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Lessons from transforming
health services delivery:
compendium of initiatives
in the WHO European Region

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Abstract

In order for health services delivery to accelerate gains in health outcomes it must continuously adapt and evolve according to the changing health landscape. At present, the case for change is compelling. In the context of both new challenges and opportunities, initiatives to transform services delivery across the WHO European Region have emerged. This Compendium demonstrates the diversity in activity, describing examples of health services delivery transformations from each Member State in the Region. The initiatives vary greatly in their scope and stages of implementation, from early changes to initiatives at-scale. When taken together, these examples offer unique insights for setting-up, implementing and sustaining transformations. A summary of 10 lessons learned attempts to synthesize key findings and consolidate insights derived from experiences.

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Acknowledgements

Croatia	Tatjana Prenda Trupec, Croatian Health Insurance Fund
Cyprus	Irene Georghiou, Ministry of Health
Czech Republic	Oldřich Pospíšil, Ministry of Health
Denmark	Birthe Dinesen, Aalborg University
Estonia	Raul Mill, Estonian eHealth Foundation
Finland	Marjukka Vallimies-Patomaki, Ministry of Social Affairs and Health
France	Yann Bourgueil, Institute de Recherche et Documentation en Économie de la Santé
Georgia	Ketevan Goginashvili and Nino Beridze, Ministry of Labour, Health and Social Affairs
Germany	Markus Siedenberg, KKH Kaufmännische Krankenkasse
Greece	Judy Triantafillou, Athens Association of Alzheimer's Disease and Related Disorders
Hungary	Tamas Evetovits, WHO Regional Office for Europe
Iceland	Sveinn Magnusson, Ministry of Welfare
Ireland	Michelle Kearns, Dorcas Collier and Margaret Curran, Caredoc
Israel	Ran Balicer, Clalit Health Services
Italy	Maria Chiara Corti, Area Sanità e Sociale, Regione Veneto
Kazakhstan	Gulnara Kulkayeva, Ministry of Healthcare and Social Development
Kyrgyzstan	Cholpon Imanalieva, United Nations Children's Fund
Latvia	Renate Pupele and Dace Klusa, State Emergency Medical Service
Lithuania	Aleksandras Laucevicius, Vilnius University Hospital Santariskiu Klinikos
Luxembourg	Martine Debacker, Ministry of Health
Malta	Rebecca Fearne, Primary Health Care Centre
Monaco	Anne Negre, Ministry of Health and Social Affairs
Montenegro	Djurdjica Ostojic, Institute of Public Health
Netherlands	Jantina Kroese, Reade
Norway	Turid Sundar and Inger Merete Skarpass, Ministry of Health and Care Services
Poland	Joanna Pietrusiewicz, Childbirth with Dignity Foundation
Portugal	Maria José Campos, Grupo de Ativistas em Tratamentos
Republic of Moldova	Ala Holban, Child High Level Group
Romania	Nicu Fota, CRED Foundation and Manfred Zahorka, Swiss Tropical and Public Health Institute
Russian Federation	Larisa Yuldashevna Pubdovinnikuva, Polyclinic 15, Samara Region
San Marino	Marianne Alders, Social Security Institute
Serbia	Natasa Milicevic, Centre for Palliative Care and Palliative Medicine
Slovakia	Stefan Mesaros, Ministry of Health
Slovenia	Vesna Kerstin Petric, Ministry of Health
Spain	Esther Gonzàlez-Maria and Teresa Moreno-Casbas, Institute of Health Carlos III and Doris Grinspun, Registered Nurses' Association of Ontario
Sweden	Carl-Johan Robertz, Hälsostaden
Switzerland	Jacqueline Burki, Rehapunkt
Tajikistan	Oktam Bobokhojaev, Ministry of Health and Social Protection
The former Yugoslav and	Neda Milevska-Kostova, Centre for Regional Health Policy Research
Republic of Macedonia	Cooperation "Studiorum"
Turkey	Necvan Tokman, Ministry of Health
Turkmenistan	Muhammet Ergeshov, Ministry of Health and Medical Industry
Ukraine	Vitaly Lukov, Voznesensk City Council
United Kingdom	Elaine Meade and Jan Baird, National Health Service Highland
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Preface

Health systems must continuously adapt and evolve to their contexts; a composite of shifting demographics and disease burdens, new technologies, changing politics and regulations, fluctuations in the economy and the environment, as well as socio-cultural factors. The cumulative effect of these shifts is driving transformations in the way health services are delivered. For example, ageing populations, increases in noncommunicable diseases, co- and multi-morbidities, and greater rates of chronicity in turn demand services that are proactive rather than reactive, comprehensive and continuous rather than episodic and disease-specific, and founded on lasting patient-provider relationships rather than incidental, provider-led care.

Adding further impetus for transformations are advancements in research, technology, manufacturing and medicines that have dramatically changed the means by which illness is prevented, pain alleviated, health restored and life extended. For example, innovations like e-health, m-health and other remote applications have made possible more personalized, affordable and effective services in ways previously unimaginable.

In the context of new challenges and opportunities for health services delivery, change is occurring. Indeed, across the Region, changes have been activated to transform existing models of care and uptake advancements of the 21st century. This shared momentum for improving performance and the level of activity is demonstrated by numerous initiatives from local, facility-specific efforts to regional or nationwide reforms that have taken place in recent years.

Taken together, these experiences are rich with technical insights and operational know-how. They provide practice-based evidence of actions that have proven vital for change agents in challenging the status quo and improving services delivery. Yet, beyond a few popularized efforts that have been widely documented, the full range of lessons learned has not been fully consolidated.

This Compendium aims to bring together the different experiences of countries, taking a snapshot across activities and attempting to draw overarching lessons. The findings ultimately inform the Region's efforts to support services delivery transformations. This work is set in the context of the Regional Office's commitment to work intensively with Member States over the 2015-2020 period for strengthening people-centred health systems in the pursuit of Europe's greatest health potential by the year 2020.[1,2]

The lessons and experience explored here have informed the development of the forthcoming Regional framework for action on integrated health services delivery: an action-orientated health systems framework committed to Member States in response to requests for support in accelerating health services delivery reforms. The framework and its supporting implementation package will be presented to Member States for their endorsement at the 66th session of the WHO Regional Committee for Europe in fall of 2016.

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1 WHO Regional Office for Europe. (2015). Priorities for health system strengthening in the WHO European Region 2015–2020: Walking the talk on people-centeredness. Copenhagen: WHO Regional Office for Europe.
2 WHO Regional Office for Europe. (2013). Health 2020: A European policy framework supporting action across government and society for health and well-being. Copenhagen: WHO Regional Office for Europe.

About this document

About this document

Definition of health services delivery transformations

Transforming health services delivery can be described as the process of undertaking strategic actions that tackle the root causes of suboptimal services delivery performance; strengthening the selection, design, organization, management and improvement processes of services delivery, backed by the supporting health system conditions for sustained change. Transformations share in their common aim to contribute to gains in health outcomes and reduce health inequalities.

Given the multifaceted nature of health services delivery, the possible actions and approaches for transforming services are numerous. Broadening the package of services to offer a comprehensive range of care, bringing the health workforce together to work in teams and shared practices, and linking information systems for the fluid exchange of clinical and operational data are, for example, some of the many changes that can and have been activated in the process of working to transform the delivery of services. Ultimately, the specific mix of strategies employed varies by context and desired goals.

Purpose

In the ever-changing context of health, the health services delivery function has proven its potential to react and adjust. This is evidenced by countless initiatives globally and across the WHO European Region to transform services in response to needs and to continuously improve upon performance.

The empirical evidence on the impact of strengthening services delivery has yet to be fully realized.[3] Nevertheless, there are an ever-expanding number of published reports and case studies documenting integrated care initiatives that are rich in practical insights and technical know-how. For example, the European Union funded project, ICARE4EU, has worked to document initiatives aiming to support individuals managing multiple chronic conditions.[4] Similarly, the European Partnership on Active and Healthy Ageing has developed a networking platform for sharing initiatives working to strengthen active healthy ageing.[5] Country-specific evaluations of initiatives to transform services have also been conducted, including work of the King's Fund and RAND Europe to report on the Department of Health's integrated care pilots in the United Kingdom,[6] as well as recent work of the OECD to identify lessons learned from a review of case studies strengthening people-centred integrated care.[7]

In alignment with these earlier efforts, this work has set out to build upon the existing evidence base and respond to the unique needs and priorities of the Region by developing a case profile on a specific initiative to transform health services delivery from all 53 Member States. In doing so, this work is guided by the following aims.

1. **To extend coverage of documented health services delivery transformations in the WHO European Region**

   This work is unique in its coverage of countries, capturing not only the diversity in initiatives but also the contexts within which they developed. Reporting in existing literature was found to account for only a limited number of countries in the WHO European Region, leaving the experiences and lessons learned from many undocumented.

2. To broaden the scope of transformations studied

Previously documented initiatives aiming to transform services delivery have typically been studied according to a disease or service-specific focus. This includes works reporting solely on integrated HIV/AIDS services, tuberculosis services or long-term care. For the purposes of comparing findings and consolidating lessons learned, this narrow focus was found to limit the understanding of changes and actions that can be taken simultaneously across services delivery processes, regardless of the entry point.

3. To facilitate understanding of both the 'what' and 'how' of transforming health services delivery

Looking to the existing literature, there is a clear focus on answering the 'what' questions behind services delivery transformations and describing the technical strategies activated. Questions regarding the 'how' behind transformations have been explored to a lesser extent. Both lessons, however, offer powerful insights and provide a way forward for accelerating gains in integrated health services delivery.

Scope

The Compendium has been developed to provide a descriptive rather than comprehensive assessment of health services delivery transformations in the WHO European Region. One case profile has been provided from each of the 53 Member States. These examples are not a reflection of the level of activity within each country and, rather, merely offer a snapshot of specific initiatives identified at the time of developing this work. Moreover, as descriptive cases, an evaluation of impact has not been attempted and findings are thus presented as lessons learned rather than best practices.

Questions guiding the development of case profiles

Case profiles of services delivery transformations from across the Region have been developed to provide a description of the processes, looking to respond to the following key questions.

1. What problems drove health services delivery transformations?

Reforms led in countries to strengthen health services delivery share a common starting point: a clearly defined and well-articulated problem. To reflect on transformations and map the actions taken, case profiles take this same point of departure, working to first understand the context of health needs and performance of services delivery that motivated the need for change.

2. What transformations were undertaken to improve health services delivery processes?

The health services delivery function has been defined elsewhere as the processes of selecting services, designing care, organizing providers, managing services, and improving performance.[8] These five processes reflect the properties of the health system that are unique and exclusive to services delivery. Strengthening services delivery calls attention to these processes given the direct contribution of each to health system outcomes and, ultimately, the health status of the population. Case profiles focus on comparing these processes of services delivery before and after transformations.

3. How have broader health system changes supported transformations?

Health services delivery does not act alone, influenced by the other health system functions of governing, financing and resourcing. In working to transform health services delivery, achieving sustained changes means looking to find alignment with these factors underpinning services delivery. Case profiles aim to describe the key health system changes activated in alignment with adjustments across services delivery processes.

4. How was the process of strategizing, implementing and sustaining changes carried out?

Reflecting on the process of putting change into practice, case profiles aim to describe key milestones, including first initiating and strategizing changes, putting new processes into practice and achieving sustained transformations. In describing the actions taken along with insights of change agents, key change management strategies have been explored.

Methods

Case profiles have been developed through a mixed-method, multi-stage process, including a descriptive questionnaire, literature review and key informant interviews. All tools, including questionnaires and templates for data extraction and drafting profiles, have been published elsewhere in a step-by-step guide to developing case profiles.[8] The process was completed as follows (see Fig. 1).

1. Scoping across the Region through an open-call for initiatives

An initial scoping of health services delivery transformations from across the Region was launched in October 2013 at a meeting marking the fifth anniversary of the Tallinn Charter. This public call for initiatives used a 21-item online questionnaire to generate a descriptive overview of transformations put forward. Prior to its launch, the questionnaire underwent piloting and expert review. This approach to identifying initiatives was devised in alignment with the Region's priority to engage the public and other health system actors in conversations on health system strengthening.

The open-call was disseminated on the WHO Regional Office for Europe webpage, as well as through direct communication with appointed country focal points and international experts. The questionnaire was made available in English and Russian in both online and offline formats. Respondents were also encouraged to submit responses in their preferred language.

In March 2014, following a six-month collection period, the open-call was closed and all submissions underwent a preliminary review. A total of 219 submissions were received, 63 of which were excluded due to insufficient details.

While this approach proved effective in identifying initiatives from many countries across the Region, gaps in coverage remained. As the initial open-call did not retrieve initiatives from all 53 Member States, a targeted call was made to experts and focal points in Member States where a case was not submitted to recommend an initiative to profile. In total 43 recommendations were received.

2. Reviewing available literature

Prior to interviewing key informants, a targeted literature review was undertaken on the specific initiative proposed to advance as comprehensive a picture as possible. Literature searches covered grey and peer-reviewed literature, identifying journal articles, press releases, programme reports, conference presentations and project proposals. The majority of documents were identified with the support of key informants.

3. Interviewing key informants

Key informants from all 199 cases (open-call submissions passing the initial review stage and expert recommendations) were invited for a follow-up interview. Two attempts were made to connect with key informants via email to organize an interview. Interviews were conducted at a distance through Skype, WebEx or phone and averaged an hour in length. Discussions were conducted as semi-structured interviews following a questionnaire developed for this exercise.

Interviews were carried out by one of seven researchers. Eight different languages were used in the interview process (English, French, German, Kazakh, Lithuanian, Russian, Spanish and Ukrainian) according to the preferred language of key informants as far as possible. All interviews were recorded and transcribed with permission from key informants.

Of the 156 open-call submissions, 44 interviews were undertaken. An additional 43 were completed based on expert or focal point recommendations. In total, 87 interviews on 85 initiatives were conducted and transcribed, then translated to English where necessary.

4. Consolidating and validating findings

A tool for data extraction and analysis was developed based on the guiding questions and concepts applied. All sources of information were consolidated for data analysis. A summary of findings was presented for discussion at an internal workshop in the fall of 2014, from which a template for drafting case profiles was advanced.

A tool for validation was designed in June 2015, which consisted of a 10-question online and paper-based survey inviting each key informant to review and comment on a draft profile of their case. This feedback was then incorporated into a final version of the profile alongside a series of in-house reviews.

Case profiles

Case profiles were developed using a standard template.[8] The profiles were drafted through a synthesis across sources of information. Direct quotes from interviews with key informants have been used in some instances to highlight key messages.

Recalling the original intention of the Compendium to provide merely a snapshot of activity, as well as for practical considerations including length, only one case per country has been profiled. For countries where multiple case examples were submitted, an overview of additional cases can be found in the Annex (see Annex 1). These abstracts have been drafted only the information available.

All cases can be found through an online platform.[9] Using this and the step-by-step guide, additional case profiles can be developed by other parties to enrich research on transforming health services delivery.

Fig 1
Process and sources of information for case profile

Consolidating and validating

Open-call submissions
n = 219

Submissions excluded
for insufficient detail
n = 63

Expert recommendation
n = 43

Interviewing

Preliminary review for
follow-up
n = 156

Submissions lost to
follow up
n = 112

Interviews conducted
n = 44

Interviews conducted
n = 43

Scoping activity

Separate cases
merged into one
n = 2

Developed case profiles
n = 42

Developed case profiles
n = 43

Total case profiles
n = 85

Cases profiled in
Compendium
n = 53

Initiatives appearing
in Annex
n = 29

Determining lessons learned

A horizontal analysis across case profiles was conducted to identify key lessons. Following the structure of case profiles, key questions and variables for comparing initiatives were devised (see Table 1). Variables were identified applying concepts of health services delivery defined elsewhere.[8]

For each variable identified, key themes were flagged as they emerged across cases. An iterative process of inductive coding was used, capturing and organizing key concepts from case profiles as they emerged, rather than pre-defining categories. Profiles were catalogued based on these codes in an electronic database for ease of peer-review and to facilitate comparisons.

Each area of analysis was studied for key takeaway messages. From this, 20 overarching lessons initially emerged. These lessons learned were reviewed with consideration to other similar exercises to compare and validate findings (see Annex 2). Through this exercise, the findings were further refined and summarized as 10 key lessons.

Table 1

Analytical framework: Areas and variables of analysis

Areas of analysis	Guiding question	Variables
Drivers of change	Why?	Problem definition Health needs
Target population	Who?	Target population
Locus of transformation	Where?	Locus of transformation
Services delivery perspective: clinical and managerial	What?	Selection of services Design of care pathways Organization of providers Management of services Performance improvement Population empowerment Patient engagement Dimensions of health services delivery integration Level of complexity
System perspective	Under what conditions?	Accountability Incentives Competencies Information Innovation
Leadership perspective	How?	Leading change
Outcomes and impact	To what effect?	Performance measurement Scope of impact

Limitations

The cases profiled are restricted to initiatives that actively responded to the open-call questionnaire or those already known and targeted through follow-up with experts and country representatives. Cases are by no means a reflection of the level of activity for transforming services delivery countrywide and do not account for other parallel changes, as this was not within the scope of the exercise.

The approach to developing case profiles was not intended to be comprehensive in its methods of collecting information. Literature was reviewed ad-hoc, based on availability of reporting. Interviews were predominantly conducted with only one key informant; in a few instances, interviews included multiple informants or more than one interview was conducted.

In keeping to the purpose and intended scope of profiles, cases have not been assessed for impact and, in effect, performance reporting is not possible. Rather, a description on outcomes is presented for each case based on anecdotal information and internal evaluation results available at the time of writing. Case profiles were reviewed and validated by key informants in 2015 and reflect information available at that time.

Related resources

Detailed information on the concepts and application of findings described here can be found elsewhere. Related background documents for reference include:

- Health services delivery: A concept note.[8] This document has been developed through a review of health system and services delivery literature, putting forward a description of health services delivery according to its links to performance, its unique processes and its alignment with other health system functions.

- A step-by-step guide for developing profiles on health services delivery transformations.[9] This guide provides a detailed process for developing case profiles as well as the resources for undertaking this exercise, including questionnaires and templates. The guide is intended for self-application, producing case profiles similar to those captured here.

- Framework for action on integrated health services delivery. Developed in alignment with global and regional health priorities, the Framework draws on concepts and practical experiences to put forward a synthesis of key areas for action in transforming services delivery. This policy document is a useful resource for identifying priority areas of focus and possible strategies and tools that may apply.

- IntegratedCare4People web platform. This web platform is a global network for learning about integrated people-centred health services, supporting countries and organizations to improve health services delivery as part of WHO's global framework on integrated and people-centred health services. The platform offers access to a wealth of information including new resources, documents and publications, examples of best practices and real-life experiences, and discussion boards.

1 WHO Regional Office for Europe. (2015). Priorities for health system strengthening in the WHO European Region 2015–2020: Walking the talk on people-centeredness. Copenhagen: WHO Regional Office for Europe.
2 WHO Regional Office for Europe. (2013). Health 2020: A European policy framework supporting action across government and society for health and well-being. Copenhagen: WHO Regional Office for Europe.
3 Yaya, S. & Danhoundo, G. (2015). Introduction: Special issue on innovations in health care system reforms in OECD countries. *Innovation Journal: Public Sector Innovation Journal; 20*(1).
4 European Commission Innovation Union. (2013). Innovative care for people with chronic conditions in Europe. Brussels: European Commission.
5 European Innovation Partnership on Active and Healthy Ageing. (2012). Replicating and tutoring integrated care for chronic diseases, including remote monitoring at regional levels. Brussels: B3 Action Group.
6 RAND Europe. (2012). National evaluation of the department of health's integrated care pilots. Cambridge: RAND Corporation.
7 OECD. (2015). Delivering person-centred integrated care: Synthesis of case studies from OECD health systems. Paris: OECD.
8 Tello, J. & Barbazza, E. (2015). Health services delivery: A concept note. Copenhagen: WHO Regional Office for Europe.
9 WHO Regional Office for Europe. (2016). A step-by-step guide for developing profiles on health services delivery transformations. Copenhagen: WHO Regional Office for Europe.
   For more information, visit: http://www.who.int/servicedeliverysafety/areas/people-centred-care/en/

Lessons learned

Lessons learned

Overview of lessons learned

Real-life experience in transforming services delivery is rich in insights on what works in practice, what it takes to get new ideas up and running, implemented, and ultimately, for changes to be seen as business-as-usual. In what follows, 10 key lessons learned from cases are described with takeaway messages detailing specific insights on each. Case examples highlighted follow in full, along with all other case profiles considered in the review.

1. Put people and their needs first by making population health the starting point to take action for transformations that work to tackle the root causes of health problems.

2. Reorientate the model of care by selecting a broad range of population interventions and individual services and planning pathways and care transitions according to an individual's needs throughout the life course for care designed around individuals, not diseases.

3. Reorganize the delivery of services by structuring care settings, practice environments and provider roles and scope of practice to adopt people-centred models of care with feedback loops on performance for quality services.

4. Engage patients, their families and carers by supporting their active role in the maintenance of their health, management of diseases and shared decision-making to improve processes or outcomes of services delivery.

5. Rearrange accountability mechanisms by assigning clear roles and responsibilities, ensuring necessary resources are available and applying information on performance for effective interactions across actors working to respond to people's needs.

6. Align incentives by strategically purchasing services, designing provider payment mechanisms that reward performance improvement and removing disincentives for individuals to enable and sustain changes.

7. Support the development of human resources for health through relevant trainings and opportunities for professional development to support a competent workforce able to respond to clinical, social and other needs.

8. Uptake innovations in e-health, clinical services and medicines by continuously assessing, researching and investing in new inputs to ensure the supportive resources for the optimization of performance.

9. Partner with other sectors and civil society by creating the conditions to purposefully coordinate with non-health services to take the collective actions necessary for tackling upstream root causes of health inequalities and risk factors.

10. Manage change strategically by setting a clear direction, developing and engaging partners and piloting new ideas to ensure transformations that are tailored to the population's needs, rolled out and sustained.

Put people and their needs first by making population health the starting point to take action for transformations that work to tackle the root causes of health problems.

Main takeaways

- ☐ Make health needs the starting point of transformations.
- ☐ Use evidence to strengthen the case for change.
- ☐ Define a target population to sharpen priorities.

Make health needs the starting point of transformations. Cases profiled share a similar starting point: a concerning trend in the health status of the population linked to the unsatisfactory provision of services. The specifics of critical population health challenges vary, from increasing rates of cardiovascular disease, cancers, HIV/AIDS and tuberculosis, to new lifestyle-related risk factors including tobacco and alcohol consumption. Nevertheless, in each case change agents signalled the importance of a specific and measurable health challenge, making better health both the purpose and primary goal of transformations.

Use evidence to strengthen the case for change. Key informants consistently highlighted the importance of data on demographic and epidemiologic trends to explore disease patterns. To make the case for change, many change agents reported the use of surveys, patient records, admissions and insurance data. Many cases also relied on comparative data between regions or neighbouring countries to describe the population's health status. Linking patient stories to statistics added depth to trends and the specifics of needs, like in Poland where patient stories were used as evidence to advocate for change and to identify the key issues women faced during childbirth (Box 1).

Box 1
Patient stories for improving obstetric care in Poland

In Poland, out-of-date practices in obstetric care and low adherence to standards, contributed to high levels of patient dissatisfaction and discomfort in childbirth. In an effort to describe and measure the magnitude of challenges women faced when seeking obstetric care, a group of concerned women partnered with the largest national daily newspaper inviting the public to share their childbirth experiences. The campaign, coined Childbirth with Dignity, was launched in 1994, receiving over 2000 responses that year. By 1995, the campaign had generated an overwhelming response with approximately 50 000 patient stories. Key challenges in childbirth were repeatedly noted with regards to the use of out-dated practices in labour, lack of choice in birthing positions, and patients' limited trust in providers. This evidence was used to accelerate advocacy efforts of the Childbirth with Dignity Foundation and ultimately contribute to the development of new standards and guidelines for maternal health and obstetrics through a ministerial working group between 2007 and 2011.

Define a target population to sharpen priorities. To prioritize actions, change agents in a number of cases segmented the population by demographic, epidemiologic or socioeconomic data and used health records to target interventions and heighten the use of prevention measures based on known risk factors. Techniques applied to strategically target segments of the population included population stratification and risk modelling measures. For example, adjusted clinical groups applied in Italy's Veneto Region drew data from patient electronic health records, including disease patterns, age and gender, to create patient profiles of morbidity. Profiles were then measured against the population-at-large and subgroups were used to prioritize high-risk patients. In a similar way, Israel's Clalit Health Services applied a health disparity scale to clinics across the country in order to strategize interventions in clinics with the highest levels of inequities (Box 2).

Box 2
Understanding health inequalities in Israel

Health inequalities are a concern in Israel, which ranked highest for economic inequality among OECD countries in 2012. Inequality trends are attributed in part to the country's diverse demographic profile. In health, differences in life expectancy, infant mortality and chronic disease by factors such as geographic area, minority status and education level signal the implications of inequalities across the country. In an effort to study the nature and magnitude of inequalities, a Quality Indicator Disparity Scale (QUIDS) was developed and applied by Clalit Health Services, Israel's largest health insurer. Applying QUIDS, clinics across the country were ranked based on levels of health inequity and clinics reporting the highest levels of disparity were targeted for tailored intervention. Through this data-driven technique to study population health needs, an initial 55 clinics were selected to develop strategies for their specific communities in a campaign to tackle health disparities.

Reorientate the model of care by selecting a broad range of population interventions and individual services and planning pathways and care transitions according to an individual's needs throughout the life course for care designed around people, not diseases.

Main takeaways

☐ Expand the selection of services according to health needs for a comprehensive response.

☐ Standardize practice according to best available evidence.

☐ Design care pathways with people at the centre.

Expand the selection of services according to health needs for a comprehensive response. Change agents consistently identified the package of services offered for priority health improvement areas as too narrow to respond to the full range of people's needs at all stages of disease progression and throughout the life course. This trend reflects the selection of services that has historically been dictated in large part by acute and curative episodes of need. This reactive model of care often excludes preventive and health promotion services.

To address this, change agents shared a common aim to expand services and broaden the types of interventions available for a more diverse range of clinical and other health-related services. The expansion of services across cases included the introduction of new interventions spanning all types of care; from health protection, health promotion, disease prevention, diagnosis and treatment, to disease management, long-term care, rehabilitation and palliative care. In many cases, a particular focus was put to the expansion of prevention services, with change agents working to introduce multiple ways to support patients in staying healthy through preventive services such as screening, nutrition and behavioural counselling, support groups, patient education, pregnancy and parenting courses and substitution therapy. For example, initiatives in Andorra, Kyrgyzstan and Norway introduced routine check-ups, health promotion advertisements, patient education, mental health counselling and chronic disease management programmes in similar efforts to support comprehensive and sustained lifestyle changes.

Standardize practice according to best available evidence. Improvements in care were frequently achieved by incorporating best available evidence into clinical guidelines and protocols. Cases illustrate a common need to better align to evidence and apply standardized clinical practice in order to develop and raise care standards that work to increase effectiveness of services and reduce undue variability in practice. To overcome inconsistencies in practices, change agents worked to improve, update and adapt clinical practice guidelines and protocols. For example, to strengthen nursing practice in Spain, a collaborative approach to introduce evidence-based tools

was applied using a system of champion nurses, backed by training and other resources needed to bring new standards into practice (Box 3).

Box 3
Adopting evidence-based nursing guidelines in Spain

In 2010, inconsistencies in nursing practices across the Spanish health system raised concerns regarding the quality and safety standards of clinical practice. The wide variability in the delivery of services led to the development of an initiative in partnership with the Registered Nurses Association of Ontario in Canada to tailor Canadian best practice nursing guidelines to the Spanish context. Over 40 guidelines have been translated and the Nursing and Healthcare Research Unit of the Spanish Institute of Health Carlos III oversees a Best Practice Spotlight Organization accreditation programme in selected institutions for monitoring the introduction and application of new care guidelines.

Design care pathways with people at the centre. Change agents consistently worked to put in place processes for services to be tailored to individual needs. In many cases, the need to respond to a growing burden of chronic conditions, noncommunicable diseases and multimorbidities called for the ability to sequence and time health interventions and the transition of patients according to personalized care plans. To do so, change agents often worked to introduce new services and resources for planning a tailored package of interventions according to their needs – including its contents, timing and providers – through coaching services, multidisciplinary meetings and dedicated staff, such as care coordinators.

Reorganize the delivery of services by structuring care settings, practice environments, and provider roles to adopt people-centred models of care with feedback loops on performance for quality services.

Main takeaways

- ☐ Organize services beyond traditional settings to bring care closer to people.
- ☐ Mix disciplines in practices for improved coordination across specialties.
- ☐ Align roles and scopes of practice across health providers to match the model of care.
- ☐ Set up a system to facilitate continuous performance improvement.

Organize services beyond traditional settings to bring care closer to people. Many cases worked to reorganize delivery settings with a focus on improving the accessibility of services by bringing care closer to patients. This resulted in a general trend towards the deinstitutionalization of services, with greater focus placed on households, communities and primary care facilities as key service settings. Advancements in technologies played a key role in bringing services closer to people by enhancing the exchange of information to allow remote services. Creative processes, like those working to re-profile hospitals and build up community resources, also worked to move care beyond traditional settings for delivery of services closer to people and in their homes. For example, in Ireland, a group of health professionals devised a response to long wait times to improve patient experiences by introducing community-based services following acute discharge from hospitals (Box 4).

Box 4
Shifting acute care services from hospital to the community in Ireland

In 2010, in response to over-burdened acute care services in Carlow-Kilkenny Regional Hospitals in Ireland, Caredoc – a nonprofit organization commissioned to provide out-of-hours medical care by the Irish Health Services Executive – devised a new model of care aiming to improve health outcomes by providing support to hospitals through the early discharge of acute, yet low-risk patients to community-based care. To put this model into practice, Community Intervention Teams were established. Teams are composed of specialized nurses working in partnership with hospital staff, general practitioners and patients to provide acute care services in patients' homes. Work of Community Intervention Teams begins in hospital, where measures to design care pathways tailored to patients are activated and supports to transition from hospital to home care are put in place.

Mix disciplines in practices for improved coordination across specialties. Restructuring practice environments was an essential component of many cases for putting a comprehensive approach to services delivery into practice. Getting providers into the same space was often a first step in facilitating more regular communication. From this, with the added support of shared goals and processes, a culture of working together often took shape for more collaborative practices. In many cases, mixing disciplines worked to encourage family physicians to interact more closely with nurses, dieticians, social workers, pharmacists, physiotherapists and other specialists.

Align roles and scopes of practice across health providers to match the model of care. Bringing alignment between the roles and scope of practice for health providers with the new tasks expected of them was a key focus in many cases and was critical for ensuring that the design of care was actualized. This was especially so in those cases introducing new types of providers, such as palliative care nurses in Serbia or home care helpers in Bulgaria. Changes to adjust existing professional roles worked through a number of approaches, including the extension of roles or skills and substitution of practice, to expand the breadth of providers' profiles. In the case of Uzbekistan, for example, delivering ambulatory tuberculosis treatment in the community relied on task shifting among hospital-based tuberculosis specialists and general practitioners in the community (Box 5).

Box 5
Task shifting ambulatory tuberculosis treatment to general practitioners in Uzbekistan

In Uzbekistan, the combination of an increasing number of patients with multidrug-resistant tuberculosis (MDR-TB) and the longer treatment period required for its management, called into question the sustainability of treatment models in place requiring all patients with TB to be hospitalized during the entire intensive phase of treatment. While ambulatory treatment of TB was increasingly common in other countries, it was not yet applied in Uzbekistan. In an effort to improve TB and MDR-TB services in the autonomous north-western region of Karakalpakstan, a new design for services delivery was introduced with a focus on services delivered outside of hospital settings. To implement this new model of care, providers underwent extensive training in order to allow task shifting from TB specialists in hospital settings to general providers in the community. The implementation of this initiative has reportedly increased the number of patients able to receive treatment for MDR-TB.

Set up a system to facilitate continuous performance improvement. Establishing data-driven processes to track progress in key indicators enabled regular feedback on performance in many cases profiled. The implementation and encouragement of continuous monitoring and evaluation additionally fostered a culture of continuous improvement. Information systems, while necessary for monitoring performance, were not sufficient to ensure complete feedback cycles for performance improvement. To set up performance feedback loops, change agents worked to establish clear management routines to facilitate information flows across relevant stakeholders and promote rational, evidence-informed decision-making. Several cases also illustrate the value of open dialogue on performance across health professionals, like in the case of Turkey where peer auditing was introduced to encourage reflective practice and a culture of teamwork and shared outcomes (Box 6).

Box 6
Implementing peer auditing to ensure delivery of high-quality services in Turkey

In 2011, in response to feedback from the Social Security Institute of Turkey and from patients reporting the suboptimal delivery of services, the Ministry of Health conducted an in-depth review on service effectiveness. The review brought to light evidence on the overprovision of care. In response, the Ministry implemented audits of compliance with medical indication to increase government oversight of health services in alignment with care standards in place. Annual peer-led audits across medical specialties were introduced to improve providers' adherence to national guidelines. Auditors are expert providers in the services being reviewed who use their clinical knowledge to assess whether national guidelines are being adhered to in a selection of medical records from across institutions. An initial audit of intensive care units helped to refine the design for future audits, now conducted on 10 specialties and over 50 000 patient records.

Lesson four

Engage patients, their families and carers by supporting their active role in the maintenance of their health, management of diseases and shared decision-making to improve processes or outcomes of services delivery.

Main takeaways

- ☐ Create opportunities for patients to take an active role in their health and care.
- ☐ Support patients to share in decision-making about their health.
- ☐ Involve the public in the process of transformations from the outset.

Create opportunities for patients to take an active in their health and care. Across cases, supporting the active participation of patients in their care was a consistent priority to optimally respond to patient needs and improve health outcomes. To do so, change agents worked to establish opportunities for patients to play active roles in their health. In many cases, this included group trainings for patients, patient guides, pamphlets or similar informative material, or one-on-one coaching and counselling from staff. Measures put in place often benefited from advancements in technology, providing patients with new, user-friendly tools to monitor and manage their health status from home. For example, in Denmark, telemedicine services were introduced to support patients to take on an active role in managing their disease (Box 7).

Box 7
Self-management of COPD through telerehabilitation in Denmark

Ineffective management of chronic obstructive pulmonary disorder (COPD) placed a significant burden on the Danish health system, consuming a large amount of unnecessary health resources as a result of frequent hospital readmissions. In an effort to improve the provision of services for COPD patients, a pilot study for an alternative services delivery model was proposed. Participating COPD patients were supported to self-manage their disease at home for four months using telemedicine services. Patients in the study shifted from being passive recipients to active partners with a central role in the provision of their own care. To enable this shift in roles, patients received trainings on self-management and were issued a monitoring device to collect and upload health data to a web portal shared with providers. While it took time to convince health providers that patients could be empowered and taught to manage their disease, seeing the success of patients and their motivation for the programme helped to promote collaboration between patients and providers as the new norm.

Support patients to share in decision-making about their health. There is a clear trend across cases to define a new type of relationship between patients and providers, moving away from traditionally paternalistic, physician-focused relationships to focus on developing interactions between clinicians and patients and, by extension, patients' family members and caregivers. In many cases, this relation aimed to empower patients with the opportunities and environment to develop the skills, confidence and knowledge to shift from being passive recipients to active partners in care. In doing so, health providers were able to deliver personalized services tuned to the needs of the individual. This proved helpful not only in providing access to more appropriate care, but also to further enable patients to follow through with behavioural changes that are often difficult to activate and maintain over time.

Involve the public in the process of transformations from the outset. In transforming services delivery, a concerted effort was made to involve the public from the beginning and throughout the change process. This meant ensuring communities' needs were effectively represented in the planning and set-up of initiatives. As several of the cases profiled demonstrate, involving the public in the process of change is more than just of benefit to the public, but is integral to the success of any initiative. By involving and engaging the target population, change agents were able to identify clear priorities to ensure appropriate solutions that effectively met the population's health needs. Across cases, involving the public was approached to encourage many different roles, including recruiting members of the community to patient advocacy groups, ensuring patient representation on steering committees and boards of directors, and involving the public through campaigns. In some cases, like Greece and Poland, the public was the driving force for change.

Lesson five

Rearrange accountability mechanisms by assigning clear roles and responsibilities, ensuring necessary resources are available and applying information on performance for effective interactions across actors working to respond to people's needs.

Main takeaways

- [ ] Define clear roles and responsibilities so actors know what is expected of them.
- [ ] Ensure actors have the authority and resources to carry out their responsibilities.
- [ ] Tighten feedback loops to monitor and improve performance.

Define clear roles and responsibilities so actors know what is expected of them. Roles and responsibilities for transformations were distributed at all system levels, from national policy-making to organizational and care delivery settings. While some transformations disseminated from the top-down (through 'command and control' approaches at higher hierarchical levels), others emerged from the bottom-up (through grassroots mobilization). In either instance, clearly defined roles and responsibilities ensured performance expectations were understood. This was especially important in cases where new organizations were established to carry out initiatives. Developing planning documents, such as action plans and programme strategies, proved to be important for clarifying roles. Similarly, policy changes to establish consistent legislation supported accountability arrangements, like in the case of Bulgaria for the introduction of home care services (Box 8).

Box 8
Developing supportive legislation for home care services in Bulgaria

An initiative was devised to introduce home care services in the Bulgarian health system to cope with increasing demand to better manage the complex and continuous health needs of the elderly population. Working in partnership with the Swiss Red Cross and the nonprofit home care organization Spitex, home care services were designed and adapted from international models for application in the Bulgarian context. The introduction of these services, however, challenged existing laws that previously prohibited payment for the delivery of nurse-led services in homes and required nurses to be supervised by a physician. In order to align roles and responsibilities for the delivery of home care services as envisaged, one of the key areas for action targeted the alignment of roles among health professionals.

Ensure actors have the authority and resources to carry out their responsibilities.
Looking across cases, additional resources were not a pre-condition for transformations. Rather, cases worked to optimize existing resources through the redistribution or improved management

of funds, technology and staff. For example, in the case of Latvia, efforts to improve emergency services worked to reorganize activities and teams through a centralized structure working through locations dispersed across the country (Box 9). Improving managerial capacity locally, synergizing or investing in existing resources were other ways cases worked to optimize available resources with marginal additional costs.

Box 9
Aligning resources and management processes to centralize emergency services in Latvia

Responding to a fragmented organization of prehospital emergency medical services and disparities in access across municipalities, the Government of Latvia established the State Emergency Medical Service in 2009. Centralizing the management of services and developing a fixed budget enabled administrative activities to be streamlined. The government leveraged previous partnerships to help resource 190 ambulance teams stationed at 100 locations across the country. Strict performance targets and an information system have been put in place to assist in monitoring the quality of services. These changes, combined with effective management and resourcing, have led to a high level of reported satisfaction among both patients and providers.

Tighten feedback loops to monitor and improve performance. Continuous monitoring and evaluation across cases was a key contributor to fostering a culture of accountability. Cases illustrate that establishing information systems is a necessary, but not sufficient, condition to ensure performance monitoring and improvement. Rather, information and communication technology combined with effective management routines to facilitate information flows proved their importance to promote rational, effective decision-making. Several cases illustrate the value of transparency in monitoring and evaluating in the context of an environment of openly sharing findings, reflecting and problem-solving opportunities for improvement.

Align incentives by strategically purchasing services, designing provider payments that reward performance improvement and removing disincentives for individuals to enable and sustain changes.

Main takeaways

☐ Align purchasing mechanisms to facilitate coordination.

☐ Strategize provider payments to encourage performance improvement.

Align purchasing mechanisms to facilitate coordination. Decisions concerning purchasing and payment have a significant role for services delivery. Matching the purchasing of services to the intended model of care proved a key strategic lever for improving performance, in particular coordination. In the case of Hungary, for example, virtual fund holding among general practitioners was introduced to improve care coordination in primary care, while also working to increase financial awareness and professional responsibility among providers (Box 10).

Box 10
Introducing financial incentives to strengthen the delivery of coordinated care in Hungary

Responding to a rise in chronic disease and observed fragmentation across provider groups in Hungary, the Care Coordination Pilot was launched by the government in 1999 to pilot payment mechanisms that encourage the delivery of more coordinated care. Care Coordinator Organizations, run by health providers from general practices or polyclinics, were established to act as virtual fund holders for capitation-based health care budgets within their local regions. While all financial control was retained by the National Health Insurance Fund Administration, virtual budgets were created as a tool to guide management and the contracting of services within the region. These contracts brought providers in each region under a single-management structure, encouraging them to work together towards providing better care to patients. Any annual savings were transferred to Care Coordinator Organizations at the end of the year.

Strategize provider payments to encourage performance improvement. Aligning system incentives, including both financial and non-financial, proved instrumental to motivate adherence to new practices by providers across cases where activated. Failing to do so often undermined changes by encouraging out-of-date practices and, at times, practices in contrast to changes. In the case of France for example, the introduction of group practices was coupled with quality measures and financial incentives for collective decision-making on the optimal distribution of resources to meet shared practice goals and performance targets (Box 11).

Box 11
Shared group performance targets and goals in France

In 2010, co-financing of group practices was introduced in France with the aim to motivate improvements in the organization of services and further develop inter-professional cooperation. Contracts with group practices stipulate fixed-rate funding for expected quality improvement and efficiency of services. The specific allocation of resources is left to group practices in an effort to encourage self-managed efficiency and the appropriate investment in technology and medical supplies, necessary infrastructure and personnel. Each practice is responsible for choosing a minimum set of performance indicators from a national list, assessed as a composite 'quality of practice' measure for reporting.

Lesson seven

Support the development of human resources for health through relevant trainings and opportunities for professional development to support a competent workforce able to respond to clinical, social and other needs.

Main takeaways

☐ Accelerate changes in practice through trainings, workshops and similar learning opportunities.

☐ Ensure future competent cohorts by updating existing and/or introducing new professional programmes.

☐ Set up a supportive working environment with resources for continuous learning.

Accelerate changes in practice through trainings, workshops and similar learning opportunities. Change agents across cases recognized with clear and compelling consensus that establishing transformations in practice meant having a competent health workforce. Trainings in the workplace proved particularly effective for accelerating changes by building the capacity in practices to deliver services differently. Short courses, trainings and workshops, as well as peer-learning and conferences, for example, worked to kick-start transformations by building the knowledge and skills for health professionals to carry out the new roles expected of them.

Ensure future competent cohorts by updating existing and/or introducing new professional programmes. Ensuring a workforce capable of undertaking planned actions and optimally performing relied on the support of the health system to develop both the existing and future workforce accordingly. In a number of cases profiled, transformations called for new health professionals working in adapted roles or, in some instances, entirely new professions. While trainings worked to kick-start new processes, programmes at the undergraduate and graduate level ensured changes were sustained over time. In the case from Serbia, for example, the introduction of palliative care services was supported by a new university curriculum to train and prepare future cohorts of palliative care health professionals (Box 12).

Box 12
Preparing the future health workforce to deliver palliative care services in Serbia

In 2004, palliative care was underdeveloped in Serbia, with services concentrated on delivering acute end-of-life services in hospital settings. This approach, however, shifted the focus away from maintaining the quality of life or reducing disability and distress for terminal patients. Responding to this context, a Palliative Care Taskforce was first mobilized by concerned professionals. In order to introduce palliative care services, the scope of practice for providers across care settings – including physicians, hospital and community nurses, physiotherapists, occupational therapists, specialist physicians and pharmacists – was expanded to include clinical and non-clinical services. Trainings were provided on new models and guidelines to current professionals, as well as non-clinical skills including patient-provider communication regarding end-of-life care. In addition, to increase the sustainability of the initiative, a palliative care programme was incorporated into the curriculum at universities, helping to establish palliative care as a new norm within the health system.

Set up a supportive working environment with resources for continuous learning. Establishing new ways of practice as the norm takes time. Setting up resources, including opportunities for professional development to support a new professional culture, including information campaigns, conferences and other events, proved important for informing and sustaining changes. For example, in the case of Lithuania, networking conferences and meetings convening providers from across the target region proved essential for combatting the traditionally individualistic working culture to create a cooperative environment for services delivery.

Uptake innovations in e-health, clinical services and medicines by continuously assessing, researching and investing in new inputs to ensure supportive resources for optimization of performance.

Main takeaways

- ☐ Support patients to plan and manage their treatment needs for improved adherence and optimal benefits.
- ☐ Explore innovative medical devices and technologies to address gaps in services delivery.
- ☐ Invest in and synergize information systems to accelerate coordination.

Support patients to plan and manage their treatment needs for improved adherence and optimal benefits. Medicines are critical to effectively treat and manage health conditions. Cases profiled have illustrated the potential for services delivery to uptake new medicines with proven effectiveness to extend life, alleviate pain and manage chronic needs. Doing so has relied on the consistent availability of medicines according to available services. Cases like in the example of Kyrgyzstan, worked to strengthen managerial practices locally for managing medicine procurement and supply. Updating standards for the effective and rational use of medicines also proved an important area for ensuring effectiveness and adherence. In some cases, care planning and counselling services put focus on supporting patients with access to new information for managing their personal drug regimes.

Explore innovative medical devices and technologies to address gaps in services delivery. New medical devices and technologies accelerated transformations by presenting opportunities to deliver services closer to people. In doing so, innovations offered unique alternatives to fill gaps and improve performance. In cases profiled, the introduction of often simple devices offered new ways to deliver more personalized services. For example, in Germany, new services for post-surgery weight loss management introduced devices for patients to record and track their weight data (Box 13).

Box 13
Introducing telemetric scales for post-bariatric surgery rehabilitation in Germany

Observing rising health care costs linked to obesity and associated comorbidities, the Kaufmännische Krankenkasse-Allianz (KKH), one of Germany's largest statutory health insurance companies, designed a pilot project to assess the effectiveness of a new bariatric surgery care package to help patients achieve sustainable weight loss. KKH designed a tailored package of services targeted to patients with a body mass index of 45 or greater offering bariatric surgery followed by a six-month nutrition counselling programme. To support this work and to ensure patients remain on track, weight data is collected weekly during the first six months following bariatric surgery and a final weight measurement is recorded one year post-surgery. To ensure accurate collection, telemetric scales were purchased and used to record and automatically transmit patients' weight data for review by KKH, avoiding potential problems associated with self-reporting weight.

Invest in and synergize information systems to accelerate coordination. Change agents unanimously recognized the value of accurate and timely information for data-driven processes in services delivery. Data is needed in many directions: informing policy and planning efforts for strategic decision-making; monitoring the performance of providers and implementation of regulatory measures; and developing evidence-informed tools for the high quality and consistent delivery of services. Investing in information technology worked to accelerate these processes, introducing new devices, like tablets for inputting data health remotely or software for telehome services for self-monitoring, to improve information collection. In practice, strengthening information exchanges required little upfront investment, with many change agents putting forth simple adjustments to reporting processes or working to synergize existing information. For example, in the former Yugoslav Republic of Macedonia, in an effort to accelerate data flows, change agents worked to enhance the existing infrastructure and introduce the capability between existing systems, rather than starting from scratch (Box 14).

Box 14
Developing an integrated information system in the former Yugoslav Republic of Macedonia

Prior to beginning work in 2009 to advance an integrated information system in the former Yugoslav Republic of Macedonia, the Ministry of Health took a comprehensive look at existing bottlenecks within the system, examining the extent to which the infrastructure in place could be leveraged for change. Change agents for this initiative understood that retraining health professionals and adding additional equipment would have been "a huge undertaking", one which the Ministry had neither the time nor resources for. Following this assessment, a planning period was launched to strategize the introduction of a comprehensive and fully integrated information system. Explaining why changes were necessary and requiring the incremental use and uptake of technology with providers was prioritized from the outset to address any resistance to changes. This approach ensured that when the new electronic platform launched in 2011, the transition had already begun.

Partner with other sectors by creating the conditions to purposefully coordinate with non-health services to take the collective actions necessary for tackling upstream root causes of health inequalities and risk factors.

Main takeaways

☐ Extend services and coordinate efforts by linking with other sectors.

☐ Recognize civil society as change agents and partners in transformations.

Extend services and coordinate efforts by linking with other sectors. Working across sectors is not a new concept. Intersectoral actions are key and necessary for addressing the wider determinants of health. In many cases, public-private partnerships had a profound effect on the availability of resources. In a similar way, many cases shared a particular focus on social services, including employment counselling, legal advice, assisted living and elderly care services. In the case of Bosnia and Herzegovina, for example, day-care services for children, services for strengthening the competencies of pregnant women and counselling services for patients of children with disabilities were introduced through Integrated Early Childhood Development Centres (Box 15).

Box 15
Expanding early childhood development services in Bosnia and Herzegovina

Responding to unfavourable early childhood development indicators and fragmentation between social workers and health service providers, change agents in Bosnia and Herzegovina worked to expand services to pregnant women, children and caregivers to offer a holistic package of resources to support early childhood development. Integrated Early Childhood Development Centres have been set up to provide a range of services, including day care services, prenatal guidance, education and health promotion, specialist referrals and care for children with disabilities. Services in each Centre are carefully selected following a situational analysis to complement and build on those offered by health centres and social services nearby.

Recognize civil society as change agents and partners in transformations. Transforming health services requires actions across government and society. The importance of a whole-of-government and whole-of-society approach reflects the diversity of actions and coordination across actors vital for transforming services delivery. Moreover, the public is well-tuned to the unique needs of their family and communities and can thus be key advocates for ensuring their needs are identified and responded to. In a number of cases, self-organized groups, often representing a specific disease or patient group, played an active role in raising awareness regarding performance including lack of available services, quality concerns or accessibility of services. In Greece, for

example, carers of people with dementia mobilized a wide network of partners to advocate for new services and worked to raise awareness on the need for changes to ultimately take forward priorities and improve practice (Box 16).

Box 16
Using patient networks to advocate for dementia services in Greece

Faced with a rising incidence of dementia among Greece's ageing population and relatively few targeted health and social services, a group of caregivers for people with dementia mobilized to advocate for increased attention to the limited availability of services. As recognition for the need to increase services grew, advocacy efforts were formalized, resulting in the development of the Athens Association for Alzheimer's Disease and Related Disorders (AAADRD). As a disease-specific organization, AAADRD was quickly able to establish links with similar groups across Greece and internationally. Extensive networking and partnerships with these groups helped to raise AAADRD's profile and gather support. With national recognition and a network spanning over 4500 active members, AAADRD has successfully petitioned the government to develop a National Action Plan for Dementia.

Manage change strategically by setting a clear direction, developing and engaging partners and piloting new ideas to ensure transformations that are tailored to the population's needs, rolled out and sustained.

Main takeaways

- [ ] Articulate a vision that is technically feasible and aligned with shared values to inspire others to do things differently.
- [ ] Develop a climate for change through the active engagement of all key stakeholders.
- [ ] Pilot transformations to give flexibility to the change process while building momentum with experience.
- [ ] Take time to strategize and design transformations along a continuum of change.

Articulate a vision that is technically feasible and aligned with shared values to inspire others to do things differently. For an identified priority improvement area to grab hold, an effective case should be made for its prioritization. Change agents at the front line of care were particularly effective in delivering this message, leveraging insider knowledge to raise concerns. For example, in Ireland, a group of health professionals devised a response to long wait times and frequent shortages in hospital beds based on their experience with after-hours medical care.

Communicating a clear vision was an important part of bringing stakeholders together, especially for broad-reaching institutional changes. For example, in the case of Sweden – where actors worked to restructure the organization of health and social services for the elderly population – open discussions and consultations were held in all municipalities, primary care centres and hospitals to communicate the vision for change and receive continuous feedback, ensuring all professionals at each level of the health and social care system understood the planned changes (Box 17).

Box 17
Creating a vision for the joint delivery of health and social services in Sweden

Delivery of health and social services in Sweden has traditionally been divided between regional councils (responsible for primary and hospital care) and municipal authorities (responsible for elderly and social care). In the context of growing concerns regarding fragmented services delivery for elderly patients, an approach to combine regional and municipal resources under one organization responsible for providing health and social services to the elderly population was put forward. An initial draft of this organizational change was developed through informal discussions followed by a number of consultations with municipal actors and providers across care levels to collectively plan a path for change. The joint planning approach was described by key informants as crucial for gaining professional trust and building momentum for change. Furthermore, creating urgency for change and clearly articulating a new model of services delivery proved critical when pitching the initiative to political leaders.

Develop a climate for change through the active engagement of all key stakeholders. In each case, transformations were a product of multistakeholder engagement. Rather than heroically championing transformations, effective change agents empowered and inspired others to promote change. Change agents generally engaged stakeholders early and often which proved instrumental for securing buy-in, building consensus, finding appropriate solutions, adapting solutions to context and creating a sense of ownership that enhanced the resilience and sustainability of transformations. The large number of individuals and organizations involved made trust and transparency in stakeholder relationships particularly important at all stages of the change process.

In the cases profiled, a number of different strategies were used to engage stakeholders, from targeted efforts – like in the case of Serbia connecting with health professionals through personalized letters – to large-scale conferences and meetings bringing together a network of professionals, like in Sweden and Lithuania.

Pilot transformations to give flexibility to the change process while building momentum with experience. Many cases took the opportunity to pilot ideas prior to undertaking full-scale implementation. The use of pilot or demonstration sites often served as a means to practically experiment with different approaches without full disruption to practices. Doing so offered a degree of flexibility to plans and the opportunity to understand what elements of the initiative should be tailored to local contexts prior to regional or national scale-up. Pilot sites also allowed change agents to build an evidence-base on impact, helping to create a case for change and encourage additional buy-in from stakeholders. Moreover, in many initiatives, pilot sites were used as platforms to initiate discussions and foster involvement, like in the case of Belgium where regional pilots offered an opportunity to test multiple models for improving community-based mental health services (Box 18).

Box 18

Experimenting with new models of care for mental health services in Belgium

In Belgium, the evaluation of mental health services commissioned by the Ministry of Health revealed the magnitude of the burden of psychological illness on population health and wellbeing. Performance reviews also signalled the highly medicalized approach to mental health services in place, with services largely concentrated in institutions and few structures for community-level support. To tackle shortcomings in services, in 2010 the government launched a call for proposals and the implementation of pilot projects working to reorientate mental health services towards community-based models. In North West Flanders, a group of mental health care organizations prepared and submitted a proposal to develop a network of mobile mental health teams. Approved in 2011, the project established interdisciplinary mobile treatment teams to care for patients both at home and in communities.

Take time to strategize and design transformations along a continuum of change. Across profiled cases, change agents repeatedly highlighted with the benefit of hindsight that the process of transformation often took much longer than they had initially anticipated. The importance of sufficient time was noted primarily in regards to gaining buy-in and generating the stakeholder engagement necessary to gain support and build enthusiasm. In many cases, like the experience in Slovenia (Box 19), the period of initiating new ideas took over a year, with change agents investing a great deal of time in crafting a narrative for change, developing trust between partner institutions and answering questions to reassure stakeholders.

Box 19

Building trust and common understanding for transformations in Slovenia

In 2006, with the prevention and management of type 2 diabetes high on the international agenda, the Slovenian Diabetes Association accelerated national advocacy efforts in Slovenia. Efforts to inform the public on the importance of the cause were ultimately successful in building political pressure and, in 2008, a ministerial working group was appointed to prepare a national diabetes strategy. After an extensive two-year period of discussions amongst working group members, sufficient trust and transparency was established and a draft document was put forward. In 2010, four years after the working group first formed, the Ministry of Health formally approved the proposed strategy.

Case profiles

Strengthening disease prevention services in Albania

Overview

In Albania, noncommunicable diseases (NCDs) are the leading cause of mortality, with cardiovascular disease alone accounting for 50% of all-cause mortality in 2010.[1] With several lifestyle-related risk factors – including poor dietary habits, high tobacco use and high blood pressure – largely attributed to the NCD burden, increasing attention has been called to strengthening health promotion and disease prevention services. In 2014, as part of the newly-elected government's four-year agenda, the Free Check-Up Programme was launched to expand prevention services as part of a wider strategy towards achieving universal health coverage. The Ministry of Health led the development of the Programme in partnership with the Health Insurance Institute, under the guidance of an expert working group. The Programme offers free screenings for chronic conditions, such as high blood pressure, diabetes, certain cancers and depression, to all citizens aged 40 to 65 years. Eligible citizens are invited to participate in screenings by their local primary health care centre and offered health education, motivational interviewing and brief interventions to support them to adopt healthier behaviours. Primary care nurses and family physicians work as a team to conduct the screenings. Nurses are responsible for assessing patients through collecting measurements and samples, performing electrocardiogram tests and conducting questionnaires. Family physicians are responsible for interpreting and delivering results to patients and handling any necessary follow-up care. Short trainings for primary care providers were delivered by the Swiss Agency for Cooperation and Development as a development partner throughout the initiative. A detailed manual, along with specially developed risk assessment tools and questionnaires, guides the Programme's delivery. Health centres have been modernized and equipped with internet connections, computers, refrigerators, scales and electrocardiogram machines. Currently 360 of 415 primary health centres are equipped to deliver the Free Check-Up Programme. An additional 14 centres are undergoing improvements and the Programme continues to expand. The opportunity to extend the Programme to other screening services in Albania will be explored following evaluation at the end of the current Programme.

Problem definition

NCDs pose a significant burden on the health system in Albania. Measured through Disability Adjusted Life Years (DALYs), cardiovascular disease places the highest burden, representing 25% of all DALYs; followed by cancer (12%), diabetes (7%) and mental health (6%).[1] In 2010, cardiovascular disease alone accounted for almost 50% of all-cause mortality in Albania.[1]

Much of this disease burden has been attributable to lifestyle-related risk factors including high blood pressure, smoking, high sodium intake and obesity. However, the reactive orientation of services and limited provision of health promotion and disease prevention at the primary level left these risk factors inadequately addressed within the health system (Box 1).

Box 1
What problems did the initiative seek to address?

- High NCD burden, notably from cardiovascular disease.
- Lifestyle-related risk factors contributing to suboptimal population health.
- Reactive orientation of services limiting focus on health promotion and disease prevention.

Health services delivery transformations

Timeline of transformations
In 2013, a new government with a strong commitment to establishing universal health coverage was elected in Albania. In line with this agenda, in 2014, a Free Check-Up Programme was launched to introduce free screening services for chronic conditions to the population (Table 1). Planned to run for a four-year period, the Programme continues to be actively implemented at present.

Table 1
What were the chronological milestones for the initiative?

2013	Alliance for the European Albania elected to government; new government commits to introducing universal health coverage.
2014	Four-year Free Check-Up Programme launches on first Universal Health Coverage Day in Albania.
Present	Continued implementation of Free Check-Up Programme.

Description of transformations

Selecting services. All citizens between the ages of 40 to 65 years are eligible to receive free annual screenings and primary care services through the Free Check-up Programme. Patients are invited to participate in the Free Check-Up Programme by their local primary health centre through a letter mailed to them near their first eligible birth date. As part of the screening process, participants complete questionnaires assessing risk factors and mental health status. Key measurements, such as body weight and blood pressure, are recorded and an electrocardiogram is performed to assess heart health. Blood samples are collected to test cholesterol, glucose and albumin levels; urine and stool samples are also collected and tested. Based on individual screening outcomes, patients receive health advice and brief interventions to address potential health concerns or future identified risks. Patients may also be prescribed medication, receive additional counselling or be referred for further tests and specialized care.

Designing care. A manual has been developed to guide delivery of the Free Check-up Programme, providing detailed instructions for each stage of the screening process, as well as recommendations for follow-up treatment. The manual was developed by an expert committee and is based on extensive literature reviews of international guidelines and best practices. For example,

in the case of depression, the manual draws on the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM). A form designed for the initiative also serves to guide providers in conducting screenings, documenting measurements and recording test results. The form includes three lifestyle assessment questionnaires to collect information on topics such as diet, alcohol consumption and tobacco use, as well as a questionnaire to assess mental health status. A quantitative scoring system, which categorizes patients' risk level based on screening results, has been developed to guide treatment according to set algorithms. For example, counselling services are recommended for patients who score 10 points or above on the mental health questionnaire.

Organizing providers. The initiative has expanded the role of family physicians and increased nursing responsibilities. Primary care nurses and family physicians work as a team to conduct screenings. Nurses receive patients, collect measurements and samples, perform electrocardiogram tests and conduct questionnaires. Nurses then document all patient information in a central electronic database. External web managers control the database, consolidate information electronically submitted by nurses and laboratories and then mail family physicians a hard copy of each patient's complete screening results. Once this file is

received by physicians, a second patient appointment is scheduled to review screening results. Family physicians then oversee follow-up care and refer patients to specialist providers as necessary.

Managing services. Primary care is delivered through a network of 415 primary health centres and 1600 health posts. All primary health centres are in the process of implementing the Free Check-Up Programme, according to activities laid out in a manual distributed to all centres and posts. Health centres are gradually being provided with the necessary equipment to offer the Programme; 360 are fully operational, 14 are undergoing improvements and the rest are to be covered by mobile units. New equipment for centres includes computers with internet connection, refrigerators for storing samples, weighing scales and electrocardiogram machines. Primary care providers are contracted by the National Insurance Institute to deliver the Programme as part of their regular duties and an external private company is contracted to manage the central patient database.

Improving performance. Family physicians and nurses received training to expand their skillset to promote effective delivery of the Free Check-Up Programme. Training included instruction on interpreting screening results and electrocardiogram outputs, motivational interviewing and basic computer skills.

Engaging and empowering people, families and communities

Through the introduction of the Free Check-Up Programme, primary care providers now actively recruit patients in their local communities, inviting them to participate in screenings through mailed letters. Information on the Programme is included with the invitation, as well as instructions on how to prepare for the service. Providers have received

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Universal health coverage recently introduced for population; primary care services offered but remain weak.	Expansion of primary care services through the Free Check-Up Programme; all citizens aged 40 to 65 years eligible to receive screenings for chronic conditions, such as cardiovascular disease, diabetes and depression; tailored health education and brief interventions offered, along with referral to specialized services if needed.
Designing care	
Absence of guidelines for primary care screenings.	Assessment questionnaires developed with algorithms to classify patients according to health risk; manual provides instructions for performing screenings and delivering follow-up care.
Organizing providers	
Primary care providers (family physicians and nurses) stationed in 415 health centres and 1600 rural health posts throughout the country.	Primary care providers work as a team to deliver the Programme; nurses have expanded responsibilities and receive patients, perform screening tests and conduct questionnaires; family physicians interpret screening results and manage follow-up care.
Managing services	
Primary health centres lack necessary equipment to perform screenings; computers not widely available.	Primary care providers contracted by the Health Insurance Institute to deliver the Programme; private company manages central electronic patient database; health centres gradually being equipped with resources to support Programme delivery.
Improving performance	
Primary care providers' knowledge and skills for delivering screening services limited; providers' computer literacy generally low.	Short training courses organized for primary care providers on interpreting screening results, motivational interviewing and computer skills.

training on how to effectively communicate with patients, including how to perform motivational interviewing to support behaviour change and empower patients to take responsibility for their own health.

Health system enabling factors

The newly elected government has made a strong commitment to strengthening the health system and improving population health. A key part of the government's

new health agenda has been the introduction of universal health coverage, with a strengthened focus on health promotion and disease prevention. The Free Check-Up Programme is an integral part of this new approach and is overseen by the Ministry of Health in partnership with the Health Insurance Institute. The initiative was officially approved by the Council of Ministers in April 2014 and a supportive regulatory framework has been put in place, including the recently ratified and Ministry-endorsed guidelines for a basic package of primary care,

notably including screening and prevention services. Additionally, the agreement made by the Health Insurance Institute to reimburse providers for health check-ups has financially supported the initiative and expanded services covered under the universal benefit package.

Outcomes

The initiative is still in the early stages and information on its impact is not yet available.

Change management

Key actors

The initiative has been driven through a top-down approach, led by the Ministry of Health in partnership with the Health Insurance Institute (Box 2). The Ministry of Health assembled an expert working group to design the initiative, with the Swiss Agency for Cooperation and Development providing support during this process.

Initiating change

The election of a new government with an agenda supporting health system reform provided momentum for change and fostered the development of the necessary conditions to enable implementation of the Free Check-Up Programme.

Implementation

The initiative is being rolled out gradually to make the best use of resources currently available. With support from the Swiss Agency for Cooperation and Development, primary care providers have received short training courses to enable them to deliver new screening services and utilize the new computer system.

Box 2

Who were the key actors and what were their defining roles?

- **Ministry of Health**. Led development of the initiative; co-finances activities along with the Health Insurance Institute.
- **Health Insurance Institute**. Co-finances initiative along with the Ministry of Health; contracts primary care providers to deliver screenings.
- **Working group**. Headed by the Deputy Minister of Health; designed Programme guidelines.
- **Swiss Agency for Cooperation and Development**. Assisted in the development of the initiative; led trainings for primary care providers.

Moving forward

The Free Check-Up Programme continues to be rolled out nationally across the country, with more health centres joining the initiative as resources become available. The Programme is part of a four-year government agenda, after which it will be evaluated and future steps determined.

Highlights

- Adopting a proactive approach for prevention was key to reaching and engaging the target population.
- Significant efforts were made to improve the systematic collection and monitoring of population health data.
- Government support for the initiative and a partnership with the Health Insurance Institution to reimburse health check-up services helped embed the initiative into the health system.

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1 Institute for Health Metrics and Evaluation. (2015). *Global burden of disease: Cause patterns*. Available from: http://vizhub.healthdata.org/gbd-compare/arrow

Piloting integrated health networks to improve type 2 diabetes services in Andorra

Overview

Faced with increasing rates of chronicity since the mid-2000s, the Andorran Ministry of Health and Welfare has prioritized a transition from a system largely orientated towards more acute, reactive care, to a more integrated model of services delivery. This priority is evident in the national Strategic Health Plan 2010–2015 and the efforts put in place to see through its implementation, including the launch of a pilot integrated care model for type 2 diabetes. Working closely with key actors, the pilot has been designed to strengthen the gatekeeping role of primary care, introducing nurse-physician care teams, encouraging self-care through strengthened patient education, and standardizing for quality of care through updated evidence-based care pathways and protocols in guidebooks. While the participation of providers and patients in the pilot is voluntary, financial incentives have been aligned to encourage the engagement of both and reward providers for their performance.

The pilot secured the enrollment of 85% of general practitioners who subsequently received training on the use of the new guidelines. Officially launched on World Diabetes Day 2014 and set to run for one year, the pilot will be monitored against a set of 20 performance indicators. Results from this evaluation will inform the future implementation and scale up of the model in the context of Andorra's new health model for more integrated care.

Problem definition

Since the early 2000s, Andorra, like many countries in the European Region, has faced a high and rising burden of chronicity for noncommunicable diseases, particularly type 2 diabetes. The acute, largely reactive specialist-driven model of services delivery has challenged the health system to provide the coordination across providers and continuity of services needed to effectively respond to changing health pressures. The strained role of primary care to act as the gatekeeper to the system was marked by the growing dissatisfaction among general practitioners and observed patient care seeking patterns consistently targeting secondary or tertiary levels of care. Moreover, the time and resources required to fully engage patients in their diabetes care were found lacking, despite the known complexity of diabetes and close links to individual lifestyle factors.

Box 1
What problems did the initiative seek to address?

- High prevalence of type 2 diabetes.[1]
- Suboptimal patient education on type 2 diabetes for self-monitoring and lifestyle adaptations.
- Growing provider dissatisfaction in primary care linked to their weak gatekeeping function.

Health services delivery transformations

Timeline of transformations
In 2009, the Strategic Health Plan 2010–2015 was launched by the Ministry of Health and Welfare to activate population-wide improvements in health and social services (Table 1). As part of this Plan, in 2012, the new Andorran Model of Healthcare (MAAS) was developed to increase the delivery of patient-centred, integrated primary care. An initiative to pilot this new approach to services delivery in the context of type 2 diabetes was planned by the Ministry and officially launched on World Diabetes Day 2014. The results of the diabetes pilot, expected late 2015, will provide the Ministry with important information on the new Andorran Model of Healthcare.

Table 1
What were the chronological milestones for the initiative?

2009	Strategic Health Plan 2010–2015 launched to guide health system improvements and the development of a new care model.
2012	New Andorran Model of Healthcare conceived; key objectives include increasing patient-centredness and strengthening primary care; Ministry of Health and Welfare plans to gradually phase in Model after testing.
2012-2014	Pilot study for Model planned; type 2 diabetes selected as the disease to test the Model.
2014	One year diabetes pilot officially launched on World Diabetes Day 2014; Strategic Health Plan 2015–2020 developed.
Present	Continued implementation of diabetes pilot.

Description of transformations
Selecting services. Piloting of a more comprehensive package of type 2 diabetes care has introduced additional care services such as patient education and dietary counselling, foot health assessments and social assistance.

Designing care. Existing care pathways have been advanced based on best available clinical evidence, looking also to international experiences from hospitals in France and Spain. Redesigning pathways has sought to improve the quality of care for patients with type 2 diabetes and ensure access to a comprehensive, coordinated set of services based on patient needs over time. "Central to the design of the pilot has been to define a path for patient care where all possible visits to professionals (for example podiatrists, dieticians, doctors, dentists, nurses), both mandatory and optional, are considered."

A guidebook for health providers has been developed to map new type 2 diabetes care pathways and aid decision-making. Patients with type 2 diabetes participating in the pilot follow a fixed route of care tailored to their personal situation. Patients enter the care pathway through a primary care nurse-physician team; this team then develops a personalized plan for each patient, coordinates care and refers to necessary services based on criteria defined in the guidebook.

Organizing providers. The pilot initiative encouraged the voluntary participation of general practitioners, managing to successfully enrol 85% of Andorra's general practitioners in the project. In an effort to strengthen the gatekeeping function of general practitioners, the pilot has introduced nurse-physician care teams to act as the central managers for diabetes health networks and provide all necessary referrals. Diabetes health networks link a wide array of providers to deliver diabetes services including dieticians, podiatrists, social workers and specialists among others. These networks have served to incorporate health professionals previously not recognized by the public system to provide support to patients.

Specific forms have been developed for the purpose of streamlining referrals. All necessary information regarding patient care is recorded there in an effort to avoid duplication of services. This paper record is currently carried by the patient between care providers as an interim solution while electronic means are advanced.

Strengthening care information flow between different actors is essential for achieving integration. In our case, pending full implementation of the electronic health record, we designed a card owned by the patient, containing all the information generated by services provided to the patient from any professional.

Managing services. Diabetes nurse managers have been recruited and travel around the country to provide support to primary care teams and monitor adherence to the pilot's guidelines. All providers in the pilot are required to commit to certain terms and conditions for delivery of type 2 diabetes services. To receive financial incentives, providers are now assessed based on a number of performance indicators that serve to encourage effective service provision in accordance to the protocols in place.

Improving performance. Trainings and seminars have been made available to all health professionals participating in the pilot to educate them on the new guidelines and criteria for providing care to patients with type 2 diabetes; certain trainings are compulsory for specific professional groups. Additionally, diabetes nurse managers have received specialized training as part of the pilot to help them fulfil their supervisory role. A programme of trainings for 2015 is currently being developed for continuous learning and improvement.

Engaging and empowering people, families and communities
The initiative aims to empower patients with type 2 diabetes with the necessary knowledge and skills

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Narrow range of type 2 diabetes treatment services covered by national health insurance; lack of patient education or health promotion services; patients pay 100% of costs for specialist care from providers such as dieticians or podiatrists.[2]	Expanded package of type 2 diabetes services, including specialist services; patient education offered as standard part of care package; social services incorporated.
Designing care	
No protocols or guidelines for management of patients with type 2 diabetes.	Evidence-based care pathways designed in consultation with international experts; primary care teams develop personalized treatment plans for each patient, referring to specialist providers as needed; guidebook developed for providers maps care pathways and aids decision-making.
Organizing providers	
Professionals fragmented across care levels and public and private domains; individualistic culture prevalent and teamwork lacking; patients frequently bypass primary care providers and seek care in higher level settings or abroad; absence of system to share patient information prevents communication and coordination between providers.	Gatekeeping role of primary care strengthened; nurse-physician teams coordinate all care for patients and make referrals as needed; all professionals participating in the pilot committed to share patient information with referring nurse-physician team; pending implementation of an electronic information system, a complete set of (paper) medical records travels with the patient to enable communication and coordination between providers.
Managing services	
Absence of technological infrastructure and an electronic information system poses a barrier to effective coordination; health professionals deliver services with limited managerial oversight and control over performance.	Investments being made to establish necessary infrastructure for an electronic information system; new role of diabetes nurse manager created to oversee delivery of services according to pilot guidelines; general practitioners assessed against several defined performance indicators.
Improving performance	
Limited training opportunities available; absence of specialized diabetes training.	Series of trainings and seminars on type 2 diabetes and new care guidelines offered; specialized training given to diabetes nurse managers.

to effectively self-manage their care while supported and monitored by a coordinated care team. Patient education plans are delivered by nurses and are adapted based on the knowledge and personal circumstance of patients. The long-term goal seeks "to work with the concept of the expert patient" and the vital role patients have to play in generating health improvements related to type 2 diabetes.

The patient will receive an education adapted to their knowledge so that you [patient] get the highest level of self-care and autonomy regarding your condition. We hope to achieve the reduction in complications caused by diabetes in a few years. It will be a benefit to both the patient and the system.

Group training sessions are also being experimented with as part of the pilot project. These bring together patients, families and primary care providers to facilitate open communication. Patients are encouraged to seek advice and support from the national Diabetic Association, an important national actor in diabetes care providing resources for patients, educational opportunities and peer support.

Health system enabling factors

Implementation of the pilot has benefited from wider health system reforms led by the Ministry of Health and Welfare to establish the necessary system conditions for more integrated services delivery (Table 3).

Working in partnership with the Andorran Office of Social Security (the main health system payer) and the Andorran Public Health Service (the main public provider), the Ministry has worked to adapt necessary legal and financial frameworks to support the new working modalities described above. The diabetes pilot has applied these changes as a means to test and further refine new arrangements prior to full-scale reform.

Financial incentives have been introduced for general practitioners who enrol in the pilot and have committed to following the pilot's guidelines. Incentives are paid in accordance to performance, with general practitioners receiving a fixed payment of €5 per patient and service, up to a maximum of €25 per patient. Additionally, a variable incentive based on performance against three groups of indicators (quality, efficiency and teamwork) is awarded to participating general practitioners at the end of the pilot year, up to a maximum of €75 per patient. Nonfinancial incentives, such as improvements in status for general practitioners and increased responsibility for nurses, have complemented and strengthened financial incentives. Patients are also financially incentivized to participate in the pilot as they are only responsible for 10% of ambulatory care costs if they access services through referral from the participating nurse-physician team. Patients not participating in the pilot typically pay 25% of covered care costs and 100% of services not normally covered such as consultations with podiatrists or dieticians.

As a pilot project, a strong emphasis has been placed on collecting information to inform future implementation of the new Andorran Model of Healthcare. A total of 20 process, outcome and satisfaction indicators have been developed for this purpose. Indicators include, for example, the number of relevant health checks a patient receives (such as blood glucose testing and weight monitoring), whether appropriate referrals were made (such as percentage of patients referred to an ophthalmologist), percentage of patients showing health improvements (such as improved blood glucose, blood pressure or cholesterol levels) and percentage of patients satisfied

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Ministry of Health and Welfare has stewardship over the health system. • Strategic Health Plan 2010–2015 and the Strategic Health Plan 2015–2020 detail Ministry priorities for developing a coordinated/integrated system; new Andorran Model of Healthcare calls for widespread health system reforms and will be phased in gradually under Ministry oversight. • General practitioners participating in the pilot agree to follow pilot guidelines for type 2 diabetes care.
Incentives	• Fixed rate of €5 per patient and service (maximum of €25 per patient) offered to participating general practitioners. • Additional payment-for-performance incentive offered (maximum of €75 per patient) based on quality, efficiency and teamwork indicators. • Patients financially incentivized to participate in pilot; patients pay only 10% of ambulatory care costs if participating versus 25–100% otherwise.
Competencies	• New professional roles and responsibilities created for nurses.
Information	• Diabetes pilot serving as a means to test and evaluate new Andorran Model of Healthcare. • Series of 20 indicators developed to assess pilot; indicators include process (such as tests performed and referrals made), outcome (such as blood glucose levels) and satisfaction measures. • Evaluation of pilot will inform future implementation of the new Model.

with services provided. A series of interviews will also be held with participating patients to evaluate any changes in their health knowledge. All the information collected through the pilot will be evaluated at the end of the implementation year in order to provide insight for the future direction of health system reforms.

Outcomes

As the diabetes pilot is still in the early stages of implementation, outcomes are not yet available. Evaluation of the pilot will be based on a series of 20 performance indicators measuring processes, outcomes and satisfaction.

Change management

Key actors

This initiative has primarily been steered by the government. However, great effort has been invested to include a wide range of actors (Box 2). A project coordinator was appointed to oversee the development of the diabetes pilot under guidance from a newly established multidisciplinary steering committee. Plans for the pilot took shape through an iterative process involving regular meetings with representatives from multiple stakeholder groups including the Council of Ministers, general practitioners, nurses and other health professionals, the Diabetic Association, the Andorran Office of Social Security and the Andorran National Health Service.

Box 2

Who were the key actors and what were their defining roles?

- **Ministry of Health and Welfare**. Led development of health system reforms; worked with multiple stakeholders to design pilot to test proposed reforms.
- **Andorran Office of Social Security (CAAS)**. Main

payer of the health system; collaborated with Ministry of Health and Welfare to develop and pilot health system reforms; reworked financing structures.
- **Andorran National Health Service (SAAS)**. Main public health system provider; collaborated with Ministry of Health and Welfare to develop and pilot health system reforms.
- **Project coordinator**. Ministry appointed manager for the pilot study; acts as the central contact point for all stakeholders.
- **Multidisciplinary committee**. Composed of several stakeholder representatives and international experts; assisted in design of initiative; continue to advise project coordinator.
- **Diabetic Association.** National association of patients with diabetes; "vital partner" in design of initiative; important resource for patients with diabetes.

Initiating change

Following the proposal set in the context of the new Andorran Model of Healthcare, plans for the pilot's implementation were carried forward by the designated project coordinator and multidisciplinary committee. Plans were updated accordingly to reflect the input of all stakeholders in an effort, as key informants describe, to "make everyone feel identified with this project". In parallel, necessary legal and financial challenges to establish the institutional environment for the pilot's implementation were put in place by the Ministry.

Prior to launching the pilot, a marketing campaign raised public awareness of activities through media channels, including television and newspapers, as well

as public presentations on the project. "We conducted a media marketing campaign for positive communication. This has helped us to achieve good acceptance in the population."

Implementation

The official launch of the pilot was timed to coincide with World Diabetes Day and numerous events were held to mark its launch, including a free public diabetes screening held in a church. Mechanisms are in place for regular feedback and engagement of stakeholders to allow for continuous adjustments as necessary. The pilot is still in the early stages of implementation and is set to last one year.

The Ministry of Health and Welfare plans to use the experience and results of the diabetes pilot to inform implementation of the new Andorran Model of Healthcare. The Model calls for a large shift in the organization of health care, but also in the vision and culture of the health system. As such, "the barriers have been great because we had to change our current vision of the system to the new concept we want; a new health culture." Nevertheless, gradual implementation of the changes called for under the Model, supported with carefully chosen testing of new arrangements through the diabetes pilot, has proven successful in generating support for the new system.

Moving forward

An evaluation of the pilot, once complete, will enable the Ministry of Health and Welfare to assess the impact of the new Andorran Model of Healthcare for improving type 2 diabetes care processes and outcomes. Furthermore, the experience and outcomes of the pilot will provide insight on the feasibility of provider health networks at scale and their application to other priority health needs.

Highlights

- To encourage an integrated response to type 2 diabetes, a primary care nurse-physician team was introduced as part of a diabetes health network with the aim of connecting health professionals across disciplines and sectors, as well as strengthening the gatekeeping function of primary care providers.

- Pragmatic intermediary solutions, such as paper medical records carried by the patient, addressed pressing challenges, like poor communication between providers in the absence of an electronic information system.
- Updated evidence-based care pathways published in a guidebook for providers served as a means to streamline and standardize care while also

allowing for adaptability based on patient needs.
- Extensive patient education, support and coaching on self-management skills has enabled patients to act as agents in their own care.
- Extensive collaboration with stakeholders in the early design stages of the initiative encouraged multistakeholder buy-in and ownership from the outset.

1 WHO Regional Office for Europe. (2014). *European Health for All Database*. Retrieved from http://data.euro.who.int/hfadb
2 WHO Regional Office for Europe and Netherlands Institute for Health Services Research. (2014). *Evaluation of the Structure and Provision of Primary Care in the Principality of Andorra.*

Introducing compassionate use treatment for extensively drug-resistant tuberculosis patients in Armenia

Overview

Multidrug-resistant tuberculosis (MDR-TB) has posed a growing public health threat in Armenia, currently among the world's 27 countries for highest MDR-TB burden.[1] In this context, extensively drug-resistant tuberculosis (XDR-TB) has also emerged, accounting for approximately 10% of diagnosed MDR-TB patients in 2011.[1] While a number of new TB therapies have been advanced, approved treatment options for XDR-TB patients in Armenia were limited, leaving diagnosed patients with few treatment options. Having worked on MDR-TB control in Armenia since 2005, Médecins Sans Frontières (MSF), in partnership with the Ministry of Health, undertook an initiative to formalize the compassionate use of TB drugs to allow patients with no other treatment alternative access to experimental therapies. A committee of experts was convened to develop a protocol for the compassionate use of in-development medicines, which was approved by a local ethics committee and the Ministry of Health. A humanitarian waiver was granted to allow importation of the medicines. In 2012, a confidentiality agreement was signed with the pharmaceutical company developing the TB drug Bedaquiline, allowing XDR-TB patients and others meeting the eligibility criteria to receive this treatment. As of July 2013, eligible patients began receiving treatment, with 62 patients having benefited to-date. Patients receive a 24-week course of Bedaquiline tablets added to a multidrug TB treatment of two years. MSF has supported the compassionate use initiative with technical knowledge for establishing this programme, as well as providing necessary funding, procurement of drugs, training of providers and support for local TB specialists to deliver the new treatment. The compassionate use initiative is part of the National TB Programme's national policy framework for strengthening Armenia's response to MDR-TB and XDR-TB.

Problem definition

The resurgence of tuberculosis (TB) in Armenia throughout the early and mid-2000s sparked public health concerns, with incidence rates at 49 per 100 000 people.[2] In this context, rates of multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB) have been of particular concern (Box 1). Estimates from 2011 showed that 19% of all new TB cases and 56% of re-treatment cases were MDR-TB, of which 9% were diagnosed as XDR-TB.[1] Treatment success rates for all TB types are well below the 85% target set by WHO.

In early 2010, despite the growing need for TB care in Armenia, existing treatment options for both TB and MDR-TB remained limited. Nearly half of all patients who began treatment were unable to complete the full course of TB treatment due to a combination of contributing factors, including low adherence rates, poorly managed side-effects and treatment intolerance.[1]

Box 1
What problems did the initiative seek to address?

- High rates of MDR-TB and XDR-TB.
- High death and failure rates amongst MDR-TB and XDR-TB patients.
- Limited number of approved treatment options for MDR-TB and XDR-TB patients.
- Poor patient adherence to TB treatment due to side-effects and treatment intolerance.

Health services delivery transformations

Timeline of transformations

Despite strong political commitment throughout the mid-2000s to addressing TB, rates of MDR-TB and XDR-TB continued to grow. In recent years, efforts have focused on addressing this problem through the National Response Plan to Combat Drug-Resistant TB 2013–2015.

Médecins Sans Frontières (MSF) has worked closely with the Ministry of Health in the rollout of TB-related projects since 2005, including the development of a compassionate use drug programme (Table 1). In January 2013, the local Armenian ethics committee approved the use of Bedaquiline for XDR-TB treatment on humanitarian grounds. By April 2013, patients began receiving the treatment, with 62 patients having so far received medicines through this initiative.

Description of transformations

Selecting services. Through the introduction of the compassionate use of medicines, patients presenting with a TB-related life-threatening condition without alternative treatment options may now be considered to gain access to the use of Bedaquiline. The drug has been made available free of charge through a pharmaceutical company led compassionate use programme, supported by MSF. Compassionate use is limited to patients who have XDR-TB or pre-XDR-TB and meet strict age and other eligibility requirements. Patients receive a 24-week course of Bedaquiline tablets given along with a two-year regimen of other supporting antibiotics, such as Linezolid and in some cases Imipenem, as well as other standard anti-TB drugs thought to be effective. In parallel to exploring novel drug therapies, extending services to include palliative care for XDR-TB patients that do not qualify for the compassionate use of Bedaquiline has been advanced.

Table 1
What were the chronological milestones for the initiative?

Late 1990s–early 2000s	TB control strategies based on WHO-recommended Directly Observed Treatment Short course (DOTS) initiated across Armenia.
2005	MSF begins work on MDR-TB related projects in Armenia.
Late 2006	National Tuberculosis Control Programme 2007–2015 adopted by the government.
Early 2012	MSF begins work to establish compassionate use of TB drugs in Armenia.
October 2012	National TB Programme signs confidentiality agreement with pharmaceutical company for the use of Bedaquiline.
2013	National Response Plan to Combat Drug-Resistant TB 2013–2015 adopted by the government.
January 2013	Armenian ethics committee and Ministry of Health approve use of Bedaquiline for XDR-TB patients on humanitarian grounds.
February 2013	First Bedaquiline request submitted to pharmaceutical company.
March 2013	First Bedaquiline importation to Armenia.
April 2013	Bedaquiline treatment becomes available to patients meeting eligibility criteria.
April 2015	End of compassionate use of Bedaquiline and beginning of its routine use supplied through the Global Drug Facility.
Present	Continued implementation of compassionate use initiative led by MSF for other in-development medicines; Armenian government continues to implement the National TB Programme.

Designing care. Establishing national guidelines, specifying eligibility for treatment have been put in place through a partnership between MSF and the National TB Control Programme, according to the pharmaceutical company's criteria. Patients receive a baseline clinical assessment and, if guideline criteria are met, begin treatment once approved. This includes directly observed treatment of all drugs in the treatment regimen for the entire two year duration. The new drug Bedaquiline is given as daily treatment for the first two weeks, then three times per week until 24 weeks of treatment.

Organizing providers. TB services continue to be delivered within the existing vertical TB-specialist

system, including the National TB Centre in Abovyan staffed by 239 physicians, 291 nurses, 15 bacteriologists and 29 laboratory technicians.[1] The compassionate use initiative is delivered out of this Centre, with MSF providers and select specialist physicians trained to dispense Bedaquiline. Patients can be followed in smaller TB centres closer to their homes once they are stable on treatment.

Managing services. MSF manages the compassionate delivery of TB medicines, including the procurement, distribution and dispensing of medicines, through the National TB Centre. Funding for the initiative has been made available through MSF, providing additional human resources and trainings to assist with the delivery of services. The initiative has benefited from the National TB Programme's use of standardized electronic data collection and reporting systems developed by WHO for regular tracking and supervision of services provided.

Improving performance. Training has been provided to health workers dispensing the new medicines on topics including assessing the eligibility of patients, dispensing the new medicine, performing clinical assessments to identify side-effects, interpreting electrocardiogram results, delivering intravenous medication and other basic skills. Training was also provided to enhance communication competencies in an effort to ensure providers effectively and respectfully discuss treatment options with patients.

Health system enabling factors

This initiative has been supported by continuous political commitment to TB control, evidenced by the development and implementation of Armenia's National TB Programme (Table 3). While a legal framework for the compassionate use of TB drugs remains to be developed, the initiative was advanced through approval granted by the local ethics committee and the Ministry of Health; a small yet important step towards large-scale legal changes needed for the compassionate use programme to take place.

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Treatment for TB available free of charge to population; no approved treatment options for XDR-TB patients; new drug therapies in development but not currently available.	Compassionate use treatment with Bedaquiline made available to XDR-TB patients who meet strict eligibility criteria; palliative care options for XDR-TB patients are being explored.
Designing care	
No guidelines for compassionate use treatment for TB in Armenia.	Patient eligibility criteria set by pharmaceutical company developing Bedaquiline; national protocol for compassionate use of TB drugs established by compassionate use expert committee.
Organizing providers	
Specialized TB providers concentrated in vertically organized TB hospital settings; role of primary care physicians in TB control increasing but still limited.	Compassionate use TB treatment delivered by TB specialists and MSF physicians at the National TB Centre and other TB settings.
Managing delivery	
TB control activities managed by National TB Centre; MSF provides support for delivery of MDR-TB interventions.	MSF leads delivery of compassionate use TB initiative and provides necessary funding and resources for the service.
Improving performance	
Clinical skills of TB providers narrow and limited to direct TB treatment; TB providers have little knowledge or skills for even basic clinical activities outside of treatments for the lungs.	Comprehensive training on all aspects of delivery for new TB drugs, clinical monitoring and treatment of side-effects carried out for select TB providers; training on effective patient communication also conducted.

Table 3

How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Ministry of Health has overall responsibility for TB control; National TB Centre is accountable to the Ministry for provision of TB care. • National TB Centre is responsible for developing TB policies under the Ministry; National Tuberculosis Control Programme 2007–2015 guides national TB control interventions. • Legal framework for compassionate use initiatives currently absent; approval for initiative secured through a humanitarian waiver granted by the local ethics committee and Ministry of Health.
Competencies	• Initiative supported a general increase in pharmacovigilance.
Information	• Ongoing tracking and evaluation of patient outcomes related to TB.
Innovation	• Introduction of compassionate use treatment to Armenia.

Aligning the initiative with existing infrastructure and the ongoing monitoring of the National TB Programme has helped to ensure the compassionate use programme is appropriately resourced. The Ministry of Health continues to support the initiative as part of the National TB Programme's national policy framework for strengthening Armenia's response to MDR-TB and XDR-TB.

Outcomes

To date, 62 XDR-TB patients have accessed treatment through the initiative. Initial results are promising although most patients have not yet completed the full two-year treatment. The early six-month conversion rates (patients who are no longer positive for TB after six months of treatment) are above 80%, which is much higher than previously available treatments.[3]

Change management

Key actors

This initiative was introduced by MSF, drawing from their experience with compassionate use of medicines in high-income countries, but working closely with the Armenian government to tailor these experiences to the national context.

MSF guided the initiative's design but was "very well supported" by the Ministry of Health, the National TB Centre and other actors (Box 2). An external compassionate use committee with MSF representatives as well as external experts gave support to the drug-resistant TB committee in establishing protocols; WHO provided additional guidance and expertise. Contacts formed with the pharmaceutical company Janssen provided Bedaquiline for distribution to patients through the initiative.

Box 2

Who were the key actors and what were their defining roles?

- **MSF**. Long-term actor in MDR-TB interventions in Armenia; led development of compassionate use TB initiative; provided funding and resources for initiative; conducted provider trainings; continues to coordinate delivery of compassionate use initiative.
- **National TB Centre.** Subdivision of the Ministry of Health appointed to oversee TB control; responsible for setting TB policies and overseeing delivery of National TB Programme.

- **Drug-resistant TB committee.** Members include National TB Centre and MSF physicians; responsible for selecting patients for compassionate use treatment based on eligibility criteria and overseeing treatment.
- **Janssen**. Pharmaceutical company supplying Bedaquiline treatment; developed guidelines on eligibility criteria for compassionate use initiative; supplied drugs to eligible patients.
- **Local ethics committee**. Granted approval to allow compassionate use of TB drugs.
- **Ministry of Health**. Approved compassionate use of TB drugs and their importation through a humanitarian waiver.
- **MSF-PIH compassionate use committee**. Members include TB specialists from MSF, Partners in Health (PIH) and external experts; developed protocol for compassionate use TB initiative; oversee approval processes for potential compassionate use patients.

Initiating change

Patients' needs were "a key motivating factor" for the initiative. MSF had been working in Armenia on MDR-TB interventions since 2005 and had experience contending with the growing problem of drug-resistant TB. While new treatment options were in the pipeline, these were not yet approved for sale leaving XDR patients with no available treatment options.

These patients were otherwise dying; we needed to make these drugs available for compassionate use. The drugs were never going to be registered and cleared before it would be possible to treat patients today. So when waiting is not an option, we need to do something.

The idea of compassionate use drug programmes "is not so novel. The same has been done for HIV treatment. So already a lot of thinking has gone into the compassionate use of medicines." Prior experience in the compassionate use approach from other contexts allowed the initiative design process to move quickly, and facilitated an understanding of what resources were necessary for effective implementation. As the initiative aligned closely with existing national TB policies and programmes, patients' needs were "already well documented and understood" and the necessary monitoring and evaluation systems were in place.

Implementation

The initiative's implementation was coordinated by MSF but relied on the supporting TB systems already in place from the National TB Programme. Procurement of the first batch of Bedaquiline from the pharmaceutical company took several months but supply channels quickly became stable and streamlined for approved patients. The initiative is no longer required for Bedaquiline, as the drug is now available through routine use, however similar initiatives are now being used to give access to new drugs.

Moving forward

While the initiative remains supported by MSF, the Armenian government continues to increase their commitment to TB control. An extension to the National Response Plan to Combat Drug-Resistant TB 2013–2015 is being drawn up to provide future guidance on XDR-TB interventions. This plan is beginning to lay the groundwork for a more sustainable delivery model, including negotiations of low cost drug supplies from The Global Fund and working to establish a legal framework to allow for other compassionate use initiatives to be implemented in the future.

Highlights

- Prior experience of compassionate use initiatives in other contexts supported the initiative's effective implementation and provided an immediate solution to the lack of available treatment options.
- Donor support and a close partnership with the national government allowed for the removal of institutional barriers, including the lack of a legal framework.
- Closely aligning reforms with ongoing programmes reduced the investment needed in new infrastructure in addition to greater professional acceptance.

1 World Health Organization Regional Office for Europe. (2014). Armenia. Compassionate use of new drugs. In *Best practices in prevention, control and care for drug resistant tuberculosis*.
2 World Bank. (2014). *World Databank: World development indicators.*
3 Yeghiazaryan L. (2015). *Armenian experience on treatment of XDR and pre-XDR patients with new drugs under compassionate use program*. [PowerPoint slides]. Retrieved from http://www.tb-symposium.org/documents/en/presentations/Lusine_Yeghiazaryan_BDQ_practical_use_eng.pdf.

House of Generations: a one-stop shop for providing health and social services in Schwaz, Austria

Overview

In Austria, changing demographics over time have shifted towards an ageing population and narrowing family structure. As a result of these changes, the Municipality of Schwaz observed a growing need for social support, notably for vulnerable groups such as the elderly, people with mental disabilities and young families of low socioeconomic status.[1] However, assistance with daily living and support services were not readily available in the community and health and social services in the Municipality of Schwaz were fragmented, hindering their ability to meet increasing demands. In 2006, the mayor for the Municipality of Schwaz put priority to resolving growing disparities by proposing a new model for health

and social services targeting lower socioeconomic status individuals in greatest need. In 2007, the House of Generations was opened as a "one-stop shop" for social, health, municipal and community resources. Private apartments within the house provide assisted living arrangements for the elderly and affordable housing for young families. Communal areas offer a chance for residents to interact, fostering community spirit through regular events such as craft workshops, educational seminars and seasonal festivals. Residents have also formed their own self-organized "helping hands" service to support each other in day-to-day life, whereby individuals exchange services depending on their strengths and capacities; for example, an older resident helping

a working parent to take care of their children in exchange for meals. Several additional facilities are available at the House, including a village shop, which hires and trains people with mental disabilities as a means to support their independence and develop their skills within a protected environment. A new municipal afterschool day-care centre and senior centre were also built onsite, providing easy access to these services for residents and linking the House to the wider community. At present, the House of Generations continues to grow its community and offer social assistance services in Schwaz. While no official evaluation has been conducted, residents report high satisfaction with House services and an improved quality of life.

Problem definition

In the early 2000s, mirroring national trends, the Municipality of Schwaz observed ageing population trends coupled with a narrowing of family structures. In response to changing demographics, municipal health and social services became increasingly demanded, particularly by vulnerable populations such as the elderly, individuals with mental disabilities and families of lower socioeconomic status. However, the fragmented

organization of health and social services within the municipality, coupled with a lack of coordination between the various actors involved, hindered the system's ability to meet increasing demands and resulted in unmet health and social needs for vulnerable groups (Box 1).

Box 1
What problems did the initiative seek to address?

- Increasing demand for municipal health and social services linked to an ageing population with narrowing family structures.
- Increasing unmet health and social needs of vulnerable groups.

- Suboptimal organization of health and social services within the municipality causing fragmented services provision.

Health services delivery transformations

Timeline of transformations

During the early 2000s, municipal actors in Schwaz became aware of the need to strengthen social services provision for vulnerable populations. In response, the municipality worked in partnership with the nongovernmental organization (NGO) Caritas Tyrol to develop an idea for a new centralized, integrated facility to provide for local health and social care needs (Table 1). In 2007, after a one-year planning period, construction began on the "House of Generations". Two years later, in 2009, the House of Generations officially opened, welcoming its first occupants and beginning to offer services to the community. Since opening, there has been a gradual extension of services and activities offered through the House, which continues to expand today.

Description of transformations

Selecting services. The House of Generations provides assisted-living apartments for the elderly and housing for income-eligible young families. In addition, a number of social support services are available onsite for both House residents and the wider community. A village shop at the House supplies residents and the wider community with daily necessities. This shop also hires and trains employees with mental disabilities, helping develop their work-related skills in a supportive environment. A "living room" in the House of Generations is a registration-based service offered to elderly residents as a social space to interact and receive a midday meal. This service also offers activities such as access to mobile salon services and computer skills coaching. The living room further serves as a respite care facility for family caregivers and offers professional nursing and social care services. The municipal senior centre is also located onsite and provides a space for senior citizen associations and clubs to host events, bringing elderly people together for social interaction, lectures, music, exercise and games. An onsite municipal day-care centre provides afterschool care with a nutritious meal for children between the ages of six and 12 for a small fee. Part of the day-care centre also operates as a gymnastics room, which is open to the public in the mornings and is rented out for community sports activities available to all residents in the House and community.

Designing care. The House maintains rules for keeping a respectful, safe and harmonious living environment for all residents. Protocols and guidelines for providers remain under the regulatory direction of the regional government.

Organizing providers. Previously dispersed health and social service providers have been co-located in the House of Generations, including general practitioners and social workers. Each have offices on the premises and are connected to the House via service contracts. Co-location has improved communication, collaboration and coordination between groups. The manager for the House of Generations assists in the coordination of house services and activities by serving as a contact for both providers and residents. The House manager also motivates and mobilizes residents to participate in organized House activities, thus ensuring they are engaged with the services provided.

Managing services. Resources within the House of Generations include 19 assisted-living apartments, eight apartments for families and several communal facilities such as the day-care centre, senior centre, village shop, conference spaces and providers' offices. Working on a nonprofit principle, all financial gains are reinvested back into the House. The House is managed by a steering committee led by the Municipality of Schwaz and the Regional Government of Tyrol. Annual reports and regular meetings with all providers and municipal partners help ensure services continue to operate smoothly.

Improving performance. The initiative is monitored through an annual municipal report delivered to the steering committee and regular feedback surveys submitted to House residents. Information from these sources inform changes the following year. Residents are also free to contact the House manager with concerns, questions or requests as they arise.

Table 1
What were the chronological milestones for the initiative?

2006	Idea for House of Generations developed between Municipality of Schwaz and Caritas Tyrol in response to changing demographic pressures.
2007	Construction of the House of Generations begins.
2009	House of Generations officially opens and first tenants move in.
2010–present	Amenities available at the House of Generations gradually expanded.

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
House of Generations not in operation.	House of Generations offers a wide range of services including assisted living, affordable housing, day-care facilities, a senior centre, education sessions and social events.
Designing care	
House of Generations not in operation.	House rules require residents to maintain a respectful, safe and harmonious living environment.
Organizing providers	
Multiple actors providing health and social services through separate municipal agencies and NGOs; disconnect between providers due to separate offices and service contracts, limiting communication.	Co-location of providers at the House has increased coordination and communication; residents have easy access to onsite providers and some mobile services available; House manager helps link residents to providers as needed.
Managing services	
House of Generations not in operation.	House facilities include 19 assisted-living apartments, eight apartments for families and several communal facilities; steering committee led by the municipality manages the House, with day-to-day running overseen by the House manager; annual reports and regular meetings help ensure services operate smoothly.
Improving performance	
House of Generations not in operation.	Resident feedback surveys and annual municipal reports help improve service provision.

Engaging and empowering people, families and communities

The House of Generations' aims to develop a new, integrated home that spans generations, incomes and individual capabilities. In its very design, the House of Generations not only engages and empowers families and communities, but also sees them as the cornerstone of all activities. By accommodating its various residents under one roof, the House works to simulate an extended family within a constructed village-like environment. Through daily encounters, residents can learn from and support one another in day-to-day living. Through the creation of a friendly neighbourhood setting, the House promotes tolerance and understanding between generations and helps counteract social isolation and loneliness. Similar to a village, the House also engages with outside communities. Non-residents are able to benefit from services such as the municipal afterschool day-care centre, senior centre and village shop, as well as attend special events.

Health system enabling factors

The Austrian health system operates with a high degree of delegation to regional bodies, each of which is responsible for the overall planning, governance and financing of health and social services. The structure of regional funds give equal representation to health and social services, which is intended to increase cooperation between these sectors.[2] Municipalities in Austria are responsible for offering services such as care for children and seniors. As the House of Generations operates as a standalone service, formal policy changes outside the Municipality of Schwaz have not yet been required to support this new model of services delivery. However, municipal leadership for the initiative has been met with support and guidance from the Regional Government of Tyrol.

Outcomes

The House of Generations has become a vital meeting point and social interaction space for the

whole municipality. House residents and the wider community report satisfaction with services provided and a high quality of life. However, no official evaluation of the initiative has taken place to date.

Change management

Key actors
The open-mindedness of the mayor to take a new approach for the delivery of health and social services in Schwaz was a key driver of the initiative. Together with the NGO Caritas Tyrol, the municipal government defined the concept for the House of Generations and took action to realize its development (Box 2). Management of the House of Generations is overseen by a steering committee led by the Municipality of Schwaz, with strong support from the mayor and the Regional Government of Tyrol. Day-to-day running of the House is the responsibility of the House manager who acts as a point of contact for both providers and residents, helps develop a sense of community within the House and facilitates responsive services provision for House residents. Importantly, residents are also key actors in the initiative as the House relies heavily on their participation and involvement to function to its full potential.

Box 2
Who were the key actors and what were their defining roles?

- **Mayor and Municipal Government of Schwaz**. Led the push to restructure health and social services; co-financed the initiative along with regional government funds and private donations; continues to oversee running of the initiative through a steering committee for the House.
- **Caritas Tyrol**. Nongovernmental organization providing social services in the region; assisted in the initiative's design; provides health and social services within the House of Generations.
- **House of Generations manager**. Oversees day-to-day running of the House and resident services; focal contact for House residents and providers.

Initiating change
The necessity to reduce fragmentation of services, coupled with a need to update infrastructure for the afterschool day-care centre, led to a municipal-level meeting to discuss these issues. The idea for the House of Generations emerged from this meeting. Clear aims for the initiative were laid out and the adoption of a long-term approach at the local-government level enabled sustainable planning for proposed changes and created a clear framework for the initiative's design and management.

Implementation
The House of Generations was newly built, partly using an existing facility but making necessary architectural adaptations to fit the needs of the service. Successful running of the House relies largely on the cooperation and goodwill between House residents, supported by the House manager. Volunteers assist in providing certain services to residents.

Moving Forward
The House of Generations continues to foster a sense of community among its residents and work to provide them with services to support their overall health and wellbeing. The concept has also inspired other municipalities in Austria, Slovenia, Bavaria and Southern Tyrol to develop similar models.

Highlights
- Co-location of services increased coordination and improved access for vulnerable groups.
- Having a leader who was able to partner effectively with municipal and regional politicians and clearly communicate the idea behind the initiative was key to its successful development.
- Creating a sense of community through a shared living space, group activities and cooperative initiatives fostered a supportive and inclusive environment for vulnerable groups.
- Involvement from the community, both from House residents and the broader public, was necessary for the initiative to become a new hub for community services.

1 World Health Organization. (2015). *European health for all database*. Retrieved from http://data.euro.who.int/hfadb/
2 Hofmarcher, M., & Quentin, W. (2013). Austria: Health system review. *Health systems in transition. 15*(7): 1-291. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0017/233414/HiT-Austria.pdf?ua=1

Health services delivery reforms to improve health outcomes in Azerbaijan

Overview

Throughout the early 2000s, the largely vertical, disease-orientated arrangement of the health system in Azerbaijan posed a challenge to responding effectively to population health needs. Consequently, in 2006, a national health sector reform project was launched by the government in partnership with the World Bank, providing needed capital for systematic health services delivery reform. Under this project, the government developed a National Master Plan to guide reforms. Officially enacted in 2008, the Plan has served to guide capital investment in health infrastructure, the reorganization of health and human resources, the strengthening of the health information system and the development of a new national health insurance model. A basic package of health services – free at the point of use – has been defined and nearly 100 care guidelines developed to support services delivery. Primary health care has been strengthened by constructing primary care facilities and formalizing family medicine as a speciality; the number of primary care facilities has increased by 44% as a result.[1] The hospital system has been reformed; with hospital beds reduced by approximately 50% and underperforming hospitals closed, increasing hospital occupancy rates three-fold. Close attention was given to the development of the health information system. A national information centre was established to introduce e-health cards across the population. Several health registries have also been developed to support data collection for health system planning. The Ministry of Health has conducted several assessments examining population health outcomes and services delivered under the Plan, most significantly the demographic health survey and WHO STEPwise approach to surveillance (STEPS) assessment in 2011. Patient satisfaction with health services has also been assessed with surveys. As project funding came to a close in 2012, the Strategic Plan 2014–2020 was developed by the Ministry of Health to continue to build on health system improvements already achieved to further increase quality and accessibility of care and guide future reforms. New priorities include addressing noncommunicable disease, continuing work on maternal and child health, strengthening referral systems and improving monitoring and evaluation.

Problem definition

Between the mid-1990s and early 2000s, Azerbaijan observed fluctuations in basic population health outcomes. Life expectancy, for example, fell from 71.4 years in 1990 to 69.5 years in 1995; rising again by 2004 to 72.5, but remaining approximately two years below the WHO European Region average.[1,2] Challenges to optimally respond to population health pressures have largely been credited to the vertical, disease-orientated arrangement of the health system (Box 1). These system conditions resulted in weak gatekeeping mechanisms at the primary care level and the costly provision of largely reactive services concentrated in highly-specialized care settings. Moreover, due to limited capital resources within the health system, financial barriers limited patients' access to care and, for example, out-of-pocket payments in 2008 accounted for as much as 82% of total health expenditure. Furthermore, a generally low capacity for patient self-management, indicated by low patient compliance rates in treatment plans and inappropriate use of prescription medications, signalled limitations in services delivery to provide people-centred care.

Box 1
What problems did the initiative seek to address?

- Vertical, disease-orientated arrangement of health services delivery.
- Outdated health system infrastructure due to limited public investment.
- Inefficient use of health system resources and high out-of-pocket expenditures for patients.
- Inappropriate provision of care and weak gatekeeping at the primary level.
- Lack of patient inclusion in the care process and low population health literacy.

Health services delivery transformations

Timeline of transformations

In 2006, understanding that the current orientation and availability of health services were not meeting population needs, a health sector reform project was launched by the Government of Azerbaijan with the financial and technical support of the World Bank (Table 1). In 2008, after a two-year planning period, a comprehensive National Master Plan for health sector reform was adopted by the President and Cabinet of Ministers of Azerbaijan. Over the following four years, a number of actions were taken to realize the Plan's goals. World Bank funding for the project ended in 2012 and, while not all objectives had been realized, significant progress was achieved by this date. In 2014, the Ministry of Health launched the Strategic Plan 2014–2020 to build on improvements and guide future reforms in line with the national development concept – Azerbaijan 2020.

Description of transformations

Selecting services. The government has defined a basic package of health services to be delivered free at the point of use. Importantly,

Table 1
What were the chronological milestones for the initiative?

Early 2000s	Outdated health infrastructure and a vertical, disease-orientated health system posed challenges to the efficient delivery of comprehensive, people-centred health services.
2006	Funding approved by the World Bank for a health sector reform project in Azerbaijan; Government of Azerbaijan, along with project partners, begins development of the National Master Plan to outline project goals.
2008	National Master Plan adopted by President and Cabinet of Ministers; Plan implementation begins in five districts and is gradually expanded across the country; Health Worker Planning and Human Resources Strategy developed and ratified.
2009	Family medicine introduced as a medical specialization for physicians and nurses.
2010	National health information system established; e-health cards distributed to population; data collection to build national disease registries begins.
2012	World Bank project funding ends with the majority of planned activities completed; financial reforms envisioned under the National Master Plan incomplete.
Late 2012	National development concept (Azerbaijan 2020) approved to define major priorities across government sectors.
2014	Strategic Plan 2014–2020 developed by Ministry of Health to guide future health reforms in line with Azerbaijan 2020.

this includes an emphasis on strengthening the scope and role of primary care. The planned implementation of mandatory national health insurance is expected to further increase the availability of health promotion and disease prevention services.

Designing care. Almost 100 new protocols addressing priority diseases for Azerbaijan were developed by the Ministry of Health. According to the Order of the Ministry of Health (Pricaz), each of these protocols is under revision for updating.

Organizing providers. Significant reorganization of health providers to strengthen primary care and gatekeeping was carried out and efforts to improve referral systems were made. Primary care polyclinics and medical points have been established across the country to increase access to providers, particularly in rural areas. Family medicine was also established as a new role at the primary care level. While minimum staffing requirements have been set for each medical point based on demographic criteria, equity in geographic distribution of providers remains to be fully achieved, particularly for specialist providers.

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Limited health promotion; predominance of acute, disease-orientated services; most services have user charges at point of use.	Basic benefit package defined with services formally free at the point of use, however informal out-of-pocket payments remain high; planned implementation of national health insurance expected to increase health promotion and disease prevention services.
Designing care	
Guidelines and protocols for care outdated.	Updated clinical guidelines for over 90 diseases developed.
Organizing providers	
Shortage of primary care providers; providers concentrated in secondary care facilities as a result of the vertical, disease-orientated system; limited access to providers in rural areas; high levels of fragmentation across care levels and weak gatekeeping capacity of primary care.	Reorganization of providers to increase staffing in primary care facilities and improve access for rural areas; principles of family medicine introduced to primary care.
Managing services	
Most primary care facilities lack necessary equipment; many health facilities across care levels in need of modernization.	Primary care facilities constructed across the country, with special attention to rural areas; renovations carried out across facilities and underutilized hospitals closed; management over services still largely centralized, but expected to devolve pending introduction of mandatory health insurance.
Improving performance	
Set of national quality guidelines exists for health services.	Training on updated guidelines and protocols provided by the State Institute for Continuous Medical Education.

Managing services. Management over the health system remains centralized, with the Ministry of Health retaining responsibility for the implementation of government programmes and activities. Additionally, the Ministry has direct management over services in the capital, Baku. While devolution of responsibilities has not yet been achieved, it is expected that the introduction of mandatory national health insurance will lead to greater responsibility at the local level.[2]

Increased government health spending and World Bank funds supported capital investment in

health infrastructure to enable improved services delivery. Investments focused on increasing the number of adequately-equipped primary care facilities. Additionally, two district hospitals, four village hospitals, eight primary care facilities and one maternity hospital were constructed. Underutilized secondary facilities were closed or converted to primary clinics. Work on modernization and reconstruction of facilities has been continued by the government beyond the project with approximately 500 medical facilities being renovated or built, predominantly in rural areas.

Improving performance. The Azerbaijan State Institute for Continuous Medical Education is responsible for improving and updating health professionals' skills and competencies. Physicians are now required to pass a written and oral certification every five years. The Institute has also provided training for over 260 health professionals on updated protocols and clinical guidelines.

Engaging and empowering people, families and communities
Efforts to strengthen population health literacy and position patients to take a greater role in their care

are ongoing. In 2010, as part of the government programme Electronic Azerbaijan, e-health cards were introduced, with the aim of providing patients with access to their own health information. The Ministry of Health has also made information publicly available on their website concerning health services delivery, available benefits, health data and the newest developments in health policies. Public health campaigns are being led by the Centre for Public Health and Reform – the agency responsible for patient education – and include education on healthy lifestyle choices, chronic diseases and health risk factors. National surveys have also been conducted to identify unmet patient needs.

Health system enabling factors

Efforts have been made to enhance the Ministry of Health's ability to steer the health system by improving health information systems, establishing monitoring and evaluation mechanisms and strengthening quality assurance and accreditation systems (Table 3). Implementation of the National Master Plan project and the development of the Strategic Plan 2014–2020 have helped establish an institutional framework for services delivery reforms. These documents have served to guide efforts towards achieving goals and have demanded sufficient supervision over ongoing reforms.

A national information centre has been established to oversee health data collection and coordinate the flow of information between the Ministry of Health, Centre for Public Health and Reform and health providers. The introduction of e-health cards, as the start of a broader e-health strategy, is facilitating improved health data collection and monitoring moving forward. Additionally, a patient discharge form has been successfully introduced to allow

the government to track and compare health facilities in terms of quality and efficiency. Efforts to strengthen disease registries have been introduced to collect data on epidemiological trends, with registries helping to inform the future planning of human resources and capital investments. To help meet the minimum staffing requirements that have been set for primary care facilities and ensure providers are being trained with the necessary skills to work within the new system, departments of family medicine have been developed across all medical universities in the country. Financial reform within the health

system was also envisioned under the National Master Plan. In 2008, in an attempt to reduce high out-of-pocket expenditures, formal user charges were prohibited in public facilities. Furthermore, a detailed plan for the implementation of a mandatory national health insurance model was developed, although its implementation is still to be realized. It is hoped that once the new insurance model goes into effect, along with anticipated new payment mechanisms which incorporate payment-for-performance elements, health providers will be incentivized to deliver higher quality and more efficient care.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Ministries of Health and Finance responsible for health system planning. • National Master Plan officialized by President and Cabinet of Ministers in 2008. • Strategic Plan 2014–2020 adopted to build on National Master Plan and set priorities for future reforms.
Incentives	• Implementation of national health insurance planned; government will act as a single purchaser of health services. • Planned financial reforms include payment-for-performance elements.
Competencies	• Health Worker Planning and Human Resources Strategy developed. • New training programmes in family medicine established across medical universities.
Information	• National centre for health information oversees data collection and makes information available to relevant parties. • Data collection strengthened by the introduction of e-health cards for the population. • Patient discharge form introduced to allow government to track and compare performance of health facilities. • Disease registries strengthened to collect national-level data on priority diseases.

Outcomes

Investments in health infrastructure and technology are expected to increase the quality of services over the long term. However, reforms are an ongoing process and the improvements made require time to become observable. Notable outcomes as a result of the National Master Plan, as identified through an evaluation conducted by the World Bank, include increased access to primary care, improved delivery of care at the appropriate level and small improvements in out-of-pocket expenditures for patients (Box 2).

Box 2
What were the main outcomes of the initiative?

- Public health expenditures increased from 162 million Azerbaijani manats in 2005 to 609 million manats in 2012;[1] this amount further increased to 725 million manats in 2014.
- The number of primary care facilities increased from 543 to 782; the number of secondary care facilities decreased from 444 to 214.[1]
- The number of hospital beds decreased by approximately 50%; hospital occupancy rates increased three-fold to more optimal levels.[1]
- A slight decrease was observed in out-of-pocket expenditures as a result of free access to the essential package of health services; however, out-of-pocket payments remain high.

Change management

Key actors
The World Bank, along with international partners including WHO and USAID, worked closely with the Government of Azerbaijan to design the reform project (Box 3). Ensuring government ownership over reforms was important for securing continued political commitment to health, while collaboration with international agencies was essential for providing technical expertise. Implementation of the initiative was steered by the Ministry of Health, in partnership with the Ministry of Finance and international actors, with top-down leadership supporting the realization of far-reaching health system reforms. Since the project's completion, the Ministry of Health has continued to build on reforms achieved and guide further health system improvements.

Box 3
Who were the key actors and what were their defining roles?

- **Ministry of Health.** Worked with the World Bank, other government ministries and international agencies to develop the National Master Plan; strengthened stewardship capacities; continues to lead health system improvements under the Strategic Plan 2014–2020.
- **Ministry of Finance.** Controls health system funds; has significant control over health system planning.
- **World Bank.** Financed the health sector reform project in Azerbaijan; worked with the government to develop National Master Plan.

Initiating change
Coupled with growing recognition of the need to update and reform the health system in Azerbaijan in response to observed health challenges, in 2006 the appointment of a new Minister of Health created a window of opportunity for the World Bank to work with the Government of Azerbaijan on a project for health system reform. Funding from the World Bank made the required investment in infrastructure possible and, after two years of project planning, the National Master Plan was approved at the highest levels of government.

Implementation
Implementation of reforms was gradually phased-in after testing in five pilot districts; slow and stable implementation was required to harmonize with the cultural context. While physical infrastructure changes were implemented relatively easily, organizational and cultural changes were slower to develop and fragmentation across government ministries and care levels continues to exist. Furthermore, despite a detailed plan being developed and approved for the implementation of mandatory national health insurance under the project, execution of this has not been achieved to date.

Moving forward
There remains a need to ensure coordination between activities as "there are many different things happening in parallel, but there is no overarching strategy or vision guiding these initiatives." The Strategic Plan 2014–2020 has helped set the priorities for the health system moving forward, with the focus being on strengthening intersectoral collaboration, improving communication and orientating care to better address emerging noncommunicable disease challenges. The planned implementation of mandatory national health insurance is expected to drive health system improvements, control health care costs and support better population health outcomes.

Highlights

- A strong understanding of the historical political context and current environment proved important in determining an acceptable pace for proposed health reforms.
- Donor funding enabled investment in necessary health infrastructure with which to realize health system reforms.
- Top-down leadership from the Ministry of Health ensured national ownership over internationally-supported reforms; stewardship capacity of the Ministry was strengthened throughout the project.
- Investment in human resources, including formalizing medical training and developing new specializations in partnership with medical schools, was critical to driving sustainable reform.

1 World Bank. (2014). *Azerbaijan : Health Reform Project*. Washington, DC: World Bank
2 Ibrahimov, F., Ibrahimova, A., Kehler, J., & Richardson, E. (2010). Azerbaijan: *Health System Review. Health Systems in Transition.*
3 National Statistical Committee. (2015). Retrieved from www.stat.gov.az

Strengthening prenatal and obstetric care in Belarus

Box 1
What problems did the initiative seek to address?

- High maternal and infant mortality rates.
- Inadequate provision of prenatal care and low rates of attended births.
- Weak capacity for delivery of prenatal and obstetric services in appropriate care settings.
- Geographic disparities in access to prenatal and obstetric services.

Overview

High maternal mortality rates recorded throughout the 1990s and early 2000s in Belarus pushed maternal and child health up the government agenda and made addressing this issue the focus of several government programmes, namely the National Programme for Demographic Security 2006–2010. Studying mortality trends, the Ministry of Health identified a lack of prenatal screening and low rates of attended births as key contributors to these statistics. Government backing, evidenced by supportive legislation and allocation of necessary funding for activities, was a key enabler for changes in the delivery of prenatal and obstetric services. In response, new prenatal screening recommendations were developed, with providers receiving the necessary equipment and training to implement these. Pregnant women are financially incentivized to enrol in prenatal care early and follow recommendations issued by providers. Increased emphasis has been placed on care delivery in lower-level settings and home-care visits have also been made available. Resources have been redistributed between health facilities, with specialized equipment and providers pooled at higher levels of care. Additionally, Republican Scientific and Practical Centres have been introduced to lead highly-specialized care delivery for high-risk pregnancies. Over time, improvements in key indicators have been recorded, with reductions in infant mortality rates from 11.4 to 3.7 per 1000 births between 2000 and 2013.[1] Today, the infrastructure, regulations and incentives put in place continue to support improved maternal and child health outcomes.

Health services delivery transformations

Timeline of transformations

In the early 2000s, the Government of Belarus identified improving maternal and child health as a key priority (Table 1). Maternal and child health subsequently became a main focus for several government programmes, including the National Demographic Security Programme 2006–2010 and the Children of Belarus Programme. Guided by supportive government policy, legislation and incentives, changes in the organization of prenatal and obstetric services have supported improvements in maternal and child health outcomes which continue to be seen today.

Description of transformations

Selecting services. Basic prenatal services have been expanded to include a minimum of three prenatal screenings. Specialist services for high-risk pregnancies and births have also been widened to include services such as genetic diagnostics, surfactant therapy, mechanical lung ventilation and paediatric surgery.

Designing care. New regulations for the order and timing of prenatal screenings have been developed, with specific care pathways adapted based on screening results, pregnancy risk-level and individual needs. Additionally, clinical protocols

Problem definition

In 1991, levels of maternal mortality in Belarus, at 31 per 100 000 live births compared to a Regional average of 26 per 100 000 that same year, made improvement of maternal and child health a key priority for the Ministry of Health.[1] A lack of prenatal care and screenings, as well as low rates of attended births, were identified as root causes to observed problems (Box 1). Geographic disparities in access to prenatal and obstetric services were also observed. Capacity to provide adequate prenatal and obstetric services was weak across all care levels, hindered by a lack of necessary equipment and appropriate training.

Table 1
What were the chronological milestones for the initiative?

Early 2000s	High rates of maternal and infant mortality make matemal and child health a government priority.
2003	Preparation for health system reforms to improve maternal and child health begins.
2005	National Programme for Demographic Security 2006–2010 and Children of Belarus Programme launched; programmes focus on strengthening prenatal and obstetric care.
Present	Infrastructure, regulations and incentives put in place during the reform period continue to support improved maternal and child health outcomes.

outlining referral processes and specifying which services are to be provided at each level of care have been developed.

Organizing providers. Improved coordination and definition of referral protocols allows patients to receive necessary care in the most appropriate setting based on individual risks and needs. Delivery of prenatal and obstetric care is led by obstetricians and gynaecologists. Primary care staff, including district midwives and paediatric nurses, provide care support and serve as care coordinators across primary practices in each region, communicating with patients, sending appointment reminders and organizing transportation as needed.

Managing services. Funds provided by the Ministry of Health have allowed resource investments to be made across care levels, including equipping maternity centres with ultrasound machines to carry out prenatal screenings and providing vehicles to transport patients. Improving existing resource management has also been an important focus, with resources being reallocated between facilities to promote more equitable distribution and reduce geographic variability. Additionally, underutilized

maternity centres delivering less than 200 births were closed, with transportation networks to the closest facility established.

Improving performance. Providers received training in ultrasound diagnostic skills from the ultrasound equipment supplier to enable the provision of required screenings. Specialist trainings, for example on perinatal diagnosis and surfactant therapy, were conducted in European centres in Moscow. Additional provider trainings were offered using a cascade system, with higher-level specialists responsible for training lower-level providers.

Health system enabling factors

Strong government backing for the initiative created a supportive regulatory framework to guide changes in services delivery (Table 3). Laws enacted by the government require obstetric care to be provided free of charge to all women and dictate which services are to be provided at each level of care, ensuring continuity and efficient use of resources. While no financial incentives were incorporated for providers, financial incentives have been made available for maternity patients to encourage

early enrollment in prenatal care and increase adherence to pregnancy advice issued by providers. These financial incentives have appeared effective in generating desired participation from patients.

The Department of Human Resources under the Ministry of Health oversees continuous education for providers and helps coordinate trainings with foreign care partners. Providers are required to receive training through the Department every one to three years to ensure continued professional development. Additionally, Republican Scientific and Practical Centres have been established as highly-specialized care facilities in which providers can research and trial new technologies and procedures.

The National Statistics Committee conducts ongoing data collection and monitoring of the initiative, providing information to guide the Ministry of Health with health system planning. Reporting on maternity bed utilization and number of pregnancies, for example, helps the Ministry make evidence-based decisions about the reallocation of resources, redistribution of providers and other planning decisions. Reports produced by the Committee also allow progress in maternal and child health outcomes as a result of the initiative to be tracked. "It can be shown what was before the programme, how the programme has been implemented and what we got out at the end of the programme."

Outcomes

While transformations took time to deliver observable results, given the gradual introduction and long preparatory stage of the initiative, substantial improvements in maternal and child health have now been achieved (Box 2). Both maternal and infant mortality rates have seen significant reductions and access to care has reportedly increased.

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Maternity care included in the basic package of government-mandated free services; low rates of prenatal screening; specialized obstetric and neonatal care limited.	Minimum of three prenatal screenings offered; expansion of specialized obstetric and neonatal care.
Designing care	
No specified care pathways or guidelines for obstetric care.	Clear government guidelines and regulations define services to be provided at each care level and the order and timing of prenatal screenings; care pathways adaptable based on individual needs and risk level.
Organizing providers	
Concentration of providers in higher levels of care; geographic inequities in provider access; high rates of unsupervised pregnancies and unattended births.	Four-tier care system building on primary care established; obstetricians and gynaecologists lead prenatal and obstetric care delivery, supported by district midwives and nurses.
Managing services	
Lack of prenatal screening resources; inequitable distribution of available resources across facilities.	Investment in new equipment, including ultrasound machines; existing resources reallocated across facilities to even distribution; underutilized maternity facilities closed.
Improving performance	
Absence of training on conducting prenatal screening; lack of training opportunities for specialists.	Ad hoc trainings for using new ultrasound equipment led by the equipment supplier; specialists receive additional training abroad; specialists responsible for training lower-level providers in a cascade training model.

Table 3.

How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Provision of free prenatal and obstetric care according to guidelines is required by law.
Incentives	• Pregnant women receive financial incentives to enrol in prenatal services prior to the twelfth week of pregnancy.
Competencies	• Department of Human Resources for Health requires providers to complete continuing professional education every one to three years.
Information	• National Statistics Committee conducts ongoing data collection and monitoring to help inform evidence-based health system planning.
Innovation	• Republican Scientific and Practical Centres established to research and trial new technologies and procedures.

Box 2
What were the main outcomes of the initiative?

- Infant mortality fell from 11.4 to 3.5 per 1000 births between 2000 and 2013.[1]
- Maternal mortality fell from 32 to 1 per 100 000 births between 2000 and 2013.[1]
- Access and availability to health care is reported to have increased; 98% of women now receive standardized, free prenatal care.
- Approximately 350 women with high-risk pregnancies receive specialist care within Republican Scientific and Practical Centres annually.
- Monitoring of clinical practice shows improved adherence to care guidelines by providers.

Change management

Key actors
A strong government-led effort by the Ministry of Health through a top-down approach was the main driver of change. However, a number of government departments and national agencies played a key role in improving delivery of maternal and child health services (Box 3).

Box 3.
Who were the key actors and what were their defining roles?

- **Ministry of Health.** Identified maternal and child health as a priority area for improvement;

provided funding for initiative; developed regulatory framework and new guidelines to support improved care delivery.
- **National Statistics Committee.** Collects data to show impact of initiative; informs Ministry of Health on emerging health needs.
- **Department of Human Resources for Health.** Oversees provider training and continuous education.

Initiating change
In the early 2000s, government agencies were each tasked with identifying key problem areas. The resulting observation by the Ministry of Health regarding the high rates of maternal mortality led the government to prioritize maternal and child health and initiate the development of efforts to drive improvements.

Implementation
Regulatory frameworks designed by the Ministry of Health provided clear guidelines for professionals to follow. The commitment of specialists and providers to learn new techniques required under the initiative was essential in determining the effectiveness of practice. Close relationships with foreign care partners helped implement necessary trainings for providers. The National Statistics Committee collects and examines performance data, which is used by the Ministry to make adjustments to the initiative as needed.

Moving forward
The initiative continues to be actively implemented with continued investment in infrastructure and ongoing development of regulatory frameworks. The National Statistics Committee continues to track progress and maternal and infant mortality rates remain low at present.

Highlights

- Investigation into key challenges and a strong understanding of root causes ensured health reforms responded to observed needs.
- Broad services delivery reforms took time and a long-term vision was needed.
- Strong top-down support for change reinforced by legislation provided a guiding framework for transformations.
- Provider uptake and adherence to new guidelines were facilitated through provision of necessary trainings and equipment.
- Financial incentives helped encourage desired uptake and participation in prenatal care from women.

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1 World Health Organization. (2015). *European Health for All Database.* Retrieved from: http://data.euro.who.int/hfadb

Building community mental health services in North West Flanders, Belgium

Overview

In 2010, in response to persistently poor mental health outcomes and a largely institutionalized mental health service, the Belgian government encouraged a shift towards community mental health services by enacting supportive legislation, publishing new care guidelines and making funding available to encourage local mental health reforms. In line with these changes, the government issued an open call to fund pilot community mental health projects as a means to spur local innovation for improving the delivery of mental health services.

In 2011, the North West Flanders Mental Health Network submitted a proposal to the open call, which would establish multidisciplinary mobile teams to deliver mental health services in community settings. These mobile teams, consisting of a psychiatrist, a psychologist and a leading psychiatric nurse, have since been introduced in the region. Services offered by mobile teams aim to treat patients holistically by developing personalized care plans, collaborating with other providers and involving patients' informal networks. Patients are empowered to actively participate in their care and patient forums and support groups have been established. While no formal outcomes are currently available for the North West Flanders initiative, patient satisfaction with mental health services has reportedly improved.

The government continues to support local development of mental health services and, as of June 2012, approximately three quarters of the country had implemented experimental projects designed to improve the delivery of mental health services. An evaluation of these projects at the national level, including the North West Flanders initiative, is currently being led by Belgian universities. Government funding for projects is guaranteed until 2015 and government officials continue to monitor progress to help determine next steps.

Problem definition

Mental health conditions contribute significantly to the burden of disease in Belgium and one in four people are affected by a mental health disorder at some point during their lifetime (Box 1). Furthermore, the national rate of suicide and self-inflicted injury, at 17 per 100 000 population in 2010, was above the WHO European Regional average of 12 per 100 000 population.[1] A fragmented and largely institutionally-orientated mental health service has contributed in part to these outcomes and hindered population mental health needs from being met in community settings.[1,2] This is evidenced by Belgium recording one of the highest ratios of psychiatric beds per capita in the WHO European Region at 178 per 100 000 population in 2010 compared to a Regional average that same year of 68 per 100 000 population.[1] This emphasis on institutionalization is thought to negatively impact patients' independence and ability to integrate within their local communities.

Box 1
What problems did the initiative seek to address?

- High burden of disease from mental health conditions.
- Overly institutionalized service provision with a high ratio of psychiatric beds per capita.
- Lack of community mental health services.

Health services delivery transformations

Timeline of transformations
In the late 2000s, an international focus on mental health drew the attention of the Belgian government to Belgium's comparatively poor mental health indicators relative to other European Union countries. In response, in 2010, the government developed a mental health framework and launched an open call for project proposals in alignment with new recommendations (Table 1). Under this initiative, a group of mental health care organizations in North West Flanders submitted a joint project proposal to introduce community mental health services in their region through use of mobile mental health teams. In 2011, the project was approved by the government and awarded funding.

In addition to the North West Flanders initiative, the government continued to solicit and fund a variety of mental health projects across the country and, as of June 2012, approximately three quarters of Belgium was implementing pilot projects to improve the delivery of mental health services. Government funding for these projects is guaranteed until the end of 2015, at which time an evaluation planned by the government will determine whether they are allocated additional funds.

Description of transformations
Selecting services. The implementation of North West Flanders' community mental health service model has made both acute and chronic mental health services available locally. Mobile teams deliver a range of mental health services in home care settings.

Services provided go beyond mental health to incorporate social support services such as helping patients find employment. "It is the whole package of the person they treat,

not just the illness." These social support services help to further promote patient independence and, as patients are treated at home instead of in hospitals, they continue to manage daily activities. Patients "still have to cook and clean. … In a hospital they don't learn this."

Designing care. Care pathways are designed to meet overarching goals laid out by government guidelines. The North West Flanders Mental Health Network has also drawn on evidence from international models looking, for example, to the Netherlands and the United Kingdom. Mobile teams work with patients to develop personalized care plans and other providers are informed and involved in the care process.

Organizing providers. Multi-disciplinary mobile teams have been established to provide mental health services directly in the community and in patients' homes. Team members include nurses, social workers and ergotherapists. Teams are supervised by a psychiatrist a psychologist and a leading psychiatric nurse. General practitioners, are also informed and involved in care, with the initiative working to have mental health specialists support primary care providers to manage patients with mental health conditions.

Patients are referred to either acute or chronic mobile teams. Patients are referred to chronic mobile teams upon discharge from inpatient services. If a patient has a mental health crisis they can be followed more intensively by an acute mobile team for a short period of time to prevent the need for institutionalization. Primary care providers can also refer patients directly to acute mobile teams.

Managing services. A multi-disciplinary steering committee oversees the management of services under the project in North

Table 1
What were the chronological milestones for the initiative?

2008	WHO report Policies and Practices for Mental Health in Europe – Meeting the Challenges highlights shortcomings of mental health care in Belgium.
2009	Interministerial Belgian government conference held; Article 107 passed to allow psychiatric hospitals greater financial flexibility to fund community-based care.
January 2010	New policy guide with five key aims for mental health care published by the government.
2010	Open call for proposals aiming to improve mental health services delivery launched by the government.
October 2010	Group of mental health care organizations in the North West Flanders Mental Health Network put forward a joint proposal for increasing community mental health care in their region.
Early 2011	North West Flanders' proposal accepted by the government and granted funding.
June 2011	Actions begin on implementing mobile mental health teams within North West Flanders under the terms of the accepted proposal.
Late 2011	Second open call for proposals aiming to improve mental health services delivery launched by the government.
June 2012	Approximately 75% of Belgium involved in implementing community mental health projects.
2015	Funding for projects guaranteed until end of 2015; an evaluation of projects at this time will determine continuation of their funding.

West Flanders. Greater flexibility given to psychiatric hospitals in allocating their funds towards community care initiatives was key for securing a source of funding for mobile team services. Additionally, government funds were used to provide mobile teams with necessary resources such as a community office location and transportation to conduct home visits. "We needed to create another location, a building, because it would be strange if we are transferring care to the community to have our offices and our professionals working in a hospital."

Improving performance. Nurses working within mobile teams receive ad hoc trainings on a variety of mental health topics including alcohol addiction, addressing suicidal tendencies and determining suicide risk. Ad hoc trainings also cover skills such as working with family members and communicating with patients' children.

Engaging and empowering people, families and communities
Understanding that patients were heavily stigmatized for entering mental health institutions and that long institutionalized stays negatively impacted patients' independence and ability to reintegrate into society, the North West Flanders project aims to "keep people closer to their actual life" to enable them to "maintain their social roles". By shifting care closer to the individual, the project aims to make it easier for people to seek out care. "If we go closer to the people, more people will ask for help earlier in their illness before it is too late." Outreach is also carried out and efforts are made in the wider community to reduce stigma and build an environment that is more accepting of people with mental disorders. There are also plans underway for the creation of a mental health awareness day to increase understanding and acceptance for mental health conditions in the general population.
Patients are encouraged to connect

Table 2
How was the delivery of health services transformed through the North West Flanders initiative?

Before	After
Selecting services	
Predominance of medically focused, inpatient mental health services; community-based or home care services not available.	Community-based and home care mental health services available; social services incorporated in care for patients with mental health conditions.
Designing care	
Lack of up-to-date guidelines for provision of mental health services; patients not included in care planning processes.	New care pathways designed using updated government guidelines and evidence from international models; patients involved in developing personalized care plans.
Organizing providers	
Mental health providers concentrated in institutional settings; lack of community mental health providers; limited communication between disciplines and care levels.	Multidisciplinary mobile teams established; continuity of care established through referral to mobile teams; mobile teams collaborate with other providers, such as general practitioners.
Managing services	
All resources for mental health services directed towards institutionalized care.	A multidisciplinary steering committee oversees the mobile team project; portion of psychiatric hospitals' resources redirected to community care; government funding used to secure a community office location and purchase vehicles to facilitate home care visits.
Improving performance	
No training on provision of community-orientated mental health services.	Ad hoc trainings for nurses provided on a variety of community mental health topics.

with and provide support to one another. For example, the initiative established a patient forum and hosts recovery group meetings. "They learn from each other; some people are further on in the process and can be a good example for people who just started sharing their life story." Patients' families also now play a greater role and nurses in the mobile team have

received training on how to engage family members. Additionally, the steering committee for the North West Flanders Mental Health Network includes a family member representative. The long-term goal is to also recruit a patient to the steering committee. "Before, care was really focused on the opinion of just the care provider but now we want to combine the family and

patient perspective." Leaders of the project also held a feedback session with patients and their families about the programmes and care they would like to see implemented. The plan is to bring this feedback to the steering committee and use it to inform future activities.

Health system enabling factors

Government legislation has created a supportive policy environment for establishing local community mental health projects across the country (Table 3). This includes the passing of Article 107 to adjust financing laws for psychiatric hospitals to allow them greater flexibility in resource allocation. This law opened up new financing channels for community mental health projects by permitting psychiatric hospitals to shift a portion of their funding from inpatient to community services. The government's open call initiative for community mental health projects further incentivized local mental health networks to invest in mental health. Pilot projects selected by the government were given funding for three years to help offset start-up costs, which helped drive local networks to design and implement community mental health projects. While local networks were required to design projects which adhered to the basic guiding principles laid out in recently developed government guidelines for mental health services, there was considerable room for innovation at the local level and networks were free to experiment with different ways to achieve broad government-set goals.

Government officials monitor local networks and collect information on patients, performance and spending for funded projects. Monitoring is used to confirm that government funds are being used optimally and that projects are being carried out according to the proposals put forward. An independent evaluation of the national initiative, including

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Article 107 passed to allow psychiatric hospitals to redirect a portion of their funding towards community mental health. • Local mental health networks required to design initiatives in line with government guidelines. • Government officials oversee local projects receiving government funds to hold them accountable for implementing proposals as outlined.
Incentives	• Government funding awarded to local mental health networks for projects meeting government-set criteria.
Innovation	• Local mental health networks encouraged to innovate new strategies for improving mental health care. • Research on national mental health initiative being conducted by Belgian universities.

both qualitative and quantitative research, is being conducted by three Belgian universities to study the perspectives of patients, family members, mental health professionals and managers.

Outcomes

Outcomes of the initiative are "still unrolling" and an evaluation is currently underway. Key informants informally report observing improvements in satisfaction with services for both patients and mental health professionals.

Change management

Key actors

The government's role in the change process towards greater provision of community mental health services was critical to allow provider-led initiatives to thrive. The government issued the open call which stimulated local mental health networks to take action, government-set guidelines steered the direction of projects put

forward and ongoing monitoring of projects by government officials helped keep local projects on track.

Responding to the national government's open call for community mental health project proposals, two local psychiatric hospitals teamed up with other mental health care organizations and primary care services in the North West Flanders region to collaborate on a pitch to introduce mobile community mental health teams (Box 2). A multidisciplinary steering committee for the North West Flanders Mental Health Network oversees the community mental health project. The committee includes representatives from various mental health care organizations, primary care services and a patient family member. A steering committee coordinator is responsible for managing all the activities of the Network, facilitating the change process and connecting all organizations involved.
Box 2

Who were the key actors in the North West Flanders project and what were their defining roles?

Initiating change

- **Federal government**. Implemented legislation to support improvements in mental health care; awarded funding to project proposals meeting government-set criteria for mental health care.
- **Steering committee**. Manages the North West Flanders Mental Health Network and makes necessary strategic decisions for the community mental health project; a coordinator facilitates the group.
- **Psychiatric hospitals**. Reorganized mental health professionals to support community delivery of mental health services; shifted some resources from hospital to community care.

In the late 2000s, a focus on mental health in the European Union pushed the need to address observed shortcomings high on the government's agenda in Belgium. An interministerial meeting was convened to discuss potential improvement strategies. Rather than dictate changes and force implementation of the newly developed guidelines for mental health services, the government issued an open call for local project proposals. The open call stimulated the development of innovative projects with local ownership, one of which being the project put forward by the North West Flanders Mental Health Network.

Implementation

Implementation of activities is locally led by mental health networks according to the project proposals approved by the government. In the case of North West Flanders, implementation was overseen by the steering committee and network coordinator. When setting up the mobile teams, there was some concern among mental health professionals about their future role in a more community-orientated organization of services delivery. These concerns were eased by leaders taking the time to explain to providers that the initiative aimed to change where services were delivered and redefine, but not eliminate, their role. A uniting focus for professionals was their recognition that "it is sometimes better to keep people in their home". Initially, it was the younger professionals who joined mobile teams as they were "eager to learn new things". Some hospital providers were initially resistant to change, but working with the mobile teams on a regular basis has increased acceptance for the new organizational structure over time. "Some people are more conservative but there are some who are very eager."

Moving forward

Following recent government elections, meetings held with key political stakeholders indicate continued government support for community mental health projects. At present, funding for the North West Flanders project is guaranteed until the end of 2015, at which time the government will evaluate their progress.

Highlights

- Top-down support for bottom-up ideas ensured both the necessary resources and local ownership needed to optimize change.
- A supportive legislative framework provided a unified focus for local efforts to align with and helped develop a common vision for mental health services.
- The government created space for experimentation which motivated local projects and sparked grassroots innovation.
- The provision of community or home-based care supported greater consideration of patients' environments.

1   World Health Organization. (2015). *European Health for All Database*. Retrieved from http://data.who.int/hfadb
2   Nicaise, P., Dubois, V., & Lorant, V. (2014). Mental health care delivery system reform in Belgium: The challenge of achieving deinstitutionalization while addressing fragmental of care at the same time. *Health policy 115*: 120-127

Implementing early childhood development centres in Bosnia and Herzegovina

Overview

Throughout the 2000s, early childhood development services were suboptimal in Bosnia and Herzegovina, with 90% of children not enrolled in early childhood education.[1] Furthermore, children from Roma or low-income families and children with disabilities faced disadvantages compared to peers and experienced poorer health outcomes. In response to these challenges, select municipalities designed and implemented Integrated Early Childhood Development (IECD) Centres in cooperation with the United Nations Children's Fund (UNICEF) as a means to expand services relating to early childhood development. Services provided by IECD Centres include day-care for children, education and competency strengthening for pregnant women and caregivers relating to early childhood development, and referrals to additional services. IECD Centres employ a multidisciplinary staff and are typically co-located with other municipal services. Satellite IECD Centres and home-visit services aim to increase access for vulnerable and marginalized populations. Early user surveys conducted by UNICEF showed IECD Centres to be widely popular, with over 85% of respondents reporting satisfaction with available services. While IECD Centres are designed to assist all children, the greatest improvements have been observed for children with disabilities who now benefit from early detection, treatment and support made available through IECD Centres. At present, municipal governments continue to support and expand IECD Centres with assistance and oversight provided by UNICEF. Although initially established at the municipal level, success of IECD Centres has since gained national attention from the Government of Federation of Bosnia and Herzegovina and Government of Republic of Srpska who have each developed and adopted intersectoral policies on early childhood development to support the initiative.

Problem definition

Throughout the early 2000s, early childhood development indicators in Bosnia and Herzegovina reported unfavourable health and social outcomes (Box 1). For example, 90% of children were not enrolled in early education and 48% of infants were reported as iron deficient.[1] Vulnerable groups, including children from Roma or low-income families and children with disabilities, were found to be at greater risk of social exclusion and poor health. For example, while indicators showed a universally low rate for under-five childhood immunizations at 68% in 2004, immunization rates among Roma children were less than 5%.[2] Roma children were also at greater risk for growth stunting, which was reported to be 35% in 2010, compared to the national average of 10%.[3]

Box 1

What problems did the initiative seek to address?

- Low levels of early childhood education.
- Low levels of childhood immunization.
- Disparities in health and social indicators for vulnerable groups.

Health services delivery transformations

Timeline of transformations
As part of a wider initiative for the social protection of children in post-war Bosnia and Herzegovina, UNICEF began working with cantons and municipal governments in 2010 to establish Integrated Early Childhood Development (IECD) Centres. After successful piloting of Centres, UNICEF expanded the initiative to other municipalities and began gradually transitioning control over established Centres to municipal governments. Success of the model prompted national action to develop policies related to improving early childhood

development in the early 2010s and, at present, IECD Centres continue to be rolled out across the country in alignment with national policies.

Description of transformations

Selecting services. A range of early childhood development services are provided by IECD Centres which are open for drop-ins for 14 to 19 hours per day. Services complement and build on those already offered by health centres and social services to extend the continuum of care. Services offered by IECD Centres include prenatal guidance; caregiver education and competency strengthening; day-care and preschool services; detection of children at risk for developmental delays; and guidance, referrals and monitoring for families with specific social, psychological or economic needs. Services offered by IECD Centres are specifically targeted towards pregnant women, infants, children and caregivers of young children, particularly those within vulnerable populations such as Roma or low-income families or children with disabilities.

Designing care. Care pathways have been defined by international actors working on the initiative according to best available evidence. Services provided by the IECD Centres are freely accessible to the population who can choose to participate in care relevant to their needs at any time.

Organizing providers. IECD Centres are multidisciplinary and staff may include primary care providers specialized in maternal and child health and/or early childhood education, paediatricians, social workers, psychologists and nutritionists. Centres are located within other municipal buildings such as health centres, schools and community centres. As a result of sharing space with other municipal services, IECD providers are sometimes co-located with other professionals working with

similar populations, supporting interprofessional collaboration across sectors. For children identified as having needs that cannot be met within IECD Centres, IECD providers make referrals to external providers as necessary. To improve access for rural and Roma populations, satellite IECD Centres have been established and IECD providers also conduct home visits and outreach for these populations.

Managing services. IECD Centres operate from allocated spaces within existing municipal buildings. These are made available free of charge by municipal governments, avoiding the need for significant and costly investments in infrastructure. UNICEF supports the initial set-up, financing and management of IECD Centres in partnership with municipal governments. Following an introductory period of around six months, management of Centres then transitions to municipal governments who become accountable for implementing activities according to guidelines laid out in national strategic documents. Municipal governments, the Government of Federation of Bosnia and Herzegovina and the Government of Republic of Srpska continue to have reporting obligations to UNICEF, who provides ongoing support for IECD Centres. United Nations electronic database software (DevInfo) has been introduced to collect necessary information on a comprehensive range of development indicators, enabling monitoring and evaluation and supporting evidence-based policy making.

Improving performance. IECD providers have been trained to use new databases to enable monitoring and evaluation of the initiative. Additionally, ad hoc trainings are continuously offered to build professional competencies in delivering early childhood development services and increase awareness of women's and children's rights.

Engaging and empowering people, families and communities
As IECD Centres are located within municipal buildings, they are often in the heart of communities and are easily accessible by the population. However, outreach and satellite services targeted towards marginalized or vulnerable populations have been an important focus to ensure the engagement and uptake of services by those who need them most. IECD Centres aim to educate and empower pregnant women and caregivers of young children. Centres help to develop the knowledge of caregivers on topics such as early childhood development, nutrition, immunizations and children's rights. Centres also answer any questions pregnant women or caregivers may have, providing this population with easy access to important information. Users have commented that IECD Centres allow them to ask questions that other primary care providers do not have sufficient time to answer. Children are also directly engaged by the initiative via the provision of day-care services which provide a safe learning environment in which children can play and develop social skills.

Health system enabling factors

In response to early successes of the initiative observed at the municipal level, a number of national-level policies have been put in place to support further improvements in early childhood development across Bosnia and Herzegovina. In the Republic of Srpska, the government adopted the first Policy for Improving Early Childhood Development 2011–2016 with the goal of ensuring optimal conditions for healthy early childhood development for all children. The Policy was developed through coordinated efforts across ministries and has been implemented across different projects and programmes. In the Federation of Bosnia and

Table 1
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Absence of day-care services; services available unable to meet the complete range of needs for children and their caregivers.	IECD Centres offer a range of services designed to engage, empower and educate pregnant women, caregivers and children; day-care services available at Centres; referrals and specialized care available for children with disabilities.
Designing care	
No guidelines for delivery of early childhood development services.	Evidence-based care pathways designed by international actors for delivery of services within IECD Centres.
Organizing providers	
Providers concentrated in secondary settings; coordination between providers in delivery of child services is limited; barriers to accessing care exist for vulnerable populations.	Multidisciplinary provider teams work collaboratively within primary-level IECD Centres; IECD Centres are co-located with other municipal services allowing for cross-sector collaboration; IECD providers make referrals to other services as necessary; satellite IECD Centres and home visits help reduce access barriers for vulnerable populations.
Managing services	
Lack of day-care or preschool centres; no dedicated resources for early childhood development.	IECD Centres managed by municipal governments; international funding supports the initial costs and running of centres, as well as the introduction of electronic information systems.
Improving performance	
Absence of professional trainings relating to early childhood development and children's rights.	Ad hoc trainings relating to early childhood development provided on a continuous basis to IECD providers; IECD providers trained to use new data collection systems.

Herzegovina, the Framework Policy for Early Childhood Development of Bosnia and Herzegovina, adopted by the Council of Ministers in 2012, was developed to encourage action at the local level to improve children's environment, highlighting IECD Centres as a means to achieve this goal. The Strategic Plan for Improving Early Childhood Development in the Federation of Bosnia and Herzegovina furthered the Framework Policy and defined concrete actions and goals to be achieved by 2017. The Strategic Plan was developed with intersectoral cooperation across ministries, in collaboration with the Public Health Institute, external experts and UNICEF.

Outcomes

Many children across Bosnia and Herzegovina now benefit from early education and development services through IECD Centres. A user satisfaction survey has provided insight into participants' views on Centres and a number of other positive outcomes have been reported as a result of the initiative (Box 2).

Box 2
What were the main outcomes of the initiative?

- A user satisfaction survey revealed the majority of respondents were satisfied with IECD Centre services (89%) and felt that services met urgent needs for both the wider community and those most in need (85%).[3]
- Almost two thirds of respondents (64%) reported weekly use of IECD Centre services.

- More than 1400 parents and children were enrolled in the initial four IECD Centres set up; 25% of children enrolled were identified as being at risk for developmental delay or disability.[1]
- Municipal governments and IECD Centre staff report that the greatest observed benefits have been in the area of early detection and intervention for children with disabilities.

Change management
Key actors
Partnerships between international and government actors have been the driving force behind the initiative (Box 3). UNICEF led the design of the initiative, developing the model in partnership with motivated municipal governments wishing to pilot IECD Centres. While UNICEF has led the establishment of IECD Centres, many municipalities have now assumed responsibility for managing Centres to become self-sustaining. More recently, cross-sector government policies at the national level have been developed in both the Federation of Bosnia and Herzegovina and Republic of Srpska to support the initiative, reflecting a strong recognition of the need for coordinated efforts across sectors to achieve desired improvements in early childhood development.

Box 3
Who were the key actors and what were their defining roles?

- **UNICEF**. Conducted situational analysis and designed IECD Centre model; provided initial funding and technical expertise for the establishment of IECD Centres; provides ongoing oversight for the development of IECD Centres across the country.
- **Municipal governments**. Assist in the establishment of IECD Centres; provide necessary municipal building space for Centres; incorporate Centres into municipal budgets and operations.
- **Governments of Federation of Bosnia and Herzegovina and Republic of Srpska**. Developed policies and frameworks relating to improving early childhood development.

Initiating change
Change was led by UNICEF in response to observed needs in a post-war Bosnia and Herzegovina – as evidenced by a situational analysis conducted prior to the initiative – with the view of making progress towards the Millennium Development Goals. Within a wider European Union-funded framework for promoting social protection and inclusion for children, the IECD initiative was developed in partnership with municipal governments motivated to pilot the programme.

Implementation
Memorandums of understanding were signed with municipal authorities to ensure local ownership over IECD Centres and promote their future sustainability independent from UNICEF funds. Other stakeholders, such as health centres and local schools, were involved with implementing Centres to ensure cooperative working across sectors. IECD Centres rely on professional enthusiasm, goodwill and personal interest in increasing child development outcomes to facilitate operations as no incentives have been incorporated for providers external to the Centres.

Moving forward
UNICEF's Country Programme is due to run until 2019, ensuring a continued effort towards developing the IECD Centre model across Bosnia and Herzegovina over coming years. Many municipalities operating IECD Centres have already successfully become independent from external funding and are now financed solely through municipal budgets, indicating the capacity of the IECD model to become sustainable with continued municipal support.

Highlights
- A situational analysis supported sharpening of priorities and development of practical solutions.
- Longstanding partnerships between government actors and development agencies supported gradual capacity-building at the subnational level to enable local uptake of new roles and responsibilities relating to early childhood development.
- Aligning national policy with municipal action encouraged widespread adoption of changes, increasing consistency in approaches and securing sustainability of local efforts.

1   United Nations Children's Fund. (2013). Bosnia and Herzegovina: Early Childhood. Retrieved from http://www.unicef.org/bih/children_17680.html
2   United Nations Children's Fund. (2014). Bosnia and Herzegovina: Country Programme Document 2015-2019 (a (E/ICEF/2014/P/L.12).
3   World Health Organization. (2015). *European Health for All Database*. Retrieved from http://data.euro.who.int/hfadb/

Developing home care services in Bulgaria

Overview

Observing an increasing demand to better manage the complex and continuous health care needs of the elderly population in Bulgaria, this initiative has sought to introduce the concept of home care services to the Bulgarian health system. Working in partnership with the Swiss Red Cross and the nonprofit home care organization Spitex, home care services have been designed and adapted from international models for application in the Bulgarian context. In 2013, the first Bulgarian home care centre opened and began offering services to its local elderly population; 11 additional centres have since opened and are providing home care services across the country. The centres employ nurses and home helpers; both are required to complete a nationally licensed training upon hire. Centre employees work as a team to provide services, with nurses leading patient care in a coordinating role. Home helpers assist patients with daily tasks including managing personal hygiene, preparing meals and cleaning the home. Nurses provide services such as blood pressure monitoring, heart checks, bandage changes, wound care and other primary care services. As home care centres continue to rely on donor funding, the Bulgarian Red Cross is currently working with the government to develop a sustainable financial model for delivery. In 2012, a common project between the Bulgarian Red Cross, government ministries and other stakeholders was started. Currently in the final stages, this project is working to establish the necessary political, legal and financial frameworks to fully integrate home care services into the health system, establishing the building blocks for future sustainability.

Problem definition

Bulgaria is faced with an ageing population; in 2011 nearly a fifth of the population was over the age of 65 years.[1] This trend has shown a steady increase over time, up from 13% in 1990.[1] The ageing population has paralleled a rise in chronic morbidities, comorbidities and disabilities. For example, rates of type 2 diabetes among those over 70 years of age increased from 147 per 100 000 population in 2005 to 154 per 100 000 in 2010.[2]

In this context, the existing health care system has faced difficulties in providing the necessary continuity of care called for. Unmet care needs within the elderly population, resulting from a narrow scope of services and the exclusion of supportive social services, became increasingly evident. Additionally, this demographic faced varied mobility challenges in reaching providers, ultimately undermining their access to necessary services.

Health services delivery transformations

Timeline of transformations

In response to the problems described, an integrated model for providing health and social care services to elderly patients in their homes was proposed. In the early 2000s, the Bulgarian Red Cross initiated development of a home care model for the Bulgarian context and gradually, home care services have been introduced across the country.

In 2012, in response to increasing national pressure to accommodate the future health needs of the ageing population, coupled with the success and continued expansion of the home care model, the Bulgarian government prioritized the formalization of this effort through a collaborative project with the Bulgarian Red Cross.

A number of actions to support the formalization of home care services have been taken and the government's priority to develop a fully embedded and sustainable home care service model has been detailed in policy documents.

Description of transformations

Selecting services. Home care services are now available to the elderly population, responding to a number of their health and

Table 1
What were the chronological milestones for the initiative?

2003	Set-up of first home care centre to coordinate delivery of home care services led by the Bulgarian Red Cross in response to changing population needs.
2005–2006	Launch of five additional home care centres in different regions across the country; standard quality criteria developed for the service.
2010	Two additional home care centres opened.
Early 2012	Common project between the Bulgarian Red Cross, Ministry of Health, Ministry of Labour and Social Policy and Swiss Red Cross launched to formalize the home care model.
Late 2012	Four additional home care centres opened.
June 2013	Study conducted on the specific home care needs of the Roma population; members of the Roma community recruited by home care centres.
2014	Government approves National Strategy on Long-term Care and the National Health Strategy 2014–2020, formalizing its priority for an integrated approach to home care.
2014–2015	Project for determining cost-effectiveness and cost pricing for home care services is organized.
Present	Common project continues to be implemented; drafted legislation is awaiting finalization.

social needs. This includes basic medical services such as blood pressure measurements and blood glucose checks, wound care and heart monitoring. Additionally, home helpers provide services such as assisting with personal hygiene, cleaning and household chores, grocery shopping and meal preparation, paying bills and other similar activities.

Designing care. A needs assessment is conducted for each patient upon enrolling for home care services to ensure care plans are adapted to individuals' needs. Services are provided in patients' homes in strict observance of quality criteria developed by the

Bulgarian Red Cross based on the Swiss Spitex home care model and early operational experience of implementing the programme in Bulgaria. National standards and protocols are being developed.

Organizing providers. Home care centres are staffed by specially trained nurses and home helpers, which are both new provider positions in the Bulgarian context. The initiative has expanded the scope of practice for nurses who have assumed the primary responsibility for delivering home care services and supervising home helpers.

Managing services. Home care centres are overseen by the Bulgarian Red Cross. Nurses and home helpers are employed by the organization and are trained through a partnership with lecturers at the medical university in Sofia. Activities are carried out with donor funding support from a variety of organizations including the German, Italian and Swiss Red Cross, UniCredit Foundation, European Union funds and the Swiss Agency for Development and Cooperation.

Improving performance. All nurses and home helpers employed by home care centres are required to undergo an initial training on providing health and social services in home settings. Home helpers are expected to complete 120 classes and nurses 160 classes. The training for nurses includes additional specialized topics unique to their role such as performing needs assessments, developing care plans and supervising home helpers.

Engaging and empowering people, families and communities
An important aspect of the activities of home care centres is their support of patients' capacity for self-care and independence. Nurses provide training to patients and their relatives with the objective of strengthening patients' ability for self-care and increasing personal motivation to invest in health. In order to provide equitable, patient-centred care, approximately 25% of home care centre staff are from the Roma population, which allows for more tailored, peer-led services for this at-risk population group.

Health system enabling factors
The introduction of home care services in Bulgaria has challenged existing laws that prohibit payment for the provision of nurse-led services in homes and require nurses to be supervised by a physician. Adjusting the institutional context

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Home care services not available.	Home care services have been established; nurses provide a range of primary care services; home helpers provide social support such as cleaning, preparing meals and helping with other daily tasks.
Designing care	
No guidelines or protocols for delivery of home care.	Quality criteria for services delivery developed based on international models and early operational experience; needs assessment conducted to develop a personalized care plan for each patient upon entry into the programme.
Organizing providers	
No providers offer home care services; concentration of providers in secondary and tertiary care levels; nurses are prohibited from practicing autonomously and must be supervised by physicians.	Home care centres employ nurses and home helpers to deliver care in patients' homes; nurses work autonomously to deliver care in patients' homes and supervise home helpers.
Managing services	
No resources for delivery of home care services; no actors in home care.	Bulgarian Red Cross established 12 home care centres and employs nurses and home helpers within these; donor funding supports activities.
Improving performance	
No training on providing home care available.	Bulgarian Red Cross requires all nurses and home helpers to complete a training course on providing health and social services in home settings; home helpers complete 120 classes and nurses complete 160.

for the widespread availability of home care services has been put to the health system which is now in the process of reforming legislation to allow autonomous, nurse-led services. While this process has not yet been completed, an important milestone was achieved at the end of 2015, when an amendment was made to the Health Act allowing for the integrated provision of health and social services.

Trainings provided by the Bulgarian Red Cross for home care centre staff have been devised in line with European requirements and are licensed by the National Agency for Professional Education and Training. The Bulgarian Red Cross is working

with the Ministry of Labour and Social Policy to develop national level training for social assistants and home helpers engaged in the provision of social services in home settings. The objective is to formally recognize this role within the health system and introduce a standardized training and certification programme for these professionals.

Multi-actor and cross-sector partnerships have supported the development of unified national quality standards for health and social services provided in home settings. Software to standardize data collection has been developed with the support of universities in Sofia. First introduced in 2013, data

collected through the new software programme has informed research examining, for example, the cost of delivering home care services and how to improve access for underserved population groups.

While significant steps have already been taken to reorientate the health system to support the delivery of home care services (Table 3), until legislation is formally adopted oversight for home care services remains the responsibility of the Bulgarian Red Cross.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Bulgarian Red Cross currently responsible for oversight of home care centres. • Amendment to the Health Act allows the integrated provision of health and social services. • Common project between the Bulgarian Red Cross and government ministries is working to establish the legal and financial framework for the sustainable, integrated provision of home care. • Recent government documents supported the continued development of home care within the health system.
Competencies	• Training provided by Bulgarian Red Cross for home care centre staff certified by the National Agency for Professional Education and Training. • Bulgarian Red Cross working to build on the existing social assistant profession with additional competencies in home care; drafted proposal currently awaiting government approval.
Information	• Data collection recently introduced; data gathered will serve as the basis for cost pricing of home care services and other research agendas.
Innovation	• Software programme developed by technical universities in partnership with the Bulgarian Red Cross to enable necessary data collection.

Box 2
What were the main outcomes of the initiative?

- Integrated health and social services in the community are recognized for the first time in Bulgaria and are included as a priority in government policy documents.
- Twelve home care centres have been established across the country, providing services to over 800 patients.
- Patients are provided with necessary care in the comfort of their own home.

Outcomes

While data on outcomes are not yet available for the initiative, a number of qualitative indicators can be observed (Box 2). As a result of the initiative, elderly patients now have increased access to primary care services delivered conveniently in their own homes.

Change management

Key actors

The introduction of home care services benefited from the engagement of multiple actors working across sectors (Box 3). Strong leadership from the Bulgarian Red Cross, in partnership with international organizations such as the Swiss Red Cross and Spitex,

propelled the initiative forward. The later partnership formed with the government and subsequent stewardship of the Ministry of Health is currently serving to develop system conditions required to take the initiative forward and fully integrate home care services within the health system.

Box 3
Who were the key actors and what were their defining roles?

- **Bulgarian Red Cross**. Led the initiative to deliver the first home care services in Bulgaria; oversees running of home care centres; coordinates training for home care centre staff; collaborates with government on a common project to formally embed home care within the health system.
- **Swiss Red Cross**. Supported the initial development of a home care model in Bulgaria and provided technical assistance in setting up the initiative; collaborates on the common project.
- **Spitex**. Swiss nonprofit organization specializing in home care; lent technical assistance at start of initiative; Bulgarian home care centres based on its care model.
- **Ministry of Health and Ministry of Labour and Social Policy**. Working with the Bulgarian Red Cross on the common project to develop policies and legislation that will allow the integration of home care.

Initiating change

Inspired to address gaps in services delivery for elderly patients, the Bulgarian Red Cross initiated development of a home care model for Bulgaria despite the concept of home care being nonexistent in the country. Financial and technical input from the Swiss Red Cross and

Spitex helped kick-start the initiative. The Spitex model provided the necessary starting platform to inform programme design, which was then adapted to suit the Bulgarian context.

Implementation
Several different Red Cross agencies, nonprofit organizations and other groups assisted in the implementation of the initiative. Financial and technical support was provided by the German and Italian Red Cross for the running of five home care centres. UniCredit Foundation assisted with running a further two centres. Several different stakeholder groups, including Caritas Bulgaria (a social work nonprofit), the Bulgarian Association of Professionals in Nursing Care and the Bulgarian Association for the Protection of Patients helped build community awareness of activities and support the services offered by home care centres. Leaders do, however, note that additional awareness raising among general practitioners, municipal authorities and hospitals, among others groups, is still needed to fully meet patients' needs.

There was originally a lack of trust from patients and their relatives as home care was a foreign concept for Bulgarians. It took initiative leaders several months to explain to communities what the initiative was trying to achieve. In most cases, trust and understanding were built gradually through the consistent provision of high-quality home care services, which enabled patients and communities to see and experience the benefits of such a service for themselves. Gradually, the regular provision of home care services contributed to the popularization of this type of service among patients and communities.

Moving forward
The Bulgarian Red Cross is working with the government and other expert stakeholder groups to finalize the development of a political, legal and financial framework to support the full integration of home care services delivery in the health system. Once accomplished, this will ensure sustainability and allow standardized, high-quality care to be provided to elderly patients in home settings across Bulgaria.

Highlights
- Faced with an ageing population and increasing chronicity, introduction of home care services was proposed as a patient-orientated approach for ensuring appropriate service provision close to home.
- A pilot approach allowed the gradual rollout and testing of an adapted model in the Bulgarian context, maturing processes and building trust both among providers and the population.
- Efforts to adapt services delivery included new roles and responsibilities for the health workforce and the development of supporting information and communication resources.
- Establishing the necessary system conditions, including the development of a supportive legal framework, continues to be integral for advancing the sustainability and scale of transformations.

1 WHO Regional Office for Europe. (2014). *European Health for All Database.* Retrieved from http://data.euro.who.int/hfadb/
2 Institute for Health Metrics and Evaluation. (2014). *Global Burden of Disease Cause Patterns*. Retrieved from http://vizhub.healthdata.org/gbd-compare/arrow

Development of an integrated e-health system in Croatia

Overview

In the mid-1990s, health outcomes in Croatia were below average for the European Union, reporting unfavourable trends towards a growing burden of chronic disease. Trends were partly attributed to suboptimal accountability arrangements, resulting in disparities in access, quality and efficiency of health services. Furthermore, misaligned payment incentives contributed to the overprovision of services in secondary and tertiary settings, to the disadvantage of delivering effective health promotion and disease prevention services. In response to this context, strengthening information flows for services and managerial data became a national priority. In the early 2000s, the government initiated the development of an electronic Central Health Information System (CEZIH) to connect stakeholders and provide real-time data on patients and providers. In 2007, CEZIH was first introduced and was expanded in 2009. Management and regulation of CEZIH is the responsibility of the Health Insurance Fund, under direction of the Ministry of Health. All general practitioners are currently connected to the system, with expansion to integrate other professionals underway. Numerous technological applications have been developed within CEZIH to improve efficiency, such as e-prescriptions, e-referrals and e-waiting lists. An e-citizens portal allows patients to interact with CEZIH and an additional portal for providers offers professional development and networking opportunities. Facilitated by CEZIH, in 2013, a new payment model for primary care providers was introduced to incentivize quality and efficiency improvements, promote the reorganization of providers into group practices, encourage the delivery of care in primary settings and increase health promotion and disease prevention services. Efforts are currently underway to strengthen data collection on performance to improve monitoring. At present, significant progress has been made towards achieving the government's vision of an open, connected and interactive e-health system. The development and expansion of e-health continues to be a priority for the Ministry of Health as detailed in the National Health Care Strategy 2012–2020.

Problem definition

Contending with many of the same challenges as other European countries, Croatia faces an increasing burden of chronic disease and an ageing population. Contributing to this burden is an elevated level of lifestyle-related risk factors, such as smoking, obesity and the overconsumption of alcohol.[1,2] While formally health services are available to the population through national health insurance, in practice disparities in access and a lack of quality improvement mechanisms limit the ability of some populations to take full advantage of the services provided. Furthermore, misaligned incentives and a lack of financial transparency had concentrated services delivery in higher-level settings, limiting the ability of the health system to meet changing population health needs (Box 1).

Box 1
What problems did the initiative seek to address?

- Rising burden of chronic disease.
- Lack of standardization in care quality and disparities in access to health services.
- Concentration of care in higher-level settings.
- Inefficiencies in services delivery resulting from misaligned incentives and lack of monitoring.

Health services delivery transformations

Timeline of transformations
In the early 2000s, the Croatian government initiated the development of an open, connected and interactive e-health system as a means to address inefficiencies in services delivery (Table 1). In 2007, after several years of development, the Central Health Information System (CEZIH) was officially launched, connecting all 2300 general practice offices across the country and registering over 4 million patients. In 2009, CEZIH was expanded to incorporate a wider range of health care providers and various applications have been progressively added to CEZIH since its launch. Further development of e-health continues to be a government priority and expansion of CEZIH is planned.

Table 1
What were the chronological milestones for the initiative?

Early 2000s	Government initiates development of CEZIH in response to observed challenges in services delivery.
2007	Official launch of CEZIH; all 2300 general practice offices connected to the system.
2009	Upgrade of CEZIH; outpatient specialists, pharmacies and primary care laboratories integrated into the system.
2011	Rollout of e-referral and e-prescription applications.
2012	National Health Care Strategy 2012–2020 prioritizes development of e-health.
2013	Rollout of e-ordering and e-proposal applications; new model of remuneration for providers linked to performance data collected through CEZIH introduced; National Health Measures Programme launched to strengthen data collection.
2014	Launch of e-citizens portal; Ministry of Health's Strategic Plan 2014–2016 prioritizes development of e-health.[3]
2015	Piloting of electronic health records begins; national rollout anticipated in 2016.
Present	Continued development of e-health; integration of hospitals into CEZIH underway.

Description of transformations
Selecting services. Patients are provided with a comprehensive package of services covered under national health insurance. The initiative has emphasized the delivery of health promotion, disease prevention and disease management services to help promote healthier behaviours in the population and tackle upstream determinants of chronic disease. Further, some telemedicine services are now offered, such as cardiology and neurological check-ups, counselling and self-care supervision.

Designing care. Chronic disease management platforms integrated in CEZIH automatically prompt general practitioners to document key medical indicators. Updated evidence-based guidelines,

protocols and care pathways for each medical specialty are being developed through the National Health Measures Programme.

Organizing providers. All 2300 general practice offices, as well as over 2500 primary care offices, 1100 pharmacists, 100 primary care diagnostic labs and 800 outpatient specialists are now connected through CEZIH, allowing for greater coordination among providers and improved continuity of care;[4] integration of hospital providers into CEZIH is currently underway. The e-referral application further supports continuity by streamlining referral processes and certain CEZIH applications, such as e-waiting lists and e-ordering (appointment booking), have made booking appointments easier. Use of

technology for referrals has helped reinforce the status of general practitioners as system gatekeepers. Primary care providers have also been encouraged to self-organize into group practices, with the majority now working in this way.

Managing services. The newly created information technology department within the Health Insurance Fund is responsible for the management and regulation of CEZIH. Software is procured nationally and is given to all contracted providers. CEZIH identification cards are also provided to all employees within registered facilities. However, individual facilities are responsible for maintaining the necessary technological infrastructure to operate CEZIH software.

Improving performance. Ad hoc trainings have been offered to providers to equip them with the necessary skills to navigate CEZIH and take advantage of newly introduced technologies. A provider portal, known as ISL, creates opportunities for professional networking and makes educational materials available to providers. This programme enables providers to stay informed on the latest information in their field and develop professionally.

Engaging and empowering people, families and communities
The underlying vision behind the government's e-health strategy is to transition towards an advanced generation of user-centric and interactive health services. Many system applications, such as e-prescriptions and e-referrals, have been designed to improve and simplify care for patients, making services more accessible and convenient. The e-citizens portal enables patients to access their personal health information and receive health messages. The goal by 2020 is to interactively connect all patients to CEZIH through the portal to engage them as active participants in their care.

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Comprehensive package of services covered by national health insurance, but lack of transparency causes service variability; weak provision of health promotion, disease prevention and primary care services.	Increased standardization of services covered by national health insurance; increased focus on health promotion, disease prevention and primary care services; telemedicine services introduced.
Designing care	
Care guidelines too vague, outdated or impractical.	Care guidelines currently being updated; chronic disease digital-monitoring platforms guide chronic disease management.
Organizing providers	
Concentration of providers in secondary or tertiary settings; primary care providers typically work in independent practices; communication and coordination between providers weak; waiting lists for appointments long.	Gatekeeping role of primary care providers strengthened; 65% of general practitioners organized in group practices; primary care professionals and outpatient specialists connected via CEZIH; e-referrals help increase continuity of care; e-waiting lists and e-ordering help decrease waiting times.
Managing services	
Providers contracted to deliver services by Health Insurance Fund; providers each operate their own information systems and submit paper invoices for services rendered.	Health Insurance Fund manages CEZIH; necessary software made available to all providers, but practices must maintain necessary infrastructure to run CEZIH.
Improving performance	
Weak accountability frameworks compromise quality and safety of care; incentives and opportunities for providers to improve performance lacking.	Accountability frameworks strengthened; ad hoc trainings made available to providers on CEZIH; ISL portal encourages professional development and networking.

Health system enabling factors

Since the early 2000s, the government has supported the development of CEZIH as a means to increase oversight over services delivery and enable provision of real-time data on patients and providers to facilitate health system planning (Table 3). The Ministry of Health has developed a supportive policy framework to aid this goal and the first priority of the National Healthcare Strategy 2012–2020 is to further the development of e-health. Significant technological investments have been made to establish CEZIH and develop useful software applications. These include the creation of the ISL portal for providers, development of applications such as e-prescription and e-referral, and implementation of decision support tools such as the chronic disease monitoring platform.

Contracts between the Health Insurance Fund and primary care providers stipulate that primary providers must use CEZIH to be paid. Furthermore, in 2013, a new model of remuneration was introduced by the Health Insurance Fund, linking payments for primary care providers to measurable quality and efficiency indicators collected through CEZIH. Financial incentives have been designed to encourage health promotion and disease prevention services, as well as limit unnecessary referrals to higher-level care. Group practice arrangements for primary care providers have also been incentivized under the new payment model, encouraging collaboration to achieve quality and efficiency improvements.

The National Health Measures Programme charged the National Institute of Public Health with developing new indicators for data collection. Once complete, the Ministry of Health and Health

Insurance Fund will use new indicators for health system planning purposes, as well as to improve assessment of providers' performance. The Institute has submitted an initial report, which is currently awaiting review.

Outcomes

Positive impact on health system performance as a result of CEZIH is evident (Box 2). Integration of information systems across primary care has been completed and CEZIH records all prescriptions, referrals, laboratory reports and visit summaries at the primary level. Digitalizing referral and prescription processes has resulted in efficiency and cost savings and, as the use of e-health continues to grow and develop, further quality and efficiency improvements are anticipated.

Box 2
What were the main outcomes of the initiative?

- Full national coverage of e-referrals and e-prescriptions at the primary level has been achieved; almost 100% of referrals to laboratories and prescriptions are sent electronically.
- Significant cost savings, estimated at €2 million, have been achieved as a result of switching to a paperless system.
- An electronic application for booking appointments has been introduced; over 4000 digital appointment requests are made by patients each day.
- Approximately 65% of general practitioners have become associated with group practices, whereas virtually no general practitioners were organized this way prior to the initiative.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• First priority of the National Healthcare Strategy 2012–2020 is e-health development.
Incentives	• New model of remuneration for primary care providers links payment to quality and efficiency indicators, in addition to encouraging the formation of group practices.
Information	• CEZIH collects data on patients and providers; goal is to integrate all patients and providers into the system by 2020. • National Health Measures Programme is developing quality and efficiency indicators to enable evidence-based strategic planning and effective use of incentives to drive performance improvements.
Innovation	• Several new applications and tools developed within CEZIH, including e-prescriptions, e-referrals and e-ordering.

Change management

Key actors

Vision and leadership from the Ministry of Health drove the creation of CEZIH. The Health Insurance Fund was appointed by the Ministry to manage implementation and coordinate necessary stakeholders and a new department for information technology was established within the Fund to develop applications for CEZIH. The National Institute of Public Health was appointed by the Ministry of Health to support activities by leading the National Health Measures Programme.

Box 3
Who were the key actors and what were their defining roles?

- **Ministry of Health**. Initiated the development of e-health and CEZIH; passed complementary legislation to enable digitalization; made development of e-health a policy priority.

- **Health Insurance Fund**. Manages and regulates CEZIH; contracts primary care providers to deliver health services and holds them accountable for performance via CEZIH.
- **National Institute of Public Health**. Led the development of the National Health Measures Programme with assistance from expert professional associations.

Initiating change

CEZIH was initiated in a top-down approach led by the Ministry of Health. The Ministry developed the necessary political and legislative framework to drive change through aligning incentive structures to support the initiative, making necessary resources available and mandating the uptake of CEZIH. Meetings between key government actors helped plan how data would be collected and organized.

Implementation

Upon launch of CEZIH, use of the system by primary care providers was mandatory and incorporation of payments for services into CEZIH necessitated timely uptake. Provision of ad hoc trainings and free software for providers supported the adoption and widespread use of CEZIH. Various applications of CEZIH are phased in gradually after being tested for several months in pilot projects.

The National Health Measures Programme is supporting improvements in assessment of data collected through CEZIH. New quality and efficiency indicators were developed in consultation with expert associations for each of the 48 medical specialties to ensure their relevance and specificity.

Test data for new indicators was then collected by providers using tables provided by the National Institute of Public Health, with weekly reminder calls and regular visits to providers conducted to motivate data collection. Information collected through the National Health Measures Programme is currently awaiting review by the Ministry.

Moving forward

Expansion of CEZIH is ongoing, according to the priorities laid out in the National Healthcare Strategy 2012–2020. Activities to integrate hospitals into CEZIH are beginning and an e-discharge application and electronic health records are currently being piloted. By 2020, the goal is to connect all stakeholders to CEZIH.

Highlights

- Strong government commitment and top-down leadership established the necessary conditions for widespread adoption of e-health.
- Data collected through the e-health system helped drive performance improvements.
- Aligning financial incentives served to encourage adoption of changes in clinical practice.
- Provider trainings were critical for encouraging uptake and ongoing use of new technologies.
- An e-portal for patients offered a means to engage patients in their own care.

1   World Health Organization. (2015). *European Health for All Database*
2   Dzakula, A. Saga A., Pavic N., Loncarek K., & Katarina Sekelj-Kauzlaric. (2015). Croatia. *Health Systems in Transition 16* (3): 1–162.
3   Ministry of Health of the Republic of Croatia. (2012). *National Health Development Strategy 2012-2020*. Zagreb: Auther
4   Stevanovic R. eHealth Strategy in Croatia. [PowerPoint slides] In TAIEX Multi-Country Seminar in eHealth.

Strengthening community-based mental health services in Cyprus

Overview

Mental health services in Europe have shifted over time to a more community-based focused. In Cyprus, mental health professionals shared concerns regarding the pace of changes in the context of the system's largely institutionalized approach for treating patients with mental disorders; an approach proving ineffective to meet the growing prevalence of mental disorders and addiction. National advocacy, backed by international recommendations for the reorientation of mental health services, proved successful in persuading the government to officially support mental health reform in 1991. Changes to the Mental Health Act in 1997, along with a strategic plan for shifting services into the community, set a framework for the Mental Health Services Department within the Ministry of Health to deinstitutionalize mental health services. Over the next decade, a network of community clinics and centres was established, offering a wide range of services including counselling, support groups, detoxification, substitution therapy, rehabilitation programmes and employment assistance. Providers were reorganized into multidisciplinary teams to deliver a holistic package of coordinated care to patients. Coordination mechanisms like weekly team meetings and dedicated liaison officers helped to ensure effective collaboration and communication among professionals. Partnerships with nongovernmental organizations (NGOs) have supported efforts and extended services to include the delivery of rehabilitation care. Several training opportunities for health professionals accompanied changes to cultivate professional competencies for community-based care and a committee for lifelong learning has been established to facilitate the continuing education of professionals. As a result of reforms, institutionalized patient numbers have dramatically declined with a parallel increase in outpatient visits. The majority of care is now delivered in community settings with community related expenditures accounting for 73% of the annual mental health services budget in 2013 compared with only 20% in 1997.[1] The Mental Health Services Department continues to encourage growth of community-based services and further reforms to increase the role of primary care are currently under consideration.

Problem definition

Mental health services in Cyprus prior to the late 1990s were heavily institutionalized, with few community partners providing care outside of hospital.[2] The limited availability of treatment options outside of institutions contributed to inequitable access to services between rural and urban populations. An increasing trend in the number of disability-adjusted life years (DALYs) attributable to mental health disorders was reported between 1990 and 2000, increasing from 15 000 to 17 000 DALYs over the course of the decade.[2] In the context of increasing needs, the shortcomings of an acute model for mental health services, including lengthy hospitalizations and the concentration of care in urban areas, became increasingly apparent, necessitating action towards a more sustainable alternative.

Box 1
What problems did the initiative seek to address?

- Increasing burden of mental health disorders.
- Institutionalized model of mental health care with lack of community alternatives.
- Inequitable access to mental health services between urban and rural populations.

Health service delivery transformations

Timeline of transformations
During the 1980s, faced with the challenge of providing effective treatment and readily available mental health services, employees within the Mental Health Services Department of the Ministry of Health grew increasingly dissatisfied with the existing model of care. In 1991, following strong advocacy efforts by a network of NGOs, the government reached consensus on the need to prioritize mental health reform. In 1997, new legislation related to

Table 1
What were the chronological milestones for the initiative?

1977–1991	Advocacy efforts push for mental health services reform; four NGOs for patients with mental disorders founded; external evaluation recommends reorganization of mental health services.
1991	Political decision to support psychiatric reform by the Council of Ministers; systematic transfer of mental health care to community settings initiated.
1992–2006	International experts brought in to consult on the organization and delivery of mental health services.
1994	Management committee established to inform the design, development and implementation of mental health reform; community partnerships formed between the Mental Health Services Department and NGOs.
1997	Mental Health Act advocating patients' rights and community-based care passed by government.
1997–2001	Strategic plan for gradual development of community – based mental health services adopted.
2002–2007	Five-year strategic plan following international recommendations implemented.
2008–2013	New strategic plan outlines vision for developing three areas: community psychiatry, child and adolescent psychiatry, and the prevention and therapy of addiction.
Present	Future health care reforms expected to expand the role of primary care in mental health service delivery.

hospital admissions, treatment and care of patients was established and the first strategic plan for the development of community-based services was launched. The latest plan, put forth in 2008, focuses on developing community psychiatry, child and adolescent psychiatry and prevention and therapy services for addiction. Future health reforms are anticipated to increase the role of primary care in the delivery of mental health services.

Description of transformations
Selecting services. A wide variety of community-based mental health services are now available, putting an emphasis on services for prevention, early treatment, rehabilitation and

home care. Specialized clinics offer many outpatient services including addiction counselling, support groups for patients and families, detoxification, opioid substitution therapy and mental health services for children and adolescents. Community programmes also offer employment services for people with mental disorders.

Designing care. A series of external consultants and mental health experts were engaged in the process of redesigning services to provide recommendations on the structure of patient pathways. Mental health services have been aligned with international best practices and available evidence

evidence. In reorientating the model of care, mental health services have shifted from institutional to community settings, keeping patients closer to home.

Organizing providers. Providers have transitioned from institutional to community settings. New roles for community mental health nurses have been added. Additionally, community centre networks have been developed. These centres are staffed with multidisciplinary teams including psychiatrists, occupational therapists, psychologists and community nurses. Each team has a scientific coordinator responsible for directing the flow of clinical information. Liaison officers, usually community nurses, are responsible for exchanging necessary clinical information between hospitals and community teams. Referral forms facilitate the smooth transition of patients through the system. Weekly meetings of multidisciplinary teams are used to discuss referrals and to review challenging cases.

While most services have been transitioned into the community, some services, including care for acute mental health needs, continue to be delivered in mental health institutions. A subset of health providers split their practice between community and hospital settings.

Managing services. The Mental Health Services Department within the Ministry of Health is responsible for coordinating and managing mental health services and has the authority to independently manage its own budget, separate from other health services. A strategic plan, developed in 1997, divided the country into five mental health administrative sectors, each headed by a mental health centre providing the majority of services and responsible for the organization of community services. These centres are accountable to the Mental Health Services Department who oversees their operations. The Department

also works closely with NGOs and volunteers to manage rehabilitative services through community partnerships.

Improving performance. Regular trainings on topics such as new medications and therapies, child psychiatry, community care, rehabilitation, family therapy and addiction, as well as managerial and administrative skills have been provided to mental health professionals. These trainings have targeted community mental health nurses in particular. Multidisciplinary team meetings encourage the review of complicated clinical cases and offer learning opportunities for providers, allowing them to exchange information, share expertise and benefit from interdisciplinary learning.

Engaging and empowering people, families and communities

This initiative has worked to develop community-based mental health services, supporting patients within their familiar home environment to encourage the maintenance of regular responsibilities and social activities. "The Mental Health Institution should be reformed and the treatment be patient orientated and the dignity and rights of the patients should be recognized and secured." By providing care in the community or home care settings, the initiative has promoted the autonomy of patients with mental disorders and supported them in leading independent lives. Patients also receive assistance finding work, enabling them to be self-sufficient and contributing members of society.

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Services for patients with mental disorders highly specialized, relying heavily on institutionalization.	Wide range of community-based and home care services now available; services include counselling, support groups, substitution therapy, detoxification, rehabilitation and employment assistance.
Designing care	
Mental health care predominantly delivered in institutional settings with little room for personalization; care out-of-date with international best practices.	External consultants advised on design and structure of mental health services; care aligned with international best practices and available evidence; greater personalization of care possible as a result of community-based delivery.
Organizing providers	
Providers concentrated in institutional settings; care organized in a hierarchical framework with vertical decision-making; limited coordination and communication between care levels.	Providers concentrated in community settings; community mental health nursing profession created; multidisciplinary teams work together to deliver care; liaison officers facilitate communication between care levels; most patients managed by psychiatrists, but greater roles for primary care providers anticipated.
Managing services	
Mental Health Services Department within Ministry of Health oversees management of mental health services; all resources concentrated in Athalassa Mental Hospital.	Mental Health Services Department leads management of mental health services and works in partnership with NGOs to deliver rehabilitation services; resources distributed among a network of community mental health clinics and centres.
Improving performance	
Limited opportunities for continuing education or interdisciplinary learning.	Continuous ad hoc trainings in multiple mental health disciplines as well as administrative functions are offered to all mental health professionals, particularly community nurses; multidisciplinary team meetings provide opportunities for interdisciplinary learning.

Regular psychoeducational meetings are held to provide patients and their families or caregivers with education and support.

Efforts to reduce stigma surrounding mental disorders are also being made. A multistakeholder committee with representatives from the municipal government, church, police, social security office, volunteer organizations and relatives of patients with mental disorders, meet at one of the community centres in Nicosia to organize events aimed at fighting stigma, including planning activities for Mental Health Day. The Mental Health Services Department also organizes campaigns on Mental Health Day, Alzheimer's Day and other occasions to educate the public on mental health issues.

Health system enabling factors

Since 1991, when the government officially committed to mental health care reform, the Ministry of Health has been working to adopt policies and legislation to promote the transfer of mental health services to community settings. An external situational analysis conducted prior to reforms helped inform needs and served as an input for the reform process.

In preparation for Cyprus to join the European Union (EU), a number of laws had to be updated to align with EU standards, one of which related to the treatment of patients with mental disorders and formalization of their rights. The resulting Mental Health Act, passed in 1997, established an independent body, the Cyprus Mental Health Commission, to ensure protection of these rights, giving preference to community settings.

Along with supporting patient and community-orientated mental health services through policy and legislation, the government has also worked to strengthen the competencies of mental health

professionals to ensure new policies can be realized in practice. A multidisciplinary committee for lifelong learning has been established to manage and set the direction for continuing education of mental health professionals. Grants and scholarships have also been made available to mental health professionals in order to enable specialized training in multiple mental health disciplines. These trainings can either be undertaken in Cyprus or abroad. Partnerships with Greek universities have made specialized training programmes in psychiatry readily available to Cypriot providers. Additionally, links with other educational institutions make managerial and administration courses available to build providers' competencies in non-medical areas.

Outcomes

Overall, the initiative reports improving the availability of community-based services for patients with mental disorders and is working to reduce stigma within the population.

Box 2
What were the main outcomes of the initiative?

- Decline in number of inpatients at Athalassa Mental Hospital over time from 600 in 1989 to 130 in 2013.
- Visits to outpatient clinics have substantially increasedfrom 43 870 visits in 1990 to 65 930 visits in 2012.
- Profile of expenditures on mental health services reflects increased community provision of services; community related expenditures accounted for 73 per cent of the annual mental health services budget in 2013 compared to only 20 per cent in 1997.
- In 2011, 15 951 home visits were made to 1557 patients.[4]
- In 2011, 112 patients took advantage of vocational rehabilitation programmes, 18 patients found employment and 11 were on a trial period for work.[5]

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Mental Health Act passed in 1997 to increase rights of patients with mental disorders.
Competencies	• Multidisciplinary committee for lifelong learning sets educational priorities and requirements. • Partnerships with Greek universities allow physicians to undertake specialized training in psychiatry. • Grants and scholarships available to mental health professionals for training either in Cyprus or abroad. • Courses on management and administration offered; mental health professionals encouraged to develop managerial and administrative skills.
Information	• Situational analysis conducted to provide needs-based recommendations for reform. • Common health information system currently under development.

Change Management

Key actors

Mental health service reforms in Cyprus were first initiated by four NGOs that formed throughout the 1990s as a result of both patient and provider dissatisfaction with the status quo of services delivery. After many years of advocacy, backed by recommendations for mental health reform from international partners, the NGOs were successful in convincing the government to support mental health reform and adopt a national mental health strategy.

Over the next two decades, a number of experts were consulted to provide guidance on implementing mental health reform. A management committee, composed of division heads within the Mental Health Services Department, was established and tasked with informing the design, development and implementation of reforms. Continuous cooperation between the Ministry of Health , the Mental Health Services Department and WHO led to the creation of strategic plans for reform.

Initiating change

In the 1980s, psychiatrists and other mental health professionals with training and experience practicing abroad joined the Mental Health Services Department in Cyprus. Their vision for how mental health services should be delivered was radically different from the traditional model of institutionalization in place at the time. Dissatisfied with this model, these providers were enthusiastic to advocate for reform. Ultimately, advocacy work undertaken by NGOs combined with international pressure, linked with the anticipation of Cyprus joining the EU convinced the government to support reforms aimed to align services with international practices.

Implementation

Box 3
Who were the key actors and what were their defining roles?

- **Ministry of Health**. Supported mental health reform since 1991; passed legislation supporting reform; supervises the Mental Health Services Department and allocates their operating budget.
- **Mental Health Services Department**. Division of the Ministry of Health responsible for all mental health services; motivated new staff members pushed for mental health reform in the 1980s; formed partnerships with NGOs to realize reforms and deliver services; organize ongoing public awareness campaigns on mental health.
- **NGOs**. Four NGOs founded in the 1980s to help advocate for mental health reform; assist in the delivery of some services, especially rehabilitation.
- **External consultants**. Provided guidance and recommendations on mental health reforms.

Reforms required shifting from a hierarchical and vertical decision-making model to a more horizontal approach involving both lower level staff and patients. While it took time, the new approach was gradually accepted and adopted by the majority of mental health

professionals as well as Mental Health Services Department management. Competency strengthening of community health professionals has helped to build a strong and capable workforce. Further, the arrangement of mental health professionals in multidisciplinary teams encourages teamwork and collaboration in the delivery of mental health services. The Mental Health Services Department has also formed partnerships with NGOs and volunteers to expand care available to patients.

Moving forward

The importance of patient-centred mental health care delivered in the community is now recognized by the government and among mental health professionals. The Mental Health Services Department continues to actively promote community-based care and work to reduce stigma surrounding mental disorders according to the most recent strategic plan. Currently, the Ministry of Health is finalizing major health care reforms. Under the new system, a greater role for the primary care sector is proposed, with the responsibility for patients with mental disorders further shifting from psychiatrists to primary care providers. While it is not yet entirely known how these health care reforms will impact mental health services, the focus on ensuring community based, people-centred services remains.

Highlights

- The health workforce was a key advocate for motivating reforms and putting forth a compelling vision for transformations.
- Strategic timing was an important contributing factor for garnering political support.
- Partnerships with NGOs and volunteer organizations helped expand the continuum of care.

1 Theodorou M., Charalambous, C., Petrou, C., & Cylus, J. (2012). Cyprus. *Health systems in Transition 14*(6): 1-128.
2 Institute of health metrics and evaluation. (2015). Global burden of disease cause patterns. Retrieved from http://vizhub.healthdata.org/gbd-compare/patterns

Implementing targeted cancer screening programmes in the Czech Republic

Overview

In 2011, cancer burden in the Czech Republic was among the highest in the OECD, with an all-cancer mortality rate of 240 per 100 000 population, above the OECD average of 211 per 100 000.[1] This high mortality rate was partly attributed to the low uptake of screening services, resulting in many cancers being detected at more advanced stages. Late detection of breast, cervical and colorectal cancers drew particular concern as measures of ineffective provision of available cancer screening services. In 2011, in an effort to increase population uptake of cancer screening services, the Ministry of Health convened an expert group to develop a national cancer screening programme in partnership with key stakeholders, including the country's seven health insurance companies. After almost three years of planning, the finalized proposal was approved in December 2013 and allocated an initial year of funding by the European Union (EU) and Ministry of Health. Beginning in January 2014, health insurers started sending out personalized letters to eligible enrollees, inviting them to participate in cancer screenings. Over 1.5 million invitations were sent during the first eight months of the initiative. Alongside, in 2014, the Ministry of Health ran two mass-media campaigns to build a more positive public attitude towards available screening services and associated health benefits. Costs for all screening services are covered under health insurance. Screenings are performed by general practitioners or gynaecologists (faecal occult blood test, Pap smear) or specialists (colonoscopy, mammography). Evaluation of the first year of the programme is currently underway and is being led by the Institute of Biostatistics and Analyses at Masaryk University in partnership with the National Health Statistics Centre. At present, the Ministry of Health has full responsibility for financing the initiative. Results of the evaluation are expected to help inform future directions for the initiative.

Problem definition

In 2011, cancer burden in the Czech Republic was among the highest in the OECD with an all-cancer mortality of 240 per 100 000, above the OECD average of 211 per 100 000.[1] At the time, the mortality rate for cancer accounted for 26% of all deaths, with ageing population trends expected to contribute to further increases in the cancer burden.[1] While screening services were covered by health insurance, population uptake of available screenings was limited, leading to late detection of the disease and posing challenges to effective treatment and cure (Box 1).

Box 1
What problems did the initiative seek to address?

- High cancer mortality rates.
- Weak uptake of available cancer screenings leading to late disease detection.

Health services delivery transformations

Timeline of transformations
In January 2011, in response to high cancer mortality rates, the Ministry of Health established an expert group to develop a national cancer screening programme to increase population uptake of available screening services (Table 1). In December 2013, after almost three years of planning, the finalized proposal was approved by the Ministry of Health. Personalized cancer screening invitations were sent out almost immediately, with complementary awareness-raising activities run alongside. An evaluation of the programme's first year is currently underway and the programme will continue to be funded until 2020.

Table 1
What were the chronological milestones for the initiative?

January 2011	Expert group established by Ministry of Health to lead development of a national cancer screening programme in response to high cancer mortality rates.
January 2011–November 2013	Planning and development phase for the national cancer screening programme.
December 2013	Finalized programme approved by Ministry of Health and EU.
January 2014	Health insurance companies begin sending personalized screening invitations to eligible enrollees.
March 2014	Mass information campaign launched to sensitize the public to available cancer screenings.
September 2014	Second mass information campaign launched.
June 2015	EU funding ends for programme; Ministry of Health assumes full financial responsibility for initiative.
Present	Evaluation of the first programme year underway; funding for initiative guaranteed until 2020.

Description of transformations
Selecting services. Screenings for breast, cervical and colorectal cancers continue to be available to the population, with people over the age of 55 years specifically targeted for outreach to help increase screening uptake among this at-risk group. Cancer screening services are fully reimbursable under health insurance.

Designing care. Patient pathways have been strengthened by introducing proactive recruitment of patients for screening services. In addition, guidelines have been put in place to ensure physicians follow screening procedures.

Organizing providers. General practitioners and gynaecologists continue to offer colorectal and cervical cancer screenings in primary settings, referring patients to specialists for colonoscopy or mammography services, as well

as any necessary follow-up care for positive screening results. Primary care providers now actively invite patients to partake in cancer screenings, rather than waiting for patients to request these services or present with an abnormality.

Managing services. Health insurance companies manage implementation of changes put in place according to Ministry of Health directives, with the Ministry working to ensure that the proper technical equipment, personnel requirements and quality-control mechanisms are in place.

Improving performance. Data is collected on all screening tests, assessments and final diagnoses and all screening facilities are regularly monitored in accordance with EU recommendations by a Ministry representative to help ensure safe and effective service provision.

Engaging and empowering people, families and communities
The initiative has made a significant effort to inform the population on available cancer screening services and educate them on the associated health benefits. Furthermore, the initiative has also worked to change public attitudes towards screening and encourage widespread interest in participating in cancer prevention activities. Additionally, national information campaigns designed to sensitize the public to cancer screenings have been run through various media channels including television, radio, newspapers and publicly displayed posters and billboards in public transport. Information on cancer screening is also available to the public via the Ministry of Health's website, including information on different types of cancer, details on available screenings and links to accredited locations where screenings can be performed.

Health system enabling factors
The Ministry of Health led the development of the national cancer screening programme, with responsibility of implementing the programme resting with regional and local councils. While the majority of initial funding for the programme was provided by the EU, the Ministry of Health now covers all programme costs and has guaranteed funding for activities until 2020. The initiative capitalized on resources already in place for performing cancer screenings, limiting the required investment in infrastructure.

All seven of the country's health insurance companies have supported the initiative and specially designed software has been introduced to enable insurers to transform data on patients participating in screenings. This software is also used to support ongoing monitoring and evaluation efforts for the initiative which are led by the Institute of Biostatistics and

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Cancer screening services available but have low uptake; standard cancer treatments offered.	Increased public awareness of available cancer screening services; at-risk groups targeted for outreach to encourage uptake of breast, cervical and colorectal cancers.
Designing care	
Evidence supports benefits of screening in reducing mortality for certain cancers; screening services offered according to set criteria and guidelines.	Criteria and guidelines for screening remain in place; patients are actively recruited into care.
Organizing providers	
General practitioners and gynaecologists perform cervical and colorectal cancer screenings, referring patients to specialists for colonoscopy and mammography screening, as well as further treatment services as needed.	Organizational structure of providers remains unchanged; referral systems have been strengthened; general practitioners and gynaecologists actively invite patients to participate in screenings.
Managing services	
No formalized cancer screening programme in place; necessary resources for cancer screening available.	Health insurance companies invite enrollees to participate in screenings per Ministry of Health directives; Ministry ensures necessary resources and quality-control mechanisms are in place.
Improving performance	
Regular monitoring of screening centres ensures safety and quality standards are continually met.	Safety and quality standards remain in place; screening data collected and monitored in accordance with EU recommendations.

Analyses at Masaryk University. The Institute works in partnership with the National Health Statistics Centre which is responsible for maintaining national cancer registries (Table 3).

Outcomes

Still in the early stages of implementation, evaluation of the initiative's impact is ongoing. As of August 2014, approximately 1.5 million people had been mailed an invitation to participate in cancer screenings and millions more were exposed to educational messages through media campaigns.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Information	• National cancer registries maintained by the National Health Statistics Centre. • Institute of Biostatistics and Analyses leading monitoring and evaluation of initiative.
Innovation	• Specially designed software developed for insurance companies to enable transformation of data on patients participating in screenings.

Change management

Key actors

The development of the cancer screening programme was driven by the Ministry of Health with support from key stakeholders (Box 2). The Ministry established an expert group to plan the initiative and connected with medical professionals, insurance companies and other organizations to ensure all stakeholders had a consistent understanding of proposed activities. All seven health insurance companies took on additional responsibilities to encourage screening in their enrolled populations, working with primary care providers to promote the uptake of screening services. Monitoring and evaluation of the initiative is carried out by the Institute of Biostatistics and Analyses, in partnership with the National Health Statistics Centre.

Box 2

Who were the key actors and what were their defining roles?

- **Ministry of Health**. Established an expert group to develop the national cancer screening programme; ran mass information campaigns relating to cancer; provided 15% of initial funding for activities and will fund 100% of the initiative between 2015 and 2020.
- **EU**. Provided 85% of initial funding for the initiative.

- **Health insurance companies**. Identify eligible enrollees and send personalized invitations to encourage participation in screening services.
- **Institute of Biostatistics and Analyses**. Leads monitoring and evaluation for the initiative.

Initiating change

The initiative took several years to plan and importantly involved engaging key stakeholders to secure their support. Once the programme was finalized and funds were approved by the Ministry of Health and EU, implementation of activities began almost immediately as all the necessary preparatory steps had been taken and key stakeholders were in agreement with planned changes.

Implementation

Health insurance companies are responsible for identifying at-risk patients and sending targeted screening invitations as they have easy access to the information needed to enable accurate profiling. Primary care providers support this activity by following up with patients about screening invitations received and proactively offering opportunistic screenings and referrals. Two public information campaigns were run during the first year of the programme to further encourage uptake of screenings.

Moving forward

Funding for the programme is guaranteed until 2020. An evaluation of the programme's first year is currently underway and results will be used to help inform future directions for the initiative. Meanwhile, health insurers will continue to invite enrollees to participate in cancer screenings.

Highlights

- Strong Ministerial leadership provided an overarching direction for the initiative, promoting alignment across key stakeholders.
- Use of existing data helped identify key problems and supported tailoring of the initiative to meet observed gaps in services delivery.
- Mass media campaigns proved useful in educating the public and involving them in the initiative.
- The initiative prioritized a proactive approach to addressing cancer mortality, shifting away from a reliance on reactive service provision.

1 Organization for Economic Co-operation and Development. (2013). *Cancer Care: Assuring Quality to Improve Survival*. Retrieved from http://www.oecd.org/els/health-systems/Cancer-Care-Czech-Republic-2013.pdf

Telerehabilitation to reduce hospitalization of patients with chronic obstructive pulmonary disease in Denmark

Overview

In 2005, chronic obstructive pulmonary disease (COPD) was ranked the third greatest cause of disability adjusted life years (DALYs) in Denmark, after low back or neck pain and ischemic heart disease.[1] COPD placed a significant burden on the Danish health system and providing care for COPD consumed a large amount of health resources, mostly due to high rates of hospital admissions, frequent readmissions and lengthy stays. In response an alternative services delivery model was proposed by researchers specializing in e-health solutions and telemedicine at Aalborg University. A pilot programme to reduce hospital readmissions for patients with COPD by promoting home-based rehabilitation was designed. During an initial planning year, patients, health providers, researchers and private technology companies collaborated to design a user-focused telerehabilitation intervention for patients with COPD. Patients participating in the study were required to self-manage their disease at home for four months using telemedicine services. To enable this, patients received education on COPD self-management and a monitoring device allowing them to collect and upload health data, such as blood pressure, oxygen saturation and lung function. Patient data was uploaded to a joint web portal for health providers to share information. District nurses regularly monitored patient data through the portal so they were able to provide personalized feedback on results and initiate referrals or treatment when necessary. Results from a control trial found a 54% reduction in hospital readmissions compared to standard treatment, as well as self-reported improvements in patients' quality of life. Results from this study provided the necessary evidence to scale up the study across the North Jutland region and both the regional government and all 11 municipal governments signed on to the project, now known as TeleCare North. Aalborg University continues to oversee the initiative, with the regional government assuming operational management. A study on the impact of TeleCare North is due to be completed in 2015 and the results from Telekat and the TeleCare North are expected to inform a national model for telehomecare in Denmark as part of the National Telemedicine Action Plan.

Problem definition

Chronic obstructive pulmonary disease (COPD) places a significant burden on the health system in Denmark (Box 1). In 2010, COPD was the fourth highest cause of mortality, attributable to 7% of all-cause mortality that year.[1] COPD is one of the five most resource-intensive diseases in Denmark, accounting for a fifth of all hospital admissions.[2] A quarter of all patients with COPD are admitted to hospital within the first month of a diagnosis.[3]

A key factor in managing COPD is ensuring consistent monitoring and rehabilitation following patients' discharge from hospital. Lack of continuation in patient information, in part a result of each institution operating according to separate electronic databases, was attributed in part to this fragmentation. Further, the limited involvement of patients in the care process, coupled with their lack of knowledge on how to effectively manage their condition, increased the chance of deterioration.

Box 1
What problems did the initiative seek to address?

- High COPD disease-specific burden straining health system resources.
- Incompatible electronic medical record systems causing fragmentation of providers and reduced continuity of care.
- Limited capacity of patients to self-manage COPD symptoms leading to deterioration in their condition and frequent hospital readmissions.

Health services delivery transformations

Timeline of transformations

In 2008, researchers at Aalborg University in northern Denmark launched the Telekat project to design and test a telerehabilitation intervention for patients with COPD (Table 1); 111 patients with COPD were recruited into the study, which ran over a period of two years. Upon its completion in 2011, results showed a positive clinical and economic impact of the intervention, supporting the project's scale-up to the regional level. All 11 municipalities within the North Jutland region signed on to participate in the project, now known as TeleCare North. TeleCare North, currently ongoing since 2013, aims to test the viability and benefit of providing telerehabilitation for all patients in North Jutland with moderate to severe COPD. The project is due to be completed in 2015, at which time permanent adoption of the initiative will be considered.

Description of transformations

Selecting services. The Telekat pilot provided all patients with moderate to severe COPD residing in Aalborg and Hjoerring municipalities with standard COPD care. In addition, eligible patients received instructions on how to take clinical measurements, including blood pressure, weight, oxygen saturation and lung function, using the equipment provided. Patients also received specialized education on self-managing their condition and performing preventive exercises, such as stretching neck muscles, exercising the chest cavity and walking, to improve their symptoms. Patients are monitored by health providers across sectors and receive personalized feedback on their condition via telephone or email. If complications arise or symptoms worsen, patients receive more frequent contact and monitoring. Further treatment is initiated as needed and patients may be digitally prescribed penicillin or hormones to help avoid unnecessary hospitalization.

Designing care. An extensive literature review led by Aalborg University helped inform care pathways used in the intervention. Health providers and patients contributed to the design of care pathways to ensure they were user-focused and practical. A traffic light system is used to code clinical measurements recorded by patients as green (normal), yellow (potential concern) and red (cause for concern). Patients' monitoring devices contain information and guidelines on handling their condition and come with software that automatically guides patients through an exacerbation. Instructional guidelines for home-based exercises developed by the Danish Lung Association are used by the initiative. The level of support provided to participating patients is personalized based on individual needs, capabilities and stage of their condition.

Organizing providers. Patients are enrolled by hospitals, health care centres or their general practitioners. Once enrolled, patients become active care partners and take on many functions previously carried out by health providers. Patients now receive care in their own homes, easily accessing providers through the web portal, email or telephone as needed. While not physically present, providers regularly monitor patients' clinical data via the web portal and initiate contact if reported indicators

Table 1

What were the chronological milestones for the initiative?

2008	Telekat research project launched to develop and test a telehomecare rehabilitation intervention for patients with COPD to address concerns over fragmented services delivery and poor management of the condition.
2011	Telekat research project concludes; results show positive clinical and economic impact of the intervention.
2013	TeleCare North research project launched as a regional scale version of Telekat; project aims to test operational viability and impact of providing telehomecare for patients with COPD on a larger scale.
2014	Start of iTrain study, a multicentre randomized controlled trial between Denmark, Norway and Australia with a focus on long-term telerehabilitation of COPD patients.
2015	Planned evaluation of TeleCare North project; permanent adoption of the programme rests on results.

fall outside normal limits, symptoms worsen or patients' experience an exacerbation. Despite having less physical contact with providers, patients in the Telekat study reported feeling secure and cared for.

Extensive collaboration and effective communication between health providers across traditional institutional boundaries including hospitals, general practices and community health centres, and across disciplines is required for effective delivery of the telerehabilitation programme. A shared web portal connects health providers (including general practitioners, specialists and nurses) directly to patients and their relatives. Monthly videoconference meetings between health providers involved with the project help coordinate activities and provide an opportunity to collectively review patient cases. This new concept is encouraging health providers to learn "to play new roles and. … to collaborate and share information in new ways."

Managing services. The initiative has been co-financed by Aalborg University, national government funds and contributions from all cooperating partners. All participating patients were provided

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Patients with severe COPD receive disease management education via courses offered away from the home; frequent complications, exacerbations and co-infections cause patients with COPD to consume a high number of hospital services.	Patients with moderate to severe COPD receive disease management education at home; patients collect clinical measurements which are digitally monitored by health providers who then provide personalized feedback; oxygen, antibiotics and hormone therapies are available to patients at home.
Designing care	
Standardized care pathways for COPD exist for treatment in primary care and hospital settings; exercise guidelines for patients available from the Danish Lung Association.	New care pathways and guidelines informed by a literature review with input from providers and patients; care personalized to patient needs; traffic light system indicates to providers when to initiate additional treatment; software guides patients through handling exacerbations.
Organizing providers	
Patients receive care for COPD from multiple providers across different settings; lack of provider communication and collaboration leads to fragmented care; "patients experience having to engage in dialogue with many different health care professionals: hospital staff, general practitioners, home care nurses. … Not everyone is equally knowledgeable of patients' situation or disease progression."	Web portal connects participating providers enabling shared access to comprehensive patient information; providers work as a multidisciplinary team across institutional boundaries with monthly videoconferences facilitating coordination; nurses closely monitor patient data and initiate contact with patients or make referrals when needed; patients have electronic access to providers.
Managing services	
Small-scale telemedicine projects piloted across the region, but no use of this technology on a large scale.	Project is co-financed by multiple partners and development funds; Aalborg University oversees research project with operational activities managed by regional and municipal governments; all necessary equipment provided for patients.
Improving performance	
Individualistic culture limits opportunities for shared learning.	Trainings for providers led by Aalborg University; shared learning and innovation driven by increased communication between providers and patients.

with the necessary resources to support home-based management of COPD, including a telehealth monitor. Patients were also provided with other necessary resources such as a pedometer and oxygen equipment.

The TeleKat research project was overseen by Aalborg University with operational activities managed by regional and municipal governments. Consolidation of the web platform helped to improve the management capacity of regional and municipal governments. Greater access to data and the increased emphasis on patient monitoring supports initiative managers in ensuring services delivery are being effectively delivered.

Improving performance. Trainings for health providers on telemedicine and promoting patient self-management were delivered by experts at Aalborg University and the initiative "used a lot of resources in education". Additionally, close partnerships between health providers and patients have created opportunities for mutual learning.[3]

Engaging and empowering people, families and communities
Patients participating in Telekat have been educated and empowered to self-manage their COPD. Patients are no longer passive recipients of care, but active partners who play a central role in the care process. Digitally guided and supported by health providers, patients use monitors and devices in the comfort of their own homes to collect clinical measurements, monitor health indicators and treat arising symptoms. Patients received training to enable them to carry out their new role and can also access a wide range of informational materials on COPD through the web portal. Additionally, patients can also interact with peers through an online forum.

Seeing data presented in simple graphics, receiving feedback from health providers and sharing

knowledge with other patients have proved to be important factors for increasing patient involvement and motivation in their care. While it took time to convince health providers that patients could be empowered to self-manage care, seeing the success of patients and their motivation for the programme has helped build true partnerships between patients and providers. Providers in the Telekat study noted that they felt like coaches for patients, rather than carers. As one provider put it, "I feel that the COPD patients are getting to be more active and motivated to do training at home. I feel like a coach for them."

Health system enabling factors

In Denmark, the national government has gradually increased the role of information technology in all public services, including health (Table 3). Legislation to support e-health is in development, helping to drive innovation and promote the use of available technology. Exchange of health care documents is now almost fully electronic, with each of Denmark's five regions operating their own standardized electronic system, connected by a central web portal accessible by patients and providers. Private technology companies were vital partners in developing the necessary infrastructure for the portal; companies competed for contracts which helped drive innovation and reduce costs. Almost all health providers may access patient information through the portal; however, patients may choose to restrict access if they wish. A log is automatically generated each time patient data is accessed, helping to promote transparency and increase accountability of providers. The national government is working to expand health information held in the portal and considerable investments have recently been made to update infrastructure in hospitals across Denmark.

The Ministry of Health is guiding development of telemedicine through the National Action Plan for Dissemination of Telemedicine. Launched in 2013, the Plan aims to explore potential applications of telemedicine in the Danish health system and build knowledge in this area. Several large-scale telemedicine initiatives, including TeleCare North, are contributing information to the Plan and Ministry support is helping guide the initiation of large-scale telemedicine projects at the regional level. Government funds, such as the Public Welfare Technology Foundation, also make financing available for promising telemedicine initiatives. Aalborg University has helped develop a local pool of experts in telemedicine to support this evolution of the health system through offering a master and doctoral research degree in Medicine, Biomedical Science and Technology and housing the Transatlantic Telehealth Research Network (TTRN).

Outcomes

Telekat provided evidence that offering telerehabilitation to patients with COPD has a positive impact on health outcomes (Box 2). Hospital readmission rates of patients were 54% lower when telerehabilitation was implemented. Furthermore, interviews held with Telekat participants found that patients enjoyed learning about their condition, felt empowered by new knowledge, were secure receiving treatment at home, experienced a greater sense of control over their COPD and were motivated to perform recommended preventive exercises. As one patient said, "seeing my data on the web portal gives me a better understanding of how to exercise and interpret the development of my symptoms." While implementation of TeleCare North is ongoing and outcomes are not yet available, it is expected to have a similarly positive impact.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Legislation concerning e-health is relatively accommodating, allowing most health providers access to electronic medical records if medically necessary. • Logs document access to electronic medical records, ensuring transparency and responsible use.
Competencies	• Higher education opportunities exist within the telemedicine field, including a doctoral degree in Medicine, Biomedical Science and Technology.
Information	• National medical communication standards introduced in 1994; medical document exchange now almost completely electronic. • Electronic medical records accessible through a secure central portal; system is being expanded to provide more complete information.
Innovation	• National Action Plan for Dissemination of Telemedicine supporting innovation in health technology. • National funds help support innovative health projects. • Telemedicine research conducted by Aalborg University.

Box 2
What were the main outcomes of the initiative?

• Hospital readmission rate for COPD patients was 54% lower in Telekat participants compared to the control group.
• Majority of patients expressed a higher quality of life and felt positively about telehomecare; patients reported feelings of trust, security, empowerment and improved knowledge.

Change management
Key actors
Design of the initiative was led by Aalborg University in close collaboration with stakeholders; the first year of the project was spent engaging stakeholders and creating a shared vision. "We started having workshops. Patients, district nurses, hospital providers, researchers, general practitioners and private technology companies were developing concepts for the project. This was a very good start. The project came through this dialogue." The involvement of researchers helped mobilize participants and private technology companies ensured the focus remained on building a cost-effective solution. While for some health professionals collaborating with patients "was a challenge," eventually they "saw how patients had good ideas and it was worthy to finally listen to them, exchange ideas and develop ideas together." Paying for providers' attendance at the workshops was important for incentivizing their participation. Despite the initial communication challenges, the overall result of these collaborations was the design of a user-centred programme with improved understanding of other stakeholders' views. Implementation of the resulting Telekat project was led by Aalborg University, who had the necessary expertise and experience in conducting telemedicine research. As Telekat evolved into the TeleCare North regional project, both regional and municipal governments have taken on an increasing role in the management of the programme, with Aalborg University providing oversight and guidance (Box 3).

Box 3
Who were the key actors and what were their defining roles?

• **Aalborg University**. Initiated development of Telekat, oversaw the project and led its evaluation; key partner in the development and implementation of TeleCare North; major funding contributor for both initiatives.
• **Regional Government of North Jutland**. Manage operational delivery of TeleCare North.
• **Municipal governments**. Support delivery of TeleCare North; all 11 municipalities in North Jutland signed on to support the project.

Initiating change
A number of small-scale telemedicine trials conducted in North Jutland and other Danish regions provided starting ideas for the initiative. At the time, e-health in Denmark was expanding and there was considerable interest in telemedicine research. This context provided the necessary conditions to spark change. The personal motivation of a district nurse undertaking a PhD in telemedicine at Aalborg University

brought attention to the problem of "COPD patients going in and out of hospital the whole time" and pushed for an initiative which would "avoid them going to hospital so much".

Implementation

Implementation of Telekat was led by Aalborg University and was described as being dynamic. As a pilot project, all stakeholders had to learn as they went along. Patient motivation for the project was noted as a key factor for its success and in turn served to motivate providers. However, some patients failed to fully engage with the service, highlighting that telehomecare may not always be the best treatment option for some patients. Initiative leaders hope to explore this further to improve services for these patients or determine a method for identifying and targeting suitable candidates.

Design of TeleCare North built on the lessons learned through Telekat and scaled up activities to the regional level. The high cost burden of treating COPD, general national interest in telemedicine and prior success of Telekat helped secure the necessary regional and municipal government support. Aalborg University continues to support implementation of TeleCare North, however the project is now managed by regional and municipal governments.

Moving forward

The TeleCare North study is due to be completed in 2015. At this time, all patients enrolled in the study (including those in the control group) will have the opportunity to use telehomecare services for their COPD moving forward. Results of TeleCare North will add to the evidence base on telemedicine and provide information on its clinical and economic effectiveness. If successful, the TeleCare North model will be adopted as the national care standard for COPD.

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Highlights

- The political environment and recent changes to legislation provided a platform for the development of e-health and telemedicine.
- Partnering with stakeholders outside the health sector supported the development of telemedicine and helped drive transformations in services delivery.
- The initiative focused on providing patients with a more active role in care and created new collaborative partnerships between patients and providers.

</div>

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Developing an integrated e-health system in Estonia

Overview

In the early 2000s, as part of an overarching strategy for the advancement of information and communication technology developed during the 1990s in Estonia, the government prioritized the development of an electronic national health information system. The system was envisaged as a means to overcome fragmented communication flows, streamline services, increase efficiency and improve the coordination of care. The Ministry of Social Affairs headed the project; adopting legislation, developing policies and creating the necessary regulatory framework to establish the Estonian National Health Information System (ENHIS). In 2005, the Estonian e-Health Foundation was created to coordinate the implementation of ENHIS and oversee its management. Under the Foundation's guidance, electronic care summaries, digital imaging and e-prescriptions were gradually incorporated into the system in the late 2000s, as detailed in the Estonian Health Information System Development Plan 2005–2008. Use of ENHIS by health providers and the electronic submission of patient data is mandatory. ENHIS centrally stores care summaries and serves as a coordinating tool for the health system, connecting providers across levels of care and between disciplines. Electronic decision-support tools and virtual transfers of prescriptions and test results help to further integrate and streamline services delivery. An online patient portal has also been incorporated into ENHIS to increase patient involvement in care and provide individuals with secure access to their health information. Monitoring data shows use of ENHIS by both providers and patients is high, with 98% of providers uploading patient information to the system. The Estonian e-Health Foundation continues to improve ENHIS and support the advancement of e-health and telemedicine. Private sector innovations met with provider-derived solutions help to expand available applications and drive improvements.

Problem definition

In the late 1990s, the flow of information between professionals and across care levels was described as fragmented, with providers often relying on patients to provide their personal medical history. With rising chronicity as rates of hospital discharge for circulatory disease, for example, rose from 2337 per 100 000 population in 1990 to 3175 per 100 000 in 2000, attention was put to the imperative of improving management and continuity of care for patients with complex chronic conditions (Box 1).[1]

Box 1
What problems did the initiative seek to address?

- Fragmented flow of information between health providers.
- Poor management of the growing number of patients with chronic care needs.

Health services delivery transformations

Timeline of transformations
In the early 1990s the Estonian government spearheaded a movement to develop electronic information systems across government sectors (Table 1). As part of this commitment, the Ministry of Social Affairs was tasked with developing the Estonian National Health Information System (ENHIS). Government policies and legislation throughout the 2000s supported this goal. In 2005, the Estonian Health Information System Development Plan 2005–2008 was adopted to guide the development of ENHIS and the Estonian e-Health Foundation was founded to oversee activities. Features of ENHIS – including electronic health records, digital images, digital prescription and a patient portal – have been phased in gradually. Use of ENHIS is now widespread and the Estonian e-Health Foundation continues to support the advancement of e-health.

Description of transformations

Selecting services. Services available to patients are being expanded through the introduction of home care interventions enabled by e-health, such as online monitoring of blood pressure and interactive rehabilitative support services for patients with brain injuries.

Designing care. Treatment guidelines for primary care have been developed to guide referrals to specialist care. Electronic

Table 1
What were the chronological milestones for the initiative?

1992	Political commitment made to develop an information society across government sectors.
1998	Principles of Estonian Information Policy approved by the government as an action plan to guide development of an information society.
2000	Legislation passed requiring health providers to have access to a computer with internet.
2001	Discussions and planning for the development of ENHIS begin.
2002	Rollout of electronic patient ID cards begins.
2004	Estonian Health Information System Development Plan 2005–2008 published.
2005	Estonian e-Health Foundation created; development of ENHIS begins.
2006	Estonian Information Society Strategy updates and replaces Principles of Estonian Information Policy.
2007	Digital imaging system (known as PACS) launched within ENHIS.
2008	Electronic case summary system launched within ENHIS; legislation passed requiring all providers to upload information to ENHIS.
2009	Patient online portal launched within ENHIS.
2010	e-Prescription service launched within ENHIS.
Present	Estonian e-Health Foundation continues to actively monitor ENHIS and support e-health.

consultation via ENHIS has also been introduced in select disciplines, where a patient's status is written up and sent to specialists for their input.

Organizing providers. All providers have access to patient care summaries using ENHIS and are able to make electronic referrals as necessary. Patients may choose to opt out of allowing their information to be accessible by all providers; however, this may be waved in emergency circumstances. Alignment across disciplines and care levels has increased and providers use ENHIS to share test results, run diagnostics, make referrals and issue prescriptions. Providers are also able to utilize technologies in place for distance consultations, including with foreign providers. The patient portal has helped improve access for patients by enabling online appointment booking for six out of 19 hospitals.

Managing services. The Estonian e-Health Foundation is the legal entity founded by the Ministry of Social Affairs and other key stakeholders. The Foundation's management board is responsible for overseeing ENHIS. In facilities, all providers are required to have access to a computer with internet connection and maintain the necessary infrastructure to connect to ENHIS.

Improving performance. The initiative has strengthened health providers' computer literacy. Trainings on navigating ENHIS are offered by the private sector contributing to the development of the software systems. Additionally, virtual tutorials on software systems are under development to further build the technical capabilities of providers.

Engaging and empowering people, families and communities

Work at the macro level has led the way in developing a culture around information and communication technology where the entire population is able to fully participate in and benefit from e-health. An online patient portal empowers patients by providing read-only access to their personal health information, including treatment plans, test results and prescriptions. Clauses permit providers to temporarily block patient access if considered necessary for their protection. Patients can connect to the portal using their personal ID card or Mobile ID, which are both linked to their unique personal identification number. Since its introduction, use of the portal by patients has been steadily increasing and new applications continue to be developed and added to further engage, support and empower patients.

Health system enabling factors

Several factors have promoted the development of e-health services in

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
No telemedicine or e-health services available.	Online delivery of certain diagnostic services; ongoing piloting and development of telemedicine services.
Designing care	
Lack of guidelines for primary care.	Treatment guidelines developed for primary care to help guide referrals.
Organizing providers	
Primary care serves as the gatekeeper to higher-level services; communication between providers fragmented.	Providers connected via ENHIS; virtual consultations and electronic referrals now possible; access to care improved by the online patient portal.[2]
Managing services	
Limited use of computers; no electronic health system in place.	Providers required to maintain the necessary infrastructure to connect to ENHIS; private sector sells necessary software to providers.
Improving performance	
Limited technological capacities of health workforce.	Tech-literate health workforce; ad hoc trainings on software programmes available; virtual software tutorials in development.

Estonia, including in particular the wide political support for information and communication technology (Table 3). The Ministry of Social Affairs – who has stewardship over the health system – led the development of a regulatory environment to support the initiative, establishing the Estonian e-Health Foundation and putting laws and regulations in place to require and regulate the use of ENHIS. The Health Services Organization Act and Health Information System Statute require providers to enter into contracts with the Estonian e-Health Foundation, holding them accountable for uploading patient information to ENHIS. Adherence to privacy, patient rights and data protection laws is monitored by the Data Protection Inspectorate. In addition to government-mandated regulations for ENHIS, local providers and hospitals may implement their own supplementary internal regulations.

Significant investments have been made to establish the necessary health system infrastructure for the delivery of e-health. Private companies compete to develop the software for providers required to access ENHIS. Individual software systems connect to a government data-exchange platform, known as X-road, which integrates and secures all data in a central database. X-road digitally records all interactions for secure access to information. Further, the centralized database facilitates monitoring and evaluation of data by the Estonian e-Health Foundation and anonymized health data is also made available for research.

With e-health infrastructure now in place, the Estonian e-Health Foundation continues to focus on supporting innovation and the expansion of e-health. Investments in e-health research, partly financed by the national health insurance

fund, enable the investigation of new technologies at university research centres dedicated to e-health and telemedicine. The Estonian e-Health Foundation also collaborates with other national and international organizations working in e-health and telemedicine to connect with new innovations in the field.

Outcomes

Impact on health system performance process indicators is evident and monitoring data show widespread adoption of e-health and high usage rates of ENHIS (Box 2).

Box 2
What were the main outcomes of the initiative?

- Computers connected to the internet are present in 100% of Estonian general practices.[3]

- Over 90% of the population have documents recorded in ENHIS.[2]
- Over 90% of stationary case summaries are uploaded to ENHIS.[2]
- Over 90% of all prescriptions and hospital discharge letters are sent digitally via ENHIS.[2]
- Approximately 140 000 monthly logins to the patient portal were recorded in late 2013 and trends show patient use of ENHIS is steadily increasing.[2]

Change management

Key actors

The Ministry of Social Affairs oversaw the initial e-health planning efforts, passed legislation to enable planned changes and devised the guiding implementation strategy. Prior to development of ENHIS, the Estonian e-Health Foundation was created to assume management of the initiative. The Estonian e-Health Foundation Board is made up of stakeholders including the Ministry of Social Affairs, Estonian Society of Family Doctors and Estonian Hospital Union, among others. The Foundation has created a unified platform for stakeholders and has facilitated cooperation across different groups, giving them an active role in steering the development of e-health nationally (Box 3). At the local level, general practices and hospitals have established ad hoc working groups to support e-health implementation efforts in facilities. Valuable local e-health solutions resulting from these working groups are disseminated nationally by the Estonian e-Health Foundation, enabling all providers to benefit.

Box 3.
Who were the key actors and what were their defining roles?

- **Government**. Prioritized the development of an information society; served as role model for the adoption of information technology across all government sectors.
- **Ministry of Social Affairs**. Led the development of ENHIS; adopted legislation supporting e-health; created the Estonian e-Health Foundation along with key partners; holds three of 11 votes on the Foundation's management board.
- **Estonian e-Health Foundation**. Headed by a multistakeholder board; oversees the management and monitoring of ENHIS.
- **Private software development companies**. Eight main companies compete to supply ENHIS-compatible software to providers and offer providers training on purchased systems.
- **Health providers**. Maintain necessary infrastructure to connect to ENHIS.

Initiating change

The development of ENHIS was sparked by a broader government-led effort to transition to an information society during the personal computer revolution occurring in the 1990s, seeing this as an opportunity to develop more streamlined and efficient services across government sectors.

Implementation

The relatively small size of Estonia's population facilitated implementation of ENHIS and its widespread adoption. ENHIS was phased in gradually as new system applications were developed in line with the Estonian Health Information System Development Plan 2005–2008. Initially, use of ENHIS by providers

Table 3.
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Legislation requires providers to maintain necessary infrastructure to connect to ENHIS and upload patients' medical data to the system. • ENHIS permanently records all users accessing data, increasing transparency and accountability. • Data Protection Inspectorate oversees adherence to data protection laws.
Incentives	• Financial penalties for providers in place for non-compliance with contracts requiring use of ENHIS.
Competencies	• Development of a tech-literate society promoted across government sectors.
Information	• Entire population registered via electronic ID cards. • Central data-exchange platform integrates data and secures access. • Estonian e-Health Foundation monitors and evaluates ENHIS data.
Innovation	• Ongoing research conducted on telemedicine and e-health.

was voluntary. However, after an introductory period, widespread uptake of ENHIS was achieved by implementing a strong regulatory framework reinforced with disincentives for non-compliance.

While an overarching government framework guiding implementation of ENHIS, there was considerable room for adapted e-health solutions to be implemented at the local level. Input and local initiative from health providers helped ensure successful implementation of activities. Leaders of the initiative recognize that greater inclusion of providers in the early design phases could have improved usability of services as, despite providers generally being successful in operating ENHIS, variable system usage capabilities are still seen.

Moving forward

With ENHIS now well-established and widely implemented throughout the country, the Estonian e-Health Foundation continues to investigate ways to improve the system's functioning, performance and ease of access. In parallel, national

universities continue to lead telemedicine research and build a genetic database for the population. Linkages with foreign institutions help address potential challenges and inform future directions for e-health in Estonia.

Highlights

- Early introduction of legislation provided a clear framework for activities and established the necessary regulatory environment for change.
- Development of e-health aligned with a broader government strategy, enabling change and motivating necessary political support.
- Legislation supported with aligned incentives helped encourage provider uptake of e-health.
- Partnerships with universities and research organizations helped drive innovation.

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Advancing nursing roles to improve access to care in Finland

Overview

In the early 2000s, physician shortages across Finland drove the national government to recommend shifting responsibilities from physicians to nurses and incentivized municipal restructuring of health providers. Around this time, universities developed various postgraduate programmes to support these efforts and nurses gradually began taking on additional responsibilities. Subsequent government policies provided further support for the advancement of nursing roles and legislation was enacted in 2010 to allow nurse prescribing for a defined list of medications with a new postgraduate programme developed to support this. Advanced practice nurses have been positioned to autonomously deliver a range of health services to patients, including consultations, ordering and carrying out diagnostic tests, managing patients with chronic disease and treating minor acute conditions, among other responsibilities. Advanced practice nurses now manage approximately half of all patient visits in health centres. According to a study carried out in a rural health station, advanced practice nurses were able to meet patients' care needs without a physician up to 70% of the time.[1] Early studies indicate both physicians and nurses have reported improved workplace wellbeing as a result of changes. Furthermore, patients also appear satisfied with the care they receive from advanced practice nurses. A countrywide evaluation on nurse prescribing is currently underway, with results expected by the end of 2015. Results of this evaluation will be used to inform future directions for nurse prescribing in Finland.

Problem definition

In 2000, Finland faced a shortage of physicians with 241 physicians per 100 000 population, compared to a WHO European Region average of 302 per 100 000.[2] Not only did this shortage make responding to patient demands challenging, it was also found to contribute to inequities in access as providers were primarily concentrated in urban settings (Box 1). In contrast, Finland had an above average volume of nurses with 954 per 100 000 population, compared to a regional average of 666 per 100 000.[2] However, the scope of practice and autonomy of nurses at the time was relatively limited, compromising the extent to which nurses could support the provision of services in underserved areas.

Box 1
What problems did the initiative seek to address?

- Shortage of physicians, particularly in rural areas.
- Above average volume of nurses compared to the WHO European Regional average.
- Limited autonomy and scope of practice for nurses.

Health services delivery transformations

Timeline of transformations
Based on an analysis of 31 pilot projects conducted between 2003 and 2004,[3] the Ministry of Social Affairs and Health recommended shifting responsibilities from physicians to nurses to address access disparities and physician shortages in rural areas (Table 1). Since, several government policies have further promoted the advancement of nursing and legislation was passed in 2010 to enable nurse prescribing. At present, government support for the advancement of nursing continues to be guided by the National Development Programme for Social Welfare and Health Care 2012–2015.

Description of transformations
Selecting services. This initiative has worked to ensure the comprehensive package of services offered to the Finnish population is readily available, with an emphasis given to patient education and self-management support. Advanced practice nurses are now responsible for services such as performing consultations, ordering and carrying out diagnostic tests, managing patients with chronic disease (for example providing health education, lifestyle advice and follow-up care), managing minor acute conditions (such as minor infections and injuries) and referring patients to necessary specialist care.

Designing care. Evidence-based national and local clinical guidelines

Table 1
What were the chronological milestones for the initiative?

2002	National Project to Ensure the Future of Health Care 2002–2007 recommends advancing nursing roles to address provider shortages; Ministry of Social Affairs and Health offers state grants to municipal councils to incentivize provider restructuring.
Mid-2000s	Polytechnic universities develop various postgraduate programmes to support advanced training for nurses.
2008	National Development Plan for Social and Health Care Services 2008–2011 launched; promotion of advanced nursing roles included in the Plan.
2010	Legislation passed to allow nurse prescribing by advanced practice nurses.
2011	Decree defining postgraduate education for nurse prescribing effected.
2012	First cohort of advanced practice nurses complete training on nurse prescribing.
2012–present	National Development Programme for Social Welfare and Health Care 2012–2015 guides the further advancement of nursing.

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Comprehensive package of care including health promotion, screening, acute treatment and chronic care management offered to population.	Comprehensive package of care continues to be offered; advanced practice nurses offer services including diagnostic testing, chronic disease management and minor acute care.
Designing care	
Care delivered by physicians following national and local guidelines.	Evidence-based national and local guidelines developed to guide care delivery by advanced practice nurses; set medication list for nurse prescribing developed.
Organizing providers	
Majority of care delivered by physicians; low numbers of physicians limit care access, particularly in rural areas.	Increased proportion of care delivered by advanced practice nurses; advanced practice nurses may work in partnership with physicians, within multidisciplinary teams or, in some cases, independently using e-consultation to connect with physicians as needed.
Managing services	
Municipal councils responsible for management and planning of health services and organization of providers within their local jurisdictions.	Municipal councils retain management and planning responsibilities over health services and provider organization.
Improving performance	
Nurses' competencies underdeveloped.	Nurses' competencies expanded.

have been developed to guide decision-making and services delivery by advanced practice nurses. In addition, national standards have been set for nurse prescribing.

Organizing providers. The initiative has shifted roles previously performed by physicians to advanced practice nurses. Advanced practice nurses may work in primary care practices, health centres or hospital settings, either in partnership with physicians or as part of a larger multidisciplinary team. In rural areas and smaller health facilities not always staffed with a physician, advanced practice nurses may work independently to deliver the majority of care, supported by physicians via e-consultations as required.[4]

Managing services. Municipal councils have a high degree of autonomy over health services planning within their local area, including over the development and management of provider organization. This has allowed strategic alignment of advanced practice nurses to areas in greatest need of additional human resources.

Improving performance. Advanced practice nurses gain necessary competencies through postgraduate training at polytechnic universities, with ongoing skills-testing helping to ensure acquired competencies are maintained.

Health system enabling factors

The Ministry of Social Affairs and Health formally recommended advancing nursing roles through publication of the National Project to Ensure the Future of Health Care 2002–2007 and made state grants available to municipalities to incentivize uptake of recommended organizational changes (Table 3). The National Development Plan for Social and Health Care Services 2008–2011 continued state grants for municipalities to further advance the role of nurses. Complementary legislation to enable nurse prescribing provided added support for the initiative. Presently, the National Development Programme for Social Welfare and Health Care 2012–2015 continues to guide and promote the further advancement of nursing roles.

The Ministry of Social Affairs and Health funded the development of a standardized postgraduate training curriculum for nurse prescribing,

requiring approximately 1125 hours of training to achieve this certification. Higher education is often funded by employers and salary increases may be locally negotiated by advanced practice nurses after completing the degree, offering an incentive to achieve this qualification. As physicians are salaried by municipalities, sharing responsibilities with advanced practice nurses allows a reduction in physician workload without negative effects on income, thereby incentivizing their cooperation.

Outcomes

Several small-scale evaluations have recorded the impact of the initiative and reported positive outcomes including reductions in patient visits to physicians, improved productivity,[5] and greater workplace wellbeing for providers (Box 2).

Box 2
What were the main outcomes of the initiative?

- Advanced practice nurses managed approximately half of all patient visits to health centres.
- Advanced nursing consultations reduced acute patient visits to physicians by up to 25%.[4]
- The majority of patients at rural health facilities could be cared for by advanced practice nurses.
- Both nurses and physicians reported improved workplace wellbeing and professional cooperation.
- Patients experienced better access to providers and reports show that patients have been satisfied with care provided by advanced practice nurses.[4]

Change management
Key actors
The Ministry of Social Affairs and Health led the initiative through

Table 3.
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• National plans and policies promote and guide advancement of nursing. • New legislation permits nurse prescribing for certain medications.
Incentives	• State grants made available for municipalities to advance nursing roles. • Advanced practice nurses may negotiate higher salaries.
Competencies	• Standardized postgraduate curriculum for nurse prescribing developed.

issuing official recommendations to support the advancement of nursing roles and encouraging municipal uptake of recommendations with complementary policies, legislation and incentives (Box 3). Cooperation between national and municipal governments was essential for the development of the initiative and municipal councils were invited, along with other stakeholders, to participate in discussions and seminars during the planning process. Universities played a key role in developing new higher-education programmes to train advanced practice nurses to take on additional responsibilities.

Box 3.
Who were the key actors and what were their defining roles?

- **Ministry of Social Affairs and Health**. Recommended development of advanced practice nursing; supported initiative with complementary policies, legislation and incentives.
- **Municipal councils**. Responsible for local health services planning and organization; led local health system restructuring to support advancement of nursing roles.
- **Universities**. Led development of postgraduate programmes for advanced nursing.
- **Advanced practice nurses**. Complete required postgraduate training; manage additional responsibilities in patient care.

Initiating change
Pilot studies on advancing nursing roles provided the necessary evidence to secure government support for change. The majority of stakeholders were generally supportive of the initiative, with the exception of medical associations. However, as providers were largely in favour of proposed changes, the Ministry of Social Affairs and Health was able to work with the executives of these associations to overcome resistance. International nursing recommendations and models provided inspiration for activities and the Thematic European Nursing Network offered Finnish universities exposure to international advanced nursing programmes that had been running for many years in Ireland, Sweden and the United Kingdom.

Implementation
Specific roles and responsibilities taken on by advanced practice nurses vary based on local needs. Cooperation and support from physicians and nurse managers was described as critical for the successful implementation of the initiative, with close working relationships already existing between physicians and nurses further facilitating the transition of responsibilities to advanced practice nurses.

Moving forward
The National Development Programme for Social Welfare and Health Care 2012–2015 continues to guide and promote the further development of advanced nursing

in Finland. Additionally, a national evaluation of the impact of nurse prescribing is currently underway and is due to be completed by the end of 2015. Results of this evaluation will be used to guide the future development of nurse prescribing.

Highlights
- National legislation provided the necessary framework to align changes in the professional scope of practice for nurses.
- Partnerships and international networks facilitated sharing of experiences and offered inspiration during the design process.
- Formalizing education through the development of postgraduate programmes in partnership with universities supported sustainability and ongoing development of skills.
- Advancing nursing roles contributed to professional empowerment and improved workplace wellbeing.

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Developing multi-professional group practices in France

Overview

In response to anticipated declines and regional disparities in the number of general practitioners working in France, particularly in rural areas, a number of regional and national efforts have been directed towards supporting the reorganization of primary care providers into multi-professional group practices (MSPs). MSPs are designed to co-locate a minimum of two general practitioners with at least one additional health professional in primary care. Since conception of the model in 2007, the development and proliferation of MSPs across the country has been guided with financial incentives and a supportive policy framework. Initially, efforts to encourage the establishment of MSPs were led by Regional Health Agencies in response to local challenges in the distribution of general practitioners. Regional successes stimulated a national government initiative in 2010 to co-finance the start-up costs for MSPs and experiment with new methods of paying providers. Under direction from the Department of Social Security, Regional Health Agencies were responsible for managing the initiative and recruiting MSPs to participate. Contracts between MSPs and Regional Health Agencies awarded each participating MSP approximately €50 000 of additional funding in exchange for group-based performance improvements on quality and efficiency measures. MSPs were assessed through claims data reported to the National Health Insurance. Results of the evaluation show that MSPs increased access to care. Compared to traditional practices, MSPs are open for longer hours on more days of the week and offer a wider selection of services. Government support for the reorganization of providers into MSPs will continue and the popularity of MSPs is increasing.

Problem definition

Declining numbers of general practitioners, particularly in rural areas, triggered local government concerns regarding access to care (Box 1). With many general practitioners anticipated to retire in the coming years, and few incentives for younger physicians to take up vacant practices in rural areas,

geographic disparities in access to providers were expected to widen. Additionally, the focus on independent practices left general practitioners with limited flexibility in work schedules and isolated from peers, leading to professional dissatisfaction, notably among younger professionals who were eager to work in different, more collaborative arrangements.[1]

Box 1
What problems did the initiative seek to address?

- Anticipated decline in the number of general practitioners, particularly in rural areas.
- Widening geographic disparities in access to primary care.
- Growing dissatisfaction among general practitioners with the current model of primary practice.

Health services delivery transformations

Timeline of transformations
Growing concerns regarding the organization and availability of general practitioners, particularly in rural areas, triggered action to work towards a new model for the organization of primary care providers. Starting in 2007, regional and national government actions were taken to encourage the development of multi-professional group practices, known in French as "maisons de santé pluriprofessionelle" (MSPs) (Table 1). As a result of these efforts, approximately 700 MSPs are now operational across the country, with a target of reaching 1000 by 2017.

Description of transformations
Selecting services. In addition to the comprehensive package of primary care services offered by all general practitioners in France, MSPs may provide a wider scope of services through other health professionals co-located in the practice. Complementary services that could be offered include prenatal care, physiotherapy, mental health services and dental care.

Designing care. MSPs have been incentivized through government subsidies to develop protocols to improve the coordination of services. However, development and

Table 1
What were the chronological milestones for the initiative?

2007	MSPs first defined and introduced into the public health code; MSPs positioned to contribute to the development of a new model for the delivery of primary care and increasingly awarded funding to support establishment in underserved areas.
2009	Regional Health Agencies established to expand local authority over provision of care; Regional Health Agencies begin offering financial incentives to support MSPs.
2010–2014	National government initiative co-finances development MSPs and experiments with new payment-for-performance mechanisms for providers.
2015	Evaluation of national government initiative completed; results show increased access to care, increased productivity and delivery of better quality services, notably around diabetic monitoring, vaccination screenings and prescribing efficiency.[2,3]
Present	MSPs continue to operate across the country and increase in popularity; 700 MSPs are in operation, with a target of 1000 by 2017.

implementation of protocols is at the discretion of MSPs, which are free to organize care as they see fit.

Organizing providers. The majority of general practitioners now work in group practices, with MSPs being one form of these. MSPs are distinct from other group practices in that they co-locate a minimum of two general practitioners with at least one other health professional such as a nurse, physiotherapist or dietician. While MSPs require co-location of three providers at minimum, documentation shows that up to 21 health professionals may be found, spanning as many as eight different specialties. In addition to general practitioners, the most common providers found in MSPs are nurses, midwives, psychologists, dentists and physiotherapists.

Managing services. As private practices, MSPs are primarily financed by primary care providers. However, unlike independent private practices, initial financial investments are divided among multiple partners, thus decreasing individual financial risk. Furthermore, MSPs have received considerable financial assistance with start-up costs through government channels, particularly in underserved areas. MSPs are each responsible for attracting professionals and organizing the services they provide. Health professionals within MSPs are individually contracted to provide services by Regional Health Agencies, but do so in cooperation with other providers working within the practice.

On average, MSPs are open more days a week (5.5 days) for longer periods of time per day (11.5 hours) than other practices, increasing patients' access to care. Despite this, general practitioners in MSPs do not typically work more hours than peers in other practice settings, as scheduling flexibility allows sharing of patient rosters and distribution of

work hours as needed. "The idea is that it is not only in the same place, but working together."

Improving performance. The initiative is monitored through claims data as reported to the national insurance fund. This information, in addition to a survey designed to report on the structure and organization of MSPs, formed the basis for the evaluation completed in 2015.

Health system enabling factors

Over the past decade, changes to legislation and increased flexibility with health-financing schemes have supported the development and expansion of MSPs (Table 3). A trend towards decentralization for the planning and organizing of regional health care provision has given greater autonomy to France's 26 Regional Health Agencies, fostering the development of innovative models of care designed to meet local needs. Many Regional Health Agencies were able to financially support the development of MSPs by taking advantage of Regional Response Funds allocated to them from a variety of different sources, including centres for rural development. The number of regionally-funded MSP projects rose steadily from 20 in 2007 to 185 in 2011, which can be attributed in part to the regional incentives in place.

Observing regional support for MSPs, the national government ran an initiative to co-finance the establishment of MSPs and experiment with new payment-for-performance mechanisms between 2010 and 2014, focusing the introduction of incentives on rural or underserved areas. The Department of Social Security managed the project, with responsibility for implementation delegated to Regional Health Agencies. Eligible MSPs entered into contracts with Regional Health

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
National health insurance covers comprehensive range of services for population.	MSPs typically offer a wider scope of services than other primary care practices.
Designing care	
Informal coordination of services within primary care practices.	MSPs incentivized to self-develop protocols to improve coordination and increase patient involvement in care.
Organizing providers	
Majority of general practitioners work in isolation in individual private practices.	Majority of general practitioners organized in some form of group practice; providers in MSPs co-locate and collaborate across disciplines to deliver care.
Managing services	
National health insurance contracts individual providers to deliver services.	Regional Health Agencies contract individual providers within MSPs to deliver services; each MSP responsible for self-financing practice costs, attracting providers and organizing services; government funding assisted MSPs with start-up costs. MSPs typically open more days a week for longer hours.
Improving performance	
No performance improvement mechanisms in place.	Information on MSPs gathered from claims data submitted to the national insurance fund.

Table 3

How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Legislation enacted to define MSPs and recognize them as official legal entities. • Regional Health Agencies have oversight of MSPs, with contracts between these actors setting standards for practice. • Formalization of MSP contracts for continued remuneration based on piloted model.
Incentives	• MSPs offered government funding to help finance start-up costs. • Fixed-rate funding incentives based on performance improvements offered to MSPs.
Information	• Information on MSPs collected from claims data reported to the national health insurance fund.

Agencies which awarded fixed-rate funding incentives, in addition to traditional fee-for-service payments, in exchange for care improvements. Approximately 150 MSPs enrolled in the initiative and received around €50 000 per year in performance incentives. Importantly, funding was awarded on a group basis to incentivize achievement of performance goals through teamwork. Performance improvements were measured via selected indicators designed to quantify efficiency and quality based on performance through claims data submitted to the national health insurance fund. At the end of 2014,

legislation was passed to formalize the development of contracts with individual MSPs to continue remuneration based on the model used during experimentation. These contracts stipulate remuneration based on access to care, team dynamics and the use of information systems.

Outcomes

Since their introduction, approximately 700 MSPs have been established across France, predominantly in rural areas. These practices provide a more comprehensive range of services and increased access to care for patients (Box 2). Despite this, providers within MSPs generally report improved work-life balance and do not appear to work more hours than peers in independent practices; around a quarter of MSP providers declare less than 34 hours a week. In addition, global expenditure for MSPs is lower than other forms of general medicine as MSPs typically have lower referrals to specialists, instead being able to offer these services in-house at the primary care level.

Box 2
What were the main outcomes of the initiative?

- Proliferation of MSPs across the country, predominantly in rural areas.
- Improved access to care as a result of MSPs offering a wider range of services with extended opening hours.
- Increased productivity when compared with control independent practices, with an active patient list 13.4% higher and 15.6% more patients registered than controls.[3]
- Improved work-life balance for general practitioners working in MSPs.
- Annual expenditures on ambulatory care between the period of 2009–2012 moderately lower (9%) for patients registered in MSPs.[3]

Change management
Key actors
Development of MSPs was initially provider-led, emerging organically in response to the limited number of providers in certain regions and growing workload for general practitioners working in independent practices (Box 3). MSPs were supported and encouraged by Regional Health Agencies who saw advantages of the model for addressing local provider challenges. Regional success of MSPs ultimately secured national government support, enabling scaling up of the initiative assisted by the development and passing of legislation and application of financial incentives.

Box 3.
Who were the key actors and what were their defining roles?

- **National government**. Supported the development of MSPs through favourable legislation; implemented national project to financially incentivize development of MSPs.
- **Regional Health Agencies**. Led early efforts to support the establishment of MSPs; provide regional oversight for MSPs.
- **Primary care providers**. Own and operate MSPs.

Initiating change
A political context supporting greater regional control over the health system helped drive local innovation to observed challenges, leading to the development of MSPs to address regional shortages of general practitioners. Regional success of MSPs stimulated national interest in the model, leading the national government to promote the proliferation of MSPs through various financial incentives and supportive legislation. Working in MSPs was entirely voluntary, but with appropriate legislation and financial incentives in place, providers were encouraged to self-organize and adopt the MSP structure.

Implementation
As the majority of primary care providers are privately contracted, setting up MSPs was led by health professionals themselves, with support and guidance provided through government channels. Initially, it was primarily younger health professionals who took advantage of available funding to establish MSPs, as they wanted to work in different conditions outside of individual practice. Providers who organized themselves into MSPs reportedly appreciate the peer support and improved work-life balance offered, as well as the reduced financial risk of opening a co-owned practice where start-up costs were partially funded by the government. The development of MSPs is voluntary, health professionals who prefer to work in independent practices are still free to do so, thus limiting the ability of these stakeholders to resist implementation of the new model.

Moving forward
Provider acceptance of MSPs continues as the benefits of the model become increasingly recognized. Results from the evaluation on the national government's MSP initiative have provided insights into the benefits of this practice. While 700 MSPs are currently operational across France, targets have been set to increase this number to 1000 before 2017.

Highlights

- Local actors were given sufficient autonomy over services delivery, which spurred innovation of solutions to local health system challenges.
- National rollout of changes relied on the adoption of supportive national frameworks and policies.
- Financial incentives, including funding for initial start-up costs and payment-for-performance bonuses, stimulated voluntary provider uptake of new organizational models.
- Voluntary participation reduced stakeholder conflicts by allowing those resistant to change to abstain from the initiative.

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2 Mousques, J & Daniel, F. (2015). The impact of multiprofessional group practices on the quality of general practice. *Questions d'économie de la santé, 211.* Retrieved from http://www.irdes.fr/english/issues-in-health-economics/210-multiprofessional-group-practices-generate-gains-in-terms-of-productivity-and-expenditures.pdf
3 Mousques, J and Daniel, F. (2015). Multiprofessional group practices generate gains in terms of productivity and expenditures. *Questions d'économie de la santé, 210.* Retrieved from http://www.irdes.fr/english/issues-in-health-economics/210-multiprofessional-group-practices-generate-gains-in-terms-of-productivity-and-expenditures.pdf

Defining and standardizing primary care in Georgia

Overview

Working towards universal health care, a number of activities have recently been launched in Georgia to improve the quality of care delivered. Proposed actions have focused on expanding the selection of services, introducing a basic package of care with a focus on disease prevention, primary care and emergency medical services. Related efforts include standardizing referrals and care guidelines to strengthen the role of primary care in managing these services. While the initiative is in the early planning stages and the impact of proposed reforms remains to be realized, high levels of government support for improving primary care are evident.

Problem definition

In the early 2010s, the overall burden of disease for Georgia was high, with infectious diseases, mostly preventable with existing vaccines, accounting for 56% of the disease burden among children up to 15 years of age. Noncommunicable diseases, specifically mental health, cardiovascular diseases, cancer and trauma, collectively accounted for 69% of the disease burden observed among the working-age population.[1]

Despite previous efforts to strengthen primary care, gatekeeping by primary care providers remained weak with high rates of provider dissatisfaction as a result. A lack of monitoring and government oversight within the largely privatized health system weakened accountability and hindered performance improvements. Furthermore, a large proportion of the population lacked coverage for basic health services under the private health insurance system and out-of-pocket health expenditures were high (Box 1).

Box 1
What problems did the initiative seek to address?

- Increasing burden of chronicity and noncommunicable diseases.
- Low productivity and provider dissatisfaction.
- Weak gatekeeping ability of primary care.
- Limited coverage for basic health services.

Health services delivery transformations

Timeline of transformations

In 2012, following the election of a new parliament, plans for the introduction of universal health care became the new focus as part of a wider strategy to improve health services delivery (Table 1). An initial benefits package covering primary care and emergency medical services was introduced in 2013, with this later expanded to include elective surgery, oncology and obstetric care. Further reform efforts are ongoing to refine the concept of primary care and strengthen care standards.

Table 1
What were the chronological milestones for the initiative?

2011	National Health Care Strategy 2011–2015 released, defining strategic objectives for strengthening care quality.
2012	Election of new government; National Health Care Strategy expanded to include plans for reintroduction of universal health care.
2013	Basic package of benefits covering primary and emergency medical care, elective surgery, oncology and obstetrics introduced.
Present	Ongoing implementation of the National Health Care Strategy to refine the concept of primary care and strengthen care standards.

Description of transformations

Selecting services. Universal health coverage for a basic package of services including primary and emergency medical care, elective surgery, oncology and obstetric care was recently introduced. Emphasis has been placed on developing disease prevention services including screenings for cardiovascular disease and cancer, as well as developing health promotion services to increase awareness of behavioural factors such as diet, physical activity and tobacco use. Efforts are currently underway to further define and standardize the package of primary care services.

Designing care. Officials within the Ministry of Labour, Health and Social Affairs are developing primary care guidelines and protocols for priority conditions.

Organizing providers. Efforts are underway to establish referral systems between providers and to strengthen the gatekeeping role of primary care. Specifically, a pilot project to standardize cardiology screenings has been put in place.

Managing services. The Ministry of Labour, Health and Social Affairs is responsible for the oversight of services delivery. However, decentralization to the Health and Social Programmes Agency has been seen and an increased role of district-level public health centres in managing care delivery is under discussion.[2] Improvements in health infrastructure are planned with 150 medical facilities targeted for renovation. Efforts are also being made to define the number of health providers per catchment area to improve the planning of human resources.

Improving performance. The Ministry of Labour, Health and Social Affairs plans to offer ad hoc trainings to health providers on new care guidelines once finalized. Close monitoring of providers' adherence to guidelines and standards is also planned to help ensure care quality and patient safety.

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Large proportion of population without coverage for basic health services under privatized insurance system.	Entire population provided access to a basic package of services including primary and emergency medical care, elective surgery, oncology and obstetrics; increased emphasis on health promotion and disease prevention services.
Designing care	
Absence of guidelines and protocols for disease management in primary care; weak implementation of limited guidelines in place.	New evidence-based guidelines, protocols and tools for primary care in development; guidelines based on World Bank recommendations.
Organizing providers	
Majority of health providers salaried by privately owned health facilities, with the exception of rural practitioners who are individual fund holders; overabundance of physicians and acute shortage of nurses; weak gatekeeping ability of primary care providers; geographic access to providers is fair, but financial barriers exist.	Initiative plans to strengthen gatekeeping by primary care providers and improve referral systems; reductions in physician numbers are planned with corresponding increases in the number of nurses.
Managing services	
Ongoing investment in health infrastructure; private sector responsible for services delivery with only limited oversight and regulation from the government.	Increased government oversight of services delivery; increased role for district-level public health centres in managing services delivery under discussion.
Improving performance	
Lack of continuing education for providers; absence of monitoring and regulation threatens care quality and patient safety.	Planned training for providers on new guidelines and protocols once finalized; planned implementation of monitoring systems with performance incentives.

Health system enabling factors

The Ministry of Labour, Health and Social Affairs is leading the initiative and working to increase health system stewardship and oversight to support reform efforts (Table 3). The Ministry is responsible for planning and determining health priorities, developing and implementing national policy, ensuring enforcement of health-related laws, collecting and reporting health statistics and regulating health professionals.[3] Under the initiative, the Ministry introduced accreditation requirements for postgraduate medical education programmes, placing stronger focus on clinical training. A mandatory list of minimum quality and safety requirements to be met by all inpatient facilities has also been identified to improve care quality. The Ministry's current priority is the development of a national concept for primary care which, up until now, has not been prioritized at the ministerial level.

We started to develop the national concept for primary health care. We had to agree on what primary health care needs. … So the Ministry two months ago recruited a team of two national consultants who are currently consolidating this concept. This has never been systematized or endorsed by the Ministry before. The two consultants have already drafted a high-quality document, which defines the accessibility criteria and the organizational system criteria. … That document will then act as a guideline to every primary health care centre and as a guide to standardizing this care.

A new health information system has been established and electronic medical records will be developed to centralize patient information. The National Centre for Disease Control has developed a set of population health indicators to facilitate monitoring and evaluation. Additionally, the United States Agency for International Development (USAID) is helping to develop instruments to enable data collection for priority conditions, including cardiovascular disease.

When we looked at the scale of cardiovascular disease burden and also when we looked at the need for strengthening monitoring and accountability of primary health care, it was evident that existing tools and managing systems were not accurate enough.

The Ministry plans to use financial incentives to reward performance improvement, coupled with "rigid sanctions" for non-compliance to standards.

We envisage problems for when we actually start monitoring people because we did a preliminary analysis, which is not official, but when we looked at the utilization of primary health care in rural areas we found that rural physicians are busy only two full months out of the 12-month calendar. So no one was monitoring that; they were receiving their salary. No one was monitoring whether they showed up to the office each day and whether they were doing anything. So we will start monitoring the accountability of services and will be increasing the financial resources for physicians and putting in place financial incentives. Now it is time for accountability and partnership. We need to put in place rigid sanctions.

Outcomes

The initiative is in the early planning stages and consequently the impact of proposed reforms has yet to be realized.

Change management

Key actors

Several actors have already made significant contributions to the design and planning of the initiative (Box 2). The Ministry of Labour, Health and Social Affairs is leading the effort and is currently working with stakeholders, including national and local governments, international development partners and health providers, to build an initiative that

Table 3

How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Ministry of Labour, Health, and Social Affairs working to increase government stewardship and oversight within the health system. • New care standards in development to support standardized and high-quality care.
Incentives	• Planned use of financial incentives and sanctions to encourage adherence to care guidelines.
Competencies	• New accreditation requirements for postgraduate programmes developed.
Information	• New health information system established and electronic medical records in development. • Set of population health indicators selected by the National Centre for Disease Control for monitoring purposes.

is informed by experts and relevant to local situations. However, as the initiative remains in the early stages of development, leaders still "don't have a clear list for who will be involved or who will be in charge of what". Relationships between stakeholders have been described as strong, which has facilitated the change process.

We have been quite lucky that a lot of problems are simplified, as it is usually the political will of the government to advocate on our behalf. We have an excellent understanding with USAID and with all our stakeholders. However, we do envisage that implementation of integrated care guidelines and tools will be a challenge.

Box 2
Who were the key actors and what were their defining roles?

- **Ministry of Labour, Health and Social Affairs**. Leading development of the initiative.
- **World Bank.** Provided technical assistance and guidance in developing new care pathways.
- **USAID**. Described as a key consulting partner; leading a project to develop instruments and standards for improved disease management within primary care.

Initiating change

The initiative is an "ongoing arm" of recent health reforms in Georgia. When the Ministry of Labour, Health and Social Affairs designed the basic package for primary care services to be covered under universal health care, they "realized that if we wanted to move towards integration of primary care, the tools to do this were not there for primary care providers." Following this realization, the Ministry recruited both national and international consultants to plan the initiative and began discussions to start "to develop the national concept for primary health care built on centralizing primary health care".

This initiative is far from implementation. We have an idea and would like to work on this. We are now working on developing the concept of primary care. We think we should first have the concept

of primary care, as it is easier to design this initiative and carry out interventions.

Moving forward

The Ministry of Labour, Health and Social Affairs continues to develop the initiative and lead health system reforms. While specific actions to be taken moving forward currently remain undefined, leaders are focused on "creating a system with a clear vision, a clear mandate and simplified standardization procedures that are well monitored and supervised." Once this foundation has been achieved, leaders hope to strategize ways to further improve health system quality.

Highlights

- Articulating a clear government vision ensured reforms had a strong foundation on which to build.
- Learning from previous experiences and international partners helped avoid potential difficulties.
- Inclusion of stakeholders in the design process helped build local consensus for change.
- Following strategy development, detailed plans were drawn up to guide proposed reforms.

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Beyond bariatric surgery: a pilot aftercare programme for bariatric patients in Germany

Overview

After observing rising health care costs linked to obesity and associated comorbidities, the Kaufmännische Krankenkasse-Allianz (KKH), one of Germany's largest statutory health insurance companies, designed a pilot project to assess the effectiveness of a new bariatric surgery care package to help patients achieve sustainable weight loss. Working with Hamburg University Hospital, selected as the pilot site for the project, KKH designed a tailored package of services targeted to patients with a body mass index of 45 or greater for bariatric surgery followed by a six-month nutrition counselling programme. Evidence suggested

that bariatric surgery could help patients achieve significant health improvements and, although initial costs of performing the surgery were high, initiators of this work believed it could prove effective in the long-term. The pilot launched in May 2012 and 59 patients have been enrolled to date. Following surgery, patients are given a telemetric scale and are required to weigh themselves weekly for six months; weight data is automatically transmitted to KKH. Patients in the pilot receive a weekly health report on their progress and monthly coaching and education sessions with a nutrition counsellor during the six-month period following surgery. After completion of the programme, patients are referred

back to their general practitioner for general follow-up care. Patients are weighed for a final time one-year post-surgery to assess long-term weight loss achieved. The initiative plans to collect data on 100 patients in an effort to achieve statistically significant results for cost-benefit evaluations. Patient enrollment is ongoing but initial results are promising; "the weight loss is enormous and the comorbidities in terms of diabetes and hypertension are reduced." If evidence supports cost-effectiveness, initiators envision working with other hospitals to expand the initiative across Germany.

Problem definition

A rising prevalence of obesity in Germany, increasing from 13% in 2000 to 25% in 2008, has placed pressure on services delivery to manage higher burdens of associated comorbidities, particularly type 2 diabetes and hypertension (Box 1). Despite the availability of bariatric surgery in Germany to treat obesity, a lack of standardized post-operative care guidelines to support necessary lifestyle changes has previously compromised the effectiveness of the surgery and left patients unable to maintain weight loss over the long term.

Box 1
What problems did the initiative seek to address?

- Rising prevalence of obesity and associated comorbidities.
- Absence of standardized post-operative care guidelines for bariatric patients.
- Lack of support for bariatric patients to adopt necessary post-operative lifestyle changes.

Health services delivery transformations

Timeline of transformations
In 2011, concerns were raised within KKH, one of the five largest statutory health insurance providers in Germany, over the number of comorbidities reported among obese patients, as well as the stringent restrictions placed on the use of bariatric surgery and the limitations of standard care options to reduce obesity in the long term.

In this context, a new model for bariatric surgery incorporating a six-month aftercare programme with weight-loss support services

was proposed. Hamburg University Hospital was selected as the pilot site to test the new service and began accepting patients for the pilot in May 2012. The pilot project is currently just over halfway towards meeting its enrollment target of 100 patients and initiators plan to conduct an evaluation of the service once the pilot is complete.

Description of transformations

Selecting services. Following bariatric surgery, patients enrolled in the pilot participate in a six-month aftercare programme to support necessary lifestyle changes. Aftercare services include weekly weight monitoring and nutritional counselling. The service primarily targets individuals with a body mass index (BMI) of 45 or greater.

Designing care. Patients are recruited into the pilot based on clearly defined criteria including BMI, complication risk and medical history. The surgery and aftercare programme follow a framework designed by KKH in partnership with Hamburg University Hospital.

Organizing providers. Patients may either be referred by their general practitioner or self-refer for an assessment to participate in the pilot. All surgeries are performed by specialized surgeons working at Hamburg University Hospital. After surgery, a nutrition counsellor employed by KKH follows patients and conducts monthly counselling sessions via telephone. The nutrition counsellor is also available to patients for additional consultations and support as needed. After six months, patients are referred back to their general practitioner for general care. Patients receive a weekly health report throughout the aftercare programme, which they may choose to share with their general practitioner.

Managing services. The necessary infrastructure and specialist equipment for performing bariatric

surgery was available prior to the pilot programme at Hamburg University Hospital. Additionally, a health coaching and nutrition counselling

service was already offered by KKH to insurance enrollees and only minor adjustments to this current system were required to extend the service

Table 1
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Bariatric surgery covered by KKH health insurance for patients with a BMI 35 of greater with presence of comorbidities or 40 or greater without comorbidities; in practice, only a limited number of patients approved for surgery.	KKH pilot focuses on increasing availability of bariatric surgery to patients with a BMI of 45 or greater; patients participating in the pilot receive a six-month aftercare programme, including weight monitoring and nutrition counselling.
Designing care	
Absence of standardized framework for providing bariatric surgery or post-operative aftercare.	Formal patient selection criteria established for the initiative; guiding framework for delivery of bariatric surgery and aftercare programme developed.
Organizing providers	
Fragmentation in the delivery of services following surgery; ad hoc follow-up with patients provided by general practitioners and specialists as needed	Surgeons at Hamburg University Hospital provide bariatric surgery for patients enrolled in the pilot; a nutrition counsellor provides follow-up care to patients for six months post-surgery; patients referred back to general practitioners upon completion of care programme.
Managing services	
Necessary infrastructure and specialist equipment for bariatric surgery available at Hamburg University Hospital; KKH runs a health coaching service for insurance enrollees and maintains necessary infrastructure for this service.	Necessary infrastructure and equipment to provide bariatric surgery with nutrition counselling already in place; telemetric scales purchased and given to participating patients to enable weight monitoring and data collection.
Improving performance	
Variable quality of bariatric surgery across hospitals.	Hamburg University Hospital selected as pilot site based on quality criteria; specialist training on bariatric nutrition provided to nutrition counsellor; optional training on new referral practices offered to physicians.

to bariatric patients. Telemetric scales were purchased and provided to patients to enable accurate weight recordings with automatic data transfer to KKH. Patients are required to weigh themselves once per week on the telemetric scale to enable weight monitoring.

Improving performance. Hamburg University Hospital was selected as the pilot site based on their performance record for delivering high-quality bariatric care. Specialized training on patients' needs post-bariatric surgery was provided to the nutritional counsellor and opportunities for all physicians to improve and standardize bariatric surgery referral practices were provided through optional trainings prior to the initiative.

Engaging and empowering people, families and communities
Patients receive education and nutrition counselling to empower them to make necessary lifestyle and dietary changes following bariatric surgery. During the six-month aftercare programme, patients receive seven telephone-coaching sessions with a nutrition counsellor to review and assess their weight loss, plan healthy meal options and coach further weight-loss improvements. A 17-page manual is also provided to patients to support them in understanding and managing their diet after surgery. Patients receive a weekly health report, including weight data, on their progress. Following the six-month aftercare programme, patients have primary responsibility for maintaining their weight loss over the long term using knowledge and skills gained through the programme.

Our nutritional counsellor counsels on what nutrition is preferable, so the patient is better informed and empowered with the knowledge of what to eat because it requires a big adjustment from their traditional eating habits.

Health system enabling factors

This initiative is overseen and supported by the health insurance organization, KKH (Table 2). Funding agreements have been negotiated with Hamburg University Hospital to allow the facility to perform an increased number of bariatric surgery procedures as per the framework and criteria developed for the initiative. A performing bariatric surgery is a profitable service, but approval for such procedures is normally restricted by health insurance providers, the necessary incentives were in place to encourage participation of the Hospital.

Routine examination of health data by KKH for their enrolled population helped identify the need to address rising health costs associated with obesity. Despite the initial cost of performing bariatric surgery, it is believed that offering this service with appropriate aftercare could prove more cost-effective in the long term than refusing this service and treating comorbidities associated with obesity. As evidence of the long-term economic benefits of bariatric surgery was lacking, senior management at KKH agreed to the pilot project as a means to determine if this approach could prove cost-effective. As a pilot initiative, emphasis has been placed on data collection to enable evaluation. A sample size of 100 patients has been set to enable statistical significance to be observable. Patients' weight data is collected weekly during the first six months following bariatric surgery and a final weight measurement is recorded one year post-surgery. To ensure accurate collection of weight data, telemetric scales were used to record and automatically transmit patients' weight data for review by KKH, avoiding potential problems associated with self-reported weight.

Table 2
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Funding agreements hold Hamburg University Hospital accountable for performing bariatric surgery according to the framework set by KKH.
Incentives	• Bariatric surgery costly for insurance companies, but a profitable service for surgeons; increased insurance funding for this procedure incentivized surgeons' participation in the pilot.
Information	• Extensive health data collected on insurance enrollees for routine evaluation by KKH; analysis of this data highlighted the need to address costly comorbidities associated with obesity. • Weekly weight data collected for patients over the six months following bariatric surgery; final weight measurement taken one year post-surgery. • Cost-benefit analysis of the initiative is planned; pilot project plans to enrol 100 patients to enable statistical significance to be observed.
Innovation	• Telemetric scales automatically transmit reliable weight data to KKH.

Outcomes

To date, 59 patients have undergone bariatric surgery as part of the initiative. While official outcomes for the pilot project are not yet available, results are promising thus far. Once information has been collected on the full cohort of 100 patients, initiative leaders hope to determine whether the initiative had a statistically significant benefit in terms of health outcomes and cost-effectiveness.

The weight loss is enormous and the comorbidities in terms of diabetes and hypertension are reduced. … Patients who had type 2 diabetes before don't have this after and no longer need insulin. They are in complete remission. The same goes for hypertension.

Change management

Key actors

Despite initial resistance from senior management at KKH, persistent advocacy from programme initiators employed at KKH helped gain approval for the pilot project and drive it forward (Box 2). With senior management on board, a director for the project was hired to oversee activities. Hamburg University Hospital was selected as the pilot site to conduct the bariatric surgeries due to their expertise and excellent performance record in this medical area. Surgeons and hospital management were keen to participate in the initiative and helped in the planning and design process.

Box 2

Who were the key actors and what were their defining roles?

- **KKH.** One of the five largest nationwide statutory health insurance providers in Germany; proposed idea for the initiative and provided funds for activities; oversees data collection and analysis for the pilot project.

- **Initiative director.** Led design of the initiative in coordination with stakeholders; oversees day-to-day running of the pilot project.
- **Hamburg University Hospital.** Performs bariatric surgery for patients eligible to participate in the pilot according to criteria set by KKH.

Initiating change

Examining health data highlighted that a new approach to treatment was needed in order to address rising costs linked to obesity and associated comorbidities within KKH's enrolled population. Evidence from other studies indicating that bariatric surgery could significantly reduce costly comorbidities associated with obesity was instrumental in securing approval for the pilot project.

We encountered barriers inside KKH because bariatric surgery is very expensive in Germany and we had no experience with how many surgeries would be performed inside this concept. We also didn't know if it would be more economical. So even though we thought it would be, we could not make the case without definitive data.

Selecting an appropriate pilot site was an important task and both quality of care and experience delivering this type of surgery were important factors. "We looked at the German market for bariatric surgery. We looked at which hospitals had the greatest experience of doing this kind of surgery and we picked the university hospital in Hamburg." Meetings were held with the Hospital's management and surgeons, as well as general practitioners in Hamburg, to bring providers on board with the initiative.

The surgeons are convinced that this surgery is the best that can be offered to these patients who are unable to lose weight conservatively. Of course, the advantage to the hospital is that they had the opportunity to do more inside this concept than they could do before.

Implementation

With support secured from the necessary stakeholders, the project quickly advanced to the implementation phase. All necessary infrastructure and resources were already in place allowing enrollment of patients in the pilot to begin quickly.

Moving forward

Patient enrollment for the pilot is ongoing. Once the target dataset for the pilot has been completed, initiative leaders plan to evaluate the cost-benefit impact of the intervention. Initiative leaders are currently optimistic that the initiative will prove effective over the long term based on results observed so far. If final evidence supports the new care approach, initiative leaders hope to extend the initiative to other hospitals, enabling more patients to benefit. "We think that this concept is economic and so our vision is to offer this to more patients."

Highlights

- Thoughtful presentation of evidence and effective communication of observed problems were crucial for gaining managerial support for the initiative.
- Active patient participation, enabled through health education, was important for empowering patients to adopt healthy behaviours.
- Capitalizing on existing infrastructure minimized the need for additional resource investments.
- Continuation of the initiative will be determined based on a thorough analysis of data.

Community support programmes for people affected by dementia in Athens, Greece

Overview

Faced with a rising incidence of dementia among Greece's ageing population and relatively few targeted health and social services, the Athens Association of Alzheimer's Disease and Related Disorders (AAADRD) was founded to support those affected by dementia. Created by health professionals and informal caregivers in Athens, the organization developed as a platform to begin providing services lacking from the National Insurance Plan. This has included the introduction of a range of free services such as neuropsychological assessments, cognitive training, physical activity interventions and nonpharmacological therapies delivered out of four AAADRD-run day care centres located across Athens. Alongside these efforts, patients, caregivers and providers involved with AAADRD have advocated for greater government action to fill gaps in services and address health system bottlenecks.

In 2013, after extensive public campaigns run over several years, the government established a multistakeholder working group to develop a national dementia action plan; the resulting document was accepted in late 2014. With a formal government commitment now place, AAADRD is hopeful that funding for their services, currently primarily financed through donor funds, will become more sustainable and those affected by dementia will have improved access to care.

Problem definition

Changing demographics in Greece have contributed to a trend of population ageing, with 19% of the population over the age of 65 in 2011.[1] This has contributed to increasing morbidity trends and prevalence of chronic diseases, including dementia and more specifically Alzheimer's disease.[2] This growing burden of illness is evident from the rising disability-adjusted life years (DALYs) for Alzheimer's which increased from 733 per 100 000 population in 2000 to 1006 per 100 000 in 2010.[2] Without a national dementia plan in place, this growing trend placed significant pressure on health services. Unfortunately, these trends have paralleled reductions in both health and social care budgets due to austerity measures following the 2008 financial crisis. In 2008, health services accounted for 10.2% of the gross domestic product (GDP). However, over the next two years this fell by 1.2%, representing a loss of US$ 2.6 billion at purchasing power parity.[3] In effect, health services delivery for dementia and Alzheimer's was not comprehensive, with social health insurance covering only a few medical services and providing limited support for informal caregivers who were left to provide the majority of care (Box 1).

Health service delivery transformations

Timeline of transformations
With a shifting demographic and lack of comprehensive services available for dementia patients, the Athens Association of Alzheimer's Disease and Related Disorders (AAADRD) was founded in 2002 as

Box 1
What problems did the initiative seek to address?

- Shifting demographics towards an ageing population.
- Increasing prevalence of dementia and Alzheimer's disease.
- Limited scope of services available for the treatment of dementia.
- Lack of support for caregivers of patients with dementia.
- Inadequate resources available for dementia care due to austerity measures.

a nonprofit organization dedicated to addressing health and social challenges related to dementia (Table 1). In 2007, wanting to fill observed gaps in services delivery for people

with dementia and their caregivers, AAADRD opened their first day care centre to provide a variety of social and support services not currently available within the existing health system. Most recently, in 2014, lobbying efforts have led the government to adopt the National Action Plan for Dementia. Actions are currently being taken to realize the goals laid out in the Plan and AAADRD continues to play a pivotal role in delivering dementia related services.

Description of transformations

Selecting services. AAADRD has worked to expand the scope of services that are available to people with dementia in order to more fully address the entire spectrum of the condition. AAADRD's day care centres for people with dementia offer free services including neuropsychological assessment, cognitive training, physical activity interventions and a range of nonpharmacological therapies such as speech, occupational or art therapy. Home care services are available to people unable to access centres. In addition, AAADRD organizes educational programmes and support services for caregivers such as support groups, individual counselling and information on caring for people with dementia.

Designing care. AAADRD takes advantage of the latest available evidence on dementia to offer services aligned with best known practices. AAADRD day care centres offer a range of programmes that can be adapted to individual needs and circumstances; people with dementia and their caregivers help to design the direction of care by choosing services applicable to their needs from a general pool of offered services.

Organizing providers. AAADRD day care centres house a multidisciplinary staff including physicians, psychologists, speech therapists, social workers, nurses and physiotherapists. Centres also rely heavily on trained volunteers and medical students. Staff members work as a team to offer a holistic package of services within centres. Co-location of services allows people with dementia and their caregivers to more easily access a wide variety of health professionals. Further, a home care programme ensures access to psychologists and nurses for those unable to reach the centres.

Referrals to services provided by AAADRD can be made by general practitioners, neurologists or other specialists. AAADRD belongs to a network linking 29 independent organizations addressing dementia. As part of this network, AAADRD is able to refer patients to other relevant community programmes and organizations.

Managing services. A seven-member multistakeholder board elected every three years oversees and manages AAADRD activities with input from a scientific advisory team. AAADRD is in charge of running its four day care centres and coordinating services for people with dementia and their caregivers in partnership with municipal governments. Centres and other services are funded through the combined support of the European Commission's European Social Fund, national and local governments, as well as AAADRD membership fees and donations.

Improving performance. Ongoing monitoring of day care centre activities and their impact on health outcomes is conducted by the centres in order to assess benefits for service users. Satisfaction surveys are also carried out to ensure high-quality service provision that meets people's needs

Table 1
What were the chronological milestones for the initiative?

2002	AAADRD founded by providers and caregivers as a nonprofit organization to advocate for the needs of people affected by dementia and fill observed gaps in available dementia-related care.
2004	AAADRD begins running dementia awareness campaigns in Athens and across Greece.
2007	First dementia day care centre operated by AAADRD opened in municipality of Pangrati; three additional centres later opened.
2009	Greek Alzheimer's Initiative signature collection campaign launched to push the government to develop a national dementia strategy.
2013	Working group to draft a national dementia strategy formed by the Ministry of Health.
2014	National Action Plan for Dementia accepted by the government.
Present	Actions to realize the goals laid out in the Plan underway; AAADRD continues to support care improvements for people affected by dementia.

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Limited services available for people with dementia; some drug treatments offered but no alternative treatments, prevention services or social care available.	Holistic package of services to target full spectrum of dementia offered through day care centres; social support services available to people with dementia and their caregivers; some home care services available.
Designing care	
No involvement of people with dementia or their caregivers in the treatment or management of their condition.	Services delivered are chosen through assessing latest available evidence; people with dementia and their caregivers choose and define personalized care packages from a wide range of services offered by AAADRD.
Organizing providers	
Primary care providers are the main point of contact for people with dementia.	Multidisciplinary team of professionals and volunteers co-located in day care centres; psychologists and nurses conduct home care visits; primary care providers and other specialists continue to provide medical services externally and provide referrals to AAADRD centres.[4]
Managing services	
Management of services delivery for people with dementia largely non-existent.	AAADRD board oversees and manages the organization; AAADRD day care centres run in partnership with local municipalities; necessary funding sourced from the European Commission, national government and private donations.
Improving performance	
No specialized training on caring for people with dementia available.	Ongoing monitoring of services conducted by day care centres; user satisfaction surveys provide feedback on quality of services; centre volunteers complete two-month training courses; online training programme run for private caregivers; wide variety of educational materials, seminars and workshops offered to informal caregivers.

and expectations. A number of resources and learning services are in place to expand the skills of health professionals, patients and caregivers. This includes a two-month training programme for centre volunteers, a self-study e-learning programme for professional caregivers and several programmes to improve the health literacy and capabilities of informal caregivers.

Engaging and empowering people, families and communities
Cofounded by people with dementia and their caregivers, AAADRD is well connected to its target population. Relatives and caregivers of people with dementia continue to direct the organization through representation on AAADRD's governing board. This, along with AAADRD's extensive work with grassroots level volunteers, has ensured services are highly relevant and community orientated. For example, the Alzheimer Café is a support group run by the day care centres. The Café brings people together for exchanging information about dementia, provides a source of emotional support for participants and promotes socialization among peers. Other group programmes run by the centres also encourage people to interact through group therapy sessions. Many other

centre activities, including memory training, are light-hearted and fun for participants. Expanding its community network further, AAADRD also works in partnership with KAPI centres (popular government run senior centres) to raise awareness about dementia and to promote early diagnosis and treatment among senior citizens.

Raising public awareness on dementia has been a principle focus of AAADRD's work and public campaigns have helped bring the issue of dementia into the public spotlight and onto the government's agenda. Awareness-raising activities have included, for example, an annual Memory Walk through central Athens held on World Alzheimer's Day and signature collection campaigns petitioning for government action. AAADRD also publishes a number of educational resources online, as well as a tri-annual newsletter on the organization's activities. While dementia had previously been a stigmatized condition in Greece, education on the issue through awareness-raising efforts led by AAADRD is helping to change public perception.

Health system enabling factors

Municipal governments support the running of established day care centres in their districts and the Ministry of Health provides some additional support. Recent changes at the government level, including the adoption of the National Action Plan for Dementia, signal a shift in the policy environment in support of AAADRD's activities. In addition to political support, a number of other system factors must be given adequate attention for sustainability to be realized, such as the provision of a sufficient number of human resources, a dependable source of long-term funding and development of needed infrastructure.

Outcomes

Outcomes recorded from research conducted in the Pangrati day care centre (Box 2) provide an example of the impact of AAADRD services.

Box 2

What were the main outcomes achieved by the Pangrati day care centre between 2007 and 2010?

- Around 2000 people attended the memory clinic between 2007 and 2010, allowing them to benefit from neurological examination and neuropsychological assessment.
- Nonpharmacological support programmes offered by the centre were attended by 105 people with dementia and 64 caregivers per month.
- Home care services were offered to 80 people with dementia and 70 family caregivers per month.
- Feedback questionnaires conducted with caregivers indicated largely positive experiences and feelings regarding centre services.
- Approximately 150 volunteers completed the two-month training programme offered by the centre.

Change management

Key actors

Strong grassroots action has led the way in developing and delivering dementia care services in Greece and achieved widespread support for the initiative. Key actors to first mobilize included a small group of caregivers of people with dementia who began advocating for increased attention on the lack of dementia services. This group grew to include the support of a number of concerned health professionals and like-minded nongovernmental organizations (NGOs) across Greece (Box 3). More recently, the initiative has established the support

of both national and municipal governments and, in 2013, the national government established a multistakeholder working group, including representatives from AAADRD, to develop a national dementia action plan. While gaining political support required extensive advocacy efforts over many years by AAADRD members, these efforts finally paid off and the initiative now benefits from political support.

Box 3

Who were the key actors and what were their defining roles?

- **AAADRD**. NGO with 4500 members working on raising awareness of dementia in Greece; led by a seven-member board elected every three years; runs four day care centres in the Athens region; relies heavily on volunteers for successfully implementing activities.
- **Dementia network**. United network of 30 or so NGOs across Greece working on issues related to dementia; partnerships between individual network organizations (including AAADRD) allow members to support each other's work.
- **National government**. Currently funds 30% of AAADRD day care centre costs; recently approved a national dementia plan and appointed a steering committee to guide its implementation.
- **Municipal governments**. Assist AAADRD in the running of day care centres within their local areas.

Initiating change

As a disease-specific organization, AAADRD was quickly able to establish links with similar groups both within Greece and

internationally. Extensive networking and partnership opportunities helped to raise AAADRD's profile and gather support behind the urgent need to address increasing dementia in Greece. AAADRD currently has almost 4500 active members supporting its work.

To drive national action on dementia, extensive public awareness campaigns and government lobbying efforts eventually succeeded in pushing the government to develop the National Action Plan for Dementia.

Implementation

Running of day care centres in Athens is coordinated and managed by AAADRD, overseen by their multistakeholder board. AAADRD privately secured operating funds from a variety of sources (primarily the European Commission) to enable the set-up and running of their day care centres. These centres rely on volunteers to help keep their programmes and services running. Strong links and good working relationships exist between professionals, volunteers and users of services which helps to ensure smooth running of the centres.

Implementation of the National Action Plan for Dementia has not yet begun as this document was only recently approved by the government. A national dementia committee has, however, been established by the government to help guide implementation of the Plan.

Moving forward

It is hoped the newly accepted National Action Plan for Dementia will provide more structure in the development of dementia-related services delivery moving forward. Having a national plan in place should strengthen government commitment to dementia and help to secure stable sources of financing, thus contributing to improvements in services delivery.

Highlights

- Highly motivated actors directly affected by dementia or working in related fields played an important role in identifying and understanding gaps in services delivery.
- AAADRD, as a specialized, recognizable agency, quickly built a large network of supporters and established meaningful connections within the existing national and international arena to raise recognition of the needs of dementia patients.
- Sustainability of the initiative relies on growing the government's commitment, securing funding and resources, and continuing investment in education for both providers and caregivers.

1 World Health Organization. (2015). *European Health for All Database.* Retrieved from http://data.euro.who.int/hfadb/
2 Institute for Health Metrics and Evaluation. (2014). *Global burden of disease cause patterns.* Retrieved from http://vizhub.healthdata.org/gbd-compare/arro
3 Simou, E., & Koutsogeorgou, E. (2014). Effects of the economic crisis on health and healthcare in Greece in the literature from 2009 to 2013: A systematic review. *Health Policy 115*(2-3): 111-9.
4 Sakka, Paraskevi. (2010). Towards a Dementia Action Plan in Greece. [PowerPoint slides]. In 20th Alzheimer Europe Conference *Facing Dementia Together.*

Exploring new provider payment models to incentivize performance improvements in Hungary

Overview

Responding to a rise in chronic disease and observed fragmentation across provider groups in Hungary, the Care Coordination Pilot was launched by the national government in 1999 to experiment with provider payment mechanisms to encourage more coordinated care delivery. Under the Pilot, Care Coordinator Organizations, run by health providers from general practices or polyclinics, were established to act as virtual fund holders for capitation-based health care budgets within their local regions. All financial control was retained by the National Health Insurance Fund Administration (NHIFA), meaning Care Coordinator Organizations had no actual budget holding responsibilities; virtual budgets were simply a tool to guide management improvements. Any budget savings were transferred to Care Coordinator Organizations at the end of the year, serving to incentivize efficiency improvements. A careful mix of other incentives was employed to minimize disincentives or gaming which could result in undertreatment of patients. To increase control over spending, Care Coordinator Organizations entered into contracts with other providers in their region and shared financial rewards in exchange for providers' cooperation. These contracts essentially brought providers within Care Coordinator Organizations under a single-management structure with collective goals, encouraging teamwork across traditional care boundaries. Care Coordinator Organizations implemented and self-policed their own organizational protocols and guidelines to improve care provision within their networks. Access to health care utilization data from NHIFA allowed local monitoring of practice patterns, protocol compliance and patient pathways by Care Coordinator Organizations, as well as an evaluation across local strategies. Early reports showed positive results for the Care Coordination Pilot, including improved care efficiency, coordination and quality. While changing political priorities eventually caused termination of the initiative in 2008, early indications of success from the Care Coordination Pilot warrant consideration.

Problem definition

In the early 1990s, life expectancy in Hungary was 69 years, falling below the WHO European Regional average of 74 years (Box 1). A high prevalence of chronic disease, specifically circulatory disease, cancer and conditions of the digestive system, was found to contribute to early mortality.[1] Fragmented interactions between primary, secondary and social care services often led to inappropriate hospital admissions for chronic conditions and, without incentives to manage patients at lower care levels, overprovision of care in higher-level settings occurred.[1] Moreover, cost-containment policies put in place throughout the 1990s had demotivated providers, contributing to variability in care quality and increased medical migration.

Box 1
What problems did the initiative seek to address?

- Life expectancy below the WHO European Regional average.
- High prevalence of chronic disease, particularly circulatory disease and cancer.

- Fragmented coordination across care levels and concentration of services delivery in higher-level settings.
- Harsh cost-containment policies contributing to demotivation of providers.

Health services delivery transformations

Timeline of transformations
The Care Coordination Pilot was first launched in 1999 as an exploratory approach towards improving the coordination and quality of health

Table 1
What were the chronological milestones for the initiative?

1992	Primary care financing reforms introduce a capitation-based payment model for general practitioners.
1993	Financing reforms introduce funding for outpatient specialist services on a fee-for-service basis; acute inpatient care financed through diagnosis-related groups.
1999	Care Coordination Pilot begins with nine Care Coordinator Organizations participating in the project.
2005	Care Coordination Pilot covers approximately 2.2 million people across 16 Care Coordinator Organizations.
2006	Newly-elected government introduces plans to privatize the social health insurance system, leading the Care Coordination Pilot to be suspended; plans for privatization eventually abandoned but suspension of Pilot remains in effect.
2008	Care Coordination Pilot terminated due to lack of political support.

services (Table 1). Nine Care Coordinator Organizations were initially established under the Pilot, each responsible for the needs of between 75 000 and 280 000 enrolled patients. The Pilot was gradually expanded throughout the early 2000s, covering approximately a fifth of the Hungarian population (2.2 million registered patients) across 16 regions by 2005. Despite indications of success, a change of government in 2006 shifted political priorities and led to the eventual termination of the Pilot in 2008.

Description of transformations
Selecting services. The Care Coordination Pilot worked to ensure a wide range of health services were provided under the existing social health insurance scheme, placing additional emphasis on services for the early detection, prevention and effective management of chronic disease.

Designing care. Care Coordinator Organizations established protocols within their local care networks and implemented local strategies

designed to improve efficiency and performance.

Organizing providers. Care Coordinator Organizations developed local networks of providers across care levels and increased the role of general practitioners in managing care. All in-network providers collectively became responsible for delivering care for registered populations within the allocated budget for their Care Coordinator Organization. This change strengthened the gatekeeping role of primary care by motivating reductions in unnecessary referrals to specialists in an effort to generate savings across the group. Care Coordinator Organizations also fostered closer collaboration and teamwork among providers within each network. Registered patients retained the right to choose providers freely and could opt to receive care from providers external to the Care Coordinator Organization they were registered with.

Managing services. Responsibility for coordinating the pilot project

was overseen by NHIFA. Planning and organization of services was managed directly by Care Coordinator Organizations. Care Coordinator Organizations entered into contracts with local providers in order to influence services delivery for the realization of efficiency improvements.

Improving performance. Care Coordinator Organizations experimented with innovative ways to improve services delivery, using data collected on local practice patterns, protocol compliance and patient pathways to design improvements within their local care networks and evaluate effectiveness of local strategies.

Health system enabling factors

Implementation of the Care Coordination Pilot relied on an amendment to the NHIFA budget passed by the General Assembly. This amendment permitted the devolution of management and organizational responsibilities to Care Coordinator Organizations involved in the Pilot and established the necessary legal framework to enable virtual fundholding and transfer of incentives (Table 3). The Pilot project made use of both financial and non-financial incentives to encourage improvements in health services delivery. Financing and payment functions continued to be carried out centrally by NHIFA. Newly established Care Coordinator Organizations were assigned virtual budgets – without actual financial or budgetary responsibilities – based on adjusted capitation formulas accounting for the whole spectrum of care from primary to tertiary services. If actual spending of a Care Coordinator Organization was lower than their allocated budget, savings were awarded to them for distribution among in-network providers. Savings could also be reinvested or used to improve working conditions. Additional bonuses were made

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Social health insurance covers a wide range of services for patients, but services often overly specialized; lack of preventive, screening or effective disease management services.	Preventive and screening services increased within pilot sites, particularly services for chronic disease.
Designing care	
National guidelines and protocols in place, but adherence described as poor.	Adherence to existing national guidelines and protocols reportedly improved; Care Coordinator Organizations implemented additional local protocols and guidelines.
Organizing providers	
Vertical care structure with high degree of fragmentation across care levels; weak gatekeeping role of primary care; elevated referral rates to specialists.	Care Coordinator Organizations contracted with local providers, essentially developing local care coordination teams to improve teamwork across care levels; gatekeeping role of primary care was strengthened and unnecessary referrals to specialists decreased.
Managing services	
NHIFA paid individual providers directly for services.	NHIFA was responsible for coordinating the Pilot; Care Coordinator Organizations were responsible for managing and organizing services for their local populations.
Improving performance	
All patients assigned a social security number allowing health care utilization data to be tracked; limited use of data to drive performance improvements at the local level.	Care Coordinator Organizations used patient health care utilization data to generate performance improvements.

available for performing preventive services to help overcome the initial rise in costs associated with screening and earlier treatment of disease.

While Care Coordinator Organizations had no responsibilities or penalties for negative budget balances, cost-consciousness of health providers appeared to increase and a culture of efficiency was fostered. All savings were awarded at the end of the year, limiting providers' incentive to undertreat patients as providers needed to generate enough monthly revenue through regular service provision and bonus revenues were not guaranteed. Additionally,

patients living in Care Coordination Pilot areas were free to choose where they sought care and could easily access providers outside the Pilot network. However, Care Coordinator Organizations were still held financially responsible for all their registered patients and any costs from patients accessing out-of-network providers were deducted from virtual budgets. This served to incentivize in-network providers to adequately treat patients, as Care Coordinator Organizations had no leverage over out-of-network providers with which to ensure efficient delivery of services.

Outcomes

While the initiative was terminated before a full evaluation could be completed, preliminary data analysis and unofficial reviews reported a number of positive outcomes as a result of the Care Coordination Pilot (Box 2).

Box 2

What were the main outcomes of the initiative?

- Health services in pilot sites were seemingly better coordinated, more cost-effective and of higher quality.
- The number of patients with chronic conditions receiving

Table 3

How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• An amendment relating to the NHIFA budget permitted virtual fund holding by Care Coordinator Organizations.
Incentives	• Direct financial incentives linked to improved coordination of care were awarded to Care Coordinator Organizations; incentives were shared among local in-network providers and/or reinvested. • Undertreatment of patients was minimized as cost savings were only awarded at the end of the year and amounts were not guaranteed; Care Coordinator Organizations were also held financially responsible for all of registered patients' care.
Information	• NHIFA provided Care Coordinator Organizations with access to patient health care utilization data for monitoring and evaluation purposes.

appropriate care reportedly increased in pilot sites.
• Overall savings were achieved despite higher initial costs of care due to improved preventive and early detection services; Care Coordinator Organizations saved on average 6% of allocated budgets.

Change management

Key actors

Initial steps to establish the Care Coordination Pilot were led by the government who pushed through the necessary legislation to enable change and unite key actors (Box 3). Health providers were assigned a leading role within the initiative and became key decision-makers in the coordination and management of care through the establishment of Care Coordinator Organizations. Care Coordinator Organizations were run by general practitioners or polyclinics, encouraging primary care-led coordination according to patients' needs. NHIFA provided support throughout the initiative, assigning virtual budgets to Care Coordinator Organizations and sharing useful data.

Box 3
Who were the key actors and what were their defining roles?

• **Care Coordinator Organizations**. Acted as virtual fund holders and managed virtual budgets; entered into contracts with local health providers to influence services delivery; implemented local protocols and initiatives designed to improve efficiency.
• **In-network health providers**. Signed contracts with Care Coordinator Organizations; worked as a team with other in-network providers across care levels to deliver care.
• **National Health Insurance Fund Administration (NHIFA)**. Allocated virtual budgets to Care Coordinator Organizations; shared patient database with Care Coordinator Organizations.
• **National government**. Initially backed initiative and developed necessary policies for its implementation; change of government eventually led to disbandment of the initiative.

Initiating change

In the late 1990s, political will to experiment with financing mechanisms pushed the initiative forward in an effort to strengthen primary care and address misalignments in provider remuneration. An amendment relating to the NHIFA budget created the necessary conditions to support the virtual fundholding design of the Care Coordination Pilot.

Implementation

Implementation of the Pilot relied on the existing payment system and administrative capacity of the NHIFA, avoiding the need for costly restructuring or complicated administrative changes. Care Coordinator Organizations formed close partnerships with providers practicing in their catchment area, formalizing these relationships through contracts to ensure cooperation towards achieving common goals across provider groups. Care Coordinator Organizations were responsible for implementing their own network-specific protocols and regular monitoring helped ensure compliance. Furthermore, peer pressure within care networks supported policing of established protocols.

Moving forward

A change in government and political agenda eventually led to the initiative being abandoned. However, early indications of success resulting from this model highlight its potential as a useful strategy and lessons learned from this experiment could be constructively applied in other contexts.

Highlights

- Carefully chosen financial incentives guided performance improvements by rewarding efficiency, incentivizing preventive care and encouraging treatment in lower-level settings.
- Empowering professionals with new responsibilities helped overcome provider dissatisfaction.
- Extensive data collection supported analysis and comparison of local organizational arrangements.

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1   Evetovits, T. (2011). *Exploring new ways to pay healthcare providers and improve performance*. [PowerPoint] from
    http://www.ehfg.org/fileadmin/ehfg/Website/Archiv/2011/Presentations/W3/w3_3_evetovits.pdf

Strengthening diabetes services at the primary care level in Iceland

Overview

In the early 2000s, diabetes care in Iceland was primarily delivered in hospitals, despite the potential for diabetes-related services to be largely managed by general practitioners. In more recent years, this design of services was challenged by the rising prevalence of type 2 diabetes, straining the capacity of specialized providers to meet the needs of diabetic patients. Responding to this context, a new model of care for diabetes services was proposed, led by providers drawing from firsthand international experiences, with the aim of addressing inefficiencies in the existing system. After consulting with colleagues and finding widespread enthusiasm for change, an initial conference was organized to bring providers together to discuss and strategize actions needed, leading to the proposal to develop new diabetes care guidelines to support services delivery in primary care settings. As a result of the initiative, gradually general practitioners voluntarily adopted responsibility for diabetes care. Nurses were brought into primary care teams to support diabetes care and expand services available, including the introduction of patient education and counselling services to enable improved self-management by patients. Changes over time have gained government support, leading to the development of care guidelines for managing diabetes in primary care. Success of the initiative is marked by the increasing number of general practitioners registered as providing diabetes services, contributing to improved access and availability of services for patients with diabetes.

Problem definition

The prevalence of type 2 diabetes in Iceland has grown steadily over time. However, with diabetes care concentrated at secondary and tertiary levels, increasing prevalence placed added pressure on health services to treat the growing number of patients, straining the capacity of specialist providers and contributing to increased waiting times for services (Box 1). Furthermore, the lack of diabetes-related care at the primary level made accessing services difficult for patients living in rural areas, who were required to travel to the closest urban centre to obtain care.

Box 1
What problems did the initiative seek to address?

- Increasing prevalence of type 2 diabetes.
- Concentration of diabetes care in higher-level care settings.
- Increasing waiting times for diabetes services.
- Geographic inequities in accessing diabetes services.

Health services delivery transformations

Timeline of transformations

Momentum to improve diabetes services in Iceland was cultivated by the health workforce, following exposure through trainings and professional opportunities abroad. In the early 2000s, a conference was organized convening a multi-profile group of providers to strategize the design and organization of alternative models of care and their applicability in the context of Iceland. Following these discussions, primary care providers began to gradually introduce and offer diabetes services to their patients. In the late 2000s, new clinical guidelines for delivering diabetes care in primary settings were published. These guidelines are currently in practice and are continuously expanded upon for the effective delivery of diabetes services.

Description of transformations

Selecting services. Diabetes-related services are included in the standard benefits package covered by mandatory health insurance. Diabetes services now offered in primary settings include lifestyle counselling, blood glucose testing and monitoring, drug therapies, and provision of insulin. The initiative has also placed greater emphasis on the availability of counselling and education services for patients on self-management and lifestyle changes.

Designing care. Care guidelines have been updated to formalize recommended practices for the delivery of diabetes care in primary settings. Checklists for primary care providers have been created as tools to guide practice for standardization of quality diabetes services.

Organizing providers. Responsibility for delivering diabetes care has gradually shifted to primary care providers. Nurses have been engaged in primary care teams, typically consisting of five to six general practitioners, to support diabetes services delivery and ensure the needs of patients are followed closely over time. Nurses also play a key role in patient education and supporting patient self-management.

Managing services. Management over diabetes services continues to be within the purview of the Ministry of Welfare. The Ministry is responsible for contracting private practitioners at the primary level to deliver diabetes care according to new guidelines.

Improving performance. A two-day training programme for primary care providers was developed to educate them on new care guidelines and equip them with the necessary skills to deliver comprehensive diabetes care. Trainings are carried out in practices and clinics with approximately 20 providers participating in each session. Approximately 80 general practitioners – roughly half of those practicing in Iceland – have received training.

Health system enabling factors

The Ministry of Welfare has supported of the development of primary care-led diabetes services, providing funding for activities where necessary. New clinical guidelines for diabetes related care have been officially adopted and incorporated into the formal medical education

Table 1
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
A standard package of services is available to patients with diabetes where services include drug and insulin therapies as well as lifestyle counselling.	Standard package of services has been expanded with a focus on lifestyle counselling and support services for patients with diabetes.
Designing care	
Guidelines for diabetes care skew services delivery to higher levels of care, concentrating services in the secondary or tertiary settings.	New guidelines for the delivery of diabetes care in primary settings are published; tools developed to aid general practitioners delivering diabetes care.
Organizing providers	
Specialist providers in secondary and tertiary settings responsible for diabetes care delivery; primary care providers do not typically manage the needs of diabetic patients.	General practitioners now the primary providers for delivery of diabetes care; nurses have been incorporated into primary care teams to support diabetes services delivery.
Managing services	
Ministry of Welfare oversees management of diabetes services.	Ministry of Welfare continues to oversee management of diabetes services.
Improving performance	
Not applicable in this case.	Ad hoc training programmes on updated diabetes care guidelines offered to primary care providers.

system, ensuring future generations of general practitioners have the knowledge and skills to care for patients with diabetes. Coordination of services has further benefited from the introduction of electronic health records that facilitate information sharing and communication between providers.

Outcomes

While no formal assessment on the impact of changes in the design of diabetes services has been conducted, primary care teams report both improved efficiency of services and access to diabetes care, with a greater number of general practitioners now registered to treat diabetes. Moreover, as a result of the delivery of diabetes services shifting to primary care settings, patients are now able to access care closer to home. The support of nurses in primary care teams has also reportedly allowed additional time for discussions with patients on lifestyle and self-management. The health workforce also describes a changing professional culture; "there is more dialogue about services" among providers who informally consult with one another other and share advice to optimally support patients.

Change management

Key actors

Transformations in diabetes services were led by a provider following a period of working abroad which highlighted constraints in the Icelandic system's delivery of diabetes care. Discussing key issues with colleagues highlighted widespread enthusiasm for change across provider groups and providers self-organized to voluntarily drive change (Box 2). Support from the Ministry of Welfare later enabled the development of official care guidelines, helping to solidify new practices and establish delivery of diabetes services in primary settings as the new norm.

Box 2
Who were the key actors and what were their defining roles?

- **Initiator of transformation.** Introduced concept of delivering diabetes services in primary settings; convened conference on providing diabetes care at the primary level; developed official clinical guidelines for diabetes care; facilitated trainings on new guidelines for health providers.
- **Ministry of Welfare.** Responsible for oversight of the health system; provided funding for activities and supported transition of diabetes care into primary settings.
- **Primary care providers.** Adopted new responsibilities to enable delivery of diabetes-related care in primary settings.

Initiating change

The idea for change was first triggered by international experiences. "There are really different approaches between countries. It really sparks creativity for new ideas." As many Icelandic providers receive training abroad, the professional culture can be described to support the exchange of different ideas and adoption of new approaches. Within this context, the initiator of this work organized a small-scale conference to bring providers from across care settings together to discuss issues and strategize solutions to enable the delivery of diabetes-related care in primary settings: "From this the initiative just slowly evolved".

Implementation

Through word of mouth, an increasing number of primary care providers voluntarily chose to take on new responsibilities relating to diabetes care. Later, the initiative's leader was called on to develop official guidelines to support the delivery of diabetes services in primary settings, standardizing the proposed model of primary care-led diabetes services at the national level. Training on the new guidelines was offered to providers in small group settings, allowing for a more personalized education experience. "We went through with providers the changes needed in their practice for the whole of diabetes from diagnosis to treatment. We worked with them to see and appreciate the whole spectrum of care." Given Iceland's relatively low population size, a personalized, small-scale training system was suited to this context.

Moving forward

Primary care providers currently deliver diabetes care according to care guidelines now in place. Ad hoc trainings continue to support professional development in diabetes services delivery and sustainability of knowledge has been secured through incorporating training into formal medical education.

Highlights

- Strengthening the role of primary care in diabetes treatment and management reorientated the model of care towards a more comprehensive package of services focused on lifestyle and behaviour changes.
- Knowledge gained through experiences working abroad, fostered local innovation.
- Informal discussions among providers had sufficient power to motivate and direct change.
- Incorporating trainings into the formal education system helped establish a new standard of care and ensured sustainability of knowledge.

Shifting acute care delivery from hospitals to homes in Ireland

Overview

In 2010, in response to strained acute care services in Carlow-Kilkenny regional hospitals, Caredoc – a nonprofit organization commissioned to provide out-of-hours medical care by the Irish Health Services Executive – devised the Caredoc Community Intervention Team Model as a means to relieve hospitals of patients who could be better managed through specialized community-based care. In 2011, funds for the project were secured from the Health Services Executive who, at the time, was under considerable pressure to improve what was perceived as an "acute care crisis". After extensive collaboration with stakeholders to design the intervention, generate clinical algorithms for referrals, adapt the electronic medical records system and build general support for the initiative, the first Caredoc Community Intervention Team began operating in the Carlow-Kilkenny region in 2012. The new model of care works through hospitals, referring patients for early discharge where applicable and with general practitioners referring patients directly to avoid hospital admission. Community Intervention Teams are composed of specialized nurses who work with hospital staff, general practitioners and patients to provide acute care services within home care settings. The new approach to providing acute care services has appeared successful; between September 2012 and September 2013, the initiative provided nearly 4000 interventions between 2012 and 2013, averting 2300 hospital bed days and 215 ambulance trips.[1] Clear and simple referral services, effective use of information technology and cooperative teamwork across levels of care have been credited to the now streamlined, high-quality service in place. Patient satisfaction surveys show respondents are pleased with the service; finding the quality of care to be high, flexible to needs and convenient. As a result of the initiative's success, the Health Services Executive has incorporated the Model into its annual budget. Building on successes in the Carlow-Kilkenny region, the service was expanded to Wicklow in 2014 and plans are underway for further expansion across the entire south-east.

Problem definition

Ireland, like many European countries, is facing a rise in chronic morbidities. This disease burden, combined with a limited availability of community care, contributed to increasing rates of acute events and rising need for hospitalization. Reliance on institutional services and extended hospital stays, due to a lack of community alternatives, resulted in long waiting times and shortages of hospital beds (Box 1).

Box 1
What problems did the initiative seek to address?

- Elevated rates of chronic disease.
- Overreliance on institutional services and lack of community care alternatives.
- Long waiting times for hospital services and frequent shortages of hospital beds.

Health services delivery transformations

Timeline of transformations
Throughout the 2000s, pressure placed on services delivery in the Carlow-Kilkenny region from increased rates of chronic disease and limited community care alternatives was noticed by providers working in the out-of-hours medical care organization, Caredoc. These observations triggered the development of the Caredoc Community Intervention Team Model in the early 2010s as a means to shift care from hospitals to community-based settings (Table 1). In 2011, the Irish Health Services Executive approved the service and funding for the project, allowing the new Caredoc Community Intervention Team to launch in 2012. Today, the service continues to be actively implemented across Carlow-Kilkenny and plans for expansion are underway.

Table 1
What were the chronological milestones for the initiative?

2000s	Caredoc organization contracted to deliver out-of-hours general practice services in the Carlow-Kilkenny region.
2009	Senior nurses within Caredoc observe increasing strain on local hospitals to provide acute care; idea for Community Intervention Team service pitched to Caredoc management.
2010	Multi-professional working group established to lead development of the initiative; after three months of planning, the initiative is submitted to the Irish Health Services Executive for approval and funding.
2011	Approval and funding granted for the initiative; engagement of stakeholders begins; clinical algorithms and care pathways developed.
2012	Community Intervention Team service officially launches in Carlow-Kilkenny; extensive public awareness campaign run for the service.
Present	Community Intervention Team service formally incorporated into the regional Health Services Executive budget; expansion of the service to other areas underway.

Description of transformations

Selecting services. Community Intervention Team nurses deliver a range of home-based acute care services following early discharge. Services are chosen in partnership with referring providers, patients and informal caregivers. Together providers ensure that services are tailored to the individual needs of patients. Available interventions include intravenous therapy, feeding tube insertion or reinsertion, catheterization, medication reconciliation and hospital discharge support to postoperative patients or patients with chronic disease.

Designing care. Clear care pathways and protocols have been developed for the initiative. Hospital providers identify eligible patients using a specially developed clinical algorithm; the algorithm is simple and user-friendly to ensure easy application for hospital providers. Providers fill out an e-referral form

that triggers a phone call from a Community Intervention Team nurse to initiate a discussion with the provider currently treating the patient. A visit is then arranged between a Community Intervention Team nurse and the patient to develop a personalized care plan and prepare the patient to be active in their own care. The patient is discharged home under the care of the Community Intervention Team, usually for a period of 72 hours or as long as medically warranted. When ready to exit the service, the patient's medical file is sent electronically to their general practitioner for continued follow-up as needed, completing the information loop and ensuring continuity of care. The patient is referred back to the hospital if their condition deteriorates.

Organizing providers. Acute events continue to be managed by hospital providers, unless a patient has already registered with a Community

Intervention Team or they enter the health system through their general practitioner who can refer the patient, mitigating the hospital all together Hospital providers make the majority of referrals to the service and the Community Intervention Team has an office within the local hospital, facilitating close collaboration through proximity. Acute care nurses have been reprofiled to act as the primary provider of acute care to patients in home settings. Electronic medical records, instantly updated following patient visits via electronic tablets carried by Community Intervention Team nurses, allow for real-time information sharing between providers.

Managing services. Caredoc is a nonprofit private company contracted to deliver the Community Intervention Team service. Oversight for the service is shared between the Health Services Executive regional branch in Carlow-Kilkenny and the Caredoc management team. Additionally, local hospital executives are responsible for managing hospital referrals to the Caredoc service. The Health Services Executive provided funding for needed resources. Technologies and equipment to enable effective home-based care delivery were purchased, including electronic tablets, mobile medical equipment and vehicles.

Improving performance. All nurses working in the initiative received specialized training through Caredoc provided by the local hospital. Nurses were trained to manage acute care needs outside of hospital settings, coach patients' on self-care and screening for medication compliance. Hospital providers and general practitioners also received ad hoc training on using the new clinical algorithms and e-referral systems introduced by the initiative. Collection of patient information through the electronic platform is used to monitor and evaluate ongoing efforts. Operational meetings are held every six weeks

between the hospital and Caredoc to review this information and collectively strategize any operational difficulties.

Engaging and empowering people, families and communities

This initiative has challenged the traditional role of patients as passive recipients of medical care, making them empowered and active agents in managing their own health. "When patients are in hospitals it creates a huge disruption to regular life. The initiative allows them to keep their regular life, eat their food and sleep in their bed. We think that adds a huge degree of independence to their lives." Patients, along with their family or caregivers, are involved throughout the care process and receive coaching from Caredoc nurses to help them manage their own care needs at home.

Health system enabling factors

Caredoc is a private, nonprofit organization contracted by the Irish Health Services Executive to provide the Community Intervention Team service. The Health Services Executive finances the initiative, holding Caredoc accountable for performance under established contract terms. Prior to the initiative, Caredoc had provided out-of-hours care in the region for over a decade. The organization was therefore well-placed to extend contracted services to include community-based acute care (Table 3).

A specialized new nursing role was formalized within the Caredoc organization and the recruitment of nurses with the right mix of experience and skills for Community Intervention Teams was a critical activity. The leadership team specifically sought to employ experienced, capable nurses with a history of working in acute care; community-based experience and management skills were other desirable competencies.

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Hospital-facing acute services; no community-based acute care services.	Wide range of acute care services available in home settings for patients eligible for referral to Community Intervention Team.
Designing care	
Patients receive uniform acute care in hospitals; no standards or protocols in place for community-based acute care.	Clinical algorithm for referral to Community Intervention Team developed; clear care pathways and referral systems in place to streamline patient transition between providers; personalized care plans implemented in consultation with patients.
Organizing providers	
General practitioners manage most patient care needs with hospitals providing acute care services; some collaboration across care levels to manage care, but gaps in continuity exist; long waiting times for hospital services; Caredoc acts as an out-of-hours and overflow provider for hospitals and primary care providers.	Caredoc nurses provide home-based care assisted by general practitioners, hospital providers and patients; hospital providers make the majority of referrals to Community Intervention Teams, facilitated by a new e-referral system for the service.
Managing services	
No resources available to provide community-based acute care; Caredoc contracted to provide out-of-hours urgent care; Caredoc electronic medical records system connects providers across sectors.	Caredoc contracted to provide community-based acute care; oversight for services shared between the Health Services Executive and Caredoc management team; investments in mobile medical equipment facilitate effective delivery of home care services.
Improving performance	
Caredoc nurses not trained to provide community-based acute care.	Nurses trained to provide acute care in home settings; all providers trained on new clinical algorithms and e-referral systems; regular operational meetings held between Caredoc and hospital management to review performance data and strategize any concerns.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Caredoc contracted by and accountable to the Health Services Executive.
Competencies	• New nursing position created within Caredoc organization.
Information	• Caredoc electronic medical records system enables data collection and performance monitoring of the initiative.
Innovation	• E-referral system designed and embedded in existing Caredoc electronic medical records system.

While Caredoc staff and hospital professionals participated in ad hoc training to equip them with the necessary skills, a wider culture of collaboration and teamwork built strong inter-professional relationships and enabled effective functioning of the service.

To help ensure a streamlined service and connect to hospitals and general practitioners in the region, Caredoc established an organization-wide electronic medical records system for its services prior to the initiative. Leveraging this system, adaptations were made to incorporate specific applications for the Community Intervention Team service, such as the new e-referral function. This electronic system also enables data collection for monitoring and evaluation purposes.

Outcomes

The Caredoc Community Intervention Team continues to work on facilitating early hospital discharge, avoiding acute hospital admissions, reducing hospital readmissions, decreasing ambulance transportation use and educating, coaching and empowering patients to self-manage their own care. Benefits to patients include decreased exposure to hospital-acquired infections and faster recovery times. Reported outcomes for the initiative are positive and patient responses have been favourable (Box 2), demonstrating the ability of Community Intervention Teams to be reactive to patient needs and integrate seamlessly between providers.

Box 2
What were the main outcomes of the initiative?

- Over 142 000 patients living in the Carlow-Kilkenny region have access to Community Intervention Teams and the initiative continues to expand coverage across the south-east.
- Between September 2012 and September 2013, Community Intervention Teams in the Carlow-Kilkenny region delivered 3880 interventions; as a result 2300 hospital bed days were saved and 215 ambulances were avoided resulting in 50% cost savings.
- Patient satisfaction surveys report that 100% of patients regard the Community Intervention Team service as "excellent" or "very good".

Change management
Key actors
The initiative was designed and led by two community nurses working within Caredoc who, through observing the increasing strain on acute care resources while working closely with local hospitals, were able to leverage their technical insights and the authority of their senior role within Caredoc to raise the idea of acute-community care with Caredoc directors. Senior management for Caredoc was supportive of the idea and convened a multidisciplinary working group - including community health leaders, hospital administrators and public health professionals – to plan the initiative. Once consensus was achieved, senior management for Caredoc took the proposal to policy-makers within the Health Services Executive for approval and funding. Today, Caredoc continues to manage delivery of the Community Intervention Team service with support from the working group and dedicated nurses within its Community Intervention Teams (Box 3).

Box 3
Who were the key actors and what were their defining roles?

- **Caredoc senior level nurses**. Created the concept of Caredoc Community Intervention Teams; led and managed the initiative.
- **Caredoc management**. Supported creation of Community Intervention Teams; brought initiative to the Health Services Executive for government-level approval and funding.
- **Health Services Executive**. Granted approval and funding for initiative; contracts Caredoc to provide Community Intervention Team service.
- **Working group**. Divided into two subgroups: clinical governance and operational;

helped design and implement the initiative; provides ongoing oversight and guidance for activities.

- **Community Intervention Teams**. The Carlow-Kilkenny team is composed of nine acute-care nurses; nurses work as a team to deliver acute care services in patients' homes.

Initiating change

The initiative was well-timed with the building pressure on the Health Services Executive to respond to the apparent acute care crisis and extensive negative media coverage. Caredoc's experience working in the region, as well as their positive reputation among providers and local policy-makers, further helped secure support for the initiative and drive it forward. Opportunities to engage stakeholders were developed from the outset, with this process considered to be the most time consuming and difficult task of planning the initiative. Extensive communication about the win-win situation for stakeholders – whereby overburdened providers are relieved of patients without need for inpatient care and patients receive more personalized services conveniently in their own homes – helped achieve broad stakeholder support for activities. Persistence and clear communication were important throughout this process. "Consideration has to be given to the competing agendas and priorities of other groups, while not taking away from the momentum of the planned initiative."

Implementation

While general practitioners and hospital providers were enthusiastic and quick to become involved given their previous positive experiences of working with Caredoc, public health nurses were initially resistant as they felt Community Intervention Teams would infringe on their role. A series of meetings with public health nurses helped to communicate the different role Community Intervention Team nurses would fill and win public health nurses' support. To address general practitioners' concerns that patients would be released too early, the clinical governance group for the initiative worked with hospitals to develop clinical algorithms for patient release. Keeping these planning meetings brief and ensuring the algorithms developed were simple and user-friendly were important factors in minimizing the burden on hospital time. A close working relationship with local hospital executives enabled an office space for the service to be made available in the local hospital, giving the Caredoc Community Intervention Team easy and direct access to their target population. After approximately six months of planning and building momentum for the project, the Community Intervention Team service was officially launched, with an extensive public campaign run alongside to raise awareness for the new service. Meetings and information sessions were also held with local providers and elderly care facilities to help generate referrals for the service. While initially there was a focus on building referrals from hospital providers, outreach has been gradually extended to general practitioners and elderly care providers as the initiative becomes more established.

Moving forward

The Health Services Executive has incorporated the Community Intervention Team service into its budget for 2014, indicating a commitment to the initiative moving forward. Benefiting from the momentum of successes to date, the initiative was recently extended to Wicklow and planning is underway for further expansion across the south-east. The long-term aim is to achieve national coverage of the Community Intervention Team Model across Ireland.

Highlights

- Firsthand insights of providers enabled identification of services delivery challenges and supported the development of relevant solutions.
- Supportive senior management generated momentum for change and helped secure approval for activities from the necessary authorities.
- Stakeholder engagement was described as time consuming, but was considered to be a crucial factor in the initiative's success; careful consideration and respect for differing schedules, agendas and engagement levels of stakeholders was given.
- Electronic medical records and other technologies facilitated the creation of a simple, connected and user-friendly service.
- Training for senior nursing staff was important for establishing the necessary clinical competencies to deliver acute care services in home-care settings.

1 Collier-Hannon, D., Curran, M., Kearns, M., & McCarron, P. (2014). Integrated care in the Caredoc Community Intervention Team. *International Journal of Integrated Care; Annual Conference Supplement.*

Disparity reduction strategy in Israel's Clalit Health Services

Overview

In response to widening health disparities across the country, Clalit Health Services – Israel's largest health fund – aimed to better meet the needs of its diverse population with the implementation of a health disparity reduction strategy across its organization. Capitalizing on an organization-wide electronic medical records system, Clalit developed a data-driven initiative to improve the performance of clinics where the widest health disparities were being observed. Using a composite health disparity score (QUIDS) of seven indicators measuring both performance and health outcomes, clinics were ranked by the level of disparity observed within their patient populations. Clinics from each district determined to have the highest inequality were then targeted for intervention. Through a top-down approach, district leaders were convened at a conference, provided with guidance on addressing observed disparities and assigned performance targets. District-level financial incentives were put in place to promote teamwork among clinics instead of individual competition. Through provider-led initiatives, local districts and clinics planned and implemented tailored interventions designed to reduce disparities. Interventions included strengthening leadership skills of clinic staff, extending clinic hours, providing more services in the community, improving cultural competencies, engaging community leaders and targeting outreach to at-risk patients. Regular feedback on performance facilitated continuous improvements and helped motivate clinics to achieve performance targets. Over a three-year intervention period, the difference on QUIDS scores between intervention and non-intervention clinics narrowed by 60%, with improvements seen on all indicators included in QUIDS. Clalit Health Services remains committed to the disparity reduction strategy and continues to monitor the initiative.

Problem definition

In 2012, Israel ranked highest among OECD countries for economic inequality, attributed in part to its diverse demographic profile comprising many different ethnic, immigrant and religious groups.[1] This inequality extends to other sectors, including health (Box 1). Israel has large differences in life expectancy, infant mortality and chronic disease rates relating to geographic area, minority status and education level. For example, the Arab population – the largest non-Jewish group in Israel – have an average life expectancy 3.2 years shorter than the Jewish population and are twice as likely to suffer from diabetes between the ages of 45–74 years.[1]

Under national health insurance law, all Israeli citizens must join one of four government financed health funds. As government funding is provided on a capitation basis and health funds act as both the insurer and provider of services, health funds have a financial interest in supporting an enrollee's health. Clalit Health Services is the largest insurer with 4.2 million enrollees and provides coverage and services to over half of Israel's population, with an overrepresentation of vulnerable populations, including 70% of Israel's elderly.

Box 1
What problems did the initiative seek to address?

- Observed health inequalities in vulnerable populations.
- Higher costs linked to overrepresentation of vulnerable populations enrolled in Clalit Health Services.

Health services delivery transformations

Timeline of transformations
Despite having a long history of caring for vulnerable populations, decades of work to reduce health disparities within Clalit Health Services had been met with limited success. Government reforms of health insurance laws in the 1990s mandated universal health care access and uniformity in services provision. Despite this, comparatively poor health outcomes persisted in vulnerable populations indicating that equal treatment alone was not enough. In 2008, recognizing this problem, Clalit launched the Disparity Reduction Strategy within their organization to address inequalities in health outcomes (Table 1). Using data already available from electronic medical records, a composite Quality Indicator Disparity Scale (QUIDS) was generated and 55 clinics reporting the greatest

Table 1

What were the key stages in Clalit Health Services' Disparity Reduction Strategy?

	Stage	Description
1	Selection of quality indicators	Expert steering committee of Clalit health professionals examined 70 quality indicators currently collected by Clalit; each indicator was ranked by level of disparity between high and low socioeconomic populations determined through geocoding clinic locations; seven indicators were chosen.
2	Scoring of primary care clinics	Selected seven indicators were weighted by the steering committee for overall importance leading to the Quality Indicator Disparity Scale (QUIDS) measure; clinics in each of Clalit Health Services' eight districts were ranked using QUIDS.
3	Selection of target clinics	Clinics in each district with the highest level of disparity determined by QUIDS designated as target clinics for intervention; 55 clinics (approximately 10% of all clinics) selected.
4	Setting goals and incentives	Individual performance targets set for selected clinics; district-level financial incentives made available for individual targets achieved.
5	Planning of local interventions	Bottom-up planning approach applied to determine opportunities for performance improvement; clinic-specific interventions developed.
6	Continuous monitoring and evaluation	Ongoing assessment of improvements in each district in comparison to original QUIDS score.

health disparities were chosen for targeted intervention. Currently in the final stage, ongoing monitoring and evaluation of QUIDS scores and clinics' progress continues to be carried out by Clalit Health Services to maintain and advance improvements already generated by the Strategy.

Description of transformations

Selecting services. Clalit offers a comprehensive basic package of services. The addition of the Disparity Reduction Strategy has encouraged services to be tailored to the needs of vulnerable populations through locally designed and implemented interventions. Services where disparities were most pertinent, including performance of occult blood testing, influenza vaccination and mammography tests, are key areas of focus.

Designing care. Several tools have been developed to enable providers to identify at-risk patients and better respond to their needs. For example, at-risk patient lists are created at the clinic level so providers can target these patients for adapted care. At-risk patients are also proactively approached through outreach initiatives and encouraged to participate in preventive services.

Organizing providers. Clalit Health Services owns and operates a network of 1200 clinics, 14 hospitals (accounting for one third of all acute care beds in Israel) and a countrywide network of pharmacies, dental clinics, specialist centres and laboratories; 7500 physicians and 11 500 nurses are employed by the organization as part of its workforce. Clalit has a strong primary care network and every patient is overseen by a general practitioner who is fully accountable for their health. General practitioners work in large clinics within multidisciplinary teams comprised of nurses, allied health professionals and administrators.

When patients enter secondary or tertiary care, discharge-planning nurses and real-time electronic medical records facilitate communication between providers to ensure continuity of care. The Disparity Reduction Strategy largely capitalized on the strong primary care network already in place within communities with adjustments made to the organization of providers based on individual clinic needs, such as extending clinic hours to improve access, increasing mobile community care and integrating translator services.

Managing services. Clalit Health Services is the largest insurance fund in Israel and operates as an entirely self-sufficient, integrated care organization. As such, it provides all care "under one roof" through a decentralized organizational model. A strong electronic medical records system enables predictive modelling and identification of at-risk patients and data is routinely collected on

70 general quality measurement indicators. With the necessary infrastructure already in place, the Disparity Reduction Strategy avoided the need for additional investments by using data already being collected to develop the QUIDS scale. Strengthening of managerial capacities at the local level for districts targeted for intervention by the Strategy has helped local leaders generate and maintain services delivery improvements.

Improving performance. While clinics continue to be assessed for overall quality performance, the addition of feedback on QUIDS scores has focused attention on reducing disparity rather than just generating overall improvements. To advance a culture of continuous learning and innovation, joint meetings between clinics and districts have allowed successful interventions implemented under the Strategy to be shared with peers. Additionally, many local interventions have delivered ad hoc trainings to strengthen providers' skills in areas such as leadership, management and cultural competencies, better enabling them to achieve new performance targets.

Engaging and empowering people, families and communities
By encouraging locally-designed interventions, the initiative has placed greater emphasis on engaging people and communities in health. Examples of local initiatives stimulated by the Disparity Reduction Strategy include outreach initiatives to encourage uptake of recommended preventive services, increased provision of care directly in communities through mobile care teams and partnerships with local community and religious leaders to deliver health promotion messages.

Health system enabling factors
The Disparity Reduction Strategy benefited from the existing organizational structure and culture of Clalit Health Services (Table 3). Clalit's large self-sufficient care

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Comprehensive package of services defined by the government; needs of vulnerable populations not adequately met by generic provision of services.	Comprehensive package of services continues to be offered, but with adaptations to better target vulnerable populations; services with wide preexisting disparities prioritized for intervention, such as occult blood testing.
Designing care	
Patients follow generic care planning for each patient.	At-risk patient lists developed to enable targeted care and proactive outreach to vulnerable groups.
Organizing providers	
Providers organized in large practices to pool skills and resources; general practitioners oversee all care for patients, supported by other providers as necessary; electronic medical records connect all Clalit providers; strong focus on team-working.	Small adaptations made at the local level to improve access to providers for vulnerable groups; examples include extending clinic hours, increasing mobile community care and integrating translator services.
Managing services	
Clalit organization entirely self-sufficient owning its own network of facilities; decentralized organizational model in place; strong electronic medical records system across the organization collects data on 70 quality indicators.	QUIDS developed from existing data collection system to track progress towards disparity reduction performance targets; local managerial capacities strengthened to support services delivery improvements.
Improving performance	
Continuous monitoring and generic feedback on quality indicators motivated overall quality improvement, but failed to close disparity gaps.	Specialized feedback on progress towards QUIDS disparity reduction targets provided; successful local disparity reduction strategies shared through meetings; ad hoc trainings offered to strengthen providers' skills.

network allows the organization almost complete control over establishing the conditions necessary for change. Conditions are set in a top-down manner within a decentralized organizational structure. Clear reporting requirements and accountability measures are in place at each organizational level. Clalit's senior management set organizational goals and provide oversight for district and subdistrict managers who are responsible for locally planning, implementing and monitoring improvements on defined quality measures. District and subdistrict managers hold general practitioners accountable for patients' health. As patients tend to remain with the same general practitioner, this establishes a clear link between providers and overall health outcomes for local populations, making providers highly accountable for performance. Additionally, providers have a deep-rooted

sense of responsibility towards their patients' health created through a cradle-to-grave relationship.

While no disincentives for poor performance are applied, strong accountability lines create managerial pressure through inherent competition mechanisms to motivate general performance improvements. Financial incentives were put in place to support achievement of the Strategy's goals. Unlike payment-for-performance, which rewards individual providers, incentives are applied at the district level to foster teamwork and collaboration between clinics in each district. This supports peer-learning between clinics by positioning them as partners working towards common goals instead of competitors. A centrally-appointed steering committee further assists the shared learning process through coordinating peer-learning activities and disseminating best practices among local clinics.

Strong information systems throughout Clalit ensure that reporting on services delivery is immediate and reliable. Regular feedback and assessment on QUIDS rankings helps motivate performance improvements. Clalit's electronic medical records system was a crucial element for enabling the initiative to take place as it provided data from which QUIDS – the driving factor behind the Strategy – was constructed. The electronic medical records system continues to be updated and new applications developed to further support quality improvements.

Outcomes

The initiative went beyond encouraging general improvements in health outcomes to more specifically motivate reductions in disparity. Furthermore, the Strategy directly targeted those health conditions known to most inequitably

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Senior management for Clalit Health Services responsible for setting performance goals and providing organizational oversight. • District managers responsible for care delivery and oversight of providers in their local districts. • General practitioners care for patients from cradle-to-grave and, consequently, are highly accountable for local population health outcomes.
Incentives	• District-level financial incentives applied if clinics meet disparity reduction goals. • No disincentives for poor performance; managerial pressure and basic principles of competition encourage improvements where needed.
Competencies	• Culture of continuous learning within Clalit. • Central steering committee for Clalit facilitates peer-learning and dissemination of successful interventions for disparity reduction.
Information	• Comprehensive electronic medical records system collects data on extensive range of indicators, providing necessary information and allowing ongoing performance monitoring and evaluation.
Innovation	• New technologies researched to support performance improvements.

affect Clalit's enrolled population. Early findings report positive results as a result of the Disparity Reduction Strategy (Box 2).

Box 2
What were the main outcomes of the initiative?

- All 55 target clinics showed improvements on QUIDS post intervention; target clinics accelerated improvements by 3.25 times the rate observed pre-intervention, while improvements for non-target clinics remained relatively constant.[2]
- Inequality gaps between target and non-target clinics narrowed by approximately 60% within three years of implementing the Strategy.
- Greatest improvements were seen in performance-based quality indicators (performance of blood tests, influenza vaccination and mammography tests); outcome-based indicators (diabetes, blood pressure and lipid control, and infant anaemia) were more modest, but still exceeded those seen in non-target clinics.
- Incident acute myocardial infarction rates among low-socioeconomic groups at Clalit declined at twice the rate of those in high-socioeconomic groups, significantly reducing previous disparities.[3]

Change management
Key actors
Top-down leadership at the senior management level within Clalit Health Services drove the initial development and implementation of the Disparity Reduction Strategy by establishing the necessary conditions and priorities for performance improvements. Top-down leadership was, however,

coupled with a bottom-up approach and district leaders were empowered to implement tailored interventions at the local level, with primary care providers acting as the main implementers of change (Box 3). The commitment of primary care providers to improvement was largely driven by a sense of accountability for population health deriving from cradle-to-grave relationships with their patients. Primary care providers showed dedication to improving patient health and flexibility in their willingness to adapt practices to better meet patients' needs.

Box 3
Who were the key actors for the initiative and what were their defining roles?

- **Senior management.** Set the conditions for change through a top-down approach; established indicators to measure performance; provided feedback on to district management and awarded performance incentives; led monitoring and evaluation of the initiative.
- **District management.** Devised local solutions to achieve goals set by senior management; provided oversight for the initiative at the local level.
- **Primary care providers.** Key implementers of change at the ground level; modified practices to realize changes proposed by district management; provided targeted interventions to vulnerable populations; worked in teams to achieve performance targets.

Initiating change
Economic drivers coupled with a long held organizational commitment to caring for vulnerable populations helped build momentum for change at the senior management level.

Districts were informed of the strategy via a conference held in 2008, which served as a venue to initiate the planning process, issue guidance on evidence-based approaches for disparity reduction and present successful examples of peer-led interventions. Districts were issued a report on their current QUIDS rankings along with two-year targets. Each district initiated an internal planning process together with subdistrict and clinic-level management to create locally tailored interventions for each targeted clinic within their district.

Implementation
Team-building and strengthening local leadership were key themes of interventions devised by districts. For example, clinical management teams participated in leadership skill-building workshops, multidisciplinary team meetings were incorporated into clinics' routines and individual staff members at clinics were assigned as champions to lead improvements on specified target indicators. Regular feedback to providers and district managers on QUIDS ensures continuous performance improvement and a sustained focus on disparity reduction.

Moving forward
Data indicates disparity reduction trends within target clinics for selected indicators. However, as little is currently known about the mechanisms through which these improvements were achieved, a comprehensive programme evaluation is currently underway to provide insight into how improvements were accomplished and explain why only moderate success was achieved for some indicators. Meanwhile, the initiative will continue to be monitored and supported as part of Clalit Health Services' commitment to disparity reduction.

Highlights

- Universally-applied quality improvement initiatives may not directly benefit vulnerable populations; focused disparity-reduction targets helped drive quality improvements for those most in need.
- Top-down leadership from senior management within Clalit Health Services was essential for creating the conditions needed for change.
- Locally-designed initiatives provided tailored solutions for achieving targets set by senior management.
- Capitalizing on preexisting strengths and resources minimized the need for costly investments.
- Data-driven performance measures were the backbone for the initiative, providing evidence of the need for intervention, allowing monitoring of performance, incentivizing performance improvements and enabling evaluation.
- Regular feedback and monitoring fostered a culture of continuous learning and evidence-based performance improvement.

1 Organization for Economic Cooperation and Development. (2012). Executive summary, assessment and recommendations *OECD reviews of health care quality: Israel.*

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3 Reges O., Leibowitz M., Hoshen M., Rabi Y., Gluzman I., Cohen CJ., & Balicer, R.D. (2014). Reduction in myocardial infarction incidence: focus on socioeconomic disparities. *Int J Cardiol, 174* (3), 773-4. doi: 10.1016/j.ijcard.2014.04.073

Identifying high-risk chronic patients for targeted primary care interventions in Veneto, Italy

Overview

Over the past decade, despite reporting health outcomes slightly above the national average, the Regional Government of Veneto, Italy, faced an increasing challenge to respond to growing levels of multimorbidities among its ageing population. Drawing from international experiences that sought to optimally provide services for those in greatest need, a pilot project was launched to introduce Adjusted Clinical Groups. The approach works to identify high-risk patients for proactive care with the aim of minimizing the need for more costly services at later stages of illness. Developing Adjusted Clinical Groups relied on measures found in electronic health records, including disease patterns, age and gender, to build a comprehensive profile of morbidity within the population, subgroups and individuals. In piloting the introduction of Adjusted Clinical Groups in Veneto, general practitioners received a list of priority high-risk patients in their geographic area. Ultimately, the model of care was transformed, calling for general practitioners to reach out to priority patients, engaging them in health promotion and disease prevention services and closely monitoring their condition over time. Implementation of this model has expanded the role of nurses, encouraging them to work in partnership with general practitioners for the delivery of outreach services. Patients and their caregivers also have greater involvement in the care process. Veneto's pilot project has been implemented in three phases: phase one (2012–2013), as an exploratory period to test the feasibility of the project within two of Veneto's 21 local health units; phase two (2013–2014), as a period of expansion, extending the project to six local units and involving health professionals in planning service improvements using data collected; and currently, phase three (2014–2015), working to scale-up the project across the entire region. While results and the future continuation of the pilot project will be assessed through an evaluation planned for 2016, the project has generated considerable interest from other regions and research institutions in Italy as a promising new model of health services delivery.

Problem definition

Over the past decade, Italy has undergone a demographic shift towards an increasingly ageing population, with one-fifth of the population (21%) over the age of 65 in 2012, compared to a WHO European Regional average of 14% that same year.[1] In the Veneto Region of north eastern Italy, this shift has been particularly pronounced, with life expectancy trends slightly above the national average.[2]

With an ageing population, Italy has seen a characteristic shift towards greater chronicity and multimorbidity (Box 1). In 2010, circulatory diseases, cancers and chronic lower respiratory diseases were found to be the major causes of mortality.[3] New health pressures have placed greater demand on health services delivery to provide proactive disease prevention and health promotion, as well as continuous and coordinated services for managing chronic illnesses and instances of acute needs; a challenge in the context of the system's primarily reactive model organized according to disease categories.

Box 1
What problems did the initiative seek to address?

- Ageing population.
- High prevalence of multimorbidities and chronic diseases.
- Acute, reactive health system model.
- Fragmented delivery of health services.

Health services delivery transformations

Timeline of transformations

Faced with the challenges described, in 2012 the Veneto Regional Government embarked on a three-year pilot project (Table 1) to introduce Adjusted Clinical Groups – an integrated data management tool developed by Johns Hopkins University in the United States of America, as a means to reorientate the model of care for a tailored package of services according to needs and risks. The tool works to identify individual high-risk patients through predictive modelling, allowing targeting of services for intensive case management and preventive care before an individual's health worsens, reducing the demand for often more costly health services in the future.

In 2015, the project entered its final phase and, at present, is being scaled-up across Veneto. A regional database has been developed to enable predictive risk modelling for Veneto's 5 million inhabitants. This data is then used to identify high-risk patients and proactively offer primary care services to help prevent future health complications and reduce unnecessary hospitalizations. The impact of the initiative will be evaluated in 2016 to determine if

Adjusted Clinical Groups will be permanently incorporated in Veneto's health system.

Description of transformations

Selecting services. Services have shifted to place a greater focus on outreach, prevention and early interventions for patients at high risk for chronic disease and future hospitalizations. "We target only the population that has a certain level of multimorbidity and complexity, as well as a high risk of negative events, high probability of hospitalization within six months and high probability of high cost in the next year."

Designing care. Following the introduction of Adjusted Clinical Groups, high-risk patients are now proactively recruited. These patients and their caregivers are included in the care process and provided with a copy of their care plan explained to them by providers during a home visit. "The plan is placed somewhere obvious, often in the kitchen on the fridge." Markers for worsening symptoms are explained and patients and caregivers are encouraged to contact providers as soon as these are identified. This targeted approach has ensured the delivery system is optimally attuned to the needs of individuals at greatest risk

of ill-health. Health providers are now "running after the patient and recruiting them," not the other way round.

Organizing providers. The pilot project has introduced new partnerships between nurses and general practitioners, with nurses taking on additional responsibilities, such as autonomously managing patients and providing input on care decisions. "The biggest change taking place is the ability of general practitioners to work in a team. … They had to change their expectations of the professional role of nurses." Together, general practitioners and nurses proactively reach out to patients, conduct home visits and provide continued follow-up to help patients manage symptoms more effectively and prevent unnecessary hospitalizations.

Managing services. The regional health authority for Veneto is responsible for planning, setting the strategic direction and monitoring local health units. In Veneto, statisticians are working at local health units to extract priority patient lists for each general practice using Adjusted Clinical Group predictive risk models; these lists are then distributed to general practitioners for outreach and follow-up services. Veneto is now using data to predict the future prevalence of disease to further tailor service priorities accordingly. In order to ensure continuous access to services, on-call nurses are available any time of day and patients can reach nurses by phone directly as needed.

Improving performance. Training is being provided for general practitioners and nurses to not only equip them with the necessary skills to provide proactive, targeted health services, but to also foster collaboration and teamwork. To promote partnership working between nurses and general practitioners, training sessions are

Table 1
What were the chronological milestones for the initiative?

2012–2013	Phase one: data exploration and feasibility studies on introducing Adjusted Clinical Groups conducted within two local health units.
2013–2014	Phase two: analysis of local chronic disease data and predictive risk modelling carried out within six local units; potential services for high-risk patients designed.
2014–2015	Phase three: initiative scaled-up across all 21 local units in Veneto; proactive outreach services are being offered to a sample of high-risk patients identified through risk models.
2016	Evaluation of pilot project is planned to determine the future of the initiative.

combined and held together for these two professional groups.

When you say you want to change the mentality, this is not enough. So we are planning a special training course for this purpose with nurses and physicians. We used to have training programmes for nurses and general practitioners separately, but now we thought we should put them together in the same room.

Health system enabling factors

In Italy, responsibility for the organization and delivery of health and social services is decentralized to the regional level. The Veneto Regional Government oversees the health system via the Department of Health and Social Services. Services are provided by 21 local health units, two research hospitals and one regional cancer centre. Regions must provide a nationally

defined basic benefit package to all citizens. Health is mainly financed by earmarked central and regional taxes and Veneto receives their allocated share from the National Health Fund for distribution to local health units. Approximately 10% of national health funds are centrally reserved and a portion of this funding was used to finance the initiative, allowing local unit budgets to remain unaffected by changes (Table 3).

The introduction of Adjusted Clinical Groups has relied on the existing information system, measuring the morbidity burden of the population based on disease patterns, age and gender. Adjusted Clinical Groups have drawn from insurance claims, prescriptions or other electronic medical records to build a comprehensive picture of morbidity burden within the population, subgroups and individual patients.[4] Recent investments have been made in strengthening Veneto's health information systems and the "huge amount of data registered for administrative purposes has become a goldmine to support integrated care". While Adjusted Clinical Groups also have the potential to be applied to performance monitoring and budget allocation, general practitioners are resistant to these changes which has consequently prevented payment-for-performance incentives from being implemented. The Veneto Regional Government is, however, strategizing other ways in which to use Adjusted Clinical Groups to improve health system performance including, for example, how to plan for future health workforce needs.

Outcomes

Outcomes of the initiative will be assessed by the final evaluation in 2016. This evaluation will determine whether the initiative continues to be implemented and secured with formal policy. However, key informants report observing indirect indicators of success and the

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Nationally defined basic package of services available to the population.	Focus of services shifted towards prevention and early intervention.
Designing care	
Delayed entry of patients into care; patients and caregivers not typically involved in the care process; patients sought out care only after symptoms occurred or worsened; many patients required specialist care due to delays in seeking treatment.	High-risk patients recruited into care earlier; patients and caregivers included in care process and provided with a copy of their care plan; patients and caregivers receive education on identifying and responding to changing health conditions. Providers now "running after the patient".
Organizing providers	
General practitioners deliver majority of services with nurses "just following orders."	General practitioners and nurses work as a team with nurses taking on additional responsibilities; home care visits and follow-ups conducted by primary care providers for high-risk patients.
Managing services	
Veneto Region holds responsibility for the delivery of services to their population via local health units.	Services better managed in local health units through the use of data to adapt services in response to changing health needs.
Improving performance	
Trainings for nurses and physicians held separately.	Trainings for nurses and physicians held together to promote teamwork.

Table 3.
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Decentralized model of managing and delivering health services supported the experimentation and development of this initiative.
Incentives	• National health funding derived from taxation is pooled regionally and redistributed to local health units; approximately 10% of national health funds are centrally reserved and part of this funding financed the initiative.
Competencies	• Regional government strategizing ways to use Adjusted Clinical Groups to plan for future health workforce needs.
Information	• "Goldmine" of data routinely collected for administrative purposes. • Evaluation will assess the impact of the pilot; permanent adoption of Adjusted Clinical Groups depends on evaluation findings.
Innovation	• New Adjusted Clinical Risk applications and predictive models developed based on the methodology of Johns Hopkins University.[4] • Italian universities and national health agencies interested in researching Adjusted Clinical Groups.

initiative has already generated considerable interest from universities and other Italian regions.

Change management
Key actors
The Veneto Regional Government has led the introduction of Adjusted Clinical Groups, with support from a variety of actors (Box 2). Pioneers of the approach in Italy, government officials in Veneto showed significant foresight in their willingness to explore new approaches for addressing emerging health issues. International actors, notably Johns Hopkins University which first developed the Adjusted Clinical Groups concept, were instrumental in providing inspiration for the initiative and structural guidance.

Local actors were also heavily engaged throughout the process to ensure buy-in for the changes proposed and suitable adaptations for the local context. Furthermore, the Veneto Regional Government assembled a working group composed of local experts to lead the initiative. "We did not hire new people. We took statisticians and nurses who were working in the region and we took some of their time to build a team." To help garner support from the health workforce, providers were recruited as champions for the initiative to encourage peers to become involved. "We asked the head of the health district to help identify champions who would help promote this work. We began this work with one or two general practitioners for each area; we couldn't have everybody right away."

Box 2
Who were the key actors and what were their defining roles?

- **Veneto Regional Government**. Led development of initiative; provided necessary funding for activities; formed working group to oversee design and implementation of activities.
- **Johns Hopkins University**. Developed Adjusted Clinical Groups tool used in the pilot project.
- **Working group**. Composed of government officials, statisticians and health providers; responsible for overseeing the pilot project, developing risk models and evaluating progress.
- **Champions**. Health providers recruited to promote the initiative among peers.

Initiating change
The Veneto Regional Government's strong commitment to data driven change created an environment conducive to services delivery improvements. Taking a forward-looking focus, regional officials became increasingly concerned that the traditional approach of cutting the most expensive programmes to reduce health care costs was no longer sustainable after what they described as a "revolution of chronic disease" which had created an "epidemic of patients with multimorbidity". Some officials began to wonder if the system of diagnosis-related groups could be applied outside of hospital settings, leading them to search for international examples of this approach.

The turning point was a trip to Sweden for three days. … They were using a tool developed by Johns Hopkins University to classify patients outside of the hospital. Once you go out of your boundaries you open your mind and find out that there are often solutions and you don't have to invent anything. You simply have to look around.

Implementation

The pilot project was implemented in three gradually progressive stages. The first phase, applied to just two of 21 local health units, was used to develop the methodology, experiment with data and test the feasibility of the initiative. "Show that you are knowledgeable and that your methodology is sound. The people you are involving have to feel you are competent and you are supporting them with a quality initiative." During the second phase, which expanded the project into six local units, health providers were given information on the initiative and asked for their input and ideas.

Just in an exploratory way, we said: "look this is what we have. Do you think this might be useful for your practice, or could you come up with a way in which it would be useful for your practice?" And we started to see the possible feedback we could have from health professionals when we provided the information.

Having collected a sufficient amount of data and ideas from general practitioners and nurses "we decided to expand to the whole population to not only measure, but to identify and contact patients and to provide a different way of getting people into the health service." While leaders of the initiative indicated changes were taking place with some resistance, services nevertheless transformed and patients began receiving proactive outreach and follow-up services. Continuous feedback and support was highlighted as being critical for maintaining the enthusiasm and momentum for change.

Moving forward

Formal policy changes to permanently adopt proactive case management of high-risk patients in primary care using Adjusted Clinical Groups are being considered pending results of an evaluation to be carried out in 2016.

Highlights

- Government officials looked outward to find existing solutions to adapt and apply to the local context: "there are often solutions and you don't have to invent anything. You simply have to look around."
- The initiative was gradually implemented in a three-phase pilot project; time was taken to explore, verify and refine the initiative before scaling up across the region.
- Strong data collection was critical for allowing predictive risk modelling using Adjusted Clinical Groups; the initiative capitalized on the "goldmine" of data collected for administrative purposes.
- Nursing roles were advanced by the initiative and nurses now work in partnership with general practitioners to manage high-risk patients.
- Services were reorientated to become more proactive with high-risk patients being targeted for tailored interventions and preventive services; health providers are now "running after the patient and recruiting them," not the other way round.

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3 Institute for health metrics and evaluation. (2014). G*lobal burden of disease cause patterns*. Retrieved from http://vizhub.healthdata.org/gbd-compare/arrow.
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Medical trains for improved access to health services across Kazakhstan

Box 1
What problems did the initiative seek to address?

- Among the lowest life expectancy in the WHO European Region.
- Unequal distribution of health professionals across the country.
- Geographic disparities in health status between rural and urban areas.

Overview

A clear rural-urban divide in the availability and accessibility of health services persists across Kazakhstan, with large differences in existing health infrastructure and the geographic distribution of resources, including health professionals. These discrepancies have contributed to higher levels of morbidity and mortality in rural populations compared to their urban counterparts. In response to these challenges, the Ministry of Health and the Committee of Emergency Situations within the Ministry of Internal Affairs introduced a programme for train-based services delivery, making use of the existing railway infrastructure to reach rural areas. Three mobile medical trains have been established: Densaulyk, based in Almaty, Zhardem based in Aktobe and Salamatty Kazakhstan based in Karaganda. The three trains serve southern, eastern and western, and northern regions of the country, respectively. Each train consists of eight wagons and 80 staff members in total, of which half are health providers. The trains are equipped with modern clinical, diagnostic and radiology equipment. Advanced infrastructure and resources on board the train allow for complex diagnosis and treatment of patients, including minor outpatient surgery and dental care. Together, these three trains have increased access to health services for rural and remote areas, treating more than 56 000 people between 2010 and 2014.

Problem definition

Kazakhstan faces a rural-urban health divide, with discrepancies in resources distributed across the country, particularly with regards to human resources (Box 1). Many rural and remote areas experience a general shortage of health workers. For example, in 2010 the northern region of Kostanay had 266 physicians per 100 000 population compared to a national average of 388 per 100 000 population.[1] Persisting challenges, including limited health infrastructure, constrained resources and poor sanitation, have reportedly constrained the ability of the health system to substantively reduce morbidity and mortality among the country's rural populations.[1]

Health services delivery transformations

Timeline of transformations
In 2005, in line with the introduction of the National Programme for Health Care Reform and Development 2005–2010, and to address concerns over the geographic distribution of health resources and health professionals, the concept of transport medicine was first put forward (Table 1). The vision of train-based services proposed implementation of a series of trains travelling to 17 stations in the southern provinces of the country in order to extend the delivery of services to rural populations using the country's existing infrastructure.

In 2010, a first experiment with transport medicine was undertaken. Building upon the 2005 announcement, the State Health Care Development Programme for 2011–2015 "Salamatty Kazakhstan" (Healthy Kazakhstan) sought to continue advancements and add additional medical trains. Train-delivered health services were expanded in 2011 to also cover eastern-western and northern regions.

Description of transformations

Selecting services. The introduction of medical trains has put focus on tackling the health divide between urban and rural populations by delivering primary and specialist services directly to rural communities. Health trains each have eight wagons, equipped to provide a range of services with modern clinical, diagnostic and radiology equipment. This infrastructure allows specialists to carry out complex diagnosis and treatment of patients aboard trains at stations across the

Table 1
What were the chronological milestones for the initiative?

2005	Initial implementation of National Programme for Health Care Reform and Development 2005–2010.
2009	Presidential decision in coordination with the Ministry of Internal Affairs and Ministry of Health to invest in the first medical train, "Densaulyk".
2010	First medical train launched in July; State Health Care Development Programme for 2011–2015 "Salamatty Kazakhstan" approved.
2011	Devolopment begins on a second and third medical train in conjunction with the planning and development phase of the State Health Care Devolopment Programme "Salamatty Kazakhstan".
Present	All three medical trains continue to run, serving rural populations across the country.

country. Services also include minor outpatient surgeries, lab work and dental care, all of which is provided free of charge.

Designing care. Services are provided directly on the trains. Providers are expected to adhere to the same standards and protocols as services delivered in health facilities. Three different routes extend services across the country as needed.

Organizing providers. Medical trains are each equipped

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Inequitable service provision between urban and rural settings, with difficulty accessing acute care in many parts of the country.	Medical trains provide range of services from diagnostics to treatment; trains transport patients to health facilities as needed.
Designing care	
Services in rural areas struggle to meet the needs of rural populations and provide a comprehensive package of services.	Train routes organized for trains to deliver care in remote areas; care pathways defined according to new standards of providing care in conventional facilities.
Organizing providers	
Limited access to health providers in rural areas; poor coordination of care.	Medical trains equipped with multiple providers who offer services at the different stations trains travel to; real-time video communication used to link onboard providers with professionals in hospitals.
Managing services	
Resource constraints challenge optimal delivery of services to rural communities.	Managers onboard trains responsible for ensuring availability of resources for providing selected services and general oversight of the train itineraries.
Improving performance	
Need for skill strengthening at the primary care level.	Training for providers on new guidelines and standards planned; indicators for performance monitoring in development.

with 18 specialists including an internist, pediatrician, neurologist, gynaecologist, cardiologist, ophthalmologist and general physician. In total, 36 medical staff work on each train, with an additional 44 individuals assisting in running and supervising train functions.[2]

During a visit to the medical train patients are seen by multiple professionals, moving between specialists on board based on their specific needs. While practitioners on board continue to practice independently, the close proximity of each facilitates communication.

Managing services. Representatives from local executive bodies manage the trains. Managers on board each train are responsible for ensuring a specific itinerary is followed and that trains are appropriately resourced throughout their trips.

Health system enabling factors

The investment and implementation of medical trains has taken shape in the context of broader comprehensive health system reform through the State Health Care Development Programme for 2011–2015 "Salamatty Kazakhstan" (Table 3). As a result of this overarching policy, several changes to health system financing have been made. In 2011, a new capitation-based payment system, including a payment-for-performance component, was implemented. All the necessary conditions for differentiated payments have been established under the Programme and basic salaries for physicians and nurses have increased as a result.

Strengthening competencies of health professionals working within the health system has also been an important focus, including improvements in graduate level training and several new postgraduate level courses, such as the upgrading of nursing education

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Launch of overarching State Health Care Development Programme "Salamatty Kazakhstan". • Formal decision taken by the president to invest in medical trains.
Incentives	• Reworking of provider payments underway; payment-for-performance incentives introduced, and basic salaries increased.
Competencies	• Graduate level education has increased; postgraduate medical institute provides continuing education programmes. • Focus on developing management competencies within the health sector.
Innovation	• Development of Centre for Life Sciences to support the development of medical technologies.

to postgraduate level status. Medical education aligned with international models is now available through Nazarbayev University. Linking to the strengthening of competencies is the investment in developing high-quality research in medical sciences and novel technologies. With this goal in mind, the Centre for Life Sciences was founded in the capital, Astana.

Outcomes

Ongoing monitoring and registration of patients has recorded the initial impact of the initiative, finding positive outcomes notably in terms of improved access to services (Box 2).

Change management

Key actors
The Ministry of Health first led the introduction of medical trains as a means of tackling health disparities between rural and urban areas. With the President of the Republic of Kazakhstan's support, cross-sector action was made possible, linking with the Ministry of Internal Affairs and partnering with the

Box 2
What were the main outcomes of the initiative?

• Between 2010 and 2014 medical trains treated 56 851 people.[2]
• Accessibility of medical services in rural areas has improved, with trains taking approximately 20 days to cover 832 remote stations.[3]
• More than 30% of patients seen on each train are diagnosed during their first appointment, of which one in four are diagnosed with a serious disease requiring intervention.

company responsible for railway transportation, Kazakhstan Termir Zholy (Box 3).

Box 3
Who were the leading actors and what were their defining roles?

- **President**. Put forth a vision for the expansion of mobile medicine and the development of medical trains.
- **Ministry of Health**. Led implementation of medical trains and financed care rendered through these.
- **Committee of Emergency Situations, Ministry of Internal Affairs**. Provided cross-sector support in the implementation of medical trains with the Ministry of Health.
- **Kazakhstan Termir Zholy**. Partner in the development of medical trains; responsible for operation and maintenance of railway transportation in Kazakhstan.

Initiating change

The launch of the State Health Care Development Programme "Salamatty Kazakhstan" put focus on the health and development of the population, setting out plans to modernize and expand health services across Kazakhstan. In the context of this overarching policy, the expansion of medical trains was put forth as an approach to improving access to services.

Implementation

Backed by presidential support, a partnership was established between the Ministry of Health, the Committee of Emergency Situations within the Ministry of Internal Affairs, and Kazakhstan Termir Zholy, the national company responsible for operating the railway network in Kazakhstan. Together, these actors designed a programme for the introduction of the first train, Densaulyk, iin 2010. Two additional trains, Zhardem and Salamatty Kazakhstan, were set up the following year.

Moving forward

Medical trains continue to cover remote regions of the country stopping according to predetermined schedules to deliver care to patients.

Highlights

- Aligning transformations with the goals of overarching system reforms and gaining cross-sector buy-in from the government helped to support implementation of medical trains.
- Building upon existing infrastructure helped to alleviate the burden of additional resources in the set up and rollout of transformations.
- Solutions for population health problems were based in a strong understanding of current challenges and adapted to population and geographic attributes.

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Integrating nutrition programmes in primary and community care in Kyrgyzstan

Overview

Responding to high levels of anaemia reported among infants in Kyrgyzstan,[1] the Ministry of Health launched an initiative in collaboration with international partners to provide micronutrient sprinkles, known locally as "Gulazyk", to infants aged 6–24 months. With support from international organizations, a regional pilot project on the use of Gulazyk to prevent iron deficiency in children was conducted in Talas between 2008 and 2010. Every two months, as part of routine health visits, primary care providers dispensed Gulazyk to caregivers and counselled them on using the supplement. Messages were reinforced by Village Health Committees (locally appointed volunteers who deliver health messages within their communities), which facilitated the successful implementation of the pilot and widespread use of Gulazyk among the target population. A strong focus on monitoring and evaluation throughout the initiative provided evidence of the positive impact of Gulazyk on reducing anaemia, leading to the decision to scale up the programme nationally. Presently, the Gulazyk programme remains actively implemented across Kyrgyzstan and continues to prove effective in reducing the levels of anaemia among infants. As funding is provided primarily through humanitarian donations, initiative leaders are currently exploring ways to transition to a more sustainable delivery model.

Problem definition

High levels of iron deficiency contributed to an elevated prevalence of anaemia among the Kyrgyz population (Box 1). Children under 24 months of age were particularly affected, with anaemia rates reaching 50% among this group in 2005.[1] Furthermore, widespread micronutrient deficiencies were attributed to growth stunting in children under five which had a national prevalence of 18% in 2006.[2]

Box 1
What problems did the initiative seek to address?

- Widespread evidence of micronutrient deficiencies among young children, particularly iron-deficiency anaemia.

- Elevated levels of growth stunting among children under five linked to micronutrient deficiencies..

Health services delivery transformations

Timeline of transformations
Following repeated surveys in the late 1990s exposing widespread anaemia in infants, a new programme to distribute micronutrient sprinkles, locally known as Gulazyk, was proposed in Kyrgyzstan in 2006 (Table 1). Supported by a national maternal and child nutrition campaign, piloting of the proposed micronutrient home-fortification programme began in Talas oblast in 2009. Following a positive evaluation of the pilot programme, activities were scaled up nationally in 2011. Within one year, all regions had incorporated delivery of Gulazyk within primary care. Presently, the initiative continues to be actively implemented with donor support and efforts are underway to transition the programme to a more sustainable delivery model.

Description of transformations
Selecting services. According to internationally recommended practices, Gulazyk (micronutrient sprinkles) is a suggested intervention to reduce iron deficiency. Gulazyk is now distributed free-of-charge as part of standard primary care check-ups offered bimonthly to infants aged 6–24 months. Health promotion messages to encourage breastfeeding and improve complementary feeding have also been incorporated into health check-ups and growth charts have been introduced to monitor children's physical development. Regular health check-ups allow

Table 1

What were the chronological milestones for the initiative?

1997	First Demographic and Health Survey conducted in Kyrgyzstan; prevalence of anaemia in infants shown to be high.
Late 1990s–early 2000s	Evidence from multiple smaller surveys suggests the prevalence of anaemia among infants remains high.
2006	Based on the results of cluster research conducted by UNICEF, the Ministry of Health and international actors begin development of an initiative to systematically introduce a micronutrient home-fortification programme to tackle infant anaemia.
May 2008	Nationwide maternal and child nutrition education campaign launched.
June 2008	Talas selected as the pilot region for the proposed micronutrient home-fortification programme; baseline nutrition survey conducted in Talas.
June 2009	Implementation of the pilot study in Talas begins; micronutrient home-fortification programme integrated into the existing local primary care system.
2009	National baseline nutrition survey conducted.
July 2010	Impact evaluation on the Talas pilot carried out; decision made to expand the micronutrient home-fortification programme based on positive results observed.
2011	Phased national scaling up of the micronutrient home-fortification programme.
2013	National impact evaluation conducted for the micronutrient home-fortification programme.
Present	Continued implementation of the micronutrient home-fortification programme.

monitoring of physical development and early detection of micronutrient deficiencies in infants.

Designing care. Protocols for the initiative have been established to guide primary care providers through necessary screenings, directing consideration across all dimensions of health, nutrition and early childhood development. The selected dosing regimen requires delivery of 30 Gulazyk sachets every two months (approximately one sachet every other day). Primary care protocols for the detection and treatment of childhood anaemia have been mirrored in secondary care to ensure consistency in clinical practices. Previously established protocols remain in place for the treatment of severe anaemia.

Organizing providers. The initiative has been organized for delivery in primary care. Family physicians and nurses are responsible for conducting health check-ups and distributing Gulazyk sachets. Primary care providers are supported by community health volunteers who deliver health promotion messages, reinforce advice issued by health providers and encourage people in their local communities to access available services.

Managing services. The initiative is managed by oblast administrations according to standard practices. As locally-elected advocates for public health services in their communities, Village Health Committees have supported tailoring of practices to local contexts.

Improving performance. Basic trainings on dispensing Gulazyk are in place for providers and Village Health Committees. Trainings also provide guidance on communicating effectively with patients. Trainings for providers take place over a three-day period and are repeated in areas where coverage with Gulazyk is reported as low.

Engaging and empowering people, families and communities
The initiative relies on caregivers to add Gulazyk sachets to food prepared in the home. Consequently, a key component of activities has included educating and empowering caregivers to provide Gulazyk to their infants. Caregivers receive instructions from health providers on using Gulazyk. Educational pamphlets and children's books have

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Frequent health check-ups for infants; no provision of micronutrient supplements.	Micronutrient supplements universally available for infants aged 6–24 months as part of health check-ups; health education on infant feeding increased; infant growth regularly charted.
Designing care	
Absence of guidelines for the distribution of micronutrient supplements to infants; treatment protocol for infants with severe anaemia in place.	Micronutrient supplements delivered during health check-ups every other month according to newly-established protocols; protocol for treatment of severe anaemia remains in place.
Organizing providers	
All regional and district centres have primary care clinics and almost all rural villages have a primary care post; access to primary care services is considered high; community health volunteers support health promotion in rural communities.	Micronutrient supplements are delivered through primary care providers across settings; community health volunteers reinforce health messages issued by primary care providers.
Managing services	
Necessary systems not in place to provide national micronutrient supplementation to infants.	Oblast administrations manage the initiative; Village Health Committees provide support to the initiative at the local level.
Improving performance	
Providers not trained to provide micronutrient supplements.	Primary care providers receive three-day trainings on micronutrient home-fortification, as well as general information on infant nutrition; community health volunteers receive training on the appropriate use of micronutrient supplements.

been developed as tools to reinforce health education messages delivered by providers and inform caregivers on how to administer Gulazyk. Additionally, peer mentorship from community volunteers has been described as particularly important for supporting health education messages and encouraging use of Gulazyk. The initiative has also run an extensive communication strategy to raise national awareness of iron deficiency. Leaflets, booklets and other information sources were developed and disseminated to inform communities about the benefits of Gulazyk.

Health system enabling factors

The Normative Standard on Management of Children with Anaemia was reviewed and updated by the government in 2009, mandating the list of child services to be offered by primary care providers and requiring delivery of counselling on health, nutrition and early childhood development (Table 3). A working group – with representation from the Ministry of Health, as well as specialists within haematology, nutrition, pharmacology and paediatrics – supported development of the Standard. Initiative resources are centrally procured using donor

funding and supplies are delivered to village-level primary care clinics according to standard distribution procedures for humanitarian aid. The drug department within the Ministry of Health, responsible for monitoring all humanitarian aid, oversees distribution of Gulazyk and effective resource use. External monitoring is conducted by the National Statistics Committee. The Ministry of Health also has an internal monitoring process – channelled through the Integrated Management of Childhood Illness (IMCI) data monitoring system – which provides the Ministry with quarterly statistics. Health providers are required to submit the

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Normative Standard on Management of Children with Anaemia sets care standards and requires delivery of nutrition and early childhood development counselling in primary care.
Information	• Improvement of existing IMCI data monitoring system provides regular statistics on the micronutrient supplementation programme.

information to local health authorities who report data to the Ministry. Existing monitoring systems have reportedly been improved in order to accommodate specific reporting needs of the initiative.

Outcomes

Baseline surveys conducted prior to the initiative, combined with a strong focus on monitoring and evaluation throughout, have allowed concrete outcomes to be determined (Box 2). Uptake of the programme among the target population is high and data indicates the initiative has had a positive impact on reducing the prevalence of anaemia and iron deficiency in infants.

Change management

Key actors
The initiative has been led through collaborations between the Ministry of Health and international actors (Box 3). The Ministry of Health has served as the main actor, establishing the necessary national framework to support and oversee activities. International actors have played critical roles in conducting research, funding necessary resources and supporting monitoring and evaluation. While the initiative was developed in a top-down approach, extensive community outreach and engagement with community health volunteers and caregivers supported the widespread uptake of Gulazyk within local populations.

Health providers incorporated new mandated practices into daily routines and meetings held with Village Health Committees encouraged community health volunteers to promote use of Gulazyk.

Box 3
Who were the leading actors and what were their defining roles?

- **Ministry of Health**. Main actor leading implementation of the initiative; adjusted policies to support programme implementation; assisted with monitoring and evaluation of the programme.
- **International organizations**. Provided the Ministry of Health with technical support and resources for purchasing Gulazyk; assisted with monitoring and evaluation of the programme.
- **Primary care providers**. Provide Gulazyk to caregivers; monitor development of infants.
- **Community health volunteers**. Organized within peer-elected Village Health Committees; deliver health promotion messages and encourage Gulazyk use.
- **Caregivers**. Prepare and provide Gulazyk to their infants.

Box 2
What were the main outcomes of the initiative?

Outcomes observed within the Talas pilot study between 2008 and 2010:
- Prevalence of anaemia among infants significantly decreased from 51% to 44%.[3, 4]
- Prevalence of iron deficiency among infants decreased from 46% to 33%.[4]
- Almost all caretakers (99%) had received Gulazyk at least once, indicating successful outreach.[3]
- Self-reported consumption averaged at 23 doses out of a possible 30; 45% of infants were reported as receiving the full 30 doses in the last two months.[5]
- Participant acceptance of Gulazyk was high; caregivers reported that Gulazyk was easy to use (88%), important for the child (96%) and they would continue its use (89%).[3]

Other outcomes observed:
- Between 2009 and 2012, approximately 45 000 children in Talas received Gulazyk.
- National coverage of Gulazyk is estimated to be at least 80% of the target population based on 95% vaccination coverage rates.
- Exclusive breastfeeding increased nationally from 31% in 2006 to 56% in 2012;[2] other indicators of feeding practices also improved.

Initiating change

The driving factor behind change was "the understanding of the problem and why we need to deal with it". Leaders used data from situational analyses, as well as international nutrition recommendations, to provide "strong data to support the need for change". Increasing awareness about the importance of investing in child nutrition was another key area of activity. An analytical report examining investments in nutrition (put together by UNICEF in partnership with the World Bank) was influential in convincing politicians and other stakeholders to support the initiative by showing the possible financial returns on the investment.[1]

Implementation

Piloting the programme enabled a number of issues to be identified and addressed before national implementation. For example, it was learned that launching the programme outside of summer months was important as caregivers blamed the naturally higher incidence of gastrointestinal infections during summer on Gulazyk, leading them to abandon its use. Similarly, hospital providers also attributed Gulazyk as a causal factor for infants presenting with acute gastrointestinal infections and advised caregivers

to discontinue the treatment. Consequently, training for specialists was later incorporated to ensure all health providers were aware of Gulazyk and delivered a consistent message about its benefits across care levels.

When the programme officially launched, an extensive media campaign was used to promote activities and raise awareness about Gulazyk. Village Health Committees helped to disseminate information about the programme within local communities and pre-established high levels of trust between the population and community health volunteers proved important for gaining public acceptance of the programme. Supervisory visits to

local clinics, regular discussion of issues with providers and clear data reporting requirements helped maintain providers' adherence to the programme by increasing accountability.

Moving Forward

At present, the initiative continues to be actively implemented with donor support. Preparations to transition the initiative away from reliance on external funds are ongoing. UNICEF is currently in discussions with the Global Alliance for Improved Nutrition in an effort to secure funding to establish local production of Gulazyk and begin to build a market for selling Gulazyk through local pharmacies.

Highlights

- Alignment with existing infrastructure and services provided support and stability to new reforms.
- Building trust between primary care providers and patients was an essential step in ensuring uptake of micronutrient supplementation; community health volunteers supported this process.
- Developing a consistent message across all providers, even those not directly involved with the initiative, was essential for safeguarding changes from being undermined at other care levels.
- Participation of mothers and community members proved valuable for overcoming challenges of potential non-compliance.

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Establishing a unified emergency medical service in Latvia

Overview

In 2009, in response to the fragmented organization of prehospital emergency medical services and disparities in access, the Government of Latvia established the State Emergency Medical Service to introduce a unified national policy on emergency and disaster medicine and to improve organization of prehospital emergency medical services across Latvia. The existing 39 separate organizations delivering emergency medical services across the country were merged in the late 2000s to develop one unified service. On the 1st July 2010, the merging process and new design for emergency medical services, along with the necessary institutional adjustments, were successfully completed. Key changes focused on establishing a unified system for managing resources, developing equipment and medicine standards, training providers and improving services in rural and underserved areas. The State Emergency Medical Service now employs all necessary medical personnel to deliver prehospital emergency medical care. A network of five regional centres coordinates 190 ambulance teams stationed at 100 locations across the country. The State Emergency Medical Service is responsible for emergency medical care provision throughout the state and transportation of patients to the nearest appropriate hospital in accordance with guidelines. Ambulance teams are required to respond to calls within specified time limits stated in national legislation. Ongoing monitoring ensures targets continue to be met. An electronic information system has been introduced for call reception and processing, dispatching, communication, quality supervision, reporting, and status monitoring among health providers. Overall, a high level of satisfaction with services is reported among both patients and providers; 86.3% of patients surveyed said they were satisfied with ambulance services. Today, the State Emergency Medical Service continues to direct and manage the delivery of prehospital emergency medical services, using monitoring and evaluation to continue quality improvements.

Problem definition

In the early 2000s, 39 municipal institutions in Latvia were separately responsible for contracting emergency medical services within their defined area. Over time, this organizational structure was found to contribute to increasing regional disparities in care access and an inequitable distribution of resources (Box 1). Furthermore, decentralization restricted effective coordination and planning for emergency medical services and posed geographical limitations on patient transfers.

Box 1
What problems did the initiative seek to address?

- Decentralized provision and management of prehospital emergency medical services resulting in fragmentation, lack of coordination and service inefficiencies.
- Regional disparities in access to ambulance services and inequitable distribution of resources.
- Lack of standardized care guidelines for prehospital emergency medical services.

Health services delivery transformations

Timeline of transformations
In 2009, the government established the State Emergency Medical Service as the central organization to manage and deliver prehospital emergency medical services across Latvia (Table 1). Doing so required the gradual merging of 39 previously distinct municipal-based entities, establishing the new State Emergency Medical Service as the sole national provider for prehospital emergency medical services. At present, the State Emergency Medical Service is the main institution providing prehospital emergency medical services in Latvia.

Table 1
What were the chronological milestones for the initiative?

1990s–2000s	Period of health care reform in Latvia; project in cooperation with the World Bank in the early 2000s advanced health reforms that proved critical to the later development of the State Emergency Medical Service.
2009	State Emergency Medical Service established; 39 separate emergency medical service organizations gradually merged under this single organization.
2010	Merging of emergency medical service organizations completed, establishing the State Emergency Medical Service as the sole organization responsible for emergency medical services in Latvia.
Present	State Emergency Medical Service continues to provide all emergency medical services and direct improvements in service quality.

Description of transformations

Selecting services. Prehospital emergency medical services are provided free of charge across the country. Provision of emergency medical care, including transportation services, has been standardized to ensure the whole population has access to the same package of high-quality emergency medical care.

Designing care. Standardized guidelines and regulations have been implemented across the country for prehospital emergency medical services. Standardized guidelines have ensured decisions on tactics, treatment and transportation are consistently delivered and streamlined.

Organizing providers. The State Emergency Medical Service has centralized management of incoming calls and dispatching in two call centres and five regional centres across Latvia to direct care as needed. Emergency services can be accessed through two common emergency phone numbers (113 for emergencies or 112). Services are available at all times. Ambulances are stationed at 100 locations across the country and provide prehospital emergency medical care and transport patients to the nearest appropriate hospital for their care needs. Through the unified service, patients are now directed to hospitals based on a countrywide network map of hospitals and specialized facilities, irrespective of municipal boundaries.

There are 190 ambulance teams in the State Emergency Medical Service, each consisting of two medics and one driver. Ambulance teams may also include a physician and one or two physician assistants. Ambulance teams can consult remotely with specialists at the Centre of Specialized Medicine as needed, such as cardiologists and neurologists, via phone conferencing systems to receive guidance on medical interventions and assistance determining which hospital patients should be transported to. The Centre of Specialized Medicine, as one of the structural units of the State Emergency Medical Service, also has in place four specialized ambulance teams that can be sent to the emergency site or other hospitals to assist in complicated cases.

Managing services. The State Emergency Medical Service is the sole organization responsible for the provision and organization of prehospital emergency medical care according to a fixed budget set by the Ministry of Health. Centralized management of services has enabled administrative activities to be streamlined.

Strict performance targets have been established within the State Emergency Medical Service and providers are monitored and assessed according to these. The quality of services delivered is monitored daily to ensure consistent delivery according to standards in place and timely identification of any red flags. Standardized data reporting enables comparisons among regional centres, service quality assessment, research activities and regular reporting to the Ministry of Health and other health care institutions. Basic performance indicators include the number of ambulance visits resulting with patient transportation to hospital, number of patient transfers and average response time interval in urban and rural areas for highest priority cases, among others.

Improving performance. Qualified physicians and physician assistants lead trainings for providers in the capital city. Trainings are provided on a regular basis to ensure emergency service providers have opportunities to maintain and regularly update their skills and knowledge. In addition, regular real-life simulations are organized in cooperation with other emergency public services, including rescue and police services, to ensure the provision of high-quality care. While trainings and seminars are not mandatory, they contribute towards credit points needed for professional recertification. Every year, emergency medical care providers are required to pass both a theoretical and practical examination.

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Availability of prehospital emergency medical services variable across regions.	Free, standardized package of services available across all regions.
Designing care	
Absence of standardized care guidelines or protocols across local organizations.	Common set of standards, guidelines and protocols in place.
Organizing providers	
Individual emergency care providers contracted at municipal or institutional level with wide discrepancies in organization of care teams; emergency care providers (municipal organizations and hospitals) highly fragmented.	State Emergency Medical Service coordinates all prehospital emergency care providers – 194 ambulance teams located at 100 locations across the country, two call centres, five regional centres and a Centre of Specialized Medicine; phone conferencing allows communication between emergency care teams and specialists.
Managing services	
Delivery of emergency care services managed by 39 different organizations.	State Emergency Medical Service manages delivery of all emergency services, streamlining administrative activities; quality management systems now in place; strict performance targets in place.
Improving performance	
Inconsistent availability of trainings; variations in emergency service providers' skill level across the country.	Trainings and seminars regularly provided; trainings contribute towards credits needed for professional recertification.

Health system enabling factors

The Ministry of Health has provided considerable support to the initiative to centralize emergency medical services (Table 3). A number of policy changes supported the initiative and contributed to the legislative base for the State Emergency Medical Service, notably the passing of government order number 547 in 2002, which first enabled its development and, in 2005, orders 444 and 854, each contributing to the legislative base for the development of the State Emergency Medical Service by introducing quality and accessibility standards for emergency medical care across the country and formalizing prehospitalization emergency care guidelines. Furthermore, investments from the Ministry of Health and European Regional Development Fund enabled the State Emergency Medical Service to acquire the necessary resources and the new information technology system, once implemented, will allow for enhanced monitoring. Additionally, to ensure sufficient professional capacities, the Medical Qualification and Training Centre has been established as a structural unit within the State Emergency Medical Service to offer certified seminars and training courses for providers.

Outcomes

Bringing the management of emergency medical services under the oversight of one central organization has contributed to several positive outcomes. Informal reports indicate that the unification of emergency medical services has led to improvements in quality, efficiency and cost-effectiveness, with central management of services resulting in patients receiving services quicker and in the most appropriate location. Widespread satisfaction with services has been reported, with over 80% of patients indicating they are pleased with services provided.

Table 3.
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Policies and legislation adopted by the Ministry of Health support the functioning of the State Emergency Medical Service.
Incentives	• Financial support assisted in centralizing services, enabling important resource and technology investments.
Competencies	• Medical Qualifications and Training Centre established within the State Emergency Medical Service to offer certified seminars and training courses for providers.
Information	• Development of an electronic information system currently underway.

Change management

Key actors

The State Emergency Medical Service was established in 2009 by the government to lead necessary changes in the organization and delivery of emergency medical services (Box 2). This organization became the central actor in this transformation, working with each of the various municipal governments and institutions previously charged with delivering emergency medical services. The Ministry of Health provided support throughout the transition process, giving authority to proposed changes and ensuring necessary resources were available. The State Emergency Medical Service is now established as the sole organization responsible for the management and delivery of prehospital emergency medical services.

Initiating change

Development of the initiative was trigged by health reforms in the 1990s and early 2000s, creating a platform on which the initiative would develop. Public relations efforts providing information on proposed changes for local governments, institutions and people, as well as an information campaign on the benefits of centralizing emergency medical services, helped win stakeholder support for the initiative. An important factor in gaining widespread population support was that services would be made free of charge. Challenges during the merging process included resistance to change among local governments, as well as providers' concerns over new stricter quality standards. However, with strong government support behind them, the State Emergency Medical Service was able to direct necessary changes through a top-down approach and set clear rules and regulations.

Implementation

With all emergency service providers merged under a single organization, the State Emergency Medical Service implemented a standardized quality management system, streamlined administrative structures and sharply reduced the number of dispatch centres. There was a strong focus on achieving uniformity and efforts were made to evenly distribute resources and strengthen providers' skills where needed.

Moving forward

The State Emergency Medical Service continues to oversee and manage the delivery of emergency medical services, closely monitoring performance and making adjustments to the system where necessary. A unified electronic information system is currently being developed as a new tool to improve performance and facilitate monitoring of services.

Box 2
Who were the key actors and what were their defining roles?

- **Ministry of Health.** Established the State Emergency Medical Service as the central agency to oversee emergency medical services; provided funding for initiative; supported centralization through policy and legislative changes.
- **State Emergency Medical Service.** Central agency responsible for the merging process of emergency medical care providers, negotiations with municipalities and providers, and communication with society; currently the sole organization responsible for the management and delivery of prehospital emergency medical services.

Highlights

- Implementing a unified structure for the provision of prehospital emergency medical services reduced fragmentation, standardized care and improved coordination of services.
- Formalizing provider training and education embedded new practices as the professional norm and helped ensure high-quality care delivery according to guidelines in place.
- Strong national leadership, along with a clear narrative and communication plan, helped gain stakeholder support for the initiative.

Implementing an integrated cardiology programme in Eastern Lithuania to improve cardiovascular health

Overview

The Eastern Lithuanian Cardiology Programme was initiated in response to Lithuania's high burden of cardiovascular disease, that disproportionately affected the eastern region. Following a detailed situational analysis to inform programme activities, senior management at Vilnius University Hospital Santarisku Klinikos, a tertiary centre in the eastern region, convened government officials and health providers to garner support for the initiative. With stakeholders motivated and engaged, the Programme was rolled out across 40 health care institutions in the eastern region volunteering in the programme. Supported by €20 million in funds allocated by the European Union (EU) and Lithuanian government, the Programme included strengthening provider competencies through trainings and conferences; investing in basic equipment to facilitate provision of cardiology services in primary and secondary settings; issuing concrete guidelines for providers; and implementing electronic medical records to streamline care and improve coordination between providers, as well as connecting patients to their care. An external programme evaluation commissioned by the Ministry of Health showed success in shifting care away from tertiary settings, as well as improved health outcomes such as decreased mortality from acute myocardial infarction. However, full assessment of the Programme was hindered by the failure to incorporate monitoring and evaluation from the outset. Currently, the Programme is being passively implemented in the eastern region using infrastructure already in place.

Problem definition

Throughout the 1990s and early 2000s, high rates of cardiovascular disease in Lithuania, particularly in the eastern region, were consistently reported (Box 1). Inhabitants of the eastern region aged 45–64 years were at greatest risk of mortality due to coronary heart disease, myocardial infraction and cerebrovascular diseases.[1] Within the eastern region, data consistently showed an unfavourable mortality trend from cardiovascular diseases in areas outside of major cities. Both providers and patients reportedly found services fragmented and concentrated in tertiary settings. Moreover, variable distribution of cardiology resources negatively affected rural areas and contributed to longer waiting lists for specialists in urban tertiary level centres where quality of care was perceived to be higher.

Box 1
What problems did the initiative seek to address?

- High rates of cardiovascular disease in Lithuania, particularly in the eastern region.

- Cardiology services concentrated in tertiary settings; primary and secondary settings ill-equipped to provide cardiovascular care and perceived as being lower quality by patients.
- Tertiary settings overburdened; long waiting times for cardiology specialists.
- Poor access to cardiovascular care in rural areas.

Health services delivery transformations

Timeline of transformations

Concerns regarding cardiovascular health in the eastern region of Lithuania and inefficiencies in the delivery of services triggered discussions at Vilnius University Hospital about the potential for developing an integrated cardiology programme in the region. Following a detailed situational analysis in 2003, the Eastern Lithuanian Cardiology Programme was devised to strengthen cardiovascular care in primary and secondary settings (Table 1). Securing funding for activities in 2004, the Programme was subsequently implemented over the next four years. With basic infrastructure for improved cardiology care now in place, the Programme continues to be passively implemented today.

Description of transformations

Selecting services. Cardiology services offered within primary and secondary settings in the eastern region have been expanded. Comprehensiveness of services in these settings has also increased and health promotion, screening and rehabilitation services are now available. New services implemented under the Programme specifically aim to address the needs of at-risk groups, such as through targeted screenings for cardiovascular disease.

Designing care. The Programme clearly defined the flow of patients across settings, considering the full continuum of care from prevention measures to highly specialized acute services to rehabilitation. Drawing on evidence from international models, decision support tools were designed to clarify linkages between health providers and support the systematic transfer of patients; tools included patient pathways, concrete guidelines and schemes for different situations, cardiovascular risk evaluation tables and a list of obligatory analysis for each level of care to minimize service duplication.

Organizing providers. By strengthening primary care, the Programme has reinforced its role as gatekeeper for cardiology services. Primary care physicians are now involved throughout the care process, allowing them to oversee care for their patients. Simultaneous strengthening of secondary care has increased local delivery of more specialized services. The shift of care to primary and secondary care providers, now prepared to handle cardiology patients, has helped unload the burden on tertiary centres and reduced waiting times for specialists. Implementation of electronic medical records has established clear communication channels between providers, connecting previously isolated rural practices and streamlining referrals. Electronic medical records also permit virtual consultations between providers, allowing more patients to be treated locally yet still benefit from specialist input.

Managing services. A standardized package of cardiology equipment was delivered to each participating location to even resource distribution across the region; this included modern cardiac ultrasounds, bicycles for stress testing and Holter monitors. Each location was also provided with the necessary resources to implement the new electronic medical records system. Renovations were carried out for most participating locations to prepare facilities to receive

Table 1
What were the chronological milestones for the initiative?

2003	First discussions among senior management at Vilnius University Hospital to explore the potential for integrated cardiology services in the eastern region to address concerns over poor cardiovascular health.
2003–2004	Planning phase for the Eastern Lithuanian Cardiology Programme: detailed situational analysis conducted and a strong evidence base for proposed activities developed; stakeholders engaged with the project; necessary funds sought.
2004	Funding secured from EU structural funds and the Lithuanian government.
2004–2008	Implementation phase: rollout of planned activities across participating facilities including improving infrastructure, training providers and implementing an integrated information system.
2006	Ministerial order passed for a national primary care cardiology screening protocol for at-risk populations.
2008	Independent programme evaluation commissioned by the Ministry of Health.
2008–present	Passive implementation of activities utilizing infrastructure already in place.

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Cardiology services highly specialized; narrow scope of services centred on diagnostics and treatment.	Expansion of services available in primary and secondary care; increased comprehensiveness of care through incorporation of health promotion, disease prevention and rehabilitation services; targeted interventions for at-risk groups.
Designing care	
Absence of guidelines or protocols for cardiology care; unnecessary duplication of services at each care level; limited involvement of patients in care process.	Concrete guidelines and care pathways established using evidence from international models; list of obligatory analysis dictates services to be provided at each care level; patients engaged in care process via an online patient portal.
Organizing providers	
Specialists concentrated in tertiary settings, often located in urban areas; primary care providers unable to act as gatekeepers to cardiology care; rural providers highly isolated and often unable to offer cardiology services; referral systems ineffective and continuity of care weak.	Strengthened primary and secondary care allows gatekeeping for cardiology services, as well as local delivery of some services; electronic medical records facilitate continuity of care, streamline referral systems and enable virtual consultations between providers.
Managing services	
No coordinated information system; inequitable distribution of cardiology equipment; primary and secondary settings ill-equipped to provide cardiology services.	Electronic medical records implemented; standardized equipment package distributed to all participating locations and renovations carried out to improve care facilities.
Improving performance	
Limited opportunities for provider advancement; lack of professional motivation among providers.	Trainings for providers across all care levels offered; conferences held to encourage peer learning and foster collaborative relationships.

equipment and enhance general aesthetics. Vehicles were also purchased to facilitate patient transfers.

Improving performance. Training was provided to over 100 providers across all care levels. Training included short courses for nurses, two-month trainings for primary care physicians, a two-year cardiology specialty for secondary level physicians and various learning opportunities abroad for tertiary specialists. Peer learning

and continuous performance improvement were also encouraged through regular conferences convened at Vilnius University Hospital.

Engaging and empowering people, families and communities
A concerted effort was made to inform the public about the new services made available through the Eastern Lithuanian Cardiology Programme. A logo was designed to increase public recognition of the Programme and television, radio and

newspaper announcements were made to raise public awareness. As a result of the Programme, patients can now access higher quality cardiology care in primary and secondary settings closer to their home and renovations have made these facilities more welcoming. Furthermore, patients are now actively engaged in their care through the use of an online portal that links to their electronic medical records. Here, patients can access useful information and advice, allowing them to play a more active

role in their care by empowering them with knowledge and providing them with useful disease management tools. Additionally, the portal has other convenient features for patients, such as allowing them to manage appointment bookings online. Patients using the portal have reported a new mindfulness for their health status and greater confidence in the availability of providers to address their questions and concerns.

Health system enabling factors

While the Eastern Lithuanian Cardiology Programme is a regional initiative, several factors within the wider health system contributed to its success (Table 3). Ministry of Health endorsement for the Programme provided it with a level of legitimacy among providers. Furthermore, Ministry of Health funding supported implementation of activities. Although no formal legislation was enacted as a direct part of the Programme, the Ministry of Health passed a pertinent ministerial order in 2006, midway through the implementation phase of the Programme, setting screening standards in primary care for populations at risk for cardiovascular disease. Guidelines encourage the regular screening of at-risk patients, defined as males aged 40–55 and women aged 50–65 years. Adherence to the guidelines is supervised through the provider payment system, regulated by the insurance fund. Primary care providers receive payment-for-performance bonuses for reaching target numbers of screenings; while this is intended to incentivize implementation of services, additional incentives appeared to be needed to reach desired levels of screening activity. Other cardiology services made possible through the training and resources the Eastern Lithuanian Cardiology Programme provided are not incentivized. However, providers are now eligible to receive regular fees through the insurance fund for

these services, which prior to the Programme they were unable to perform.

To support the expansion of provider competencies called for under the Programme, a two-year cardiology programme was developed by Vilnius University Hospital. This continues to be offered as an available residency for new medical students, ensuring training in cardiology is sustainably incorporated in the medical education system. Additionally, new qualifications and recognized certifications were made available for providers participating in the voluntary training opportunities offered through the Programme.

At the end of the Programme's implementation phase, the Ministry of Health commissioned a formal evaluation. While the detailed situational analysis conducted prior to the initiative provided a baseline for reporting progress, with the benefit of hindsight, failing to incorporate a stronger monitoring and evaluation framework throughout the initiative from the beginning was a limiting factor for reporting on its impact.

Outcomes

In 2008, the Ministry of Health commissioned a formal review of the Eastern Lithuanian Cardiology Programme covering all 40 participating health care facilities. Comparing data between 2004 and 2008, reports found that combined mortality from all circulatory diseases decreased (Box 2). All 40 participating health care facilities received a basic package of cardiology equipment and standardized dissemination of resources was found to increase use of recommended practices. With

Table 3

How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Ministerial order established professional standards for cardiovascular disease screening in primary care settings.
Incentives	• Payment-for-performance incentives introduced for primary care cardiovascular screenings for at-risk patients.
Competencies	• Cardiology residency developed and made permanently available to medical students. • Recognized certification awarded to providers completing training courses offered through the Programme.
Information	• Situational analysis conducted in the planning phase of the Programme provided baseline data for assessment. • Ministry of Health commissioned an evaluation of the Programme at the end of the implementation phase; failure to incorporate a monitoring and evaluation framework from the outset recognized as a limitation.

primary and secondary facilities better equipped to manage patients with cardiovascular disease, provision of care appeared to shift from tertiary care to lower level settings.

Box 2
What were the main outcomes of the initiative?

- Combined mortality of all circulatory diseases decreased from 1.71% to 1.55% in the eastern region between 2004 and 2008; mortality from acute myocardial infarction declined by 5%.
- Access to care increased by 45% based on the number of providers in the region trained to provide cardiology services.
- Provision of outpatient services increased by 26% across secondary-level hospitals in districts outside Vilnius; demands on specialized inpatient services at Vilnius University Hospital decreased by 6%.

Change management
Key actors
Development of the Eastern Lithuanian Cardiology Programme was led by senior management within Vilnius University Hospital (Box 3). The hospital's senior management displayed creativity and foresight in their ability to leverage the region's poor epidemiological context and provider dissatisfaction to sharpen the case for transforming the provision of cardiology services. As a specialist learning centre, the Hospital had the necessary recognition and expertise to carry the initiative forward. Support from stakeholders, including providers and government actors, was solicited early on in the design process through a series of meetings and advocacy efforts led

by the Director of Vilnius University Hospital. Input from the Ministry of Health was critical for more widely legitimizing the Programme among stakeholders.

Box 3
Who were the key actors and what were their defining roles?

- **Director of Vilnius University Hospital**. Steered and managed the Programme, providing technical expertise in its design and serving as the spokesperson for the initiative to the Ministry of Health.
- **Senior management at Vilnius University Hospital**. Supported the Director in the design and implementation of the Programme.
- **Ministry of Health**. Formally acknowledged the Programme, giving it increased legitimacy among stakeholders; provided 20% of necessary funds; commissioned an evaluation of the Programme; passed a ministerial order implementing national cardiovascular screening protocols.
- **European Union**. Structural funds provided the majority of financing (80%) for the Programme.
- **Health providers**. Volunteered to participate in the Programme; completed additional training to expand competencies in cardiology; worked collaboratively to improve care provision.

Initiating change
In 2003, with senior management at Vilnius University Hospital aware of the need to improve cardiology care in the eastern region, a detailed situational analysis examining demographics, epidemiological trends, health care institution activities and patient needs, was conducted prior to starting the initiative. This not only provided key

information on which to base the initiative's design, but also helped generate a sound evidence base to support the need for intervention, which was critical for achieving buy-in from the Ministry of Health. Senior management at the Hospital used this analysis, along with their specialist knowledge of cardiology and experience of international care models, to design the Eastern Lithuanian Cardiology Programme with input from stakeholders.

Implementation
While subnational and national-level actors steered the initiative and procured the necessary resources, providers at the micro-level capitalized on investments made under the Programme and applied newly acquired skills to implement the new protocols and services. With advancement of clinical skills being the only incentive to enrol in training, it was providers' personal interest and professional ambition that supported transformations under the Programme. Encouraging provider involvement early on, as well as integrating regular opportunities for feedback throughout the Programme via a series of meetings and networking conferences, proved essential in counteracting the individualistic culture embedded in the health care system. While creating a cooperative common vision for services delivery required an extensive investment in time from the senior management team, developing the necessary culture of cooperation and teamwork was essential for capitalizing on the investments in resources and training made during the Programme.

Moving Forward
The Programme continues to be passively implemented using the infrastructure already put in place. However, the Programme has not been incorporated into the regular budget or secured additional external funding. This prevents scaling up of the initiative and calls into question

how to financially support future resource needs. Some changes have, however, been sustainably incorporated. Legislation and incentives supporting preventive screening for cardiovascular disease are in place and the two-year cardiology training programme is now a permanently available residency option for medical students.

Highlights

- A detailed situational analysis informed the initiative's design and identified the specific needs of the target population; this analysis also provided evidence supporting the need for intervention and baseline data for reporting progress.
- Strong leadership by senior management at Vilnius University Hospital provided technical expertise and generated stakeholder support; securing support from the Ministry of Health was essential for legitimizing activities.
- Extensive engagement of providers from the beginning was necessary for overcoming the individualistic culture within the health care system and building collaborative relationships.
- Provision of a standardized cardiology equipment package to all participating locations ensured basic quality standards were met and helped support providers implement their new training.

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1 Laucevicius A., Abraitis V., Gaizauskiene A., Klumbiene J., Petruiloniene Z., Kizlaitis R., et al. (2005). Eastern Lithuania cardiology project (ELCP): demographic and epidemiological situation, activities of health care institutions and the needs of the patients of the region. *Seminars in Cardiology. ;11(4).*

Developing a national cancer plan to coordinate the fight against cancer in Luxembourg

Overview

In 2012, cancer was the leading cause of mortality in men causing 32.1% of all male mortalities, and the second leading cause in women at 26.7%.[1] Despite many initiatives aimed at reducing the burden of cancer and increasing the availability of high-quality cancer services, the Ministry of Health recognized that there was a need for an overarching strategic vision to unite current services. In this context, a national framework to direct and coordinate the fight against cancer was proposed. In 2013, the Ministry of Health began the development of a national cancer plan, appointing a coordinator to oversee the process. International recommendations from the European Partnership for Action Against Cancer and WHO were adapted to the national context and extensive input from stakeholders was sought and incorporated into the plan. In 2014, the final National Cancer Plan 2014–2018 was approved by the Ministry of Health, listing 10 priority areas for action: governance, health promotion, prevention, screening, diagnostics, treatment, rehabilitation, resources, patients' rights and research. Specific actions within each area include, for example, increasing smoking cessation programmes, establishing systematized screening programmes for priority cancers, validating care guidelines, strengthening community care, fostering multidisciplinary team working and implementing performance assessments for health providers. Proposed changes in services delivery will be supported with complementary legislation and policies at the Ministry level. Cross-ministry partnerships, such as between the Ministry of Health and Ministry of Education to improve nursing education, will be established. Several national-level organizations will also play key roles and the Ministry of Health plans to establish a new National Cancer Institute to lead cancer initiatives. Investments in existing organizations will also be made, including a new genetic research department within the National Health Laboratory. A rigorous evaluation strategy for the Plan has been laid out, with a midway evaluation planned for 2016 and a final evaluation anticipated in 2018. At present, implementation of the Plan is underway and the Ministry is already looking ahead to the National Cancer Plan 2019–2023.

Problem definition

With almost a third of mortality in 2012 attributable to cancer and approximately a quarter of all cancer cases affecting people under the age of 65, cancer poses a considerable negative social and economic impact in Luxembourg (Box 1)[1]. Despite national availability of high-quality cancer services across the care spectrum, services were believed to lack coordination. Furthermore, projected increases of cancer incidence in Luxembourg's ageing population, compounded by rising numbers of people living with cancer or post-cancer morbidities due to improved survival rates, triggered concerns over the financial sustainability of current practices.

Box 1
What problems did the initiative seek to address?

- High cancer mortality rates.
- Projected increases in cancer incidence and prevalence.
- Financial concerns over sustainability of cancer services provision.
- Lack of coordination of cancer services.

Health services delivery transformations

Timeline of transformations
In July 2013, the Ministry of Health initiated the development of the National Cancer Plan 2014–2018 to create a joint platform for change in the fight against cancer (Table 1). In July 2014, after a one-year development period, the Plan was officially launched and actions are currently underway to achieve the 10 priorities outlined by the Plan. A midway evaluation to assess progress towards goals and determine future directions is scheduled for 2016.

Table 1
What were the chronological milestones for the initiative?

2013	National Cancer Registry established to improve collection of cancer statistics.
July 2013	Ministry of Health initiates development of the National Cancer Plan 2014–2018 to improve coordination of cancer services and related activities; Plan is elaborated in consultation with stakeholders.
July 2014	National Cancer Plan 2014–2018 launched; activities to achieve outlined objectives begin.
Present	Continuing effort to achieve National Cancer Plan 2014–2018 objectives.
2016	Midway evaluation of National Cancer Plan 2014–2018.
2018	Final evaluation of National Cancer Plan 2014–2018; elaboration of National Cancer Plan 2019–2023.

Description of transformations

Selecting services. Improvements to services will take place across the care spectrum from health promotion, disease prevention and screening to rehabilitation and end-of-life care. Changes will include implementation of health promotion programmes targeting smoking cessation, alcohol abuse and weight loss; development of cancer prevention services, such as the introduction of medical radiation exposure controls and increasing HPV vaccinations; expansion of screening services, particularly for prevalent cancers like breast and colon; introduction of multidisciplinary rehabilitation; and promotion of home and community-based end-of-life care.

Designing care. Diagnosis, treatment and rehabilitation guidelines for prevalent cancers will be validated and implemented. Priority guidelines to undergo validation are for lung, prostate, breast and colorectal cancers. Guidelines for cancers of the skin, pancreas and blood are planned to follow. Once validated, guidelines will be shared among health providers and made available to the public. Guidelines

are to be developed according to international recommendations, adapted to the national context with input from clinicians and scientific organizations. New care standards are also being implemented to ensure timely provision of care; for example, tissue samples collected through screening must be processed within five working days.

Organizing providers. Specialized cancer nurses will act as case managers for cancer patients to improve coordination and continuity of care. The Plan also advocates for increasing the role of primary care and community health providers. The importance of working as part of a multidisciplinary team, with the inclusion of a variety of professionals such as dieticians, psychologists and occupational therapists, is also emphasized. To facilitate communication among providers, an electronic dossier for cancer patients will be implemented by 2018; it is planned this will be integrated into the electronic medical records system currently in development.

Managing services. The Ministry of Health initiated and led the development of the National Cancer

Plan 2014–2018 and continues to have oversight over its implementation. The Ministry of Health is supporting and fulfilling actions called for within the plan and has developed 10 priority goals to be assessed annually. Establishment of a new National Cancer Institute is planned to lead and support cancer initiatives.

Improving performance. Continuing professional education is seen as integral for guaranteeing safe and high-quality care. Trainings will be provided on the new guidelines once established and validated. Quality assurance plans will also be put in place across the care spectrum.

Health system enabling factors

The National Cancer Plan 2014–2018 provides a guiding framework to align multiple components across the health system in the national fight against cancer. Over the past decade leading up to the plan, a number of laws and policies relating to the fight against cancer were adopted including regulations concerning environmental exposures, restriction of smoking in public places and programmes such as the Healthy Living and Physical Activity Programme. The National Cancer Plan 2014–2018 aims to coordinate and build on these efforts, as well as to fill existing gaps (Table 3). The Ministry of Health is supporting planned activities with legislative action and is taking a health in all policies approach to cancer, as already practiced in other government programmes. Collaboration between the Ministry of Health and Ministry of Education to revise nursing education curriculums to include necessary oncology training, as well as to devise a strategy to ensure children with cancer can remain in education, provides an example of cross-ministry work proposed under the Plan.

A National Cancer Institute will be established by the Ministry of Health as the lead agency in

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
High-quality cancer care available to population as part of social health insurance package; screenings in place for some cancers but not systematized; sporadic health promotion and disease prevention activities implemented.	Planned improvement and strengthening of services across entire care spectrum from health promotion through to rehabilitation and end-of-life care; coordination between cancer services will be increased.
Designing care	
Care standards generally recognized as high but no measures in place to quantify these; variability observed in care due to a lack of comprehensive evidence-based care guidelines.	Plan will standardize care pathways through the introduction of evidence-based care guidelines; guidelines will be developed based on international recommendations.
Organizing providers	
Providers delivering care for cancer patients concentrated in specialized hospital settings; role of primary care providers and other health professionals underdeveloped; electronic medical records system in development to improve communication between providers.	Specialized cancer nurses to act as case managers for cancer patients will be introduced; role of primary care and community health providers will be increased; multidisciplinary teams including dieticians, occupational therapists and psychologists will be encouraged; electronic cancer dossier will be integrated in the electronic medical records system currently in development.
Managing services	
Modern facilities equipped with latest cancer care technology; investment in electronic information systems underway; agreements with neighbouring countries in place to provide highly-specialized care for rare cancers.	Ministry of Health initiated and led the development of the initiative; National Cancer Institute will be established to lead and support cancer initiatives.
Improving performance	
Limited oversight of health providers' performance and adherence to cancer care standards.	Health providers will receive training on new guidelines; cancer quality assurance plans will be put in place across the care spectrum.

the fight against cancer. Among other responsibilities, the Institute will coordinate the organization of oncology at the national level, monitor epidemiological indicators for cancer, promote cancer research and publish evidence-based recommendations for improving cancer care. The existing National Health Laboratory – which currently analyses cancer screening samples – will also play a pivotal role in cancer research and will be developed into an academic centre for excellence. A national human genetics department will be established within the Laboratory to lead genetic cancer research and the Laboratory will partner with the Integrated BioBank to collect and build a database of cancer tissue samples. The National Research Fund will be an important financer of cancer-related research.

Strengthened information systems, including the introduction of the National Cancer Registry in 2013 and the electronic medical records system currently in development, will enable monitoring of progress towards Plan objectives, as well as increase oversight of health providers' performance. Indicators on which to evaluate the Plan are currently being devised by expert working groups. Annual assessments on progress based on chosen indicators will be conducted and an independent midway evaluation for the Plan is scheduled for 2016. A comprehensive final evaluation in 2018 will document achievements of the Plan and provide planning insight for the National Cancer Plan 2019–2023.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• National Cancer Institute will be established as the leading authority for cancer. • Supportive legislation to promote healthy environments, reduce hazardous exposures and strengthen care standards will be enacted.
Competencies	• Formal education for nurses will be revised in partnership with the Ministry of Education to improve nursing competencies in cancer care.
Information	• National Cancer Registry documents cancer-related statistics. • Development of an electronic medical records system will enable improved monitoring of progress towards Plan objectives.
Innovation	• National Cancer Institute will be established to lead innovation in cancer care and research. • Investments will be made to elevate the National Health Laboratory to a centre of academic excellence and leader in genetic cancer research.

Outcomes

It is hoped that the National Cancer Plan 2014–2018 will help reduce the incidence of cancerimprove cancer survival rates and enhance quality of life for cancer patients and survivors. An intermediary evaluation of the Plan's impact is planned for 2016.

Change management

Key actors

The Ministry of Health initiated development of the National Cancer Plan 2014–2018 in response to epidemiological concerns and hired a project coordinator to oversee design and implementation of the Plan. All key stakeholders were engaged throughout the development process (Box 2). Interviews with each key stakeholder group – including insurance companies, cancer societies, health providers and patients – were held individually. A series of workshops then brought stakeholders together to collectively

define priorities under mediation from the project coordinator. "The main challenge was a lack of discussion between all stakeholders. People were doing things but communication was really missing. It was really interesting to see everyone work together." Expert working groups have been established by the Ministry to oversee activities for each of the Plan's priorities. All working groups initially strategize together to ensure an integrated approach, before breaking out individually for specialized tasks.

Box 2

Who were the key actors for the initiative and what were their defining roles?

• **Ministry of Health**. Initiated the development of the National Cancer Plan 2014–2018 and hired a project coordinator to oversee its design and

implementation; hosted stakeholder meetings.
• **Project coordinator**. Led stakeholder interviews; mediates working group discussions; monitors and evaluates progress towards Plan objectives.
• **Working groups**. Responsible for defining care pathways and indicators; each priority within the Plan has its own dedicated working group to oversee necessary activities.

Initiating change

The significant negative social and economic impact of cancer observed by the Ministry of Health signalled the need for action. Many other European countries had already established national cancer strategies and both the European Partnership for Action Against Cancer and WHO had developed guidelines for cancer control programmes, providing a strong starting base for the design of Luxembourg's Plan. A "gap analysis to know what existed and what was lacking" was carried out, incorporating opinions of key stakeholders. Financial incentives were offered for attending stakeholder meetings to ensure necessary actors were present for planning discussions and teleconferencing further facilitated attendance.

Implementation

After a one-year planning process, implementation of the Plan began in July 2014. Timely implementation of the Plan and progression towards goals are kept on track by the project coordinator. Implementation of the Plan is still in the early phases and working groups are currently defining care pathways and indicators before changes to services delivery are enacted.

Moving forward

The National Cancer Plan 2014–2018 continues to be implemented according to schedule. A midway evaluation will be conducted to assess progress towards goals and identify any changes or adjustments needed moving forward. A final evaluation will be conducted in 2018, which will serve as the basis for developing the National Cancer Plan 2019–2023.

Highlights

- Strong government commitment was essential to realizing a coordinated national approach.
- Involving a diverse range of stakeholders from the beginning helped to guide the initiative.

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1 Ministry of Health. (2014). *Plan National Cancer Luxembourg 2014-2018*. Retrieved from http://plancancer.lu/

Improving population health in Malta through the introduction of community Lifestyle Clinics

Overview

In recent years, the Government of Malta has prioritized tackling increasing chronicity and the rise of lifestyle-related health risk factors. In 2011, taking advantage of this political support, a multidisciplinary group of motivated professionals working in a local primary care centre designed an initiative to widen the availability of health promotion and disease prevention services. A proactive, holistic health promotion service was implemented through the introduction of a Lifestyle Clinic within the local community. Launching as a small-scale pilot project in 2012, the Lifestyle Clinic model has since been expanded to seven areas across Malta. Lifestyle Clinics aim to empower patients to adopt healthy behaviours with the aim of reducing their risk for future health problems and improving management of any existing conditions. Community nurses oversee the operational management of Lifestyle Clinics and conduct comprehensive health and social needs assessments for patients who self-refer to the service. Nurses then work in partnership with patients to develop personalized care plans and provide tailored support to enable health improvements, referring to other providers and services as needed. Lifestyle Clinics have proved popular among patients and patient advocacy is helping to drive the initiative forward at the government level. Leaders of the initiative continue to oversee activities and work to extend Lifestyle Clinics to additional communities across Malta.

Problem definition

Like many European countries, Malta faces a high and rising burden of chronic disease, namely from cardiovascular diseases and cancers which accounted for 39% and 31% of all-cause mortality in 2010 respectively.[1] Several lifestyle-related risk factors in the population have been attributed to chronic disease burden, notably smoking, high blood pressure and obesity.[2] However, the curative focus of primary care has, for the most part, restricted general practitioners from meeting the wider health and social needs of patients during routine health visits and adequately providing personalized health promotion and disease prevention services. Additionally, time constraints of general practitioners, limited referral guidelines to complementary health promotion services and lack of communication between providers across disciplines, among other factors, further hindered the provision of holistic care (Box 1).

Box 1
What problems did the initiative seek to address?

- Growing burden of chronic disease, partly attributable to lifestyle-related risk factors.
- Limited availability of services focusing on individualised health promotion and disease prevention.
- Limited time for general practitioners to spend with patients on health promotion and disease prevention strategies.

Health services delivery transformations

Timeline of transformations
In 2011, understanding that the current availability and accessibility of individualised health promotion services was not meeting patient's needs, a multidisciplinary team of health professionals in a local primary care centre began planning for a new health promotion and disease prevention service (Table 1). Taking advantage of recent government policies supporting chronic disease prevention and the recent introduction of a new postgraduate community nursing programme in 2008, an initiative was designed to introduce Lifestyle Clinics, previously called Health Awareness clinics, to offer proactive services to support healthier living. Piloting of the initiative began in a small community

Table 1
What were the chronological milestones for the initiative?

2000s	Tackling chronic disease becomes a growing priority for the national government.
2008	New postgraduate community nursing programme established.
2011	First cohort of postgraduate community nurses graduates; planning for an initiative to introduce clinics offering health promotion services led by community nurses begins; multidisciplinary organizing committee established to develop aims and objectives for the new service.
2012	Pilot of designed initiative launched in small clinic; service initially introduced as a Health Awareness Clinic.
2014	Health Awareness Clinic rebranded as a Lifestyle Clinic; initiative expanded to seven areas across Malta.
Present	Continued implementation of Lifestyle Clinics; further expansion of initiative planned.

in 2012 and Lifestyle Clinics have since expanded to nine areas across Malta and its sister island of Gozo. Clinics continue to be actively run, with further expansion planned due to the popularity of the service.

Description of transformations
Selecting services. Lifestyle clinics have been developed to expand the availability of primary care services that focus on health promotion and disease prevention. "As a primary health care department, we realized we need to focus on the preventive aspect of health more than anything." Through Lifestyle Clinics, patients receive a detailed health and social needs assessment, which includes a review of medical history, diet, substance use, sexual behaviours, social needs and mental wellbeing. Basic measurements including blood pressure, blood glucose and body mass index are also taken as part of the assessment. Personalized one-to-one health counselling and support services, along with necessary follow-up care based on identified needs are then offered.

Designing care. Guidelines, protocols and assessment tools for Lifestyle Clinics were designed by a multidisciplinary organizing committee made up of health providers and administrators working within the primary care centre leading the initiative. Guidelines and protocols drew on existing policies within the primary care centre while incorporating international evidence-based guidelines, with adjustments made based on piloting experience and local contexts. Personalized care plans for patients are developed within Lifestyle Clinics based on identified health risks. Patients actively contribute to the design of care plans and act as key partners in their care. Lifestyle Clinics have been designed to provide an earlier access point to patients, helping to proactively recruit them into the health system and direct them towards higher-level care where necessary.[3] Patients may also be guided towards useful community resources, such as fitness centres, smoking cessation or weight management programmes.

Organizing providers. In certain districts, Lifestyle Clinics are run out of primary care centres, with others existing as separate entities within community settings. "We work in eight health centres but we wanted to move away from these and encourage the idea that people focus on their health not only when they feel ill but also when they feel well." Patients self-refer to the service; "there is no red tape or bureaucracy to access, so patients don't need any particular referrals. They can come directly from the community." Patients typically see the same nurse for any follow-up visits in an effort to promote continuity of care. In instances where the assessment or treatment of patients' needs is beyond the scope of practice for community nurses, patients are referred to other providers for additional care. "We identify the risks the person has and then steer them towards the system that already exists. … We are using the services we currently offer to their maximum potential. It is sort of a guided entry into the health service." All patient information collected during assessments is recorded on specially designed documentation sheets that are made available to other providers for referred patients.

Managing services. The Chief Executive Officer for the primary health care department leading the initiative is responsible for the strategic planning of the service, including securing necessary funding and resources. Community nurses with specialized postgraduate training in community health are in charge of the operational running of Lifestyle Clinics and leading the provision of services.

Improving performance. Leaders of the initiative are working to develop a professional and organizational culture that favours health promotion. Data is currently collected on patient needs and any referrals made, but this information is not yet used systematically as a quality improvement tool.

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Primary care services focused on managing and treating existing conditions; routine health visits fail to take into account wider health and social needs of patients; community-based individualised health promotion and disease prevention services lacking.	Holistic health promotion and disease prevention services offered by Lifestyle Clinics; patients receive detailed individualised health and social needs assessment plus basic health testing, one-on-one health counselling and referrals to additional services offered as necessary.
Designing care	
Primary care health centres operate according to established policies, guidelines and protocols for the delivery of primary care; patients have limited involvement in the care process with little personalization of care.	Guidelines, protocols and assessment tools for Lifestyle Clinics developed by the multidisciplinary organizing committee based on existing policies and international guidelines; patients receive a personalized health plan based on individual assessment results.
Organizing providers	
General practitioners act as gatekeepers to the health system; primary care nurses did not have specialized knowledge and qualifications in community health; limited integration of other providers, such as social workers, in the primary care system.	Patients self-refer to Lifestyle Clinics; community nurses lead services delivery at Lifestyle Clinics, referring patients to general practitioners and other providers as necessary; patient information recorded on forms which information is made available to other providers as necessary.
Managing services	
Strategic oversight of the network of primary care services managed at central administrative level; operational management of primary care centres managed at the health centre level.	Chief Executive Officer responsible for strategic oversight of service; primary health nurses responsible for the operational running of Lifestyle Clinics under the supervision of the senior nurse for the initiative.
Improving performance	
Not applicable.	Highly skilled primary health nurses recruited to work in Lifestyle Clinics; new professional culture supporting health promotion promoted.

Engaging and empowering people, families and communities

Lifestyle Clinics are located directly within communities, "closer to where people live and work". The aim of Lifestyle Clinics is to support and empower patients to adopt health-promoting behaviours to decrease risk for future health problems and encourage improved self-management of existing conditions. In light of this, patients are expected to take an active role in their care; "we need patients' cooperation, but they need to take an active role in maintaining their health." The fact that a patient self-refers to this service is important, as it indicates the necessary self-motivation to drive health improvement. "A self-referral system is implemented thus ensuring those who want to tackle their health issues may have unbridled access to do so." Patients are "guided to explore strategies that would address the identified risks to their health". The population has responded positively to Lifestyle Clinics, which leaders of the initiative believe is a direct result of patient empowerment and inclusion. "It is amazing the amount and depth of information patients will give you if they feel you will give them the time and opportunity to do so." Furthermore, patient word-of-mouth about the service has been described as extremely important for publicizing Lifestyle Clinics with "the people who make use of the service actually doing most of our promotion for us."

Health system enabling factors

Health promotion and disease prevention have been high on the government agenda in recent years in an effort to reduce the growing national burden of chronic diseases. Several national policies and strategies relating to population health have been launched by the government since 2009, demonstrating political commitment to addressing major public health concerns such as cancer, obesity and sexual health. Introduction of a postgraduate degree in community nursing in 2008 provided an influx of community health professionals. The initiative was designed in such a way as to optimally use these professionals' skills. Primary health care nurses were recruited to run Lifestyle Clinics. While the number of nurses who participate in this degree programme is limited, the course has provided enough highly-skilled professionals to enable Lifestyle Clinics to be scaled up across Malta.

Outcomes

Feedback on Lifestyle Clinics from patients has reportedly been very positive. However, official outcomes and data are not currently available.

Change management

Key actors

A group of health and administrative professionals working within a local primary care centre observed a need to "move away from being disease orientated" and "focus on preventive care". In response, these professionals pushed for the establishment of the initial Lifestyle Clinic with support from the director of the department at the time. A multidisciplinary organizing committee composed of a general practitioner, several nurses and members from the centre's administration was formed to design the initiative and guide its implementation. Primary health nurses with postgraduate training were recruited to run Lifestyle Clinics and lead the delivery of health promotion services. Leaders of the initiative continue to oversee activities, encourage the proliferation of Lifestyle Clinics and advocate for increased government support for the service (Box 2).

Box 2
Who were the key actors and what were their defining roles?

- **Multidisciplinary organizing committee.** A group of health professionals and administrators working in local primary health centres in Malta; pushed to expand health promotion services through the introduction of Lifestyle Clinics; led design and implementation of the initiative.
- **Primary health care department.** Supported the development of the original Lifestyle Clinic within the primary care centre; allocated portion of centre resources to enable the initiative.
- **Primary health care nurses.** Lead operational management of Lifestyle Clinics; work in partnership with patients to deliver health promotion services and generate health improvements.

Initiating change

With the government implementing policies supporting the reduction of chronic disease, along with the establishment of a new postgraduate community nursing programme, conditions were favourable for the development of a community-based health promotion and disease prevention initiative. Led by a multidisciplinary team of professionals within local primary health centres, the necessary guidelines, protocols and assessment tools were developed for the initiative. Social workers, nutritionists and sexual health workers were also brought into the design process to ensure that the development of guidelines and assessment tools reflected the wider health and social needs not typically captured by traditional health visits.

Implementation

Lifestyle Clinics were initially piloted to test procedures and provide the opportunity for adjustments prior to scaling up. Initially known as Health Awareness Clinics, a name change to Lifestyle Clinics helped market the holistic, preventive nature of the service. Posters and leaflets were distributed within the local community to raise awareness for the service and initiative leaders worked with primary care health centres to generate referrals. As a new service, initiative leaders had to gradually gain the support and trust of other health professionals. Nurses were motivated to participate in the initiative as they felt empowered by the increased responsibilities and new roles given to them. "I think in seeing nursing colleagues running their own clinics it also helps to get other nurses motivated and see, in actual fact, nurses can carry out certain roles." Registered nurses are encouraged by initiative leaders to enrol in the community nursing programme to be able to join the initiative. While a few general practitioners were described as being wary of the initiative at first, over time these providers have come to realize the value of being able to focus on more complex patient cases, particularly given their time constraints.

Moving forward

Positive patient responses to Lifestyle Clinics are helping to drive the initiative forward at the government level. Meanwhile, initiative leaders continue to extend Lifestyle Clinics to other areas of Malta and its sister island of Gozo and raise awareness of services provided.

Highlights

- A motivated, multidisciplinary group of professionals led development of the initiative through collaborative teamwork.
- External conditions, such as the recent introduction of a community nursing programme and supportive political environment, were important accelerators for the initiative.
- An initial information campaign helped raise awareness of new services and gain public acceptance for activities.
- Patients responded well to being offered a more active role in their health; furthermore, patients became strong advocates for the initiative.

1 Institute for Health Metrics and Evaluation. (2010). *Global burden of disease cause patterns*. Retrieved from http://vizhub.healthdata.org/gbd-compare/
2 World Health Organization. (2015). *European health for all database.* Retrieved from http://data.euro.who.int/hfadb
3 Primary health care department. (2014). *Introduction of lifestyle clinics*. Retrieved from https://health.gov.mt/en/phc/Pages/Clinics/Lifestyle/Lifestyle.aspx

Establishing a gerontology coordination centre to improve care for the elderly in Monaco

Overview

Like many European countries, Monaco faces emerging health challenges associated with an ageing population. Responding to changing trends, in 2006, the Ministry of Health and Social Affairs led an initiative to open a national Gerontology Coordination Centre. The Gerontology Coordination Centre now serves as the central coordinator for home support and care for the elderly, under the guidance of a multidisciplinary team composed of an administrative coordinator, a geriatrician, nurses, social workers and a psychologist. As part of the Centre's services, people aged 60 years or older are eligible to receive a comprehensive geriatric assessment designed to evaluate functional ability, physical and mental health and socioenvironmental circumstances. Assessments are conducted by the Centre's geriatrician, with annual reassessments led by nurses in home settings. Personalized care plans are developed by the multidisciplinary care team based on individual assessment results and are reviewed with patients in home settings. Care plans aim to promote good health and support independent living. Depending on the financial resources of patients, necessary care costs may be covered by the government. Since opening, the Centre has performed 4675 assessments and has attended to the needs of 2100 patients, delaying entry into institutionalized care by up to eight years. In addition to coordinating and delivering services directly to patients, the Centre also has important public health functions relating to the collection and evaluation of health data to help identify national health trends and emerging needs within the elderly population. This information can then be used by the Ministry of Health and Social Affairs to implement policies supportive of healthy ageing and to develop a more favourable environment for elderly citizens.

Problem definition

Similar to trends seen in other European countries, Monaco faces an increasing burden of chronicity in an ageing population. Changing population health trends have strained the ability of health and social services to effectively meet increasingly complex health needs within the growing elderly population (Box 1). While both health and social care sectors were well established, a lack of coordination and information sharing between these sectors hindered effectiveness. Furthermore, fragmentation across care levels obstructed smooth transitions between inpatient, outpatient and homecare services and compromised continuity of care.

Box 1
What problems did the initiative seek to address?

- Increasing chronicity in an ageing population.
- Lack of coordination between health and social sectors.
- Fragmentation across care levels.

Health services delivery transformations

Timeline of transformations
In 2005, understanding that effectively addressing the needs of an ageing population called for a more coordinated approach to health and social care, the Ministry of Health and Social Affairs worked with a multistakeholder group to analyse demographic data, define gerontology concepts and develop a new structure for the coordinated delivery of health and social care for elderly patients. In 2006, as a result of these efforts, the government opened the Gerontology Coordination Centre as a dedicated resource to support elderly people aged 60 years and over (Table 1). Today, the Centre continues to support health and social care needs of elderly people in Monaco.

Table 1
What were the chronological milestones for the initiative?

Early 2000s	Ministry of Health and Social Affairs begins discussions about how to respond to changing demographic pressures on the health and social care system.
July 2005	Gerontology Coordination Centre team assembled.
2005–2006	Preparatory activities to establish the Gerontology Coordination Centre.
September 2006	Gerontology Coordination Centre opens and begins providing care to the elderly population.
Present	Centre continues to provide care to the elderly population and respond to evolving health needs for this group.

Description of transformations

Selecting services. The Centre provides comprehensive gerontology assessments and personalized health and social care services for people aged 60 years and over. Patients receive general medical care with follow-up, health advice, and assistance arranging necessary social services and home support. Services focus on the early identification and management of conditions which compromise patients' autonomy and level of functioning and, consequently, home-support services are a key part of the proposed interventions. The Centre also runs a counselling service to support informal caregivers.

Designing care. All elderly residents aged 60 years and over are eligible for an annual, standardized comprehensive geriatric assessment. This tool is a composition of several internationally recognized tests designed to determine health status, physical functioning, social care needs and potential risks. Based on individuals' assessment results, a personalized care plan is developed for each patient by the multidisciplinary group of providers working within the Centre. Personalized care plans are reviewed and updated annually or if a patient experiences a change in status, such as onset of dementia or hospitalization.

Organizing providers. The Centre employs a geriatrician, nurses and social workers in full-time positions. In addition, a psychologist works one day per week. These providers work as a multidisciplinary team to coordinate and deliver care for patients. Comprehensive geriatric assessments are initially performed by the geriatrician, with reassessments typically led by nurses. Following each assessment, a social worker visits patients in their homes to complete a review of the home environment and discuss care options. A second social worker links with specialist providers if a patient enrolled in the Centre is hospitalized or requires other specialized services to ensure continuity of care. Additionally, several links and partnerships have been established between the Centre and other providers – such as general practitioners, hospital specialists and care homes – to improve coordination and organization of care for patients. A common language between health providers and social workers has developed as a result of working together as a team and a holistic approach to caring for elderly patients has been cultivated among health and social care professionals.

Managing services. The Centre is overseen by the Ministry of Health and managed by an administrative coordinator. Weekly team meetings with all providers are convened by the Centre's coordinator and serve as an opportunity to review progress and set weekly objectives.

Improving performance. Health providers have received training on how to conduct comprehensive geriatric assessments. Additional trainings on the management of patients with dementia and Alzheimer's disease have also been organized for health providers, social workers and caregivers.

Health system enabling factors

Two government orders enacted between 2006 and 2007 provided the necessary legislative framework for the Gerontology Coordination Centre by formalizing its status as an organization and allowing benefits to be allocated to elderly patients for health and social services (Table 3). The Ministry of Health and Social Affairs developed a central information bank to collect data on Centre patients, which can be used to help guide wider system planning decisions by, for example, identifying additional transportation networks for elderly people or supporting implementation of further legislation to protect elderly citizens' rights.

Outcomes

Since opening, the Gerontology Coordination Centre has performed 4675 comprehensive gerontology assessments and followed 2100 patients. Closer follow-up of elderly patients as a result of the Centre has been reported to delay institutionalization of elderly patients by up to eight years.

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Services largely reactive and focused on acute care; health and social care services for elderly patients lack coordination.	Personalized health and social services are provided to elderly people aged 60 and over; home care, counselling, health promotion and disease prevention services expanded.
Designing care	
No standardized, systematic assessment of elderly patients' health and social care needs.	Standardized comprehensive geriatric assessment tool used to assess elderly patients; personalized care plans developed for each patient based on individual assessment results.
Organizing providers	
Strong primary care system in place with general practitioners acting as gatekeepers to specialist services; fragmentation exists among the various providers caring for elderly patients; limited cooperation between health providers and social workers.	Gerontology Coordination Centre employs a multidisciplinary team composed of a geriatrician, nurses, social workers and a part-time psychologist; the geriatrician and nurses lead assessments for patients; social workers review care plans with patients and link with other providers to ensure coordinated care.
Managing services	
Not applicable in this case.	Centre overseen by the Ministry of Health and managed by an administrative coordinator; weekly team meetings held between Centre staff.
Improving performance	
Not applicable in this case.	Providers received training on performing comprehensive geriatric assessments; additional training on dementia offered to health providers, social workers and caregivers.

Table 3

How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Government orders enacted to formalize the opening of the Gerontology Coordination Centre and provide funding for activities.
Incentives	• Government benefits allocated to elderly patients according to the degree of loss of autonomy to encourage use of services by those most in need.
Information	• Software developed to collect patient data in a centralized database for evaluation; information accessible by government for planning purposes. • Data collected by Centre used to annually evaluate changing health needs in the elderly population.

Change management

Key actors

Development and implementation of the initiative was led by the Ministry of Health and Social Affairs. A new multidisciplinary team was established to oversee the running of the Gerontology Coordination Centre. Led by the Centre coordinator, this team is composed of a secretary, geriatrician, nurses, social workers and a psychologist. Under supervision from the Ministry, this team continues to manage the Centre and provide care for the elderly population in Monaco.

Initiating change

The Ministry of Health and Social Affairs led the development of the Gerontology Coordination Centre in response to anticipated demographic pressures compounded by the fragmentation of health and social services. Preparations for opening the Centre took approximately one year. During this time demographic data was analysed and research examining relevant literature carried out, the Centre team was recruited and trained, budgets for the Centre were drafted and new assessment tools and technical software were developed.

Implementation

The Gerontology Coordination Centre opened in 2006 and has since established itself at the heart of the gerontology network in Monaco, acting as the central coordinator for all gerontology services under the guidance of its dedicated team. Partnerships with other actors, such as general practitioners, hospital specialists and care homes, ensure the Centre is connected to all key players. Weekly team meetings between Centre staff facilitate smooth running of the Centre and serve as an opportunity to discuss emerging needs and set future objectives.

Moving forward

The Centre continues to serve the elderly population in Monaco and advise the government on health and social care needs for this population.

Highlights

- Monaco's small geographic and population size lent itself to a centralized approach, whereby the initiative created a hub for the coordination of elderly people's care.
- Centralizing information collected on elderly patients provided data on emerging population needs, allowing data-driven responses at the political level.
- Services offered are holistic, integrated and tailored to patients' individual needs and place strong emphasis on supporting patients to remain independent.

Strengthening cancer screening in Montenegro

Box 1
What problems did the initiative seek to address?

- Rising cancer burden with high mortality rates observed for cancer patients.
- Lack of a proactive, preventive approach to cancer care.

Overview

In 2008, the Government of Montenegro developed a National Cancer Control Plan outlining ways to address the growing cancer burden in the country, including a recommendation to implement national screening programmes for colorectal, breast and cervical cancers. In line with this priority, the Institute of Public Health began an information-driven initiative to increase uptake of cancer screenings, selecting colorectal cancer for initial piloting of a new screening programme. The initiative was designed with input from a wide variety of stakeholders and supported by the Ministry of Health. Efforts to improve cancer screenings focused on the population aged 59 to 64 years, encouraging all men and women in this age group to uptake free screenings via targeted outreach messages to their mobile phones. General practitioners are financially incentivized to conduct required outreach and a partnership with the telecommunication company has allowed all phone communication as part of the initiative to be delivered at no charge. Reaching the public using this method has been found to be highly successful; 89% of the target population received outreach messages resulting in a 68% screening uptake rate in the first year of the initiative. Participants are screened with specially developed risk questionnaires and submit a stool sample for fecal occult blood testing. If samples test positive, patients are referred for a colonoscopy and specialist care. The pre-existing electronic information system assists referral processes and also enables monitoring and evaluation of the initiative by the Institute of Public Health. The initiative is currently ongoing and its five-year aim is to reduce colorectal cancer mortality by 15% among the target population. Following the success of the colorectal cancer-screening pilot, the Institute of Public Health has begun preparations for implementing a similar cervical cancer screening programme, with breast cancer screening also planned in the future.

Problem definition

The rise of noncommunicable disease in an ageing population has contributed to a growing cancer burden in Montenegro. In 2010, cancer accounted for 14% of total mortality, making it the third highest cause of death.[1] Specifically, incidence of colon cancer has seen the greatest increase, rising from 490 000 cases in 1990 to 715 000 in 2010.[1] The reactive orientation of screening services and lack of preventive services for noncommunicable disease have contributed to poor cancer mortality rates and limited the effective provision of proactive cancer care (Box 1).

Health services delivery transformations

Timeline of transformations

In 2008, the Government of Montenegro released the National Cancer Control Plan as part of its overarching strategy for the control of noncommunicable diseases (Table 1). The Plan put forward a recommendation to develop a comprehensive cancer screening programme, prioritizing cervical, breast and colorectal cancers. In response, a pilot screening programme for colorectal cancer was developed to improve early detection rates. In 2013, after a three-year planning period, implementation of the initiative was rolled out, reaching national coverage by 2014. Preparations are now underway to extend the screening initiative to other priority cancers.

Description of transformations

Selecting services. The initiative has prioritized increasing the availability and timely use of preventive services for colorectal cancers through implementing a comprehensive screening programme targeting people aged 59 to 64 years. Screening services are provided free-of-charge to all eligible participants. Patients accessing the screening programme receive a questionnaire-based risk assessment and fecal occult blood test. If tests return positive, patients are referred for a colonoscopy and, if necessary, surgical intervention and cancer treatment.

Table 1
What were the chronological milestones for the initiative?

2008	National Cancer Control Plan released by the government; recommendation made to develop cancer screening programmes to address high cancer mortality rates.
2009	Action on cancer screening recommendation proposed; colorectal cancer selected as the target for a pilot screening programme.
2010	Planning and design of screening initiative; necessary funding for activities secured.
2011	Partnership with telecommunication company formed to enable outreach messaging.
2013–2014	Rollout of colorectal cancer screening initiative; full coverage across all municipalities achieved in 2014.
Present	Preparations underway to develop a cervical cancer screening programme.

Designing care. The most distinct feature of the initiative has been described as "the shift from a passive approach to colorectal cancer screenings to one that engages and mobilizes the public by having general practitioners use interactive communications." The initiative has targeted the population directly, sending invitations and reminders to participate in cancer screenings using telecommunication. If patients cannot be reached via mobile phone, they will be invited to participate in screening when they next visit their general practitioner.

Two screening questionnaires for use in general practice have been designed to assess patients' risk for colorectal cancer prior to a fecal occult blood test. A triage system has been designed where patients with elevated questionnaire scores receive a fecal occult blood test. The care pathway follows European guidelines for quality assurance in colorectal cancer screening and diagnosis. Fecal occult blood tests are processed and the results are reported back to patients within 12 days. A colonoscopy for patients is scheduled within one month of a positive screening notification. The cancer treatment pathway following a positive colonoscopy test has not been altered by the initiative.

Organizing providers. Earlier health reforms to strengthen the gatekeeping role of general practitioners have been leveraged and the initiative relies on general practitioners to engage patients, coordinate screenings and make necessary referrals. The Institute of Public Health receives and analyses collected stool samples and reports results back to general practitioners. General practitioners continue to act as the central coordinators of cancer services for patients following a positive diagnosis, assisted by the electronic medical record system in place which allows information sharing with other providers across care levels.

Managing services. The Institute of Public Health acts as the leader and coordinator of the initiative, with municipalities responsible for ensuring general practitioners implement the initiative as required.

The Ministry of Health provided an initial supply of 15 000 containers for the collection of stool samples, however the Institute of Public Health has now incorporated containers into their regular budget. Laxatives are donated by a pharmaceutical company through arrangements organized by the Ministry of Health.

Improving performance. A three-day training course for general practitioners was held at the Institute of Public Health to educate providers on the initiative and equip them with the necessary knowledge for performing required tasks. Training included educating providers on conducting outreach, completing screening questionnaires and referring patients with positive test results.

Engaging and empowering people, families and communities
A significant effort has been made to increase the population's awareness on the importance of cancer prevention and screening services. Specially designed educational materials have been distributed and television, radio and other media channels have been used to run informational campaigns and promote screening services. These activities are working towards increasing population awareness of cancer screening and cancer risk to overcome barriers to screening uptake, such as feelings of embarrassment or shame and fears of positive test results.

Health system enabling factors

The government released the National Cancer Control Plan as part of a wider strategy on addressing the rising burden of noncommunicable disease. This Plan made the recommendation to strengthen screening for priority cancers and created a platform from which the initiative could develop. The Institute of Public Health led the design and implementation of the initiative,

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
No active cancer screening programmes in place.	Active colorectal cancer screening programme available free to all people between 59 and 64 years of age; future screening programmes for cervical and breast cancer anticipated.
Designing care	
No cancer screening tools or guidelines in place.	Patients actively recruited to participate in screenings; screenings conducted according to European guidelines for colorectal cancer screening and diagnosis; screening questionnaires developed to assess cancer risk.
Organizing providers	
Strengthened primary care system allows general practitioners to act as gatekeepers to specialist care; electronic medical records system links providers and facilitates referrals.	General practitioners conduct colorectal cancer screenings and refer patients to specialists as needed; general practitioners continue to act as main care coordinators for patients.
Managing services	
No resources for cancer screening available.	Institute of Public Health leads and coordinates screening activities; municipalities responsible for ensuring general practitioners implement the initiative as required.
Improving performance	
No training on cancer screening provided.	Ad hoc training on the screening programme provided for all general practitioners.

with efforts supported throughout by the Ministry of Health (Table 3). The Ministry has made financial incentives available to general practitioners and other providers active in the screening programme, encouraging their participation in the initiative.

As almost everyone in Montenegro has a mobile phone, this was described as "the easiest way" to engage the target population and encourage uptake of screening services. A partnership between a telecommunication company and the Institute of Public Health provides free SMS text messages and phone calls for outreach activities, as well as a list of telephone numbers for individuals falling within the target

population. Leveraging of the cellular network has been a key enabling factor for the initiative to effectively and efficiently communicate with the target population.

The Institute of Public Health monitors municipalities' performance, assisted by the strong electronic information system already in place prior to the initiative. Each step of the screening process is entered into patients' electronic medical records, including information from the risk-assessment screening questionnaires. Data collected through this system is accessed by the Institute for Public Health for monitoring and evaluation purposes.

Outcomes

Over the next five years the initiative is aiming to reduce colorectal cancer mortality by 15% in the 59 to 64 year target age-group. Colorectal cancer screening has achieved national coverage and uptake of screenings has been shown to be high. While the initiative is still in the early stages of implementation, a number of positive outcomes are already observable (Box 2).

Change management
Key actors
Change was initiated by the Ministry of Health who established the policy framework on which to build the initiative. Design and development of the initiative was led

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• National Cancer Control Plan provided a policy platform for the initiative.
Incentives	• Financial incentives offered to health professionals to support the cancer screening programme.
Information	• National Cancer Control Plan helped identify needs and inform programme activities. • Phone lists provided by the telecommunication company used to identify and connect with the target population. • Strong electronic medical records system enables monitoring and evaluation of the initiative.
Innovation	• Partnership with the telecommunication company provides free SMS text messages and calls for outreach.

Box 2
What were the main outcomes of the initiative during the first year of implementation?

- On average, 89% of the target population was invited to receive screenings. Average population uptake of screenings in response to invitations was 68%.
- Approximately 22 000 fecal occult blood tests and 600 colonoscopies were performed.
- Screenings led to the detection of 12 carcinomas and 35 adenomas.

by the Institute of Public Health with support from the Ministry and other stakeholders (Box 3). To engage stakeholders, the Institute of Public Health established a national team for colorectal cancer, bringing a wide range of professionals into the planning and design process and helping stakeholders to develop a sense of ownership over the initiative. Today, the Institute of Public Health

continues to oversee the initiative, evaluate progress and expand activities with support from key actors.

Box 3
Who were the key actors and what were their defining roles?

- **Ministry of Health**. Made initial recommendation for a cancer screening programme; allocated funding to the initiative; worked with the health insurance fund to include colorectal cancer screening under statutory health insurance.
- **Institute of Public Health**. Led design and implementation of the screening programme; hosted trainings for health professionals; analyses samples collected through screenings; performs monitoring and evaluation for the initiative.
- **National team for colorectal cancer**. A multidisciplinary team of stakeholders including

representatives from the Institute of Public Health, health insurance fund, health providers and pharmaceutical companies; supported planning and design of the initiative.
- **Telecommunication company**. Allowed outreach messages to be sent free-of-charge.
- **General practitioners**. Sent outreach messages inviting patients to participate in colorectal cancer screenings; conduct screenings and coordinate necessary follow-up care.

Initiating change
In response to the recommendation of the National Cancer Control Plan to implement cancer-screening programmes, the Institute of Public Health called on the national government to act on this recommendation and championed the realization of this goal.

Implementation
Health care providers were invited to the Institute of Public Health at the launch of the initiative to collectively receive necessary training. Now trained, general practitioners are responsible for championing engagement of the public by initiating contact with the target population through the mobile phone network. In many municipalities, general practitioners have shown overwhelmingly positive participation, managing to reach over 90% of the target population in their local area. However, outreach levels vary across localities and the Institute of Public Health is working with municipalities where engagement rates are suboptimal to help generate improvements.

Moving forward
The Institute of Public Health continues to monitor and evaluate the progress of the initiative to

ensure it remains on track to achieve its five-year goals. Using the knowledge and experience obtained from implementing the colorectal cancer screening programme, the Institute is now leading the development of a similar cervical cancer screening programme. Once this programme extension is complete, planning for an additional breast cancer screening programme is expected to begin.

Highlights

- A strong information system supported a data-driven initiative design, facilitated implementation and enabled monitoring and evaluation.
- Moving from a reactive to a proactive approach was key for reaching and engaging the target population and increasing uptake of screenings.
- Partnering with stakeholders outside of the health sector provided access to technologies and tools for engaging the public.

1 Institute of Health Metrics and Evaluation. (2015). *Global burden of disease cause patterns*. Retrieved from http://www.healthdata.org/notice-tool-migration.

Integrating occupational therapy into cancer care in the Netherlands

Overview

Between 2000 and 2010, cancer incidence in the Netherlands rose by over 40%, reaching 684 per 100 000 population. Cancer survival rates also increased during this time. These trends have increased the number of patients requiring post-cancer treatment services, specifically rehabilitative care following more invasive procedures. This growing unmet need was recognized by occupational therapists working for Reade, an organization of specialist rehabilitation centres within Amsterdam. Responding to this issue, Reade's holistic package of rehabilitation services, including occupational therapy, was extended to cancer patients

in treatment and recovery. Patients follow personalized care plans delivered in outpatient clinics and work with occupational therapists to maintain or regain functioning and independence. Patients are referred to the programme by general practitioners or oncologists. As part of the initiative, providers in the area have received trainings on how occupational therapy could benefit patients, helping to encourage referrals. Reade management negotiated contracts with health insurance companies so that services for cancer patients would be fully reimbursable. Additional resources have not been necessary as the initiative works within the existing infrastructure and systems

already in place at Reade. At present, the initiative continues to be actively implemented and improved based on clinical experiences, with plans for future research. Recently, one of the initiative's leaders was chosen by the Dutch Association of Occupational Therapists to chair a newly established Union Branch for Occupational Therapy and Oncology. The Union Branch is currently working to build knowledge and develop evidence-based guidelines and recommendations on providing occupational therapy to cancer patients and the experience of the Reade initiative has been shared through this network.

Problem definition

Cancer incidence rates in the Netherlands rose from 483 per 100 000 population in 2000 to 684 per 100 000 in 2010.[1] In parallel to increasing incidence, cancer survival rates have increased following efforts to improve services, including increasing the availability of cancer screening and accessibility of care, demonstrated through a reduction in the standardized death rate for all cancers decreasing from 198 per 100 000 population in 2000 to 180 per 100 000 in 2010.[1] These trends have necessitated a growing need to provide appropriate care for cancer morbidities, particularly rehabilitative care (Box 1).

Box 1
What problems did the initiative seek to address?

- Increasing number of patients living with or recovering from cancer.
- Lack of rehabilitative services for people affected by cancer.

Health services delivery transformations

Timeline of transformations
In the late 2000s, occupational therapists employed by Reade – an organization specializing in rehabilitation services – observed

a need to extend Reade's services to cancer patients. In response, a holistic package of services to be offered to cancer patients and survivors was introduced under direction of Reade management in 2010. The initiative has shared its experience through the Union Branch for Occupational Therapy and Oncology's network, which is to build an evidence base on best practices in this emerging area.

Description of transformations
Selecting services. Outpatient occupational therapy services are now available to cancer patients at Reade rehabilitation centres in Amsterdam. Occupational therapy

services are offered as part of a holistic rehabilitation package, which aims to increase functioning and quality of life for cancer patients and survivors.

Designing care. Reade has adjusted internal organizational protocols to account for the integration of occupational therapy into cancer patients' care. While efforts are being made at the national level to develop evidence-based guidelines on providing occupational therapy to cancer patients, at present occupational therapists draw on recommendations for conditions with similarities to specific cancers and personal experience to provide the best possible care for patients. Care pathways for cancer patients are highly personalized and adapted to individual needs. Occupational therapists work closely with patients to develop individualized care plans and therapy goals. Patients' daily functions and progress are assessed and regularly monitored using a subjective 10-point graded scale based on a Canadian assessment model, recognizing this as a best practice.

Organizing providers. A variety of health providers, including physicians, nurses, social workers, psychologists and occupational therapists, among others, are employed by Reade and work in multidisciplinary teams to provide inpatient and outpatient services in home, community or hospital settings, depending on which is the most appropriate for patients. Health providers at Reade work together to deliver holistic rehabilitative care to cancer patients and survivors. The number of different providers caring for each patient depends on individual needs and functioning. For example, some patients may only require services from occupational therapists, while others may need additional support from physiotherapists or psychologists. Patients must be referred to Reade either by their general practitioner or

specialist. Occupational therapists have direct access to patients' medical records and provide a final report to referring providers detailing the care given to ensure a continuity of information.

Managing services. The management team at Reade is responsible for overseeing and managing services delivery. Costs for services are reimbursable under patients' health insurance. Additional resources have not been necessary as the initiative works within the existing infrastructure and systems already in place at Reade.

Improving performance. The Union Branch for Occupational Therapy and Oncology offers continuous learning opportunities to occupational therapists, including workshops, symposiums, lectures and other educational programmes. Specialized trainings for occupational therapists are offered four times a year, with additional activities held in conjunction with other providers to expand knowledge and skills. Providers are also encouraged to share experiences with each other through the Union Branch's network and engage in peer-to-peer learning.

Indicators including the amount of care patients receive, the range of services each patient uses and patient outcomes are collected internally at Reade. These indicators are monitored and analysed to help manage activities and maintain the focus on achieving positive outcomes for patients.

Engaging and empowering people, families and communities
Increasing the wellbeing and healthful functioning of the patient is at the centre of occupational therapy. "We [occupational therapists] look holistically at the client and their abilities and functioning during daily activities. This is a central perspective within occupational therapy." New services offered by Reade work to support

people living with or recovering from cancer to live "a healthy life again and work on independency and autonomy". Occupational therapists work closely with patients to develop personalized care plans with the aim of gradually building patients' abilities and confidence to enable and empower them to manage on their own. "Supported self-management is necessary to create independency. As an occupational therapist your job is to create care that meets patient needs and helps them obtain their healthy independent life back again."

Health system enabling factors

While the initiative has primarily been carried out at the organizational level within Reade, wider health system support is helping to generate a national understanding of the role of occupational therapy in supporting people affected by cancer. A key enabler for the initiative was the cooperation from health insurance companies. Reade management negotiated with insurance companies to secure reimbursement for occupational therapy services provided to cancer patients and survivors at Reade. "Health insurance companies do realize that this care is necessary for people who are living with and are surviving cancer."

Oversight for the development of occupational therapy and oncology more broadly within the Netherlands is the responsibility of the new chairperson of the Union Branch for Occupational Therapy and Oncology. The Union Branch is working with policy-makers responsible for setting national care guidelines to secure official recognition that occupational therapy is an essential component of care for oncology patients. This communication is ongoing and more work needs to be done on establishing an evidence base to convince policy-makers to implement changes to care guidelines at the

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Cancer patients receive standard curative treatment but have limited access to rehabilitation or support services; occupational therapy widely available for other conditions.	Reade offers holistic package of rehabilitation services to cancer patients and survivors, including occupational therapy.
Designing care	
Lack of evidence and guidelines on providing occupational therapy to cancer patients.	Efforts underway to develop national guidelines and recommendations on providing occupational therapy to cancer patients; occupational therapists draw on knowledge and experience of other conditions to develop personalized care plans for cancer patients at present.
Organizing providers	
General practitioners act as gatekeepers to specialist care; patients referred to oncologists for cancer treatment; providers employed by Reade organized in multidisciplinary teams (including occupational therapists, physiotherapists, psychologists and others), but do not work with people affected by cancer.	Reade providers deliver services to people affected by cancer; patients referred by general practitioners or oncologists to Reade, who then reports back to referring providers to ensure continuity of care; specific mix of providers involved in patients' care determined by individual needs; medical records made available to occupational therapists treating patients.
Managing services	
Reade organization consists of several specialized rehabilitation centres around the Amsterdam area; health insurance reimburses services provided by Reade.	Cancer services managed and delivered within the existing Reade infrastructure; health insurance reimburses costs of delivering cancer-related services at Reade.
Improving performance	
No educational opportunities available on providing occupational therapy for cancer patients.	Continuing education opportunities made available by the newly established Union Branch for Occupational Therapy and Oncology; monitoring of key indicators is conducted by Reade and used to improve services.

national level. The Union Branch is currently working to build the necessary knowledge in this area.

Outcomes
Final outcomes for the programme have net yet been determined. However, new services offered by Reade have been reported to be better suited to helping patients return to work than previous care models. Once the initiative is more established, leaders hope to conduct formal research and share this information with other professionals in the occupational health field.

Change management
Key actors
Completing a master's degree in clinical epidemiology triggered the initiative's leader to recognize the need to provide occupational therapy for people affected by cancer. As an occupational therapist working for Reade, the initiative's leader immediately turned to the organization for support in addressing the challenges observed (Box 2). Design of the initiative was led by a multidisciplinary group of providers working within Reade with support from Reade management. "What really helped me is that my company

and my colleagues have supported this and that they have created the policy for the company to focus on occupational therapy and cancer."

More recently, increasing awareness of the need to expand knowledge on the use of occupational therapy in cancer care caused the Dutch Association of Occupational Therapists to form the Union Branch for Occupational Therapy and Cancer to bring together actors in this field for knowledge sharing and best practice development. Currently chaired by the initiative's leader, the Union Branch has helped share the

example of the Reade initiative with occupational therapists across the country.

Box 2
Who were the key actors and what were their defining roles?
Initiating change

- **Initiative leader.** Developed the initiative with support from colleagues and Reade management; chairs the Union Branch for Occupational Therapy and Cancer.
- **Reade management.** Supported the development of initiative; worked with policy-makers and health insurance companies to negotiate support and funding.
- **Union Branch for Occupational Therapy and Oncology.** Branch of the Dutch Association of Occupational Therapy which connects occupational therapists in a professional network and enables knowledge sharing among members; raises awareness of the application of occupational therapy to cancer care; gathers information on best practices on treating cancer patients; plans to publish evidence-based guidelines on occupational therapy in cancer care.

Examination of the current care guidelines for cancer highlighted several possible opportunities where occupational therapy could help improve patient outcomes. As providing occupational therapy to cancer patients was a relatively new idea, leaders designed the initiative based on their experience treating patients with other conditions with similar clinical presentations to those seen with specific cancers; for example, using experiences of treating patients with brain injuries to design care pathways for patients with brain tumours. "Combining present knowledge with new insights can provide important possibilities for good care."

Implementation

Reade brought together providers within its organization to apply their skills to treating the complex needs of cancer patients and survivors. Different providers' skills are pooled in multidisciplinary teams to deliver more comprehensive and holistic care, with providers supporting each other to better support patients. Attention was also given to identifying necessary partnerships and resources outside the organization. Providers external to Reade were approached by leaders in order to gain their support and participation in the initiative. "It is really helpful, for example, to speak with nurses and the other providers. This is what we are trying to do more and more. It raises awareness and helps them understand why the initiative is important." Engaging external providers has been important for generating referrals to the programme. Outreach efforts, combined with positive experiences of working together, have helped generate widespread recognition within the medical community of the important role occupational therapy can play for cancer patients and survivors. "General practitioners are sometimes quite surprised with what occupational therapists can do."

Moving forward

The Reade rehabilitation centre continues to offer services to cancer patients and survivors with the focus moving forward on further defining services and undertaking formal research on the initiative. As the use of occupational therapy in the rehabilitation of cancer patients is a relatively new practice, it is hoped that future research on the initiative will contribute important evidence supporting this type of care. Experiences of the Reade initiative are being shared with other occupational therapists using the Union Branch for Occupational Therapy and Oncology's network. By sharing their experiences, the initiative's leaders hope to educate and empower other professionals to implement similar initiatives. "By sharing your programme throughout the country and by learning from each other, I think you can build up best practice evidence." The Union Branch is currently compiling occupational therapists' experiences on delivering care to cancer patients and developing best practice guidelines based on this information to support future improvements.

Highlights

- Extending the services package provided more holistic treatment to cancer patients.
- Support from management in developing protocols and negotiating with national level actors was essential for the implementation of the initiative.
- Building strong working relationships with other providers in the region was key to bringing them on board with planned activities.

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1 World Health Organization (2015). *European Health for All Database.* Retrieved from: http://data.euro.who.int/hfadb/

National rollout of Healthy Life Centres in Norway to improve population health

Overview

Despite reporting some of the most favourable health outcomes in the WHO European Region, Norway faces a growing burden of chronic disease, largely attributable to unhealthy lifestyle choices and changing health behaviours.[1] In the early 2000s, following a series of unsuccessful piecemeal attempts to curb this trend, the Norwegian Directorate of Health launched a systemwide strategic plan to advance health promotion and disease prevention efforts in municipalities. The strategy took direction from the locally designed and successfully implemented Healthy Life Centre model. Healthy Life Centres are municipally managed facilities staffed by multidisciplinary teams of public health specialists working in coordination with primary care providers to support lifestyle and behaviour change. In 2012, following extensive piloting and review, national legislation formally endorsed municipal action to implement the model across the country.

By 2014, over 180 Healthy Life Centres were established, covering approximately half of Norway's 428 municipalities with their services. The implementation rate reflects the benefits of technical and financial resources invested nationally, as well as regional motivation and capacity to adapt the model to local needs. At present, a full-scale evaluation led by the Directorate of Health is planned which will help determine future directions for the initiative.

Problem definition

Overall, Norway's 5 million inhabitants report positive health outcomes. Life expectancy was 82 years in 2012, above the WHO European Regional average of 76, and the gap between overall life expectancy and healthy life years was half that of the European Union average.[2] However, over the past decade the increasing prevalence of overweight and obesity and rising alcohol consumption have contributed to less favourable trends for chronic conditions, such as cardiovascular disease, type 2 diabetes and certain cancers (Box 1). In the context of growing chronicity and multimorbidities with complex treatment needs, a more proactive approach to services delivery was needed to help contain health care costs and high rates of sick leave.[2]

Box 1
What challenges did the initiative aim to address?

- Shifting lifestyle trends and rise in less healthy behaviours within the population.
- Growing burden of chronicity, notably rising rates of cardiovascular disease, type 2 diabetes and certain cancers.
- Rising economic pressures such as the inability of the public sector to cope with increased demand for chronic needs, as well as high rates of sick leave.

Health services delivery transformations

Timeline of transformations
In the early 2000s, in an effort to curb increasing rates of chronicity, the Norwegian Directorate of Health experimented with strategies to advance health promotion services. These attempts however were met with limited success (Table 1). By the mid-2000s, the locally conceived idea of Healthy Life Centres (in Norwegian, Frisklivssentraler) began attracting national attention.* Following a favourable review of the approach and a successful pilot study across five counties, the Directorate of Health issued a national recommendation in 2006, advising municipalities to take concerted action to increase their health promotion efforts and endorsed Healthy Life Centres as

the recommended approach for achieving this goal. Ten years after the initiative was first piloted, a total of 251 municipalities and city districts (approximately half) have Healthy Life Centres that are now operational and providing health promotion services.

Description of transformations
Selecting services. Taking direction from the population's increasing chronic care needs, Healthy Life Centres have broadened the scope of local health promotion services to include a wide range of interventions extending to smoking and alcohol cessation programmes, cooking classes and nutrition counselling, courses for coping with mental health challenges and diabetes management. The specific services provided by Healthy Life Centres are determined at the municipal level to ensure a package of services tailored to local needs.

Designing care. Throughout the early 2000s, the standard preventive services provided to patients by general practitioners were described as generic and brief. However, following the introduction of Healthy Life Centres, patients can now be referred to the nearest facility for highly personalized preventive services. Care plans are formulated following a standard 12-week programme, using the principles of motivational interviewing to design programme goals with the active participation of the individual to match activities with their needs and personal preferences. Participants typically complete two or three programme cycles before fully establishing their desired behaviour change and exiting the care plan.

Organizing providers. Working in close coordination with primary care providers to facilitate referrals, Health Living Centres have networked a variety of health professionals including physiotherapists, nurses, personal trainers, psychologists and nutritionists; pooling expertise for the delivery of a comprehensive

Table 1
What were the chronological milestones for the initiative?

1998	First Healthy Life Centre opened in Municipality of Modum Kommune by local administration in response to local health needs.
Early 2000s	National Directorate of Health explored ways to improve disease prevention services as positioned in the 2002-2003 Prescriptions for a Healthier Norway White Paper.
2004	Evaluation of programmes including the introduction of green prescriptions and the Healthy Life Centre model by the Directorate of Health led to the decision to pilot Healthy Life Centres in five counties.
2006	National Strategy to Reduce Health Inequalities published by the Directorate calling for further interventions and follow-up programmes to Healthy Life Centres.
2008–2011	Legislation drafted to officiate a renewed focus on prevention and early intervention for chronic disease.
2011	Guidelines for Municipal Healthy Life Centres published by Directorate.
2012	New public health legislation enacted requiring health promotion services be provided in some capacity across all municipalities; Healthy Life Centres recommended as the ideal practice.
2013	Revised edition of the Guidelines for Municipal Healthy Life Centres published.

range of services onsite. At the end of the 12-week programme, patient progress is reported back to general practitioners and, if further follow-up is warranted, patients can re-enter the programme. If necessary, patients may be given referrals to external providers for services not available at their local Centre.

Managing services. Healthy Life Centres are funded primarily through municipal health budgets. Healthy Life Centres generally require office space, a consultation room and access to outdoor exercise facilities. Smaller municipalities coordinate or partner with neighbouring Centres to ensure coverage in their area. Through partnerships with other public facilities, such as schools

and community centres, it has been possible for Centres to minimize costly infrastructure expenses. Some services offered require a small monetary input from patients to cover expenses, such as ingredients for cooking classes; these fees are considered nominal and not limiting of access. Centres have a specified scheme of questions to complete for each participant at the beginning and end of the programme, ensuring necessary data for managing the general operations of facilities is generated.

Improving performance. All professionals operating within the Centres have undergone training on motivational interviewing to equip them with the skills needed

to support and strategically guide patients through the programme. In addition, professionals receive courses on a range of topics such alcohol, nutrition, or sleep counselling, to expand their scope of practice and increase their awareness of the multidisciplinary environment they work in.

Engaging and empowering people, families and communities

This services delivery transformation has worked to support behaviour change in the population for improved health outcomes by placing a strong emphasis on engaging and empowering the individual service user. To address underlying causes of chronic disease, rather than merely treat symptoms, individuals are called upon to be active agents in promoting their own health. Healthy Life Centres can be accessed either through a prescription from a primary care provider or directly by the individual. In either case, the individual decides to use the service of their own volition. In an initial meeting with a counsellor, participants' medical history, personal information and desired behaviour changes are discussed. Using motivational interviewing to empower the participant, a set of goals and a personalized action plan are designed in close partnership with participants; family members are also welcome to participate in the process.

As a locally led effort, in many municipalities, Centres have managed to embed themselves within both the health system and local community, becoming successful and sustainable sources of wellness and health education.

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Lack of effective disease prevention or health promotion services; traditional services fail to adequately address rising burden of chronic disease.	Increase in continuum of services across the life course with health promotion services required by law; comprehensive range of health promotion services available through Healthy Life Centres.
Designing care	
Patients receive brief, generic information from general practitioners and are issued green prescriptions for diet and physical activity; limited follow-up care to support healthy behaviour change provided.	Patients receive highly personalized care plans and intensive follow-up care in Healthy Life Centres; flexible care planning process based on principles of motivational interviewing is dictated by patient needs and goals.
Organizing providers	
Primary care providers are responsible for preventive care, with limited time and training in health behaviour change for the meaningful provision of disease prevention and health promotion services.	Primary care providers refer patients to multidisciplinary teams within Healthy Life Centres; patients' progress relayed back to primary care provider to ensure continuity of care; primary care providers contacted if individuals access Healthy Life Centres directly.
Managing services	
Preventive services delivery sole responsibility of primary care; no dedicated resources for health promotion.	Partnerships between primary care and Healthy Life Centres delegate services delivery to municipally funded Healthy Life Centres which are equipped with necessary resources for health promotion activities; individuals provide nominal resources for some activities.
Improving performance	
Primary care providers lack necessary training to effectively motivate behaviour change in patients.	Professionals in Healthy Life Centres receive training in motivational interviewing and a variety of health promotion topics.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Legislative changes require municipalities to provide health promotion services in some capacity.
Incentives	• Directorate of Health provides start-up funds to municipalities establishing Healthy Life Centres, incentivising this service over others.
Information	• Pilot programme prior to rollout of the Healthy Life Model provided evidence of effectiveness and helped refine implementation guidelines. • Directorate of Health established reporting requirements for Healthy Life Centres to allow monitoring and evaluation of activities; Centres complete set scheme of questions for each participant at the beginning and end of individuals' 12-week programme.
Innovation	• Research and development supported by the Norwegian Knowledge Centre for Health Services.

Educational campaigns on health promotion have further supported the initiative by increasing population health literacy and awareness of the service and its success.

Health system enabling factors

While the concept of Healthy Life Centres was derived from municipal actions, scaling up the initiative and embedding it within the health system was a result of macro level efforts led by the Directorate of Health (Table 3). National guidelines developed based on pilot studies for the approach and legislation enacted by the national government in 2012 requiring municipal provision of health promotion services, for example, fostered necessary institutional arrangements at scale.

Sustainable financing has been made possible through municipal funding, with services provided at Centres forming part of the basic benefits package. Initial start-up costs have been supported by the government as an incentive for municipalities to establish the Healthy Life Centre model. Ongoing research to further advance the evidence base on the significance of behaviour change for health improvement is led by the Norwegian Knowledge Centre for Health Services.

Outcomes

Improved health outcomes as a result of Healthy Life Centres have been demonstrated in a small-scale pilot study conducted in 2004 (Box 2). A larger, formal evaluation of the intervention being led by the Directorate of Health is planned for the coming year with data collection currently ongoing.

Box 2
What were the main outcomes of the initiative?

- Between 1998 and 2014, 183 Healthy Life Centres were established providing a comprehensive package of health promotion services to approximately half of Norway's municipalities.
- A pilot study on Healthy Life Centres has shown remarkable success in the prevention of chronic disease, as well as reductions in health expenditures.
- A study of Healthy Life Centres in the municipalities of Nordland and Buskerud showed referral to Centres can support improved fitness, weight loss and increased self-perceived health.

Change management

Key actors

Local municipal action first spurred the development of Healthy Life Centres and, since their conception, leadership at the national government level, along with support and cooperation from a variety of different actors (Box 3), has facilitated their widespread introduction. While the national government has steered the effort to introduce Healthy Life Centres through legislation, incentives and recommendations, adoption of the model ultimately rests on the motivation of local actors who remain free to seek adapted or alternative approaches for improving local population health.

Box 3
Who were the key actors and what were their defining roles?

- **Municipality of Modum Kommune.** Invented the Healthy Life Centre concept through grassroots action

in response to local health problems.

- **Directorate of Health**. Spearheaded the national rollout of Healthy Life Centres; led a pilot study for the initiative, developed and published implementation guidelines, mandated municipalities provide health promotion services and financially incentivized implementation of Healthy Life Centres; currently planning a large-scale evaluation of Healthy Life Centres.
- **Municipal governments**. Responsible for providing health promotion services in some capacity; allocate funding to Healthy Life Centres and support their set-up and running.
- **Healthy Life Centre teams**. Multidisciplinary teams of health professionals co-located within Healthy Life Centres provide a comprehensive set of health promotion services in close partnership with Centre participants and primary care providers.

Initiating change

Community health leaders designed the first Healthy Life Centre in response to high rates of sick leave they observed in their municipality. Through meetings and advocacy efforts to engage the support of the municipality, grassroots action helped establish this first centre as an important community resource

and its successes generated national attention. With evidence of success deriving from the pilot example in the Municipality of Modum Kommune, the government had a strong evidence base supporting the scale up of the approach. While government commitment was integral to launching the momentum for a country-wide effort, the model itself and its implementation continue to remain dependent on community driven efforts in response to local contexts.

Implementation

The distributed leadership approach allowed municipalities the autonomy to implement their own initiatives, engage local leaders in the design process and create local ownership over the Healthy Life Centre model. Strong teamwork between health professionals in the Centres combined with collaborative partnerships with participants contributed to the successful running of activities. Guiding participants

through change is an important part of the process requiring unique leadership skills. Generating support from providers proved critical for securing referrals. While some areas were successful through regular meetings with providers to educate them on the benefits of the programme and gain their support through referrals, in other areas providers were less engaged and, therefore, less likely to refer patients.

Moving forward

In 2014, Healthy Life Centres provided coverage to approximately half of Norway's 428 municipalities, with hopes to further expand as the Directorate of Health continues to support the development of Centres across the country. Further adoption remains dependent on leadership from local municipalities to take advantage of the incentives and tools put in place by the Directorate. A full-scale evaluation planned by the Directorate may offer insight for future directions.

Highlights

- Government commitment to address the growing burden of chronic disease through strengthening health promotion and disease prevention services provided a platform for change.
- A local initiative to address services delivery challenges proved the most appropriately responsive method to tackle similar challenges observed in other municipalities.
- Actions by the national government to steer the health system towards a common direction capitalized on local solutions.
- A structured approach to the rollout of the model of Healthy Life Centres from the outset ensured accountability and systemwide evaluation.
- Collaborative partnerships between primary care providers and Healthy Life Centres have been integral to streamline service use and facilitate continuity of care.

1 Norwegian Knowledge Centre for Health Services. (2011). *Effects of organized follow-up on behavior that may increase risk of disease in adults – executive summary*. Norwegian Knowledge Centre for Health Services.
2 Ringard, A., Sagan, A., Saunes, I.S., & Lindahl, A.K. (2013). Norway: *Health Systems in Transition; 15*(8): 1-162.
* The Norwegian health care system can be characterized as semi-decentralized, whereby municipalities are responsible for primary care services and have the authority for organizing health services delivery in their jurisdiction. For more details on the organization and governance see: Ringard, A., Sagan, A., Saunes, I.S., and Lindahl, A.K. (2013). Norway: *Health Systems in Transition; 15*(8): 1-162.

Campaigning to improve obstetric care in Poland

Overview

In the early 1990s Poland faced a lack of standardization of obstetric care and care practices were found out of date with current evidence. Furthermore, women were given little opportunity to influence their care, compounded by the lack of information made available to them. In an effort to shed light on suboptimal obstetric services and start a public dialogue about childbirth, a group of women partnered with the largest national daily newspaper – Gazeta Wyborcza – in a 1994 campaign asking women to write in about their childbirth experiences. The overwhelming number of responses received – 2050 letters in 1994 growing to 50 000 letters in 1995 – inspired the organizers to establish the Childbirth with Dignity Foundation to advocate for change on the issues brought forward and empower women to openly express their needs and exercise their rights as patients. To gain political action for their cause, the Foundation released the ground-breaking report, Childbirth with Dignity is not a Privilege, in 2006. The report highlighted key issues faced during childbirth, giving testimonials from over 26 000 women, as well as views of health providers. In response to the report, the Ministry of Health convened an expert working group in 2007 to develop new obstetric care standards and, after several years of deliberation, the first Perinatal and Postnatal Care Standards were published in 2011. The Foundation works closely with providers to improve knowledge of new guidelines and increase an understanding of women's needs through regular trainings and other educational opportunities. Additionally, the Foundation publishes several educational resources for women on their website, as well as an online database of all hospitals and self-reported reviews of women's childbirth experiences for each facility. Since the Foundation was first started, testimonials indicate women's experience of childbirth has improved dramatically and that many hospitals are now providing obstetric care according to national standards. In addition to continuing to work with women and providers to support improvements to obstetric care in Poland, the key focus area for the Foundation at present is lobbying the Ministry for stronger monitoring and evaluation systems to ensure adherence to care standards.

Problem definition

In the 1990s, a public campaign on women's experience of childbirth in Poland brought several issues to light (Box 1). Many of these problems stemmed from variability of obstetric services due to an absence of care standards and continued use of outdated practices, including routine performance of enemas and episiotomies during labour. At the time, women lacked information on obstetric care and were largely unaware of what treatments to expect or what rights they had. Opportunities for women to discuss care with providers were limited and, for example, women were unable to decide birthing position or make choices regarding treatment administered during labour.

Box 1
What problems did the initiative seek to address?

- Absence of obstetric care standards resulting in variability of services across the country.
- Continued practice of outdated procedures.
- Limited involvement of women in the care process or choice over services rendered.
- Lack of information relating to obstetric care available for women.

Health services delivery transformations

Timeline of transformations
In 1994, a campaign was launched through Gazeta Wyborcza – the largest daily national newspaper in Poland – to document women's childbirth experiences and initiate a public dialogue on this largely taboo topic. In 1996, the overwhelming number of responses demonstrated a need for improvements in obstetric care, motivating the creation of the Childbirth with Dignity Foundation to advocate for change. In 2006, the Foundation published a report – Childbirth with Dignity is not a Privilege – providing overwhelming evidence of the challenges women faced during childbirth, finally pushing the Ministry of Health to assemble a working group to develop national obstetric care standards. In 2011, after several years of deliberation, the first

national Perinatal and Postnatal Care Standards were published (Table 1). Today, the Foundation works to ensure these standards are met across the country and advocates for further improvements.

Description of transformations
Selecting services. Services aimed at better meeting the needs of women have been introduced, including the provision of access to private, single occupancy rooms, where they are allowed the company of a partner or family member during delivery; comforts not consistently offered before. Women are more engaged in the birthing process and, for example, have choice over pain relief and birthing position. There has been a shift away from performing procedures such as episiotomies and enemas unless medically necessary. After delivery breastfeeding support services are now offered and skin-to-skin contact is particularly encouraged. The Childbirth with Dignity Foundation provides information regarding the treatment women should expect and services they are entitled to receive, offering support, counselling and legal assistance to women experiencing adverse events.

Designing care. New evidence-based Perinatal and Postnatal Care Standards in line with WHO Standards for Maternal and Neonatal Care have been published by the Ministry of Health. In addition to aligning with evidence-based practice, the guidelines take into account the reported experiences of women. Protocols aim to encourage standardization while maintaining sufficient flexibility to take into account women's personal choices.

Organizing providers. Physicians are required to supervise all deliveries, based on reimbursement structures in place, with nurses and midwives playing a supporting role. The Foundation strongly advocates for a greater and more autonomous role for midwives.

Table 1
What were the chronological milestones for the initiative?

1994	National newspaper launches appeal for women to write in and share their stories about childbirth, sparking discussion on this taboo topic; 2050 responses received.
1995	Newspaper launches second appeal; 50 000 responses received indicating need for improvements in obstetric care.
1996	Childbirth with Dignity Foundation established to advocate for improvements in obstetric care.
2006	Foundation releases the report Childbirth with Dignity is not a Privilege; report provides strong evidence of the difficulties women face, gaining attention from the Ministry of Health.
2007	Working group assembled by Ministry of Health to develop guidelines for obstetric care.
2011	Ministry of Health issues first national Perinatal and Postnatal Care Standards in line with WHO guidelines.
2012	Updated Perinatal and Postnatal Care Standards published by Ministry of Health.
Present	Foundation continues to advocate for improvements in obstetric care.

Managing services. Hospital management are responsible for the delivery of birthing services at their facilities. While not mandatory, some hospitals have invested resources to update equipment and improve maternity ward conditions to better manage services delivery.

Improving performance. The Foundation organizes trainings for providers and periodically holds conferences on childbirth across Poland. Trainings focus on aligning professional skills with Ministry guidelines and on encouraging providers to take a people-centred view of obstetric care. In addition, a number of short courses and seminars are provided on topics such as postnatal depression, patient rights and skin-to-skin contact. The Foundation also publishes and distributes a publication on obstetric care as an additional educational resource for professionals. Available trainings are announced on the Foundation's website. Training participants' information is recorded in a database and past participants are automatically notified of future training opportunities.

Although there are currently no formal structures in place to ensure hospitals meet new care standards, an informal review website run by the Foundation encourages hospitals to improve performance to avoid being given poor ratings by women giving birth at their facility. Feedback generated by the website is also useful for highlighting the specific areas in which hospitals need to improve.

Engaging and empowering people, families and communities

From its conception, this initiative has worked to engage and empower women and the general public on the issues relating to childbirth in Poland, seeking women's views from the outset. "Someone at some point said 'just ask women'. ... Start an initiative to ask women to write letters describing their experience in labour." The overwhelming public response and interest in the topic inspired the Foundation to be created. "Women had a big need to express their need and just to talk about this. ... It turned out that there was such a big need to continue it, so we couldn't just stop. That's why the foundation was set up."

The Foundation acts as a channel for women's voices, combining them into a powerful advocacy tool. "We [Foundation] are only a tube that carries these voices." Reports produced by the Foundation reflect tens of thousands of women's views, which make them influential with policy-makers. Strong public engagement and the ability of the initiative to unite so many individuals behind one cause has been a vital energizing force. While not all stakeholders were initially receptive, initiative leaders have worked to engage all groups and frame this as an important societal issue. Mass media has played an important role in engaging the public and educating them on key issues. "Gazeta Wyborcza [national newspaper] had a big impact on society and could reach everyone. This was really helpful."

The Foundation continues to encourage women to share childbirth experiences through a website where they can publicly provide feedback on hospitals to help other women decide where to give birth; the website has collected over 10 000 reviews to date. Reading about peers' experiences can give expectant mothers an idea of what to anticipate from each hospital and empower them to make choices about their care. The Foundation also runs a second website with information on pregnancy-related topics, women's rights in childbirth, what maternity services should look like and breastfeeding education. By making this information available the Foundation is helping to empower women to openly express their needs.

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Childbirth highly medicalized with high rates of caesarean sections, episiotomies and enemas performed; many basic services only available for additional fees.	Unnecessary services such as episiotomies and enemas reduced, although caesarean section rates remain high; women have choice over certain services, such as pain relief; breastfeeding increasingly promoted in hospitals; support and legal aid offered by Foundation to women who experience adverse care.
Designing care	
No obstetric care guidelines in place; highly medicalized one-size-fits-all approach taken to childbirth; unnecessary procedures routinely performed regardless of patients' needs.	New evidence-based guidelines for obstetric care adopted by Ministry of Health; protocols allow flexibility for women's individual circumstances and personal preferences.
Organizing providers	
Hospital physicians supervise all deliveries supported by nurses and midwives.	Foundation advocates for increased role of midwives; women can view hospital ratings on a website run by the Foundation to help them select a provider.
Managing services	
Hospitals responsible for managing services delivery; maternity ward conditions described as poor.	Some resource investments by hospitals to update equipment and improve maternity ward conditions.
Improving performance	
Quality and safety inconsistent; lack of professional training resources reflecting patient perspectives on obstetric care.	Foundation offers professional trainings, conferences and publications to educate health providers on new guidelines and how to improve care from the patient perspective.

Health system enabling factors

In response to consistent advocacy from the Childbirth with Dignity Foundation, the Ministry of Health put in place Perinatal and Postnatal Care Standards, requiring these to be met by law (Table 3). However, the Foundation recognizes stronger monitoring and evaluation systems are needed to ensure adherence to care standards and continues to lobby the Ministry to put formal assessment structures in place.

The systematic collection of patient testimonies, leading to reports like Childbirth with Dignity is not a Privilege, was instrumental for convincing policy-makers to take action by providing clear evidence of the need for change and information on key challenges. The Childbirth with Dignity is not a Privilege report compiled information from both patient and provider surveys, as well as information collected from independent observational visits to hospitals to verify the information provided was accurate. External assistance with the report from experts helped ensure its methodology was sound and increased its legitimacy. "The Foundation didn't analyse on their own but had support from big companies who deal with methodology and statistics, so this material was really valid." Building a strong information base continues to be a key area of activity for the Foundation to aid research.

The Foundation also works closely with universities across Poland to incorporate information on care standards, best practices and patient perspectives into providers' formal medical education, hoping to instill good practices while providers are still learning. The Foundation believes it must "involve and engage students and the next generation of professionals; this is the power of the future." However, the Foundation is advocating for the Ministry to assume responsibility for trainings on care standards.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Ministry of Health adopted Perinatal and Postnatal Care Standards; hospitals required to adhere to these by law.
Competencies	• Universities work with Foundation to educate, involve and engage the next generation of providers.
Information	• Foundation routinely collects data from patients and providers to report on childbirth experience; external companies provide support with methodology and statistical analysis for reports.

Outcomes

Maternal health has significantly improved since women began advocating for respectful care and, in 2015, the Childbirth with Dignity Foundation was awarded the Sasakawa Health Prize at the World Assembly for its work improving maternal care. Surveys among Polish midwives indicate widespread respect for the Foundation's work and the Foundation is now well-recognized and respected within the maternal and child health field. While there is still considerable progress to be made, improvements already achieved are evident in the positive testimonials from women and providers.

Change management

Key actors

The initiative started with a small group of motivated individuals reaching out to the public (Box 2). "At the beginning it was just several people who felt they had to do something." Support from the largest daily newspaper in Poland and the subsequent mass promotion of the cause through print media was instrumental in generating widespread support for the issue. "The nationwide newspaper had a big impact on society and could

reach everyone; this was really helpful." As the initiative gathered supporters, the need for a more formal approach emerged and the Foundation was established to unite actors and solidify the cause. The growing success of the Foundation is largely attributed to the women who lent their voices to its cause; it is these women who are the base for the Foundation and the driving force behind its work. "Success of the Foundation are the people who created it, but most important were the women and their voices and this is the energy that has led the issue." New funding avenues were sought from municipal councils and corporate sponsors to finance the Foundation's activities on a larger scale. The Foundation relies on the generosity of external donors and volunteers to run and draws on experts in obstetrics, law, psychology and other fields, as well as student volunteers from universities. While it took time, grassroots action led by the Foundation has been successful in securing top-down support from the Ministry of Health.

Initiating change

Rise of the initiative coincided with a general cultural shift towards a more empowered society where free speech was increasingly

Box 2
Who were the key actors and what were their defining roles?

- **Childbirth with Dignity Foundation**. Advocacy group leading efforts to improve childbirth experience across Poland; employs several full-time and part-time staff, as well as many volunteers; works with both patients and providers to achieve grassroots-level change; extensively lobbies the Ministry to achieve top-down support for care improvements.
- **Gazeta Wyborcza**. Largest daily newspaper in Poland; led initial campaign soliciting women's experiences of childbirth; helped generate public support behind the initiative by running information campaigns.
- **Women and general public**. Complete surveys on childbirth experience and submit data to Foundation; share childbirth experiences and stories to help effect change.
- **Ministry of Health**. Developed Perinatal and Postnatal Care Standards; working to implement monitoring systems to improve adherence to guidelines.

encouraged. "This cultural shift really helped because it was easier to raise this topic and women felt they were able to speak. It turned out it was easier to show that perinatal care is important for the whole of society and that the whole of society has to care about this."

Implementation

The tipping point for political action came when the Foundation released the Childbirth with Dignity is not a Privilege report. Representing views from 26 000 respondents, the report confronted the Ministry of Health with public demands for change. In response, an expert working group, including representatives from the Foundation, was assembled by the Ministry to develop new standards.

Although the working group was first assembled in 2007, the process of developing new guidelines was slow due to conflicting opinions. In 2011, a compromise was reached between members of the working group, allowing the new standards to be officially adopted by the Ministry. "It's [guidelines] not perfect, but it is at least moving forward and it takes into consideration patients' rights and evidence-based medicine." While official regulation of the new standards has still not been implemented, many hospitals have already improved their practices as a result of public pressure and professional education activities facilitated by the Foundation. "The effect of these actions was that many hospitals wanted to change. … When they heard the voices of these women they started to change."

Moving forward

The Foundation is now established as a well-recognized and respected actor in the maternal and child health field. However, despite sustaining activities for almost 20 years, financial instability continues to be a concern and new funding sources are continually being sought. The Foundation continues to advocate for improvements in obstetrics care and serve as an important resource for women, the general public and health providers. Additionally, the Foundations is currently lobby for the Ministry of Health to implement monitoring and evaluation systems to ensure adherence to the new care standards. "Our main goal now is to lobby and push the Ministry of Health to fully introduce the regulation so that the regulation works in practice."

Highlights

- Systematically collecting and documenting the experiences of individual patients was an important tool for advocating for systemwide change.
- A strong connection with the target population, encouraged by their substantial involvement, helped the initiative gain broad public support.
- The initiative gained attention through leveraging a highly-visible public platform which could lend sufficient credibility to information conveyed.
- The initiative connected with all stakeholders to effect change from both the bottom-up and top-down.

Peer-delivered HIV/AIDS community testing and prevention services in Lisbon, Portugal

Overview

In 2012, prevalence of HIV/AIDS was estimated to be 10% among men who have sex with men (MSM) in Portugal, compared to a national prevalence of under 0.6%.[1] In Lisbon, new diagnoses of HIV showed a 6% annual increase between 2005 and 2011 within the MSM population.[2] Concerned by these statistics and the limited number of targeted services available for MSM, members of Grupo de Ativistas em Tratamentos, a nongovernmental organization (NGO) working on HIV/AIDS-related issues, began discussing potential solutions. The idea to establish a community centre in Lisbon to provide free, anonymous and peer-delivered HIV testing and prevention services targeted to the MSM community resulted from these discussions. After extensive advocacy to the government to highlight the need for this approach to services, in 2010 the Ministry of Health approved funding to support the initiative. The community centre, known as CheckpointLX, opened in 2011. At the Centre, a team of eight trained peers deliver rapid HIV testing and prevention services to the MSM community, supported and supervised by health professionals. If an individual tests HIV positive, a referral protocol between CheckpointLX and a local hospital guarantees them an appointment to receive treatment within two weeks of diagnosis. Over 5000 HIV tests were performed between 2011 and 2014 and, as a result of the initiative, the MSM community reports better access to HIV/AIDS-related services. Researchers at the University of Porto are currently following a cohort of individuals at CheckpointLX and analysing information collected through a standardized questionnaire that individuals complete when accessing the Centre's services. CheckpointLX continues to deliver services to the MSM community at present.

Problem definition

Men who have sex with men (MSM) are a vulnerable group for HIV/AIDS in Portugal (Box 1). In 2005, prevalence of HIV/AIDS was estimated to be 10% among MSM in Portugal, compared to a national prevalence of under 0.6%.[1] In Lisbon alone, new diagnoses of HIV within the MSM population showed a 6% annual increase between 2005 and 2011.[1]

Limited health promotion services targeted to the MSM community have contributed to the trends observed. The MSM population has also been described as exhibiting low rates of care seeking behaviour and poor compliance to medical treatment, which is likely linked to several barriers the MSM community faces in accessing care, including high levels of stigma and concerns regarding confidentiality.

Box 1
What problems did the initiative seek to address?

- Rising prevalence of HIV among the MSM population in Lisbon, Portugal.
- Limited targeted health promotion on HIV/AIDS to the MSM community.
- Low rates of care seeking behaviour among the MSM population.
- Access barriers including high levels of stigma and concerns over confidentiality.

Health services delivery transformations

Timeline of transformations
Members of Grupo de Ativistas em Tratamentos (GAT), an NGO working on HIV/AIDS-related issues, came together in 2005 to discuss their concerns regarding worsening HIV/AIDS rates observed in the MSM community. An initiative to establish a community centre offering peer-led HIV testing and prevention services evolved out of these discussions (Table 1). Following three years of planning, GAT began looking for resources to realize their envisaged model of care. After two years of lobbying on the part of GAT, the Ministry of Health approved the funds needed to begin implementing the initiative

in 2010. The community centre, known as CheckpointLX, officially opened in 2011 and continues to offer HIV testing and prevention services to the MSM community at present.

Table 1
What were the chronological milestones for the initiative?

2005	GAT members concerned over worsening HIV/AIDS outcomes for MSM and the lack of preventive services available for this group; decision is taken to establish CheckpointLX as a community-based HIV testing and prevention service for MSM.
2008	Resources to support CheckpointLX sought by GAT; applications for funding from the Ministry of Health made.
2010	Ministry of Health approves funding for CheckpointLX.
2011	CheckpointLX opens; HIV testing and prevention services begin to be offered.
2014	Ministry of Health re-establishes funding for CheckpointLX; CheckpointLX continues to deliver HIV/AIDS-related services to the MSM community.

Description of transformations
Selecting services. CheckpointLX offers free, anonymous and confidential rapid HIV/AIDS and syphilis testing to the MSM community in Lisbon. For HIV-positive individuals, the Centre offers a referral service to local hospitals for treatment. Post-exposure prophylaxis treatment is made available through referral to emergency services.

Designing care. Services provided by CheckpointLX are based on evidence-based practices derived from similar initiatives in the United States of America. A strict procedural protocol is in place for all services and HIV testing procedures are set by an independent laboratory. A standardized questionnaire has been developed for each individual to complete, collecting information on basic sociodemographic characteristics, as well as behaviours such as sexual practices, condom use and drug use.

Organizing providers. The initiative has recruited and trained members of the MSM community to provide services at CheckpointLX. A team of peers works alongside health professionals. As all HIV/AIDS treatment must be delivered in hospital according to policies in place, direct referrals between the community centre and a local hospital have been established. This process bypasses the need for referral from a general practitioner, as many members of the MSM community do not feel comfortable seeking care in primary care settings due to concerns over confidentiality. CheckpointLX patients who test positive for HIV receive a hospital appointment within two weeks of diagnosis. Peers from CheckpointLX offer to accompany patients to their first hospital appointment, helping to provide a degree of continuity of care and increase the number of attended appointments.

Managing services. GAT manages the CheckpointLX Centre. A scientific coordinator ensures that the Centre is properly resourced and provides supervision for peer volunteers working at the Centre. A building space in the heart of the gay district in Lisbon was acquired and is used as the facility from which the Centre is run. Materials to support safe sexual practices, such as information leaflets and condoms, are purchased and distributed for free by the Centre.

Improving performance. A strict training protocol is in place for all peer team members, with an independent laboratory certifying their training. In addition to teaching peers how to safely and accurately perform rapid tests, training includes education on the biology of HIV/AIDS (and other sexually transmitted infections), infection mechanisms, and disease prevention measures. All team members receive additional training as necessary, for example, in order to keep up-to-date with best available evidence on testing procedures. The University of Porto is currently researching Centre services using data collected through standardized patient questionnaires, to explore opportunities for service improvements in the future.

Engaging and empowering people, families and communities
CheckpointLX is "based on the gay community, near the community and then by the gay community". CheckpointLX has provided individuals in Lisbon with a confidential service they can trust. They are also able to walk into CheckpointLX and receive free anonymous HIV testing and information delivered by peers. If a positive diagnosis is made, the Centre further supports individuals by offering to have one of the peer team members accompany them to their first hospital appointment, helping and guiding them through the process.

By having members of the MSM community affected by HIV/AIDS deliver services, CheckpointLX is effectively able to connect with and actively involve the wider MSM community in Lisbon. Peer-led services delivery has been an integral part of creating a cultural

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Lack of HIV/AIDS services targeted to MSM population.	Free, anonymous and peer-delivered HIV/AIDS rapid testing service made available to MSM; targeted health promotion and disease prevention services offered to MSM community.
Designing care	
Absence of protocols for peer-delivered testing services for sexually transmitted infections.	Evidence-based protocols for peer-delivered testing in CheckpointLX established.
Organizing providers	
HIV testing available through primary care and patients are referred to hospitals for all HIV/AIDS treatment; MSM population reportedly uncomfortable accessing HIV/AIDS-related services in primary care settings; long wait times for hospital appointments after referral.	HIV testing and other services delivered by a team of peers working alongside health professionals at CheckpointLX; partnership with local hospitals allows for direct referral to treatment, bypassing primary care; all patients testing HIV positive receive a hospital appointment within two weeks of diagnosis.
Managing services	
No dedicated resources for HIV/AIDS prevention or testing services for MSM population.	GAT responsible for oversight of CheckpointLX; a scientific coordinator ensures that the Centre is adequately resourced and provides supervision for peers.
Improving performance	
Absence of HIV/AIDS training for nonmedical community.	All CheckpointLX team members received relevant trainings; researchers at the University of Porto are investigating the impact of the Centre.

shift towards greater disease prevention, health promotion and HIV/AIDS awareness within this at-risk group.

CheckpointLX also works to strengthen health literacy within the MSM community, providing information and running educational campaigns on HIV/AIDS and other sexually transmitted infections, as well as information on safe sexual practices and available treatment options. CheckpointLX has published several leaflets and are available at the Centre, as well as in other settings commonly frequented by the MSM community.

Community volunteers help distribute this information, further engaging the wider community with the initiative. Social media campaigns are also run and CheckpointLX services are advertised online, allowing for widespread dissemination of information and increasing awareness of the services available.

Health system enabling factors

This initiative has not sought to activate systemwide changes as it has focused on ensuring its sustainability within Lisbon. Nevertheless, the advocacy work of GAT was successful in achieving funding support from the Ministry of Health and the Lisbon City Council, which enabled CheckpointLX to be opened. CheckpointLX has also been able to work within the framework of existing laws requiring all HIV/AIDS treatment to be delivered in hospitals while also strengthening this through care pathways designed with local hospitals to secure referrals.

Outcomes

Research on the impact of services provided by CheckpointLX is ongoing. To date, the Centre reports to have expanded HIV testing and prevention services for the MSM community and key informants informally report observing improvements as a result of the Centre (Box 2).

Box 2
What are the key outcomes of the initiative to date?

- Between 2011 and 2014, 5156 tests were performed at CheckpointLX; the number of individuals tested is unknown as a single individual may take several tests.
- MSM community reports better access to HIV/AIDS related services and treatment.

- HIV/AIDS specialists involved with the initiative report seeing male patients in earlier stages of infection compared with three years earlier, potentially indicating CheckpointLX is supporting earlier diagnosis and intervention.

Change management

Key actors

The initial momentum for the CheckpointLX programme was led by grassroots community advocates within GAT (Box 3). Already closely connected to the HIV/AIDS community, GAT members were aware of the growing issues within the MSM population. Realizing HIV/AIDS was not an issue the gay community was willing to champion, GAT members felt it was important to expand their own work to fill gaps in HIV/AIDS care for the MSM community. A motivated group of individuals within GAT led the design and implementation of the initiative, supported more generally by the organization as a whole for advocacy and outreach efforts. Strong and persistent advocacy by GAT was critical for securing and maintaining support from the Ministry of Health.

GAT continues to oversee the running of CheckpointLX with direct support from the MSM community. The high level of peer-engagement with the Centre is a unique attribute of this service that helps involve and gain buy-in from the MSM community. Support from health care professionals, both directly at the Centre and in a local hospital receiving referrals, have also been critical for ensuring the effective delivery of care.

Box 3
Who were the leading actors and what were their defining roles?

- **GAT.** NGO that connects people affected by HIV/AIDS and advocates for their rights; discussions among members first led to the development of CheckpointLX and their advocacy efforts secured funding for the Centre; continues to oversee the management of CheckpointLX.
- **Ministry of Health.** Provides 70% of necessary funds; remaining funds are provided by a variety of different actors, including the Lisbon City Council.
- **CheckpointLX staff.** Composed of peer workers and health professionals responsible for delivery of CheckpointLX services.

Initiating change

Initially, advocating for political and legislative changes for HIV/AIDS services proved more difficult than those leading this effort expected. It was described as a "long and persuasive process" with "lots of meetings" and a need to "repeat the message endless times". Eventually, after two years of persistent advocacy from the wider GAT community, supported with data and evidence backing the initiative, CheckpointLX had enough credibility and momentum to secure initial funding from the government and other organizations.

Implementation

Successful implementation of the initiative has relied on the motivation of GAT members, CheckpointLX

staff and community volunteers. Establishing the essential treatment referral process for patients testing HIV positive at CheckpointLX was initially challenging. Laws require HIV treatment be delivered in hospitals, but hospital providers did not want more patients, had no incentive to participate and did not understand the importance of accepting patients referred from a community initiative rather than from a general practitioner. Sheer determination of CheckpointLX's leadership eventually led them to find hospital providers who were happy to take referrals, securing continuity of care for HIV-positive CheckpointLX patients.

Moving forward

CheckpointLX continues to provide HIV/AIDS related services to the MSM community. The management team for the initiative hopes that research conducted by the University of Porto will provide evidence that can be leveraged to secure more sustainable funding moving forward.

Highlights

- Generating political buy-in took considerable time.
- Strong advocacy and persistent lobbying efforts were essential for securing funding.
- Incorporating the target population in the provision of services helped ensure wider community engagement and trust.
- Establishing partnerships with professionals who believed in the initiative was necessary in the absence of a formal legislative framework or financial incentives.

1   UNAIDS. (2012). *Regional fact sheet: North America, Western and Central Europe.* Retrieved from: http://www.unaids.org/sites/default/files/en/media/unaids/contentassets/documents/epidemiology/2012/gr2012/2012_FS_regional_nawce_en.pdf
2   Meireles, P., Lucas, R., Martins, A., Carvalho, A., Fuertes, R., Brito, J., et al. (2015). The Lisbon cohort of men who have sex with men. *British Medical Journal., 5(5).*

Development of guidelines to reduce under-five child mortality in the Republic of Moldova

Overview

Efforts throughout the early 2000s to reduce child mortality in the Republic of Moldova were met with success, reducing deaths from 23 per 1000 live births in 2000 down to 13 in 2010.[1] However, despite improvements, child mortality rates remained above the WHO European Regional average and disproportionately affected children from rural areas, lower socioeconomic families and migrant populations.[1,2] In light of persisting challenges, the government developed an under-five child mortality reduction initiative through intersectoral collaboration across ministries. In 2010, government regulation was enacted to provide a framework for action and step-by-step guide for activities. The aim of the initiative is to reduce hospital admissions and increase preventive measures for at-risk children through broadening the care continuum to include consideration of social factors. The initiative has reorganized providers to encourage joint-sector delivery between health and social sectors. At-risk children are recorded in a database and jointly managed by health providers and social workers cooperating in teams. Following an official assessment according to government protocols, a personalized care plan is jointly developed for at-risk children by care teams. Children are then monitored on a monthly basis or as often as needed. While initial investments to train providers were supported by development partners, the initiative is now fully self-sustaining and embedded within the existing health system and legislative structure.

Problem definition

Despite a drop in child mortality rates in the Republic of Moldova throughout the 2000s,[2] in 2010 rates remained above the WHO European Regional average at 12 per 1000 live births compared to 8 per 1000. Furthermore, vulnerable populations – including children from rural areas, low socioeconomic families, migrant populations and single parent households – were disproportionally affected, with the main cause of mortality being respiratory disease, specifically pneumonia (Box 1).

Services and disease screening for newborns were largely reliant on out-of-date practices, including an overemphasis on clinical assessment and limited recognition of wider risk factors, such as children's home environment. While reforms in the early 1990s introduced family medicine, most general practitioners were previously internal medicine specialists who had been retrained to provide primary care. However, insufficient continuing education for providers relating to the detection and treatment of childhood illness hindered timely diagnostic treatment. Furthermore, a lack of education for parents on early warning signs and necessary action steps contributed to child mortality.

Box 1
What problems did the initiative seek to address?

- Elevated rates of child mortality in home settings, particularly for vulnerable populations.
- Out-of-date practices for the detection and treatment of childhood illness, with an overly clinical focus.
- Limited education for providers and new parents regarding childhood illness.

Health services delivery transformations

Timeline of transformations
In 1998, in response to high under-five child mortality rates, the Republic of Moldova adopted the Integrated Management of Childhood Illness (IMCI) Strategy developed and recommended by WHO and UNICEF. Despite progress in child mortality rates being achieved throughout the 2000s, research examining persisting root causes highlighted

Table 1
What were the chronological milestones for the initiative?

1998	IMCI Strategy launched to address child mortality through improved case management at health facilities, strengthened health system support and enhanced provision of care.
2010	At-home mortality in children under five remains high; research conducted on root causes implicates poor social conditions and lack of provider recognition of needs.
Late 2010	Initiative to address social problems linked to child mortality developed through interministerial collaboration; government decree officializes proposed initiative.
2011	National implementation of the child mortality reduction initiative begins.
2012	Observation standards revised to increase supervision requirements for vulnerable families.
Present	Continued implementation of the initiative according to regulations in place.

providers' limited recognition of children's wider needs as a concern in 2010. In light of this research, the initiative for the reduction of at-home mortality in children under five was developed (Table 1), being formalized through government decree late in 2010. National implementation of the initiative began in January 2011, with new standards and protocols for the observation of child illness put in place. At present, the initiative continues to be implemented according to regulations in place.

Description of transformations
Selecting services. All children are eligible for free standardized medical care under the guaranteed state benefits package. Specific services are now targeted to the under-five population living in vulnerable households including rural, low socioeconomic, migrant and single-parent families. Social support services for vulnerable groups include legal advice, help with medical and legal documentation (including passports and birth certificates), unemployment assistance and food aid.

Designing care. Health and social services delivery for the under-five population living in vulnerable households follows a defined assessment path with step-by-step instructions on identifying problems and determining appropriate follow-up actions. An initial assessment using a government-defined questionnaire is carried out by both a health provider and social worker. A second more comprehensive assessment then follows, enabling development of a personalized care plan based on individual needs. Reassessments are then conducted monthly or more frequently if warranted. New screening protocols guide symptom assessment in community settings, reducing the need for laboratories and specialist equipment from previous standards. A simplified three-category model is applied to determine intervention: category one – immediate hospitalization; category two – outpatient treatment; and category three – specialized care at home. Applying this model has supported increased responsiveness by providers to children's symptoms.

Organizing providers. Health providers are organized according to the IMCI structure with the majority of health services delivered by primary-level providers, with referral to secondary or tertiary levels as needed. Home care services are now available for children under five living in vulnerable households, increasing access to care for this population group. Health providers work in teams with social workers to collectively assess risk and make treatment decisions. Personalized care plans distribute responsibility among care team members, each responsible for the actions assigned to them.

Managing services. District-level seminars with heads of primary care and social services were held to develop the managerial capacity of local administrations to enable them to assume a coordinating function between health and social services. Joint-sector delivery between health providers and social workers enables the effective provision of services making use of resources already in place. In two districts, technical input and occasional financial support are provided by the charitable foundation, Lumos.

Improving performance. Training for health providers and social workers in the country's four largest districts was carried out. To cover the training needs of other areas, district coordinators and other leaders for primary care and social services were invited to training seminars and were then responsible for training subordinates in their local areas. Intersectoral care teams conduct informal performance reviews for each case of under-five child mortality occurring while under supervision of care teams. These meetings bring together both health providers and social workers to discuss strengths and weaknesses of the care provided to strategize improvements for future cases.

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
All children eligible for free standardized medical care under the guaranteed state benefits package; social services also available.	At-risk children targeted to receive tailored health and social services.
Designing care	
No defined care pathways or tools for the management of at-risk children.	Defined assessment requirements and step-by-step case management instructions dictate care pathway for at-risk children; personalized care plans developed based on needs identified during standardized assessments.
Organizing providers	
Majority of care provided at primary level with referrals to secondary or tertiary care as needed; limited collaboration between health providers and social workers.	Home care services made available for at-risk children to increase care access; health providers and social workers jointly coordinate and manage care for at-risk children.
Managing services	
Separate delivery of services by health providers and social workers.	Strengthened capacity of district-level administrations to coordinate health and social services; joint-sector delivery between health providers and social workers; some technical input and assistance provided by charitable organizations at the district level.
Improving performance	
No specific training on reducing at-home mortality in at-risk children under five.	Trainings held for health providers and social workers; intersectoral care teams review performance and strategize improvements for each supervised case of under-five mortality.

Engaging and empowering people, families and communities

Social support services provided through the initiative aim to assist and empower families in caring for their children. Caregivers are provided with both verbal and printed information on how to care for children's health and receive assistance for a variety of needs, such as obtaining legal documentation for their child, finding employment and securing necessary material resources. All caregivers in the Republic of Moldova can also attend parenting school sessions held in polyclinics on topics such as nutrition, vaccinations, child development and safety. These sessions are open to caregivers with children of all ages and serve as an important source of information.

Health system enabling factors

The government created a supportive regulatory environment across sectors to help address at-home mortality in children under five (Table 3). Step-by-step protocols for child assessment and subsequent actions required by both health and social sectors are formalized through government decree, holding health providers and social workers accountable for delivering services as required. Ongoing priority actions for quality assurance of paediatric care based on IMCI principles are focused on developing policy tools on integrated supportive supervision.

The initiative capitalized on previous strengthening of provider competencies as part of the IMCI Strategy. Furthermore, previous trainings conducted as part of the Strategy are now credited through the continuous medical education system and IMCI recommendations have been integrated in the curriculum for all medical schools, fostering continuing development of providers' skills relating to child health.

Registries recording data on all at-risk children currently residing in each district are used by providers

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Government decree officializes actions required by health and social sectors relating to child health. • Local districts required to report status updates to the Ministry of Health every three months.
Competencies	• IMCI trainings accredited and included in continuing medical education. • IMCI principles integrated into formal medical training.
Information	• Improvements made to information systems to enable tracking of at-risk children through database registries. • Situational reports inform on the number of at-risk children in each district and actions taken to address problems at the local level.

to identify children requiring assessment and support. Data is also reported to the Ministry of Health for monitoring and evaluation purposes, enabling assessment of initiative's impact on child mortality rates. Local districts are required to report status updates to the Ministry of Health every three months.

Outcomes

The initiative has built on progress in under-five child mortality rates achieved through the IMCI Strategy to decrease at-home child mortality through increasing social support to vulnerable families. For the first time in two decades, at-home child mortality accounted for only 15% of all-child mortality; down from approximately 25% in previous years. Informal reports indicate families are happy with the increased support services provided.

Change management

Key actors

Change has been driven through a top-down approach by the Ministry of Health with cross-ministry support

at the national level. Understanding that the complex multifactorial nature of the problem warranted an intersectoral approach, the Ministry of Health formed collaborative partnerships across sectors with other ministries, as well as with international partners, to facilitate implementation of the initiative (Box 2).

Box 2

Who were the key actors and what were their defining roles?

- **Ministry of Health**. Conducted initial research on the causes of at-home child mortality in partnership with Lumos; led development of the initiative in collaboration with other ministry departments (including the Ministry of Labour and Social Security and the Ministry of Internal Affairs); continues to oversee implementation and monitor outcomes for the initiative.
- **Lumos**. Conducted initial research on the causes of at-home child mortality in

partnership with the Ministry of Health; provided technical support in developing the regulations to support the initiative; led professional trainings in two districts; provides ongoing assistance as needed.
- **UNICEF**. Carried out professional trainings in two districts (different districts to Lumos).

Initiating change

The initiative aligned with the Ministry of Health's pre-existing agenda for addressing child mortality. Having observed the persistently high levels of at-home mortality in children under five, research was carried out to identify root causes. Evidence gathered from this research identified unaddressed social determinants of health as a key area for action, serving as an argument for the development and adoption of the government decree on reducing at-home mortality in children.

Implementation

The initiative is implemented according to regulations and standards set by the government, which provide a clear framework for action. Within this regulatory framework, health providers and social workers work in collaborative partnerships and share responsibilities to effectively deliver services. Intersectoral team meetings serve as a self-evaluation mechanism to assess individual contributions to team functioning and strategize improvements to the implementation of care plans.

Moving forward

The initiative continues to be implemented according to the established regulatory framework in place and all activities are considered sustainable.

Highlights

- Guidance and support from the Ministry of Health led to coordinated intersectoral action.
- Research conducted prior to the initiative identified the root causes of problems and provided the evidence needed to stimulate action.
- Educating and expanding providers' competencies challenged pre-held attitudes regarding the detection and treatment of childhood illness.
- Joint-sector delivery by health providers and social workers facilitated more comprehensive and coordinated care for patients.
- National ownership over the initiative was a key enabler; activities were fully integrated into national standards and backed by a supportive legislative framework.

1 Centre for Health Policies and Analysis in Health. (2010). *Evaluation of integrated management of childhood illness initiative (IMIC) in the Republic of Moldova: Years 2000-2010*. Chisinau: UNICEF. Retrieved from http://www.unicef.org/evaluation/files/Moldova_2011_009_IMCI_Evaluation_ENG(1).pdf
2 World Health Organization. (2015). *European health for all database*. Retrieved from http://data.euro.who.int/hfadb/tables/tableB.php?w=1440&h=900

Strengthening local capacity to implement integrated community health services in rural Romania

Overview

Romania has seen important improvements in health outcomes over time, with life expectancy, for example, increasing from 71 years in 2000 to 74 years in 2012.[1] These gains, however, have not been evenly observed across the country, particularly to the disadvantage of rural communities.[1] In 2008, despite a well-developed primary care system, rural areas and vulnerable populations faced challenges accessing care and experienced wide health disparities.[2] Responsibility for managing health services was largely decentralized to local governments, many of which were described to face capacity constraints in effectively managing services. Responding to this context, an initiative was proposed in 2010 to invest in managerial capacity subnationally to help overcome geographic disparities. The Romanian government, together with the Swiss Agency for Development and Cooperation (SDC), developed an action plan strategizing how to work with local authorities to drive health improvements through the implementation of community-based services targeted to rural and vulnerable populations. The approach adopted by the initiative has been designed to support the development of managerial capacity across the country through trainings and the implementation of pilot projects focused on addressing the unmet needs of rural and vulnerable populations. Trainings have been designed to support managers in developing project proposals targeted to specific needs in their jurisdictions. To date, seven local proposals put forward have been funded for implementation and the initiative works to provide guidance and coaching throughout the implementation process.

Problem definition

Romania continues to face below average health outcomes relative to other European Union (EU) countries on measures such as infant mortality, maternal mortality and life expectancy. For example, in 2011 Romania reported the highest level of infant mortality in the EU at 9.8 per 1000 live births, with considerable disparities between urban and rural areas; some rural municipalities reporting infant mortality rates as high as 11.8 per 1000 live births.[2]

Although family medicine is well established, approximately 15% of the population have limited access to care; rural areas and vulnerable populations including pregnant women, children, the elderly and Roma people are among those most affected.[2] Outreach and community-based services are limited and, while social services are available, coordination of these with the health system was lacking. Local authorities at the municipal level are responsible for the organization of community health and social services. However, in many rural municipalities the capacity to effectively manage and organize community health services was found to be suboptimal, hindering the ability to address health disparities in these areas (Box 1).

Box 1
What problems did the initiative seek to address?

- Health outcomes reporting below EU averages and wide health disparities within Romania.
- Inequitable access to services negatively impacting rural areas and vulnerable populations.
- Limited provision of outreach and community services in rural areas and disconnected social services.
- Limited managerial capacity within rural municipalities to fulfil their mandate of organizing community health services.

Health services delivery transformations

Timeline of transformations

Planning for the initiative began in 2010 within the framework of the Swiss-Romanian Cooperation Programme to reduce economic and social disparities within the EU. By supporting local authorities, the initiative hopes to strengthen the availability of relevant health and social services for local communities. The approach taken has five principal action stages (Table 1); by 2015, the first two stages had been completed.

Table 1
What are the key stages of the initiative?

Stage	Description
Stage one: Capacity-building	Local managers were invited to participate in a capacity-building training programme. Participants were identified through a two-step sensitization and selection process. A total of 61 communities across three districts expressed interest and were invited to a conference on community-based integrated care. Of the 61 communities, 18 were selected for capacity-building training. As part of the training process, each community developed a coordinated/integrated community health project proposal.
Stage two: Funding	Funding was granted based on merit for seven out of the 18 project proposals developed during the training programme.
Stage three: Facilitating	Funded proposals will be implemented by local authorities with supervision and guidance from initiative managers. Local authorities will be coached throughout the implementation process and receive assistance with any difficulties they encounter.
Stage four: Documenting	Local authorities will be required to monitor and evaluate funded projects to enable performance and outcomes to be assessed. Additional implementation research will be conducted to document processes, experiences and lessons learnt.
Stage five: Sharing	Documentation on funded projects will be used to capitalize on experiences. Knowledge and experience gained from implementing funded projects will be shared to facilitate wider uptake of successful strategies.

Description of transformations

Selecting services. The initiative has worked to equip local managers with the skills necessary to identify and provide health and social services that meet the specific needs of their communities. Increasing community and outreach services is the main focus, with priority given to services that address the unmet needs of rural and vulnerable populations or those focusing on health promotion and disease prevention for chronic conditions. The specific selection of services varies by the unique needs of each jurisdiction, captured in the proposals put forward.

Designing care. The initiative pilots a range of health projects that have been developed and implemented by local authorities to provide an evidence pool for future interventions. Based on experience gained through these funded pilot projects, guidelines will be developed to direct future interventions, keeping a focus on ensuring care can be tailored to meet the specific needs of local communities.

Organizing providers. Romania has a widespread network of general practitioners in place. Nevertheless, variability in their distribution has contributed to differences in access. Proposals developed through the initiative aim to bring together community actors, including general practitioners, community nurses, social workers and Roma mediators, in collaborative and multidisciplinary projects. Implementation of local initiatives will aim to strengthen the role of general practitioners for improved outreach services in cooperation with other health professionals and social workers. Specifics for the rearrangement of providers will depend on local contexts.

Managing services. Local authorities are supported in the conceptualization, planning, implementation and monitoring and evaluation of efforts to strengthen health and social services integration in their communities. Supervisory support, training and funding has been awarded to seven communities whose proposals were selected for implementation under the initiative.

Improving performance. This initiative has provided capacity-building training to local leaders to equip them with the knowledge and skills to generate health improvements within their local communities and to continue to manage these changes and initiatives

over time. Training was organized in modules which included instruction on the legal framework of health and social services, project development, strategic analysis, operational planning, budget management and monitoring and evaluation. Practical learning opportunities were incorporated into the training and participants developed actual project proposals as part of the programme. Engagement with the training was incentivized by awarding funding to the top 40% of submitted proposals developed during the programme.

Baseline and follow-up surveys in communities participating in the initiative and control sites are planned to allow an assessment of the initiative's impact. Local authorities receiving project funding are expected to implement monitoring and evaluation systems to enable assessment of their specific interventions. Data collected on implemented projects will be used to identify successful strategies and build an evidence pool to inform other community health interventions.

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Comprehensive package of services offered through national health insurance but gaps in access exist, especially for vulnerable or rural populations; limited preventive, community-based or outreach care; lack of coordination between health, social and community services.	Additional community or outreach services tailored to local needs will be offered; services addressing unmet needs of vulnerable or rural populations, as well as those focusing on health promotion or disease prevention, will be prioritized; integrated community care services following a continuum of care logic will be offered.
Designing care	
National care guidelines and protocols in place; limited adaptation to local contexts.	Pilot projects will serve as evidence for future interventions; guidelines for community services will be developed based on pilot experiences.
Organizing providers	
Widespread network of general practitioners, but gaps in health provider access for rural or vulnerable populations; limited number of community health professionals; lack of coordination between health professionals and social workers.	Guided by local authorities, pilot projects will bring together community actors including general practitioners, community nurses, social services and Roma mediators; cooperation and collaboration between different level providers and across sectors will be promoted; specifics for the rearrangement of providers will be determined by the proposals submitted.
Managing services	
Local authorities have responsibility for managing services delivery but lack necessary management capacities.	Management capacities of local authorities strengthened through trainings; additional support and coaching provided to funded projects with concept development, capacity-building, monitoring and evaluation, implementation research and documentation of evidence and lessons learnt.
Improving performance	
Lack of training limits management skills of local authorities; limited local knowledge or tools for generating performance improvements.	Training provided to local managers to increase management skills and ability to generate services delivery improvements; baseline and follow-up surveys will be completed and funded projects will be required to introduce monitoring and evaluation; successful strategies will be disseminated to facilitate wider improvements.

Engaging and empowering people, families and communities
Pilot projects selected by the initiative for implementation focus on encouraging locally adapted, people-centred services which actively reach out to communities and individuals, particularly vulnerable populations and people living in isolated rural areas. The initiative hopes that through engaging and empowering local managers, they will in turn engage and empower local communities.

Health system enabling factors

The initiative is closely aligned with the National Strategy for Health 2014–2020, which has provided a framework and overarching vision for activities (Table 3). The Strategy has called for increased national funding for community health services to be allocated to local authorities. One of the government's long-term goals under this Strategy is to establish a network of community health centres to provide an array of services including health promotion, disease prevention, home care and social services. The Strategy also plans to increase the number of health professionals working within community settings.

Outcomes

As the initiative is in the early stages of implementation, outcomes have not been reported to date. It is expected that the initiative will improve access to care for rural populations and vulnerable groups and reduce current disparities in health outcomes between urban and rural communities.

Change management

Key actors

SDC began planning the initiative as part of a long-term development partnership with the Government of Romania (Box 2). The Government of Romania played a leading role in driving the initiative forward and making necessary funds available; Swiss funds were also put forward to support activities. The CRED Foundation and Swiss Tropical and Public Health Institute were mandated to manage the initiative and support the Ministry of Health of Romania in concept development, capacity-building, coaching and implementation research related to its activities. These organizations were selected through a competitive open bid, where their longstanding work experience in the region contributed to their winning the tender. Both organizations are expected to report to the Romanian and Swiss governments under the terms of their contracts. Over time, local authorities will be expected to take advantage of their strengthened capacities achieved through the initiative and lead delivery of community health and social services for their communities.

Box 2

Who were the key actors and what were their defining roles?

- **Ministry of Health**. Launched a national health strategy supporting development of community services; main partner for the initiative in cooperation with the Swiss government; provides funding initiative activities.
- **Swiss Agency for Development and Cooperation (SDC)**. Instigated development of the initiative as part of a long-term development agreement between the Romanian and Swiss governments; Swiss cohesion funds help support the initiative.
- **Swiss Tropical and Public Health Institute (Swiss-TPH)**. Swiss institute associated with the University of Basel contracted, together with the CRED Foundation, as an intermediary for SDC; supported development of the initiative and provides ongoing oversight over its implementation.
- **CRED Foundation**. Romanian-Swiss nongovernmental organization whose mission

Table 3.
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• National Strategy for Health 2014–2020 supports expansion of community-based health services.
Incentives	• Local authorities competed for project funding available through the initiative; funding was awarded to the top seven project proposals developed during the capacity-building training programme.
Competencies	• Local authorities' ability to guide local health system improvements strengthened through the capacity-building training programme.
Information	• Local authorities received training on conducting situational analyses, mapping health and social outcomes and carrying out monitoring and evaluation.

supports Romanian health system improvements; contracted to support the implementation of the initiative in partnership with Swiss-TPH.

- **Local authorities**. Responsible for delivery of community health and social services at the local level; participated in capacity-building trainings offered through the initiative; selected authorities will implement and evaluate community health projects awarded funding under the initiative.

Initiating change
The initiative was designed to complement the vision laid out in the Romanian government's National Strategy for Health 2014–2020. Establishment of a framework for the Swiss-Romanian Cooperation Programme to reduce economic and social disparities within the European Union, coupled with a long history of understanding between these two governments, opened up the necessary resources and funding for the initiative to take place.

Implementation
The CRED Foundation and Swiss-TPH worked in partnership to deliver capacity-building trainings and support development of community project proposals. With seven proposals now selected for implementation, these organizations are now shifting their focus towards providing ongoing support and coaching to community project managers during the implementation of funded projects. Later, these organizations will also be responsible for overseeing the evaluation of the initiative as a whole and coordinating the dissemination of lessons learned. While support and coaching will be provided, local authorities are expected to take on the lead management role in the design and delivery of community-based health and social services and the initiative has been designed to put local authorities "in the driving seat to develop and implement local solutions to local health and social problems".

Moving forward
The initiative continues to progress through the five stages of its action plan to promote sustainable improvements in local health and social services delivery. Currently entering the third stage, the initiative is working to facilitate the implementation of seven community health projects. Given the strong focus on generating sustainable capacity improvements throughout the initiative, it is expected that local authorities will continue to lead improvements in community services for their local populations upon its completion.

1 World Health Organization (2015). European health for all database. Available from: http://data.euro.who.int/hfadb/
2 Fota, N., & Zahorka, M. (2013) Integrated community health services in rural Romania. [Powerpoint slides]. Retrieved from http://edoc.unibas.ch/29670/.

Advancing nursing roles to improve disease prevention services in Samara, Russian Federation

Overview

Declining life expectancy and rising population health needs throughout the early 1990s in the Russian Federation placed added strain on the capacity of physicians to effectively manage the population's needs. In response, starting in the mid-1990s, Polyclinic 15 – responsible for the provision of care for 73 000 residents across 36 urban districts in Samara oblast, – led an initiative to expand health promotion and disease prevention services by advancing nursing roles. Under the initiative, nurses received training from Samara Medical University and the Samara Centre for Professional Qualification Education, with complementary practical trainings provided by physicians at Polyclinic 15. Additionally, between 1999 and 2004, a partnership with the American International Health Alliance provided opportunities for a series of international exchanges to help develop new scopes of practice and guidelines for providers working at Polyclinic 15. To support changes in nursing roles, several adjustments to infrastructure were carried out at Polyclinic 15, including the introduction of electronic medical records and a new scheduling system. As a result of the initiative, nurses have a greater role in the delivery of care and now spilt their time between assisting physicians and independently receiving patients. Examples of services that nurses are now trained to conduct independently include home care visits, cancer screening exams and blood glucose tests. Additionally, comprehensive health screenings with risk-assessment questionnaires were introduced for all patients at Polyclinic 15. Patients with identified health risks, such as high blood pressure or tobacco use, are referred to patient health education classes taught by nurses. These screenings have contributed to Polyclinic 15 observing increases in the early detection of health problems and reductions in emergency calls and hospitalizations. Health data is monitored by administrators of Polyclinic 15 to identify needs and areas for improvement, as well as to ensure quality standards are met. Furthermore, health providers' salaries are partly based on a composite score, reflecting both individual and group performance, helping to incentivize teamwork, efficiency and quality improvements. Polyclinic 15 has been recognized within the Russian Federation as an innovative best-practice model and continues to adapt to the changing health needs of its local population.

Problem definition

The Russian Federation has seen declines in population health with life expectancy falling to 65 years in 2000 – a number nine years below the WHO European Region average of 74 years that same year.[1] Health services in the Russian Federation were highly specialized and took a reactive rather than proactive treatment approach. The system's centralized structure maintained a hierarchical professional model, placing the responsibility of providing services almost entirely on physicians and leaving nurses with a limited scope of practice. Together the effects of declining population health, increasing rates of risky behaviour including tobacco and alcohol use and growing population health needs, increasingly exposed shortcoming in the delivery of services by overburdened physicians working in polyclinics (Box 1).

Box 1
What problems did the initiative seek to address?

- Worsening health outcomes throughout the mid-1990s, evidenced by declining life expectancy.
- High prevalence of risky health behaviours in the population.
- Reactive rather than proactive orientation of services; limited

- availability of health promotion and disease prevention services.
- Restricted scope of practice for nurses leaving physicians overburdened.

Health services delivery transformations

Timeline of transformations

In 1995, the regional government for Samara implemented a new model of health system financing and adopted policies to support strengthening of primary care. Within this context, Polyclinic 15 adopted an initiative to advance nursing roles to enable the expansion of health promotion and disease prevention services (Table 1). With recent national attention on health reform, many of the actions taken by Polyclinic 15 are being elevated to the national level through the launch of the Health Care Development Programme in 2012.

Description of transformations

Selecting services. Services at Polyclinic 15 have been expanded to include health promotion and disease prevention. Health risk screening assessments have been introduced for all patients and help to identify local population health needs, with services adapted accordingly. Patient health education programmes or "schools" on approximately 20 priority conditions - including cardiovascular disease, breast cancer and diabetes - have been created to provide health education to patients with identified health risks. "We analyse the risk factors and estimate what kind of disease is creating the biggest and the most relevant risk to our patients. We then focus on that disease and develop a school that tackles this problem." Additionally, a new women's wellness centre has expanded family planning services for women. The centre also runs breast cancer awareness and screening programmes, as well as

Table 1
What were the chronological milestones for the initiative?

1995	New economic model of health financing adopted in Samara; polyclinics become main budget holders, giving them greater responsibility over the organization and delivery of health services.
1996	Conception for Development of Health Care in Samara 1996–2000 passed by the regional government; developing primary care to the principles of family medicine established as a key goal.
1996–1997	Polyclinics across Samara begin the reorganization process to strengthen primary care and expand provision of preventive health services; Polyclinic 15 emerges as a model example of reform.
1998	Electronic medical records introduced within Polyclinic 15.
1999–2004	Partnership between Polyclinic 15 and the American International Health Alliance supports the expansion of nursing expertise and scope of practice.
2006	National Priority Project – Health launched with the aim of strengthening primary care and modernizing health facilities across the Russian Federation; Polyclinic 15 receives resources under the Project.
2012	Health Care Development Programme sets national standards for preventive services; Programme aligns with standards already established by Polyclinic 15.
Present	Continued support for strengthening of the role of nurses and expanding services delivery within Polyclinic 15.

targeted health programmes for menopausal and postmenopausal women. A special branch for pediatric care has also been established.

Designing care. To support advanced nursing roles, standardized guidelines and protocols for services delivered by nurses have been created based on algorithms published by the Russian Association of Nurses. Evidence-based care guidelines have also been updated for priority conditions such as asthma, hypertension and diabetes in partnership with Samara Medical University. Risk assessment questionnaires have been developed

to identify patients with health risks and advise them to attend the relevant health schools.

Organizing providers. Polyclinic 15 serves a population of 73 000 people across 36 urban districts. It employs approximately 600 medical workers, of which 190 are physicians and 240 middle medical workers, such as nurses. Under the initiative, task shifting from physicians to nurses has been a main focus and new job descriptions for these providers were developed to support changes. Examples of new nursing responsibilities include conducting home care visits, cancer screening exams, blood

glucose tests and patient education programmes. Providers' schedules have been adjusted to allow nurses to perform these new functions. Nurses now spend the first two hours of each five-hour nursing shift assisting physicians, however for the remaining time, nurses work independently receiving their own patients and teaching in patient schools. Nurses and physicians are co-located in the same office facilitating collaboration and teamwork as needed. Introduction of electronic medical records has enabled information sharing between all health providers in Polyclinic 15 and a new electronic scheduling system has improved time efficiency by enabling providers to "forecast what is required from them for a certain day".

Managing services. Polyclinic 15 is responsible for financing patient care within their catchment area, giving them responsibility over the organization and delivery of health services. The budget for Polyclinic 15 is assigned based on weighted capitation payments. Necessary investments for the initiative, such as upgrading technology to implement electronic medical records, were financed from the regular budget. However, Polyclinic 15 also benefited from an infusion of resources in 2006 from the National Priority Project – Health.

Improving performance. All health providers at Polyclinic 15 received ad hoc trainings on general practice through the initiative. Nurses were trained for their new roles through three-month physician-led courses in the workplace. A series of additional trainings, workshops and international knowledge exchanges were also provided through a partnership with American International Health Alliance. To sustain knowledge improvements, the Samara Centre for Professional Qualification Education has taken on a key role in developing training programmes and Polyclinic 15

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Guaranteed basic package of services; limited health promotion or disease prevention services.	Expanded services package includes health promotion, screening and disease prevention; new women's wellness centre offers improved family planning and female health services.
Designing care	
Absence of guidelines or protocols to guide delivery of care by nurses.	Evidenced-based guidelines created to assist nurses to fulfil expanded roles; risk assessment questionnaires developed to help identify and categorize patients' health risks.
Organizing providers	
Nurses work as physician assistants without an independent role; physicians overburdened and have limited time to spend with each patient; paper medical records held by physicians.	Shift of responsibilities from physicians to nurses; nurses divide their time between assisting physicians and receiving patients independently; electronic medical records enable information sharing between nurses and physicians.
Managing services	
Outdated infrastructure restricts effective services delivery.	Technological investments made to introduce electronic medical records and a new scheduling system; medical resources updated with government and international funding.
Improving performance	
Nurses lack necessary skills to take on more advanced roles; paper medical records inhibit timely performance assessment.	Nurses participate in a series of additional on-the-job and ad hoc trainings to develop necessary skills for independent practice; new performance indices introduced to track provider performance using new electronic systems; performance indices monitored closely and adapted as necessary to respond to changing needs.

providers now receive accredited continuing education every five years. "No matter how hard workers of our polyclinic try to educate other workers, we will not provide as good an education as the one provided by the Centre because they are qualified and sanctioned to do that."

A rigorous performance assessment system for providers at Polyclinic 15 has been implemented to drive efficiency, with specific performance indices for nurses also developed. Polyclinic 15 monitors and analyses performance indices to identify possible areas for improvement. Performance indices are adapted based on identified priority needs and bonus indices are in place to motivate additional work. Furthermore, Polyclinic 15 partners with other polyclinics for auditing purposes, with audits described as helping keep Polyclinic 15 "in shape".

We are constantly analysing the general condition of our patients and then make decisions on how to tackle certain risks and problems. After that we monitor the work done and see whether our work was fruitful or not. We try to identify on what step or on what level we made a mistake, if we did. Indices tend to be responsive to what we find as the most relevant problems currently. If, for example, influenza is the most important problem, we consider indices in the work of the nurse related to influenza. That is how the problems and risks are resolved. As soon as one problem is resolved, we repeat monitoring and identify a different problem which is more acute.

Engaging and empowering people, families and communities
Polyclinic 15 established a website where people can learn about the services provided and access general health information. A patient satisfaction survey has also been added to the website allowing feedback to be collected from patients. A key area of activity for the initiative has been the creation

of patient schools where nurses teach health promotion, disease prevention and chronic disease management classes for patients. Schools typically run for five days per topic with 10 to 20 patients per session; relatives may also be invited to participate.

Health system enabling factors

Samara has demonstrated a strong regional commitment to strengthening the health system in recent decades, with Polyclinic 15 standing out as a model example within this supportive context (Table 3). Recently, the national government proposed a series of health system reforms, helping to standardize and formalize the activities of Polyclinic 15 at the national level and providing supplementary resources to the initiative.

The National Priority Project – Health, launched by the Russian government in 2006, encouraged local experimentation with provider incentive mechanisms. Providers received a basic salary increase, as part of the project, but additional financial incentives linked to provider performance were also introduced. The administration for Polyclinic 15 uses a composite score of performance indices to track providers' performance. The system works transparently and providers receive salaries in accordance with their performance each month. Some indices within the composite score can be altered as population needs change, giving Polyclinic 15's administration influence over health providers' priorities. Additionally, the launch of the national Health Care Development Programme in 2012 established national standards for preventive services, reinforcing those already implemented by Polyclinic 15.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• National-level reforms, notably the National Priority Project – Health and the Health Care Development Programme, introduced new standards for health services delivery.
Incentives	• Health providers' salaries are linked to a composite performance score; indices included in the score change to reflect current health priorities.
Competencies	• Samara Medical University supported competency strengthening to advance nursing roles at Polyclinic 15.
Information	• Information collected on patients' health status and risk level used to inform the prioritization and creation of services at Polyclinic 15. • Performance indices closely monitored and evaluated by Polyclinic 15 administration.
Innovation	• New performance indices developed; multiple indices combine to assign providers a composite performance score.

The advancement of nursing roles in Polyclinic 15 has been supported by Samara Medical University and the Samara Centre for Professional Qualification Education through educational support and guidance on new training programmes for nurses. Samara Medical University also offers both diploma and Master's level nursing programmes, enabling senior nurses from Polyclinic 15 to strengthen professional competencies through completing higher education.

Outcomes

Polyclinic 15 has been recognized as a successful innovator in primary care.[2] A number of improvements relating to patient outcomes, efficiency and process indicators have been observed as a result of the initiative, notably improved access to providers, improved screening rates with earlier detection of screened conditions and increased patient participation in health education (Box 2). Patients have generally been responsive to receiving care from nurses instead of physicians and now indicate that being seen by the nurse is reassuring because it is a "sign their condition is not as bad".

Box 2
What were the main outcomes of the initiative?

- Time-efficiency gains derived from the new scheduling system and task sharing with nurses have improved access to providers for patients; physicians report having more time to spend with high-risk patients.
- The number of patients receiving health risk assessments from nurses almost tripled from 2267 in 2007 to 6675 in 2012.
- Improved screening has increased detection of diseases in less advanced stages; disease complications and need for hospitalization have reportedly declined as a result.
- Participation in health education schools increased from approximately 1000 patients in 2006 to 11 000 in 2014; schools help empower patients to improve their health and self-manage care.

Change management
Key actors
Leadership by the administration of Polyclinic 15 enabled the development of the initiative and carried it forward with support from multiple actors (Box 3). "The administration motivated us to start working on this initiative." Providers across departments at Polyclinic 15, including both nurses and physicians, provided input on the development of activities and worked together as a team to implement changes. Development of new guidelines, care standards and training programmes for nurses was supported by various partners including the Association of Nurses, Samara Medical University and the Centre for Professional Qualification Education. Additional resources and technical support for activities came through an international partnership with the American International Health Alliance. Active promotion of the initiative by its leaders was successful in later gaining recognition, funding and support from the Samara Ministry of Health. Today, providers at Polyclinic 15 work closely as a team in adapted roles to deliver care to patients. The administration of Polyclinic 15 continues to support the advancement of nursing roles to further improvements in care.

Box 3
Who were the key actors and what were their defining roles?

- **Administration for Polyclinic 15**. Led development of initiative; provided in-house trainings for nurses; promoted initiative and advocated for external funding to support activities; developed new performance indices and adjusted financing mechanisms to incentivize performance improvements; performs ongoing monitoring of health outcomes and performance data.
- **Samara Ministry of Health**. Provided funding for the initiative; revered Polyclinic 15 as a best-practice model.
- **Association of Nurses**. Provided funding for educational opportunities for providers at Polyclinic 15; assisted in the development of new nursing guidelines and standards for Polyclinic 15.
- **American International Health Alliance**. Hosted Russian nurses in knowledge exchange programmes; provided training and educational materials for Russian nurses.

Initiating change
Expansion of nursing roles was identified by the administration of Polyclinic 15 as a means to achieve greater efficiency and expand the provision of services within current system constraints. Despite an absence of similar initiatives nationally, strong support from Polyclinic 15 administration allowed the initiative to develop in a "vacuum". As Polyclinic 15 had full control over its health budget and organization of health services, external support for the initiative was largely unnecessary for initiating change. Nevertheless, external support and funding was later sought by leaders through extensive

promotion of the initiative, enabling its further advancements.

Implementation

Clear standards and expectations were put in place to ensure a common understanding of each professional's new responsibilities, with both physicians and nurses at Polyclinic 15 providing input during the development of these. All health providers at Polyclinic 15 received training as part of the initiative, a factor considered important for successfully overcoming traditional professional hierarchies. Furthermore, having physicians lead practical in-house trainings for nurses gave physicians ownership over changes and enabled them to observe nurses' skills develop, increasing their confidence in the abilities nurses. Nurses responded positively to their roles and responsibilities and reportedly "enjoy observing patients in the same way as doctors". Nurses also appear to be motivated by statistics which show improved health outcomes for their patients and feel "proud of the work they do". Polyclinic 15's administration closely monitors performance on an ongoing basis and initiates adjustments as needed, relying heavily on data to inform changes and priority areas.

Moving forward

The administration of Polyclinic 15 continues to support the advancement of nursing roles and hopes to further develop nurses' understanding of performance indices to help motivate additional services delivery improvements. Polyclinic 15 recognizes the importance of sharing their experiences and contributing to the development of nursing recommendations at the national level.

Highlights

- High levels of autonomy supported the development of innovative practices.
- Changes to professional scope of practice helped overcome capacity barriers.
- International partnerships supported transfer of knowledge and advancement of new practices.
- Continuous training, backed by supportive legislation, helped to institutionalize new practices.
- Patient education was offered to help empower patients to adopt healthy lifestyles and increase self-management of care.

1 World Health Organization. (2015). *European Health for All Database.* Retrieved from http://data.euro.who.int/hfadb
2 American International Health Alliance. (2009). *Samara and Stavropol, Russia / Iowa*. Retrieved from http://www.aiha.com/_content/3_What%20We%20Do/Archives/HealthcarePartnerships/SamaraStavropolIowa.asp

Integrating health and social services in San Marino

Overview

Since the early 2000s, San Marino has faced rising rates of chronic disease and multimorbidity in the context of an ageing population, placing growing pressure on health and social services to effectively coordinate and manage complex care needs. In 2006, the government adopted the first social health plan, outlining a strategy for the integration of health and social services under a single organization. Health and social sectors were united with a single budget and common objectives managed by the Social Security Institute. Redesign of care pathways and protocols to support integration has helped standardize services provided, drive efficiency improvements and increase accountability. This has included the development of a protected hospital discharge pathway, which brings health providers, social workers and informal caregivers together to collectively design care plans. Due to San Marino's small size – with only one hospital and three primary health centres to cover population needs – providers worked in close proximity to one another and had close, collaborative relationships across sectors. A shared electronic information system has been developed to increase connections between providers and facilitate information sharing the introduction of peer-led training sessions aim to support knowledge sharing across disciplines. At present, the Social Security Institute continues to focus on "the whole system" and collectively plan future directions in an integrated and collaborative way, seeking input from all stakeholders. Upgrades to the information system are currently underway to provide the Social Security Institute with data to support evidence-based system planning.

Problem definition

Over the past two decades, San Marino has seen rising levels of chronic disease and multimorbidity, which are expected to continue given population ageing trends. In this context, greater demand has been placed on both health and social services to coordinate and effectively meet population needs (Box 1). Despite San Marino's small size, separate management of health and social sectors hindered effective coordination of services, contributing to inefficiencies in care delivery.

Box 1
What problems did the initiative seek to address?

- Ageing population with increasing chronicity and multimorbidity.
- Increasing demands for greater coordination between health and social services.

Health service delivery transformations

Timeline of transformations
In 2004, the Government of San Marino began the process of integrating the health and social services system to improve care coordination and efficiency, publishing the first social-health plan to guide this process in 2006.

Description of transformations
Selecting services. A comprehensive package of health and social services is available to the population, with efforts continuously made to expand health promotion, disease prevention and outreach services. Recently, this has included expanding cancer-screening, encouraging the use of preventive services such as the influenza vaccine, and strengthening homecare services. Agreements with the Italian government allow patients to have access to highly-specialized services not available in San Marino.

Designing care. Evidence-based care pathways have been developed with input from clinical experts to help standardize services delivery. Care pathways are continuously updated and improved; "we are trying to make the care pathway better all the time. ... We try to do our best to follow these patients in the best possible way." The integration of health and social services has led to the development of a protected hospital discharge pathway, bringing health providers, social workers and informal caregivers together to collectively design care plans in an effort to avoid hospital readmissions. Additionally, new pathways have been introduced to include patients in care decision-making. Providers inform patients of care options and provide information to enable meaningful patient participation. Families and caregivers are also included in this process.

Organizing providers. San Marino has three primary health centres, on average one per 10 000 population.[1]

Each centre houses six to seven general practitioners, nine nurses and a mix of other professionals, such as psychologists and gynaecologists. General practitioners act as gatekeepers to care and "it is the rule that patients must go to general practitioners" instead of directly seeking higher-level services. "When patients go directly to the specialists, the specialists feed-back to general practitioners. … The patient is educated to start from the general practitioner next time." San Marino has one centrally located hospital, from which the maximum journey time is 20 minutes with an average journey time of 10 to 12 minutes.[1] In addition to specialists, the hospital houses social workers, public health professionals and health administrators.

As a result of the integration of health and social sectors at the system level, coordination across services delivery has increased. Multidisciplinary teams have been developed to pool expertise and deliver more coordinated care to patients.

If there is needed some help at home we can already ask social assistants about the things the patient needs. And the multidisciplinary team all know the condition of the patient the moment they leave the hospital. The multidisciplinary team all have parts in this group.

Due to San Marino's small size and close physical proximity of providers, interprofessional communication and collaboration was high prior to the initiative, with collaboration often occurring informally between the two sectors. "Professionals really know other professionals. We all know each other." The initiative has served to formalize these connections across care levels and disciplines. To further enhance coordination and continuity, a shared information system has been developed across all levels of health and social services. In addition, shared radiographic digital imaging has been incorporated into this system.

Managing services. The Social Security Institute has been established as the single authority responsible for managing health and social services. Within the Institute there are three departments: prevention (environmental, occupational and public health), hospital (hospital and specialist care) and health and social services (primary care, mental health, services for the elderly and maternal and child health). Each department has a steering committee, which meets regularly. The heads of each department are members of the Executive Committee within the Social Security Institute. "The departmental model has established multi-professional representation in the Committees of the department and, therefore, the possibility to better exploit

Table 1
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Comprehensive package of health and social services available free-of-charge to population; highly-specialized services available in Italy.	Expansion of health promotion, disease prevention and outreach services; increased home-care services for elderly population.
Designing care	
Absence of formal protocols for majority of care "because it was so easy for providers to call and ask other providers what to do"; strict protocols in place for ambulatory care.	Care pathways formally defined and protocols implemented to control quality and efficiency; clinical experts helped design pathways and continue to inform improvements; new pathways more inclusive of patients.
Organizing providers	
One hospital and three primary health centres serve population; small population size and close proximity facilitate close interprofessional communication and collaboration; general practitioners act as gatekeepers to care and have close relationships with patients.	Providers across the health and social system continue to work closely; multidisciplinary teams collectively design coordinated care plans for patients; shared information system connects providers to give access to "the same computerized information".
Managing services	
Separate health and social services departments manage care delivery in silo.	Social Security Institute established to jointly manage health and social services.
Improving performance	
Sporadic availability of training opportunities for providers.	Regular programme of continuing education; informal peer-led courses offered.

the skills and the value of other professions."

Improving performance.
Professional continuing education courses are available to health and social services providers. An annual programme of available courses is published by the Social Security Institute. In addition to formal training opportunities, informal education sessions led by providers are held at the hospital. "We are organizing small courses in the hospital, usually in the afternoon, where we see each other for certain things we want to do better." A substitute general practitioner is available to take the place of another provider wishing to attend trainings if needed.

Engaging and empowering people, families and communities
A special office has been established to manage feedback between the population and the Social Security Institute. Patients are able to share their opinions and file complaints through this office. This service is "the way by which the patient can have a dialogue with the Social Security Institute". Patient associations also play an important role in representing patients' voices. The Social Security Institute has encouraged participation from these associations, who are subsequently becoming more involved in planning processes. "When we have, for example, a meeting about a specific topic, the population participates. We have a lot of interactive discussions."

Health system enabling factors

The first social health plan in 2006 advocated for integration of health and social services at the system level and laid out the main points for how integration was to be achieved. This policy provided the framework for the initiative to take shape (Table 2). The main feature of this first social health plan was to establish the Social Security Institute as the single authority responsible for

managing health and social services. The Social Security Institute is responsible for annual planning to achieve long-term goals laid out by the Ministry. Annual plans detail short-term objectives and assign the annual budget. Discussions surrounding the development of the Social Security Institute's annual plans are inclusive, with the government, clinical experts and general population all providing input. Although health and social system planning had previously been controlled by politicians, significant contributions and representation of clinical experts at the system level now enable development of more practical proposals. Annual plans must still be approved by the Ministry of Health. The Social Security Institute has just one budget

for all health and social services and consequently plans these services in an integrated way.

The budget, in this case, is not a mere economic instrument, but it is a complex and dynamic tool for annual programming that contains objectives (process and outcome), human resources, economic resources, equipment and – the most important thing – the links and the integration targets.

The "budget is a goal" and is somewhat flexible based on needs. Providers have set levels of expenditures and are discouraged from exceeding allocated funds. All providers can freely access the claims and expenses data of other providers through an

Table 2
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Social-health plan guided integration of health and social sectors. • Ministry of Health responsible for long-term planning of the health and social system. • Social Security Institute responsible for management of the health and social system under direction of the Ministry of Health; Institute is responsible for short-term planning and annual budget decisions.
Incentives	• Shared budget for all departments encourages collaboration and integrated working at the system level. • Providers' expenses openly available to all providers, creating strong financial accountability and incentivizing appropriate care practices.
Competencies	• Intersectoral teams within Social Security Institute "better exploit the skills and the value of other professions".
Information	• Information system being updated and expanded to support data collection for system planning by the Social Security Institute and Ministry of Health. • Health and social care experts included in system planning process; clinical experts, not politicians, design the system.

open information system. This has introduced a high level of transparency among professionals and discourages unnecessary expenditures.

Investments have been made to equip care facilities with the technology needed to connect to the shared health and social information system and the hospital was recently equipped with a wireless network. To enable greater use of data in future decision-making, the shared information system is currently being upgraded to "be more complex and structured so we can have statistics". The evolution of the information system will provide the Social Security Institute with full data on medicines, technologies and activities for both providers and patients across the entire health and social system.

Outcomes

Impact directly attributable to the integration of health and social sectors is difficult to determine, but it is believed that reforms have improved cost-effectiveness of care and encouraged greater coordination among providers.

Change management

Key actors

While the design and planning of system reforms to integrate health and social sectors was led in a top-down approach by the Ministry of Health, changes have felt largely organic as a result of San Marino's small size and close-knit community which favoured collaboration with multiple stakeholders (Box 2). While the Ministry of Health led the reform process, input on changes was sought from both providers and patients. All stakeholders were given a voice and were able to influence

reforms. Rather than politicians dictating the system, clinical experts significantly contributed to the design process, enabling the development of practical solutions to drive change.

Box 2
Who were the key actors and what were their defining roles?

- **Ministry of Health**. Led development of first social-health plan; established Social Security Institute as the single authority responsible for coordinating health and social services; guides Social Security Institute by setting three-year programmes detailing long-term goals.
- **Social Security Institute**. Single authority responsible for managing and coordinating health and social services; develops annual programmes detailing budgets, goals and objectives in line with long-term Ministry of Health goals.
- **Health and social care providers**. Work collaboratively to deliver coordinated/integrated health and social services to patients; coordinate peer-led training workshops; provide expert input on guidelines and protocols developed by the Social Security Institute.

Initiating change

San Marino has a long history of providing health and social protection to its population. This cultural context was important for helping to establish formal links between health and social sectors in response to emerging demographic pressures on the health and social care system.

Implementation

Reforms reinforced already widespread informal practices in health and social services delivery and nurtured the existing community spirit stemming from mutual respect, collaboration and effective communication. Due to San Marino's small population size, all professionals within the health and social sector have strong working relationships. Patients, for the same reason, also have close relationships with providers. A sense of connectedness and willingness to collaborate derives from these close ties, which has been essential for ensuring coordinated and continuous care to patients through integrated services delivery.

Moving forward

The Social Security Institute continues to focus on "the whole system" and collectively plan future directions in an integrated and collaborative way, seeking input from all stakeholders.

Highlights

- Familiarity and close professional relationships between the health and social care sector were integral to the development of the initiative.
- Integration of management structures at the system level provided a strong platform from which to drive integration at the services delivery level.
- A focus on peer-led multidisciplinary education and trainings provided professionals with improved knowledge of each other's disciplines and fostered mutual respect.

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1 Pasini, P., & Aalders, M. (2011). *Virtual Study Trip to Integrated Care in San Marino*. Odense: International Network of Integrated Care. Retrieved from http://www.integratedcare.org/Portals/0/congresses/Pasini%20Virtual%20Studytrip%20SM.pdf

Introducing palliative care services in Serbia

Overview

Serbia faces the burden of an ageing population with rising prevalence of chronic disease, notably cardiovascular disease and cancer.[1] Consequently, the health system has been confronted with the need to effectively manage long-term care, shifting treatment goals to focus on continuous disability reduction and maintenance of quality of life, rather than acute, curative interventions. Observing gaps in the provision of services for terminal patients, in 2004, the Ministry of Health established the Palliative Care Task Force (PCTF) to develop the National Palliative Care Strategy. In March 2009, the Strategy was adopted by the and the Ministry of Health applied for funds from the European Union (EU) to support its implementation. The subsequent EU-funded project – Development of Palliative Care Services in the Republic of Serbia (DPCS) – took place between March 2011 and November 2014, supporting the establishment of numerous palliative care units across the country and vehicles for home-care services. Funding also served to strengthen providers' competencies through trainings led by the DPCS project team and palliative care training has since been incorporated into formal medical education. Efforts to formalize training have helped instill a new palliative care philosophy among providers to root palliative care services into the basic package of care provided.

Problem definition

Throughout the early 2000s, a growing elderly population in Serbia – with almost a fifth (17%)[1] of the population over the age of 65 in 2004 – posed new challenges for the Serbian health system (Box 1). Changing demographics have contributed to an increasing prevalence of chronic disease, namely cardiovascular disease and cancer.[2] Palliative care was an undeveloped concept within the country and a concentration of acute end-of-life services in hospital settings failed to allow adequate focus on maintaining quality of life or reducing disability for terminal patients.

Box 1
What problems did the initiative seek to address?

- Ageing population with increasing rates of chronic disease and progressive illness.
- Acute, reactive focus of end-of-life services.
- Concept of palliative care in Serbia underdeveloped.

Health services delivery transformations

Timeline of transformations
In response to pressure to meet growing palliative care needs, the Ministry of Health formed a Palliative Care Task Force in 2004 to guide the development of palliative care in Serbia (Table 1). A National Palliative Care Strategy was adopted in 2009 and €4.1 million in EU funds were secured to support activities under the Development of Palliative Care Services in the Republic of Serbia (DPCS) project which ran from 2011 to 2014.

Description of transformations
Selecting services. Palliative care services have been made available across primary, secondary and tertiary care levels. Palliative care services now offered include pain and other symptom management, counselling, mental health services and occupational therapy. Social services, while already integrated within the health system, have been expanded in scope to provide complementary palliative care services, such as bereavement and support services for informal caregivers.

Designing care. Frameworks and a model of care defining the roles of each professional delivering palliative services, have been established drawing on evidence from international examples, predominantly from the United Kingdom. A list of essential palliative drugs has also been defined. Patient pathways and palliative care guidelines help inform providers about best palliative care practices at each level of care.

Organizing providers. Palliative care services are offered in home, institutional and hospital settings, depending on the most appropriate location for patients' needs. Increasing emphasis has been placed on providing care in community settings. Scope of practice for providers across care

Table 1
What were the chronological milestones for the initiative?

Early 2000s	Growing need for holistic end-of-life care; absence of palliative care concept and actors in this area.
2004	First Serbian doctor obtains a postgraduate diploma in palliative medicine and establishes BELhospice as a charitable palliative care organization; Palliative Care Task Force formed by the Ministry of Health to guide national development of palliative care.
2005	European conference on palliative care held in Belgrade.
2007–2008	Designing and planning stage for the National Palliative Care Strategy.
2009	National Palliative Care Strategy officially adopted by the government.
2011	Three-year EU grant awards €4.1 million to developing palliative care in Serbia under the DPCS project.
2014	Eight-month extension granted for finalization of the DPCS project.
Present	Concept of palliative care integrated within the health and social care system.

settings – including physicians, hospital and community nurses, physiotherapists, occupational therapists, specialist physicians and pharmacists – has been expanded to include new roles in palliative care delivery. New specialized palliative care physician and nurse profiles have been introduced. Social care experts to consult on the delivery of palliative services in secondary and tertiary facilities have also been added. To overcome fragmented communication between providers, the Ministry of Health is currently in the process of developing new laws to allow for the development of a common information system.

Managing services. During the DPCS project, responsibility for the development of palliative services was delegated to the DPCS project team under guidance from the Ministry of Health. Local health councils also played a role in management of palliative care services at the local level. The Ministry of Health funded the development and reconstruction of numerous dedicated palliative care units within hospitals to support services delivery and EU funds were used to purchase 52 vehicles to facilitate community-care provision.

Improving performance. Trainings were offered to a wide variety of health professionals to strengthen competencies in palliative care. Trainings included education on the palliative care philosophy, new models of care and guidelines developed for palliative services, as well as strengthening of non-clinical skills such as provider-patient communication.

Engaging and empowering people, families and communities
While patient-provider communication was previously constrained by cultural reluctance to openly discuss death and dying, trainings provided by the DPCS project team have focused on increasing the communication between providers and patients, as well as between providers and caregivers or family members of patients. By improving communication, patients can be more meaningfully involved throughout the care process and engaged in decision-making. In addition, the initiative has helped raise patient awareness of palliative care through various media channels, a website and a special awareness day, which have helped to stimulate broader societal conversation on the topic.

Health system enabling factors
A complex interplay of wider health system factors enabled the successful development of palliative care in Serbia (Table 3). Strong ministerial support and collaboration across government sectors facilitated the development and implementation of the National Strategy for Palliative Care. Legislation was enacted to officially recognize nongovernmental organizations (NGOs) and charitable organizations as actors in palliative care, allowing involvement of these organizations in services delivery. Certification for completing palliative care trainings was introduced as a non-financial incentive to engage providers and to ensure sustainability of training in palliative care, meetings with medical schools led to the integration of palliative care education into formal curricula.

While assessment of the initiative has not yet taken place, the planned development of a coordinated health information system will assist in data collection and monitoring in the future. The government is currently in the process of developing the necessary legal framework to permit development of this coordinated health information system.

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
No concept of palliative care in Serbia; treatment for progressive disease focused on provision of acute care services; limited provision of social care services as part of basic service package.	Services delivery continuum expanded to include palliative care; palliative services include clinical pain and symptom management, mental health services and physical therapy; expanded social support for patients and caregivers.
Designing care	
Limited guidelines on the management of chronic symptoms in place; no standards for palliative care.	Palliative care guidelines and pathways designed based on international best practices; list of essential palliative drugs defined.
Organizing providers	
Little interaction between providers across care levels; no unified system for communication between providers.	Palliative care offered in a variety of settings including patients' homes, residential institutions and hospitals; specialized palliative care provider profiles introduced; development of a unified communication system underway.
Managing services	
No dedicated palliative care resources.	DPCS project team managed development of palliative services under guidance from the Ministry of Health; local health councils responsible for developing palliative services at the local level; government and EU funds supported necessary investments to enable delivery of palliative care services.
Improving performance	
Limited training in palliative care.	Trainings provided on palliative care and related non-clinical skills; trainings conducted across disciplines and care levels, reaching 1200 professionals.

Table 3

How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• National Strategy for Palliative Care developed via intersectoral collaboration between Ministry of Health and Ministry of Social Welfare. • Legislation enacted to legalize NGOs and charities as actors in palliative care, allowing involvement of these organizations in services delivery.
Incentives	• Certification awarded to health professionals for completing training in palliative care.
Competencies	• Palliative care incorporated into formal medical school education.
Information	• Development of a coordinated health information system underway.

Outcomes

Formal evaluation of the initiative has not yet taken place. The initiative is believed by leaders to have strengthened the provision of end-of-life services in Serbia and successfully embedded the palliative care philosophy into the delivery of health and social services.

Change management

Key actors

Motivation of an individual health provider to address observed challenges resulting from a lack of palliative care led them to seek out training in palliative medicine and establish a charitable organization to obtain greater legitimacy and authority with policy-makers. Through advocacy efforts, providers successfully brought the need for palliative care to the attention of policy-makers and joined the newly-formed government Palliative Care Task Force which led the development of palliative care in Serbia along with cross-ministry support and EU funding (Box 2).

Box 2

Who were the key actors and what were their defining roles?

- **Ministry of Health.** Adopted the National Strategy for Palliative Care; enacted legislation to support the initiative.
- **Palliative Care Task Force.** Developed the National Strategy for Palliative Care.
- **Development of Palliative Care Services in Serbia (DPCS), EU funded project.** Project team provided palliative care expertise, united stakeholders behind the initiative, facilitated the implementation process and trained professionals in palliative care.
- **Health Insurance Scheme.** Reworked reimbursement system to incorporate palliative care services and medicines, creating sustainable financing for services.
- **Medical schools.** Incorporated palliative care into curricula allowing for sustainable provision of provider training in palliative care.

Initiating change

Grassroots action was successful in advocating for change at the government level which led to the establishment of the Palliative Care Task Force. A conference on palliative care organized by the newly-founded Task Force was instrumental in driving change as it united stakeholders, created a tipping point for political buy-in and provided information to guide policy development and the National Strategy for Palliative Care. Through the conference, government representatives were able to understand why palliative care was an important investment and how it could be integrated into the health system; experience and authority of international actors was vital to achieving government support.

Implementation

Recognition of the importance of palliative care at the clinical level was achieved by soliciting health professionals through written invitations to participate in stakeholder discussions. Training organized by the DPCS project team equipped providers with the necessary knowledge to follow new palliative care frameworks.

The DPCS project team was instrumental in providing expert knowledge and running trainings for providers to strengthen professional competencies and update professional clinical skills. However, it was professionals' willingness to apply their new training, which allowed the palliative care philosophy to permeate the traditional model of care and embed itself within professional practice. Leadership by health professionals in establishing the palliative care philosophy as a norm was critical to the initiative's uptake.

Moving forward

The focus on sustainability throughout the initiative has helped to permanently root palliative care within the health system, ensuring its continuation beyond the funded project.

Highlights

- Partnerships with international organizations, local NGOs and supportive government actors helped secure buy-in at the national level.
- Developing a legislative and political base was essential for securing the foundation on which to build the initiative.
- Incorporating a new palliative care philosophy within professional culture required extensive communication, advocacy and time.
- Formalizing educational opportunities through university partnerships helped ensure sustainability.

1 World Health Organization. (2015). *European health for all database.* Retrieved from http://data.euro.who.int/hfadb
2 Institute for Health Metrics and Evaluation. (2015). *Global burden of disease cause patterns.* Retrieved from http://vizhub.healthdata.org/gbd-compare/

Developing an integrated primary care model in Slovakia

Overview

In 2012, the indicator of population healthy life years in Slovakia was 10 years below the European Union average of 62 years. Rising rates of chronicity and suboptimal management of chronic conditions in primary level care settings were key contributors to below average health outcomes.[1] In response, the government committed to comprehensive health system reform to transition away from the hospital-centric model in place and work towards strengthening the role of primary care.[1] Formalizing this aim through the Strategic Framework of Healthcare 2014–2030, this strategy proposed plans for the development of a network of primary-level integrated health care centres (IHCC) to co-locate providers and promote interdisciplinary team working. Anticipated system-level transformations to include the introduction of performance-based financing mechanisms and strengthening of medical education. The Ministry of Health has formed a steering committee to oversee implementation of reforms and has established the Institute of Health Policy to provide analytical and implementation support. The region of Trenčín has been selected as the pilot site to test reforms. Following a performance review of all health facilities in Trenčín, a map-based analysis was used to determine the number and geographic location of facilities required to meet population needs. Four acute-care facilities, eight large IHCCs and eight small IHCCs have been proposed to cover care needs based on findings. Existing facilities will be renovated and modernized where possible, however approximately half of all facilities will need to be newly constructed. While implementation of the pilot project is only just beginning, it is expected that reforms will change health system dynamics to increase cost-effectiveness, reduce fragmentation and bring care closer to communities.

Problem definition

In 2012, expectation for Healthy Life Years in Slovakia was just 52 years; 10 years below the average in the European Union of 62 years that same year.[1] Chronic disease was the leading cause of mortality and morbidity and there was growing political concern regarding individuals' involuntary exit from employment and experience of social exclusion in retirement (Box 1)[1,2]. The existing hospital-centric model of care limited the availability of health promotion or disease prevention services and hindered effective management of patients with chronic disease in primary settings. Gatekeeping at the primary level was weak, evidenced by 80% of patients with chronic conditions being referred to outpatient specialists or inpatient hospital services following the first contact with general practitioners. Furthermore, with little communication between providers, care delivery was found to be fragmented leading to duplication of services and limited continuity of care.

Box 1
What problems did the initiative seek to address?

- Growing political concern over chronic disease burden and suboptimal population health outcomes.
- Limited availability of health promotion or disease prevention services.
- Concentration of services delivery in higher-level settings; weak gatekeeping at the primary level.
- Fragmented delivery of services with limited continuity of care for patients with chronic disease.

Health services delivery transformations

Timeline of transformations
In 2013, the Slovak government launched plans for a comprehensive health system reform, committing approximately €4 billion to the project and approving the Strategic Framework of Healthcare 2014–2030 to guide changes (Table 1). In 2014, the self-governing region of Trenčín was selected by the Ministry of Health as the pilot location to test proposed reforms. Currently, the initiative is still in the early planning stages and activities are underway to prepare Trenčín for implementation of proposed reforms.

Description of transformations
Selecting services. A more holistic package of services is being advocated for through the reform strategy. Emphasis is placed on early detection and intervention for chronic disease, as well as more

Table 1

What were the chronological milestones for the initiative?

July 2013	Government announces plans for health system reform and commits approximately €4 billion over a period of 35 years to modernize health system.
December 2013	Strategic Framework of Healthcare 2014–2030 approved as a roadmap to guide health system reform.
2014	Small region of Trenčín selected as pilot site to test proposed reforms.
Present	Ongoing implementation of reforms in Trenčín as part of the pilot study.

effective life-cycle management of chronic conditions in primary settings. Services offered will include screening for chronic conditions, physical and occupational therapies, dietary counselling, mental health services, addiction counselling, minor interventional treatments, dental care, gynaecological services and chronic disease management

support. Further, select social care services, including social counselling and rehabilitation, will be integrated with primary health services.

Designing care. New guidelines for disease prevention, management and treatment of chronic conditions are being developed to assist primary care providers to fulfil their expected new roles. Guidelines and standards are being based on international guidelines and recommendations, as well as evidence-based practices observable in other European countries.

Organizing providers. Primary care providers will be positioned to take on a greater role in managing patients with chronic conditions, reducing referrals to specialist care. The goal is to establish primary

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Universal health coverage provides basic package of services to population; weak provision of health promotion or disease prevention services; treatment for chronic conditions overly specialized.	Plans aim to increase health promotion and disease prevention services, expand services offered in primary care and integrate health and social services.
Designing care	
Absence of guidelines for primary care providers to support management of patients with chronic disease in primary settings.	New guidelines will be developed to support increased provision of care in primary settings; guidelines and standards will be evidence-based and incorporate European recommendations.
Organizing providers	
Concentration of providers in higher-level settings; weak gatekeeping ability of primary care; high referral rates to specialists after initial contact with general practitioner, even for low-risk patients; high degree of fragmentation between providers limits continuity of care.	Efforts to strengthen primary care underway; improved gatekeeping by general practitioners and increased management of lower-risk patients in primary settings anticipated; IHCCs will be established to co-locate primary care providers with other health professionals.
Managing services	
Inefficient management of health resources; overabundance of health facilities leading to low utilization rates and cost inefficiencies.	Mapping of health needs in pilot region undertaken to identify underperforming facilities for closure and optimal reorganization and development of new care facilities.
Improving performance	
Need for skill strengthening at the primary care level.	Training for providers on new guidelines and standards planned; indicators for performance monitoring in development.

care as the main gatekeeper to the health care system through building a network of integrated health care centres (IHCC). IHCCs will co-locate general practitioners with a variety of other supporting health professionals to help support multidisciplinary team working. Larger IHCCs will house 20 to 25 physicians with smaller centres housing five to 15. Additionally, depending on local contexts, consultation rooms will be made available to health professionals such as occupational therapists, psychologists, social workers, dieticians and dentists, among others.

Managing services. Mapping of health care needs in Trenčín was carried out at the start of the pilot to enable efficient planning and allocation of resources. A network of eight large and eight small IHCCs has been proposed to cover the pilot region's primary care needs. Initially, the pilot project plans to construct three IHCCs in Trenčín for study. Underutilized facilities have been identified for closure with planned reductions in the number of hospitals in the region. New performance parameters, based on best practices from other European countries, have been developed to assess the operational efficiency and effectiveness of hospitals against quality, productivity and financial performance indicators.

Improving performance. Prior to implementation of reforms, trainings are planned to educate providers on new care pathways and guidelines. A series of indicators are also being developed to enable monitoring of performance.

Health system enabling factors

In 2013, the government approved the Strategic Framework of Healthcare 2014–2030 as an overarching framework to guide health system reforms (Table 3). As proposed reforms align with

the existing legislative structure, only minor legislative changes are anticipated, largely focused on enabling the implementation of new clinical guidelines and changes to physician remuneration models. The Ministry of Health plans to use financial incentives to encourage health providers to adopt the new integrated model focused on primary care. Payment mechanisms for health providers in IHCCs will be based on a capitation method, with additional payment-for-performance incentives for effective management of patients with specified chronic conditions. Incentives for new medical graduates to work in regions with provider shortages are also planned and capital investments to modernize health infrastructure are expected to attract and retain younger providers, with strengthening of medical residency programmes helping to enhance new providers' competencies.

The Ministry of Health has focused on building internal ministerial capacities for successful

implementation. This has included establishing the Institute of Health Policy to provide analytical support to government decision-makers. The government has also drawn on international examples, guidelines and support tools to support the initiative, including epidemiological and demographic service profiling systems from Northern Ireland; clinical modelling strategies for acute hospital configuration from the Netherlands and the United Kingdom; condition appraisal toolkits developed in Norway; a template model and systems analysis used in Sicily; and a master plan template for regional health care reform developed in Finland. While the majority of planning has so far has taken place at the national level, the Ministry recognizes that later decentralization to the regional level is necessary. However, as each health care region will be defined by the catchment area of an acute hospital instead of geographical boundaries, it is currently unclear how this will be managed.

Table 3

How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Strategic Framework of Healthcare 2014–2030 approved by the government to guide health system reforms.
Incentives	• Remuneration for primary care providers will be capitation based with additional payment-for-performance incentives. • Management of specified conditions in primary care will be financially incentivized. • Targeted funding will promote relocation of new medical graduates to underserved areas.
Competencies	• Medical residency programmes will be strengthened.
Information	• Detailed situational analysis conducted in pilot region for the initiative to understand needs. • Institute of Health Policy established to provide analytical support to the Ministry of Health.

Outcomes

As piloting of the initiative is only just beginning, information on outcomes is currently unavailable.

Change management

Key actors

The initiative is being led by the Ministry of Health through a top-down approach. The government has focused on building internal capacity to enable implementation of reforms, establishing the Institute of Health Policy and an expert steering committee to help oversee implementation (Box 2).

Box 2

Who were the key actors and what were their defining roles?

- **Ministry of Health.** Leader for national health system reforms; developed the Strategic Framework of Healthcare 2014–2030 to guide activities; government funds support reform process.
- **Institute of Health Policy.** Provides analytical and implementation support for key decision-makers at the Ministry of Health.
- **Steering committee.** Oversees implementation of reforms; ensures effective use of time and resources throughout the implementation process.

Initiating change

Growing political concern over the negative economic and social impact of suboptimal health outcomes pushed the need for health system reform up the government agenda. The timely release of a European Commission report, published around the time the government was considering potential health reform strategies, illustrated how the development of the health sector could improve economic sustainability and provided inspiration for the design of the Strategic Framework of Healthcare 2014–2030.[3]

Implementation

Implementation of the pilot project in Trenčín is only just beginning. Trenčín was selected as the pilot site following a pilot feasibility study which confirmed it had the necessary pre-existing capacities for implementing reforms. Following completion of the pilot, implementation of health reforms across Slovakia is set to occur in five interconnected stages: development of IHCCs; redevelopment of acute centres and regional centres of excellence in the hospital sector; implementation of new clinical guidelines and care pathways; strengthening of medical residency programmes and education of clinical staff; and integration and dissemination of health information. Implementation of reforms will be led at the regional level and is expected to unfold at different paces based on local political support and preparedness for reforms.

Moving forward

Piloting of proposed health system reforms is ongoing. Based on the results of the pilot study, the Ministry of Health plans to scale up reforms across Slovakia as detailed in the Strategic Framework of Healthcare 2014–2030.

Highlights

- Development of a framework at the national level provided the initiative with a strong base from which to develop.
- A national approach to change provided clear goals and supported the alignment of activities.
- Creation of a new agency to provide analysis and implementation support increased government capacity to lead change.
- Piloting of reforms will enable gradual introduction and testing of planned changes.
- Regional authorities will lead implementation of reforms to allow adaptations based on local needs.

1 Ministry of Health of the Slovak Republic. (2014). *Implementation strategy – Integrated health care system: Modernizing health care infrastructure and improving access to quality services in primary and acute bed health care.* Bratislava; Slovakia. Retrieved from http://www.health.gov.sk/?strategia-v-zdravotnictve

2 Institute of Health Metrics and Evaluation. (2015). *Global burden of disease cause patterns.* Retrieved from http://vizhub.healthdata.org/gbd-compare/arrow

3 European Commission. (2013). *Investing in Health.* Brussels: Author. Retrieved from http //ec.europa.eu/health/strategy/docs/swd_investing_in_health.pdf

Designing a national diabetes plan in Slovenia

Overview

Throughout the 2000s, the burden of diabetes in Slovenia was on the rise; approximately 6% of the population were diagnosed with diabetes in 2007 and further increases were expected by 2025.[1] Prompted by international recommendations and national advocacy efforts, in 2006, the Ministry of Health convened a multidisciplinary working group to develop a national diabetes strategy. In 2009, after several years of planning, a patient-centred, transparent working document for diabetes was proposed. Later that same year, the National Health Insurance Institute joined the working group in support of the proposed document in what was termed "the winning moment" for the initiative and the Ministry of Health formally approved the proposed strategy in 2010. The strategy works in parallel to several independent health care reforms that occurred during the late 2000s, aiming to strengthen diabetes prevention and care services already in place. A coordinating committee has been created by the Ministry of Health to guide implementation of the strategy and progress towards established goals.

Problem definition

In 2007, approximately 125 000 patients (6% of the total population) in Slovenia were living with diabetes.[1] Type 2 diabetes accounted for 95% of all diabetes cases, many of which could have been prevented and treated through dietary and lifestyle changes.[1] With prevalence projected to rise to 8% by 2025, diabetes was a growing public health concern for Slovenia (Box 1).[1]

Health services delivery transformations

Timeline of transformations
In 1989, the St Vincent Declaration signalled widespread recognition of the growing burden of type 2 diabetes, highlighting the need for

Box 1
What problems did the initiative seek to address?

- Rising prevalence of type 2 diabetes and associated health care costs.
- Limited availability of diabetes-related health promotion and disease prevention services.

a national diabetes plan in Slovenia (Table 1). When type 2 diabetes came to the forefront of the European Union (EU) health agenda in 2006, the Ministry of Health for Slovenia convened a working group to develop a national diabetes strategy in response to mounting pressure for action. In 2009, after several years of

deliberation among members of the working group, the National Diabetes Strategy was completed and was approved by the Ministry of Health in 2010. Two-year action plans guide achievement of long-term goals and the Strategy is currently midway through implementation set to run until 2020.

Description of transformations
Selecting services. Every five years people aged 40 to 65 in Slovenia are invited to participate in health checks which screen for a number of conditions, including diabetes. The National Diabetes Strategy has strengthened the provision of health promotion and disease prevention services, integrating disease prevention with current national screenings. In about half of all primary care centres an additional preventive programme has been developed whereby everyone above the age of 30 receives a diabetes risk assessment – measuring indicators including body weight, eating habits, physical activity and blood glucose levels – and tailored health education and follow-up care based on assessment findings.

Designing care. New guidelines for providing diabetes care have been developed with input from a variety of actors including physicians, diabetologists, nurses and representatives from patient associations.

Organizing providers. General practitioners provide the majority of diabetes care and are responsible for making necessary referrals. Recent reforms have added registered nurses to primary care practices, forming so-called model practices. Approximately half of all primary care practices now employ a registered nurse to assist with the management of patients with chronic but controlled conditions, such as diabetes. Some responsibilities for diabetes-related care are delegated to registered nurses, helping increase the level of care

Table 1

What were the chronological milestones for the initiative?

1989	St Vincent Declaration on diabetes recommends WHO European Region member states adopt a national diabetes plan.
1995	National diabetes plan drafted in Slovenia but a lack of momentum prevents formal adoption by the Ministry of Health.
2006	EU declares prevention of type 2 diabetes a priority health care topic; Ministry of Health in Slovenia convenes a working group to prepare a national diabetes strategy.
2008	Extensive deliberation among working group stakeholders leads the initiative in a new direction towards a more collaborative, people-centred approach.
July 2008	Resolution on the National Health Care Plan 2008–2013 adopted to require regular screening for certain conditions, including diabetes.
June 2009	Draft for the National Diabetes Strategy finalized.
September 2009	National Health Insurance Institute joins the working group in support of the proposed National Diabetes Strategy.
March 2010	National Diabetes Prevention and Care Development Programme Development Strategy 2010–2020 adopted by the government; Ministry of Health establishes a coordinating group to oversee implementation of the Strategy.
Present	Strategy is currently halfway through the set implementation period and continues to be developed according to planned actions.

patients receive and supporting greater attention to preventing and monitoring the condition. Registered nurses also play a key role in coordinating necessary care with other providers and ensuring patients attend diabetes check-ups.

Managing services. The initiative is described as being an "almost zero cost project" and generally resource investments in addition to those already in place have not been required. The National Diabetes Strategy is guided by a multidisciplinary coordinating committee who reports to the Ministry of Health. This group is responsible for the development of two-year action plans detailing incremental goals to help ensure the initiative stays on track to meet its long-term objectives.

Improving performance. Trainings have been provided for physicians and nurses which focus on counselling for diet, physical activity, weight loss and other related topics. Additionally, specific trainings were developed to prepare registered nurses to work in model practices. Annual reporting for the National Diabetes Strategy on what activities have been undertaken that year and any success or challenges the initiative has faced is performed by the coordinating group and submitted to the Ministry of Health.

Engaging and empowering people, families and communities
Leaders of the initiative described patients as the "unifying focus" for all proposed actions in the National Diabetes Strategy. At the centre of the initiative is an empowered patient who is able to actively participate in the care process, assume responsibility for their own health and lead a high quality life free from diabetes-related complications. The national patients' association for diabetes was instrumental in helping to construct the National Diabetes Strategy via participation in the working group. One in every five people diagnosed with diabetes within Slovenia belong to the association and this group was important for making sure "patients have their say and are heard".

Recent health system reforms have strengthened the rights and involvement of patients in health care, namely the Patients' Rights Act of 2008, which supported the National Diabetes Strategy in furthering patient engagement in diabetes-related care. Providers are tasked with ensuring patients receive clear and credible information about diabetes to enable patients to take the central role in care planning. Training for primary care providers fostered improvements in diabetes-related patient education and providers now offer prevention programmes focusing on diet, physical activity, weight loss and other topics to help increase patients' health literacy surrounding their condition and empower them to prevent or self-manage their diabetes. Leaders of the initiative described patient engagement as "the most important focus" of type 2 diabetes prevention efforts.

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Screening in place for population aged 40 to 65 for variety of conditions, including diabetes; standard care for diabetes available.	Strengthened provision of health education, health promotion and disease prevention services; diabetes risk assessments introduced for population above age 30 in some practices.
Designing care	
Standard guidelines and protocols for diabetes care in place.	New diabetes guidelines and protocols developed via multistakeholder collaboration.
Organizing providers	
Strengthened role of primary care; general practitioners lead management of care for patients with diabetes.	General practitioners continue to lead management of care for patients with diabetes; registered nursing positions added to primary care practices, expanding nursing responsibilities in diabetes prevention and care.
Managing services	
National Health Insurance Institute reimburses diabetes-related care under statutory health insurance.	Initiative makes use of resources already in place; coordinating group oversees activities.
Improving performance	
Limited education for providers on patient counselling for diabetes.	Trainings provided for primary care providers on delivering health education to patients; additional training offered to registered nurses in model practices; annual progress reports prepared by the coordinating group.

Health system enabling factors

Several laws passed during the planning phase of the National Diabetes Strategy have supported the initiative. The resolution on the National Health Care Plan 2008–2013 strengthened the role of primary care and required screening for diabetes to be offered to the population aged between 40 to 65 years. Additionally, the Patients' Rights Act formalized the right of patients to be involved in their care, promoting patient empowerment and engagement with diabetes-related care.

Outcomes

The main goals of the initiative are to prevent or delay type 2 diabetes in at-risk individuals, increase early detection of diabetes and decrease diabetes-related complications. However, a system to monitor and evaluate the impact of the initiative is not currently in effect and no formal data on outcomes are available. A study on the burden of diabetes has been carried out to serve as a benchmark for improvements and a national clinical register for diabetes is currently being developed.

Change management

Key actors

A number of actors came together to realize the National Diabetes Strategy (Box 2). Strong advocacy efforts by the national Diabetes Association succeeded in securing the necessary government-level support behind the initiative and a multidisciplinary working group was formed by the Ministry of Health to design the Strategy. As participation in the working group was unpaid and entirely voluntary, it was composed of individuals who were highly motivated to address the problem of diabetes. "If you have zero-cost activities then you get different types of people who get involved. When money is the driver, you get completely different types of people. Because of zero-cost we did a better job than we would have done with money."

Later support from the National Health Insurance Institute was seen as the "winning moment for the national diabetes plan". The Ministry of Health formally adopted the Strategy and set up a coordinating committee to oversee implementation efforts. The coordinating committee is currently

responsible for ensuring progress towards Strategy objectives under continued Ministry oversight.

Who were the key actors and what were their defining roles?

- **Ministry of Health**. Convened a working group (to design the initiative) and coordinating group (to oversee implementation of the initiative); approved proposed National Diabetes Strategy and oversees activities; co-organizer of National Diabetes Day.
- **Slovenian Diabetes Association**. Strong and active patient association for diabetes; advocated for the development of a national diabetes plan; participated in the working group and continues to represent patients on the coordinating committee for the National Diabetes Strategy.
- **Working group**. Composed of representatives from the Ministry of Health, universities, diabetes care providers, the National Public Health Institute and, later, the National Health Insurance Institute; worked together to develop the National Diabetes Strategy.
- **Coordinating committee**. Oversees implementation of the National Diabetes Strategy; submits regular evaluation reports to the Ministry of Health.

Initiating change

The first trigger for the initiative was the St Vincent Declaration which inspired senior diabetologists in Slovenia to draft a national diabetes plan; however, insufficient support at the time meant the plan was never realized. The discussion on diabetes in Slovenia was rejuvenated in 2006 when type 2 diabetes became a health care priority for the EU, which Slovenia had recently joined. At this time, the Slovenian Diabetes Association increased advocacy efforts calling for government action on diabetes. Combined, these driving factors pushed the Ministry of Health to establish a working group to develop a national diabetes strategy. Examples of diabetes plans in other countries served as inspiration, namely that of Finland. Initially, having never worked together, the working group faced challenges in establishing trust as "it was not very common to speak at the same table with different kinds of people who had very different feelings about what is important in diabetes." After two years of discussion without sufficient progress, the working group found a "unifying focus" by asking the question "what can I – as a diabetologist, nurse, general practitioner or civil servant – do for my patient". With a common platform in place, the working group "started to build trust and common understanding" allowing them to "join to work better, more efficiently, to know each other and to start producing the project together in a coordinated way". Orientation trainings for working group members helped to build leadership skills among individuals. With increased trust established within the group, there was enough transparency to draft a document. The working group completed this document in 2009 after a three-month review by all stakeholders. In 2010, four years after the working group first formed, the Ministry of Health formally approved the National Diabetes Strategy.

Implementation

A coordinating committee was established to oversee implementation of the initiative. Two-year action plans were set to divide the 10-year National Diabetes Strategy into more tangible goals. The coordinating committee convenes annually to review progress in relation to the two-year action plans, strategize improvements and resolve any issues.

Moving forward

Leaders continue to phase in the National Diabetes Strategy in two-year incremental stages. Standardizing quality of prevention and treatment, better integrating care and taking into account the needs of vulnerable populations are the main challenges for the future. Strengthening primary care, further involving patients, implementing monitoring systems and introducing e-health are priorities recognized by the coordinating committee moving forward.

Highlights

- An active patient association supported patient engagement and involvement throughout the initiative's planning and implementation process.
- Meaningful stakeholder engagement across professions and institutions helped develop a common vision for the initiative.
- Building trust between stakeholders took time but was necessary to allow functional teamwork and effective plan development.
- Oversight from the Ministry of Health fostered important linkages across activities, ensuring that changes to services delivery under the initiative aligned and complemented other parallel reforms.

1   Ministry of Health of the Republic of Slovenia. (2010). *Diabetes prevention and care development programme 2010-2020*. Ljubljana: Author. Retrieved from http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/mz_dokumenti/delovna_podrocja/javno_zdravje/diabetes/National_Diabetes_Prevention_and_Care_Development_Programme.pdf

Introducing evidence-based guidelines through a best practice accreditation programme to improve care quality in Spain

Overview

In 2010, seeing the potential to improve service quality, the Nursing and Healthcare Research Unit of the Spanish Institute of Health Carlos III (Investén-isciii) partnered with the Registered Nurses' Association of Ontario (RNAO) in an effort to translate RNAO's best practice nursing guidelines to enable their use in Spain. As a result, RNAO's 40 or so guidelines supporting evidence-based nursing, care quality improvements and better health outcomes for patients have been translated into Spanish. Furthering this relationship, Investén-isciii also became a Best Practice Spotlight Organization Host, responsible for overseeing implementation of RNAO's prestigious Best Practice Spotlight Organization (BPSO) accreditation programme in Spain.

The BPSO Programme aims to not only raise health care organizations' awareness of best practice guidelines, but also provide a guiding structure to incentivize, facilitate and monitor guideline utilization. In 2011, the first cohort of Spanish health care organizations was selected to participate in a three year BPSO Programme. Eight organizations were selected to ensure each could receive enough personalized support during the project. BPSO candidates were required to select at least three best practice guidelines to introduce based on the needs of their organization; examples of guidelines chosen for implementation included fall prevention, ostomy care and breastfeeding promotion, among others. Nurses and other health professionals have been recruited and trained to work as guideline

champions within participating organizations. Champions are responsible for training other professionals on the guidelines being implemented within their organization in a cascade model; the aim of this model being to promote guideline utilization through peer learning. All BPSOs collect and report data on standardized nursing quality indicators using a shared online portal. Each BPSO has access to their own data, which enables strategic planning and informs improvements; organizations can also view aggregate data of other BPSOs. In 2015, all eight BPSO candidates achieved accreditation, which is valid for two years. The BPSO Programme is expanding and 10 additional BPSOs were recently recruited into the three-year accreditation process.

Problem definition

In 2010, inconsistencies in nursing practices across the Spanish health system contributed to concerns about quality and safety standards in clinical practice (Box 1). A lack of comparable indicators across health care organizations, coupled with limited record keeping or evaluation of nurses' clinical practices, resulted in a failure to systematically measure and monitor services delivery.

Box 1
What problems did the initiative seek to address?

- Variability in nursing practices across health care organizations and concerns over quality and safety of services provided.
- Lack of comparable indicators across institutions with which to systematically monitor or evaluate nursing practices.

Health services delivery transformations

Timeline of transformations
In line with goals laid out in the Spanish government's Quality Plan for the National Health System 2006–2010, an agreement was signed between the Registered Nurses' Association of Ontario (RNAO) and the Nursing and Healthcare Research Unit of the Institute of Health Carlos III in Spain (Investén-isciii) to establish a project to promote the use of evidence-based best practice

nursing guidelines in health care organizations across Spain (Table 1).

Under the new partnership, RNAO's guidelines were translated into Spanish and Investén-isciii became a Best Practice Spotlight Organization (BPSO) Host, responsible for managing the introduction of the BPSO Programme in Spain. In 2011, Investén-isciii issued an open call for health care organizations wishing to become accredited through the Programme. In 2012, eight organizations were selected and began the three-year accreditation process. In 2015, all eight organizations achieved accreditation, which is valid for two years. Accredited organizations continue to receive support from Investén-isciii and RNAO through the Programme and a second wave of 10 BPSOs has been enrolled.

Description of transformations

Selecting services. The initiative has retained the core package of services offered under national insurance. In addition, BPSOs are required to select three guidelines to implement based on identified priority needs. Depending on guidelines chosen, the addition or enhancement of some services may be required.

Designing care. RNAO has developed over 40 evidenced-based guidelines for nurses to use in everyday practice; guidelines have been translated into Spanish. BPSOs must implement at least three guidelines to receive accreditation. Examples of guidelines include prevention of falls and injuries in the older adult; assessment and management of pain; assessment and management of diabetic foot ulcers; stroke assessment; collaborative practice among nursing teams; and developing and sustaining nursing leadership. Guidelines promote the inclusion of patients and often require patient education and involvement of patients in care planning. Where

Table 1

What were the chronological milestones for the initiative?

1999	RNAO launches Nursing Best Practice Guideline Programme in Canada; over 40 clinical guidelines generated to date.
2003	BPSO Programme developed in Canada to promote uptake of best practice guidelines developed through the Nursing Best Practice Guideline Programme.
2010	Concerns over variability in the quality and safety of care in Spain lead to an agreement between RNAO and Investén-isciii to translate RNAO guidelines into Spanish; Investén-isciii becomes a BPSO Host, responsible for introducing and managing the BPSO Programme in Spain to promote guideline uptake.
2011	Open call for health care organizations wishing to participate in the project; eight organizations selected from the applicant pool.
2012	First group of Spanish BPSO candidates begin the three-year path to accreditation.
2014	Second open call launched; 10 additional BPSOs selected from applicant pool.
2015	First Spanish BPSOs receive accreditation; second wave of organizations begin activities towards BPSO accreditation.

necessary, protocols have been updated or developed to support implementation of guidelines, for example a skin-to-skin protocol for breastfeeding mothers. A toolkit to support implementation of the guidelines is also available. BPSOs receive specialized implementation support and guidance. However, all organizations can access the translated guidelines free of charge.

Organizing providers. Generally, guidelines call for the collaboration between professionals, including physicians, physiotherapists, nurses, midwives and others to deliver care. However, how providers work together varies considerably based on the organizational context and guidelines that have been chosen for implementation.

Managing services. A formal agreement contracts Investén-isciii to host the implementation of the

Spanish BPSO Programme. Host responsibilities include selecting BPSO candidates and establishing contracts; training BPSOs and supporting them to implement best practice guidelines; reviewing biannual progress reports; and monitoring achievement of required deliverables. These responsibilities are overseen by two dedicated Investén-isciii BPSO Programme coordinators. All materials to implement the Programme are provided by RNAO at no cost and then translated to Spanish and fit to the specific contexts by Investén-isciii. While Investén-isciii provides support to BPSOs, it is the responsibility of the participating organizations' managers to allocate the necessary human and financial resources from their current provision of services and designate a leader responsible for the implementation of each guideline.

Improving performance. Trainings have been provided to nurses and other health providers within participating BPSOs. Training is organized through a cascade model, whereby a group of appointed champions within each organization receive a week of training on implementing new guidelines; in turn, champions train, encourage and monitor other providers within their organization to facilitate uptake of these guidelines. Additional champion trainings are offered annually, as building staff capacity is recognized as a continuous process. Training materials are provided free by RNAO and translated to Spanish by Investén-isciii.

Under the terms of their contracts, BPSOs must meet a number of reporting requirements. BPSOs can use data reported on to track performance and inform improvements. Data Dictionaries have been developed to help guide BPSOs through the data collection process and provide step by step instructions on data collection. For example, the Data Dictionary for diabetic foot ulcers requires measurements of the ulcer be taken and tracked over time to assess healing rates and details how to perform this task.

Health system enabling factors

The Quality Plan for the National Health System 2006–2010 was developed by the Spanish government to promote high quality health care focused on patients' needs through supporting the promotion of clinical excellence and adoption of evidence-based best practices.[1] The initiative has built on this supportive backdrop (Table 3) to incentivize, through accreditation and greater recognition of health care organizations meeting BPSO requirements, the increased use of evidence-based guidelines in care delivery. Recognition as a BPSO provides a non-financial incentive

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Statutory national health system provides universal coverage.	Delivery of services package enhanced; some additional services may be added if called for under guidelines and not already offered as standard care.
Designing care	
Some efforts to introduce evidence-based care guidelines in Spain under the Guia Salud Project; weak and inconsistent implementation of guidelines in practice.	BPSOs commit to implementing, monitoring and evaluating a minimum of three RNAO best practice guidelines within their organization; care protocols are updated or developed to reflect guidelines; a BPSO toolkit assists organizations in implementing guidelines.
Organizing providers	
Strong primary care network with effective gatekeeping; each region has at least one large hospital which offers access to inpatient and outpatient specialists.	Any adjustments to provider arrangements depend heavily on existing organizational structures and the specific guidelines chosen for implementation; cooperation and collaboration is encouraged between providers; nursing roles have been strengthened.
Managing services	
Majority of health facilities are publicly owned, financed and managed.	A formal agreement contracts Investén-isciii to oversee the implementation of the Spanish BPSO Programme; minimal resource investments needed as Programme materials provided free of charge by RNAO.
Improving performance	
No systematized method for performance improvement; quality and performance varies widely across health care organizations.	Network of champion providers trained on new standardized guidelines; cascade training model sees champions train other providers within their organizations and monitor adherence to new guidelines; BPSOs must collect and monitor performance data.

for improving care, as a prestigious symbol identifying an organization as a high-quality care provider.

Strong reporting structures in place require Investén-isciii to send biannual reports to RNAO who monitors and evaluates all BPSO Hosts' progress. Similarly, BPSOs are contractually obligated to send biannual reports to Investén-isciii for review. All selected BPSOs must complete a baseline analysis prior to commencing activities and subsequently collect and enter data into an online platform. Nursing Quality Indicators for Reporting and Evaluation (NQuIRE)

is the online platform developed by RNAO to collect, analyse and report comparative data on nursing sensitive indicators for all BPSOs worldwide; CarEvID is the fully compatible Spanish equivalent to this system. Nursing Quality Indicators BPSOs are required to collect and report on were specifically developed to assess RNAO best practice guidelines.

Outcomes

Several research projects designed to investigate the effects of the BPSO guidelines in Canada have demonstrated positive outcomes

for patients. While research relating to Spain's implementation of BPSO guidelines is not yet available, data collection currently taking place will allow outcomes to later be evaluated. It is expected the success of Canadian BPSOs will be mirrored in Spain.

Change management

Key actors

The initiative rested on the collaboration between RNAO and Investén-isciii. These two actors worked closely together throughout the initiative to bring the BPSO Programme to Spain (Box 2). Investén-isciii, a national Spanish health research organization with experience collaborating with other international centres, took on the role of BPSO Host and therefore has full responsibility for the implementation and management of the BPSO Programme in Spain. RNAO is responsible for oversight of the initiative and for providing Investén-isciii with free guidance and support in the form of trainings, educational resources and mentorship. Participation in the Programme is voluntary, but has proved to be competitive as there is a surplus of organizations wishing to participate. All senior management within selected organizations must sign the BPSO contract with Investén-isciii to demonstrate widespread managerial support for the initiative. Selected BPSOs lead the changes necessary within their organizations to meet BPSO Programme standards. Each BPSO is required to designate an overall project leader, as well as a leader for each guideline being implemented. In addition, a group of health providers are selected by organizations to become champions for each guideline; it is up to organizations how many are recruited. Champions lead trainings for other providers within their organization and help promote new evidence based organizational cultures.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Quality Plan for the National Health System 2006–2010 developed by the Spanish government; promotion of evidence-based care guidelines a key part of the plan. • Contract signed between RNAO and Investén-isciii, formalizing the introduction of the BPSO Programme to Spain. • RNAO sets accreditation standards for the BPSO Programme; Investén-isciii responsible for ensuring Spanish BPSOs meet required standards.
Incentives	• Prestige of accreditation incentivizes participation in the Programme and improvements in care quality; BPSOs recognized as high-quality care providers.
Information	• BPSOs are required to perform a baseline analysis and report on specified Nursing Quality Indicators developed by RNAO. • NQuIRE online platform is used by RNAO to collect, analyse and report comparative data on nursing sensitive indicators for all BPSOs; CarEvID is the fully compatible Spanish equivalent to NQuIRE.
Innovation	• RNAO developed new Nursing Quality Indicators tailored to specifically evaluate their best practice guidelines. • BPSOs commit to participating in health research on evidence-based guidelines; BPSO data is submitted to a shared international database.

Box 2
Who were the key actors and what were their defining roles?

- **RNAO**. Created and launched BPSO Programme in Ontario, Canada; oversee and support geographic expansion of the Programme; work with BPSO Hosts to facilitate implementation of the Programme internationally.
- **Investén-isciii**. Main national body for health research in Spain; signed contract with RNAO to serve as the BPSO Host for Spain; manages all aspects of the BPSO Programme in Spain; translated RNAO's guidelines and Programme materials into Spanish; hired two project coordinators to support the initiative.
- **BPSOs**. 18 health care organizations, representing 81 suborganizations, currently involved in the BPSO Programme; under contractual obligation under Investén-isciii to meet required Programme standards; implement at least three best practice guidelines within their organization, monitor their utilization and evaluate outcomes.
- **Champions**. Nurses and other providers recruited within each BPSO to serve as advocates for best practice guidelines (each guideline has its own group of champions); train other providers within their respective organizations to apply the guidelines; monitor adherence to guidelines.

Initiating change
Development of the BPSO Programme was initiated by RNAO in 1999 with funding from the Ontario Ministry of Health.

Quickly growing to become a well-established programme with a reputation for quality and excellence, the Programme was expanded internationally. In the 2000s, the national Spanish government was attempting to increase the use of evidence-based care guidelines to address concerns over variable care quality. Around this time, a conference facilitated by the University of Toronto brought together RNAO with Investén-isciii, giving rise to a partnership between these two organizations, a partnership was born to translate RNAO's best practice guidelines into Spanish and establish the BPSO Programme in Spain. The BPSO Programme kicked off with an initial training led by RNAO for Investén-isciii project leaders.

Implementation
A toolkit developed by RNAO served as the template for implementation. Health care organizations wishing to participate were recruited through an open call and were required to show readiness and ability to become BPSOs. Investén-isciii selected eight organizations from over 30 applicants, as a small number could be supported and monitored to the level needed. Investén-isciii acts as a coach for BPSOs, helping and motivating organizations to implement guidelines, monitoring

adherence to BPSO standards and offering support to help organizations achieve their goals. With the appropriate support, BPSOs are able to "change something they never thought was possible," which has proved motivational for further improvement. Support is delivered through regular teleconferences and online knowledge exchanges, but also through onsite visits by BPSO coordinators. While BPSOs receive considerable support from Investén-isciii, they are ultimately responsible for ensuring the implementation of guidelines within their own organizations.

Moving forward
Having graduated the first cohort of Spanish BPSOs in 2015, the focus is now on maintaining standards achieved, growing the network of BPSOs across Spain and developing research on best practice nursing guidelines. Accredited BPSOs will continue to be monitored and will require recertification every two years to ensure maintenance of standards. Meanwhile, the newly recruited cohort will be supported to achieve accreditation in 2018. National and international alliances help to sustain the initiative; as the network of BPSOs continues to grow, more organizations will be able to collaborate and share experiences.

Highlights

- The initiative implemented a well-established and structured programme model; however, flexibility in implementation supported the tailoring of new practices to local population needs.
- Requiring providers to take a leadership role over peer education provided ownership over the initiative and greater acceptance of the new practices.
- A focus on generating and comparing data enabled positive health services delivery transformations.
- Strengthening the evaluation of care practices motivated better performance and continuity around people-centred health care.

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1 Spanish Ministry of Health and Social Policy. (2009). *Quality plan for the national health system of Spain 2006-2010.* Madrid: Author. Retrieved from http://www.hpm.org/organizacion/sns/planCalidadSNS/docs/InformePlanCalidad_ENG.pdf

Pioneering integrated organizational models for improving care for elderly people in Ängelholm, Sweden

Overview

The delivery of health and social services in Sweden has traditionally been divided between regional councils, responsible for primary care and hospital services, and municipal authorities, responsible for elderly and social care. However, in recent years, rising chronicity in the context of an ageing population has placed new challenges and pressures on the delivery of health services, leaving professionals unsatisfied with care being managed and delivered by separate organizations. In response, senior officials in the Municipality of Ängelholm would deliberate over the implementation of an initiative to improve care, to respond in particular to the local elderly population. After building the trust of stakeholders' through discussions across municipal, primary and hospital levels, a shared vision for change was put forward to the highest-level regional authority. Approval for a pilot initiative to explore new integrated care models was granted and a new integrated care organization known as Hälsostaden was established. Hälsostaden works to bring together primary care and hospital services, previously delivered by regional councils, with elderly and social care, previously delivered by the municipality. The organization employs 600 health professionals across these sectors. Through merging previously fragmented and separately managed professionals under one organization, Hälsostaden has created a shared organizational culture that fosters collaboration, cooperation and teamwork. Hälsostaden's health workforce benefits from additional training on palliative and end-of-life care designed to strengthen their competencies, while also allowing for a greater number of shared learning opportunities by engaging across professionals. Regional and municipal resources are pooled in a joint budget to fund Hälsostaden and several new projects are also being tested, such as the introduction of mobile care teams, electronic medical records and e-health technologies. As a pilot project, leaders of the initiative have significant freedom to explore innovative models of care, the long-term goal being to permanently adopt successful strategies across Sweden. An evaluation of the initiative is being led by Lund University to determine the organization's impact. Early results indicate reductions in unnecessary hospitalizations, increased cost savings and high patient satisfaction with services. The pilot is set to continue until September 2016 and permanent adoption of the model is a possibility based on the evaluation's results.

Problem definition

In Sweden, a growing proportion of the population is over the age of 65 years. In 2007, this demographic made up 18% of the total population, above the WHO European Regional average of 14% that same year.[1] This shift in demographic has contributed to a trend of increasing chronic diseases and multimorbidities, placing new demands on health services for the provision of more complex care.

Responsibility for the delivery of health and social services in Sweden is divided between regional and municipal governments. However, as the need for greater coordination between these services increases, this separation of roles has contributed to growing challenges related to fragmentation in the delivery of health and social services, including observed increases in hospital readmissions and a reported lack of communication between providers (Box 1). As a result of fragmentation, providers in both the Municipality of Ängelholm and the Regional Council of Skåne grew increasingly dissatisfied with the standard of care for elderly patients, sharing concerns for their ability to follow patients and manage their care and frustrations with observed duplication of services.

Box 1
What problems did the initiative seek to address?

- Changing burden of diseases following population ageing and increasing rates of chronicity.
- Fragmented services delivery resulting from split management of health and social services.
- A reported lack of communication between providers and high rates of hospital readmissions.
- Increasing provider dissatisfaction in the standard of care available to elderly patients.

Health services delivery transformations

Timeline of transformations

Growing concern regarding fragmented services delivery for elderly patients sparked discussions in 2010 on how to improve services for elderly residents in the Municipality of Ängelholm, Sweden (Table 1). Over the next three years, senior health management officials across municipal, primary care and hospital settings in Ängelholm came together to plan an initiative to improve the coordination and integration of care for elderly residents, proposing the formation of a single organization to merge services managed by the regional council with those managed by the municipality. Approval for the initiative was granted by the Regional Council for Skåne in 2013 and the proposed organization, known as Hälsostaden, was formalized.[2] While the initiative is set to run until September 2016, an extension is anticipated and the long-term goal is to secure permanent adoption of Hälsostaden in Ängelholm and scale-up of this integrated health and social services model across Sweden.

Description of transformations

Selecting services. The initiative has prioritized the delivery of a comprehensive range of health and social services for the elderly population across primary, secondary and tertiary care levels. "We had a focus on quality of life, so we didn't put in some surgical parts of the hospital, but we focused on internal medicine, geriatrics and rehabilitation." Services available to the pilot's target population include chronic disease management, home and community care services and palliative care.

Designing care. Tailored tools have been developed to support the new model of care. For example, assessment criteria have been established to direct referrals to mobile community teams where possible. Care has been reorganized to focus on meeting patient needs, with new patient-centred care models tested through a trial and error process: the idea behind Hälsostaden is to experiment with new ideas and care models to learn and grow through experience.

Organizing providers. Hälsostaden employs around 600 professionals across a range of care settings: 500 from local hospitals, 65 from primary care and 35 from municipal care. Employees include physicians, nurses, welfare officers, occupational therapists, haematologists, rheumatologists, nutritionists and biomedical analysts, among others. A significant effort has been made to create a shared identity and vision for the Hälsostaden health workforce to encourage collaboration, cooperation and teamwork, through fluid communication among the newly-formed organization. A shared electronic medical record system further helps to increase communication and coordination within the organization.

Two interdisciplinary mobile teams (one emergency, one community) have been set up to deliver care to patients in their own homes and "mobile teams are a key component in the concept of Hälsostaden" as the initiative believes "the best bed is your own bed".

Managing services. Responsibility for the provision of all health and social services in Ängelholm has been mandated under a single organization in an effort to alleviate the prior distinction between health and social care in order to improve coordination across services. Hälsostaden is organized directly under the regional council and has its own steering committee and board with representatives from both regional and municipal governments, as well as managers, administrators and other necessary personnel to oversee its functioning. Hälsostaden's budget is formed of contributions from both regional and municipal finances. However, the financing system is not yet fully integrated and some services are contracted with funds transferred from separate regional and municipal budget holders as necessary.

We have designed a system where we transfer funds between the

Table 1
What were the chronological milestones for the initiative?

Early 2013	Approval sought from the Regional Council of Skåne to endorse an initiative to improve care for the elderly, putting forth a proposal for the formation of a single organization to merge management over health and social services.
Mid-2013	Approval for pilot project granted by regional council, establishing the organization known as Hälsostaden to begin offering integrated health and social services.
2014	Series of care improvement projects and new services launched within Hälsostaden including the implementation of an electronic medical record system.
Present	Continued advancement of care improvement projects and new services. A strategy for scale-up of the initiative is in development.
Mid-2016	Planned end-date for pilot project, however, an extension is anticipated with a view to permanent adoption.

organizations. If we do something at the hospital that increases the costs for the municipality then we pay them and likewise. ... We found that it wasn't really feasible to have the joint budget yet, so we had to design another system; partly joint budgets and partly transfer reimbursements.

Access to providers has been increased by extending primary care clinic hours to include evenings and weekends. The extended-hours primary care clinic is staffed by professionals from 21 different primary care centres and is located adjacent to the emergency room, making it easy for patients to choose this setting over specialist care.

Improving performance. On-the-job trainings and ad hoc educational seminars, particularly focusing on palliative and end-of-life care have been offered to Hälsostaden employees in an effort to strengthen professional competencies. In addition, the initiative has supported expansion in the skills of nurses, aiming to encourage their role in working across a variety of settings and to perform a wider range of tasks. For example, community nurses have been given opportunities to refresh specialized clinical competencies through clinical rotations, internships and peer mentorship schemes.

Engaging and empowering people, families and communities Hälsostaden translates to "city of health," symbolizing community links which spread beyond traditional care settings. Through this initiative, care is now organized around the needs of elderly people and feedback is continuously solicited to help improve services and ensure that care adopts a people-centred approach. The initiative also has a strong focus on improving quality of life for the elderly population, aiming "to add life to years not years to life" and so building care delivery in home and community settings has been an important area of activity.

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Comprehensive package of services offered to population; fragmentation between health and social services, particularly noticeable in services for the elderly population.	Focus on improving integrated delivery of internal medicine, geriatrics and rehabilitation services for the elderly population; expansion to other areas and populations under consideration.
Designing care	
Care pathways for elderly patients fragmented and undefined; care not centred on patients' needs.	Care pathways designed "based on common sense" for what is best for patients and refined through trial and error; new tools developed to guide integrated models of working.
Organizing providers	
Health providers and social care professionals employed separately within municipal primary and hospital care settings; poor communication channels between professionals increased fragmentation; lack of continuity of care often left patients lost in the system.	Hälsostaden employs a multi-profile workforce including physicians, nurses, welfare officers and therapists; collaboration and teamwork are encouraged through a shared organizational culture; an electronic medical record system connects Hälsostaden employees.
Managing services	
Care managed separately by municipal, primary care and hospital organizations; separate budgets increased fragmentation and inefficiencies between sectors.	Hälsostaden operates under a single management uniting municipal, primary care and hospital officials; a joint budget increases integration and pools resources.
Improving performance	
Professional competencies lacking in palliative and end-of-life care; professional skill set was found narrow in scope.	Series of seminars on palliative and end-of-life care organized; temporary placements and clinical rotations across settings offered to professionals to expand skill set.

Health system enabling factors

Responsibility for health and social care in Sweden is divided between 20 regional councils responsible for primary care and hospitals and 290 municipalities, responsible for elderly homes and social care. Hälsostaden has bridged oversight for services delivery between the Regional Council for Skåne and the Municipality of Ängelholm to support improvements in care (Table 3). A memorandum of understanding at both the regional and municipal government levels was granted for the initiative, which has allowed significant freedom for the exploration and testing of new integrated care models. Amendments to medical data sharing laws were also taken in order to permit the exchange of information across municipal, primary care and hospital settings within the Hälsostaden organization.

The political leadership from the region and municipality made a joint decision that they wanted to go through with this and they put together a memorandum of understanding that they would collaborate. … The paper they signed gave us almost complete freedom to explore what we thought was the best for the patient. If there was anything we have learned from this, it is that there are a lot of good thoughts; people working in both systems know what has to be done, but they aren't given the liberty to actually change the system. So here we were given that freedom. That was a big step.

Hälsostaden has also created a valuable pool of health resources. The merging of municipal, primary care and hospital settings under Hälsostaden generated a hub of diverse professional competencies and expertise under one roof. Furthermore, formal continuing education programmes for professionals are currently being developed.

One of the best things about integrating the hospital and the municipality is that a lot of the competencies that we need we actually have in house; we just had to put the right people together. So we just had to figure out what competencies we had and then how to spread the knowledge to the people who need it.

In anticipation of future professional needs as Hälsostaden grows and care shifts further into municipal and home settings, universities in the region are developing a new municipal home care programme to equip health professionals with the new skills needed to manage these responsibilities. Universities are also playing a key role in researching new technologies and e-health solutions which may prove useful for improving care for the elderly population. The Centre for Ageing and Supportive Environments at Lund University is supporting research on the impact of Hälsostaden and is charged with conducting an evaluation of the initiative to determine if the quality of health services in Ängelholm improves as a result of the pilot.

Outcomes

While evaluation of the initiative is ongoing, it is anticipated that Hälsostaden will generate improvements such as reduced hospital stays, fewer emergency admissions and increased financial efficiency over the long term. After only a year of implementation, several positive outcomes have been reported (Box 2).

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Regional Council of Skåne and Municipality of Ängelholm have joint responsibility and oversight for Hälsostaden. • Memorandum of understanding passed to allow the initiative significant freedom to explore new integrated care models. • Laws adjusted to allow medical records to be shared across care settings within Hälsostaden.
Competencies	• Merging of multiple organizations and professionals under Hälsostaden has created a rich pool of professional competencies. • New municipal home care programme being developed by universities in the region in cooperation with Hälsostaden.
Innovation	• Research on information technology-based health care solutions being conducted by universities with the aim of expanding e-health. • Lund University is leading an evaluation to understand the impact of Hälsostaden to date.

Box 2
What were the main outcomes of the initiative?

- Over 90% of patients were seen within government-set waiting time targets; Hälsostaden waiting times compared favourably with other hospitals and ranked among the top 10 nationwide.
- Within its first six months of operation, the emergency mobile care team made 334 visits to 188 patients; in 94% of cases an unnecessary visit to the emergency room was prevented and 73% of unplanned inpatient hospitalizations were avoided.
- Cost savings have been demonstrated within the initiative; for example, the emergency mobile team saved €600 000 from reducing unnecessary hospitalizations, while only costing around €130 000.
- Feedback from patients about Hälsostaden has been positive, and 100% of patients reported satisfaction with care from the emergency mobile team.

Change management

Key actors

Hälsostaden is implemented across several organizations and involves many stakeholders (Box 3). The idea for the initiative emerged out of informal discussions between local leaders in health and social care in the Municipality of Ängelholm. Motivated by a common desire to improve care for elderly residents in the region, these leaders lobbied the regional council to grant permission for the initiative. The regional government, recognizing the upcoming challenges in delivering health and social services to an ageing population, were open to change and proved forthcoming in developing the necessary legal framework for the initiative. A

multistakeholder steering committee and board for Hälsostaden oversee its management and the organization is developing a strong ethic of teamwork among its employees.

Box 3
Who were the key actors and what were their defining roles?

- **Hälsostaden.** New health and social care organization jointly managed by a steering committee and board with oversight from the Municipality of Ängelholm and Regional Council for Skåne; employs 600 health and social care professionals, as well as a full administrative staff.
- **Local health and social care management.** Leaders of municipal, primary and hospital care in Ängelholm; met to discuss potential service improvements and first conceived the idea for Hälsostaden.
- **Municipal government.** Serves on Hälsostaden's steering committee and board; allocates portion of its budget to fund the initiative.
- **Regional government.** First approved the initiative and passed memorandum of understanding granting significant regulatory freedom for activities; serves on Hälsostaden's steering committee and board; allocates portion of its budget to fund the initiative.

Initiating change

Broad consensus that better care could be delivered for elderly patients provided strong motivation for the initiative, prompting managers from hospital and primary care to begin building relationships with municipal officials in an attempt to resolve challenges of service fragmentation. "There was a lot of

groundwork" needed for building trust between these two groups.

We just sat and drank coffee and built trust. We discussed joint patients that we are both responsible for, but that no one was taking responsibility for. We started forming a joint vision of what we could do. … We figured that to collaborate we would have to build trust and see whether it was even possible to have a relationship and a partnership.

While it took time for both sides to develop a shared understanding, the idea for the initiative gradually took shape as each party considered what they could contribute to achieve the common objective of improving care for elderly patients.

It is scary for the health care system to change and, in this case, to be releasing power to the municipality. The municipality was afraid that maybe we would drain their resources. To overcome this you have to build trust and you have to find a common ground. The best way to do this, we found, was to look at examples from real life. We extracted real cases that we had a joint responsibility for and we looked at them objectively, examining the way things turned out for that patient. We asked ourselves "is this how we want it to be?" and in each case we agreed that this was not in fact the case.

Having formed a joint vision for change, the initiators bypassed hierarchical channels and went directly to top political leadership at the regional level to pitch the envisaged model. "That is what we did because we thought it was right and then the top leadership supported us. When you do things like this you are challenging people's status quo and there is always a balance of power to strike." Timing was opportune as growing awareness of emerging demographic challenges made political leadership more open to change. "Usually when

you put forward ideas like this they don't really go anywhere, but in this case I think the political leadership saw the challenges and the pressures on the economy for health care; they saw this as an interesting experiment."

Implementation

With approval from the regional government and a memorandum of understanding giving freedom to explore new care models, leaders of the initiative set about designing Hälsostaden and deciding which parts of each individual organization would contribute. During this time there were many discussions with stakeholder groups and leaders "listened to what the workforce thought was the best way forward" and engaged with the unions. Again, focusing on what was best for patients was the uniting factor across stakeholder groups.

We asked them "if you or your parents were admitted to the hospital, how would you like it to be? What kind of care would you like? What kind of communication would be important?" Once you ask people that then they knew what they wanted and this largely aligned with exactly what we wanted to do. Once they verbalized this it was very easy for them to adopt this behaviour.

Once Hälsostaden was up and running, efforts were focused on improving information and communication among professionals and developing a strong organizational culture to support teamwork. For example, a printed magazine "Hälsobladet" is distributed quarterly to Hälsostaden staff to strengthen their identity as one unit. There was also a large one-year anniversary event for Hälsostaden that brought all staff together in celebration. "If you want to lead a system of integrated care it has to be based very much on values and you have to find a common value base. … This could be a key to breaking down cultural differences."

Moving forward

As a dynamic and exploratory project, Hälsostaden is constantly evolving. The initiative is approximately halfway through the planned pilot phase, yet expected to be extended and "there are good prospects of expanding to eventually make Hälsostaden permanent". There are plans for expansion into other care areas, such as mental health, as well as to spread the project to other municipalities and regions. The initiative has generated considerable outside interest and "every week we have visitors from regional councils and countries who are curious what tomorrow's care for the elderly might look like". Discussions with several municipalities about implementing similar projects are already "pretty far along" and a strategy for scaling-up the initiative is currently being developed.

Highlights

- Organizational change to integrate health and social services for the elderly improved coordination across these sectors for the target population.
- Early investment in strengthening stakeholder relationships and building trust was essential for securing the future development of the initiative and developing a foundation based on teamwork.
- A uniting objective enabled participating organizations to find common ground and move forward with planning and implementation.
- Political and legislative support for the initiative created a strong, yet flexible, framework on which the initiative could grow.
- Identifying organizational strengths and pooling resources from each institution minimized required investments and supported in-house development of activities.

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1 World Health Organization. (2015). *European health for all database*. Retrieved from data.euro.who.int/hfadb
2 Skåne region. (2015). *The project Hälsotaden Ängelholm: care and nursing without borders*. Retrieved from http://www.skane.se/sv/Webbplatser/ Angelholm-samlingsnod/Angelholms-sjukhus/Sjukhuset/Valkommen-till-Halsostaden/Nyheter/

Outpatient rehabilitation services for patients with brain injuries in Bern, Switzerland

Overview

In the early 2000s, providers in the city of Bern, Switzerland grew increasingly concerned by an observed gaps in rehabilitation services for working-age patients recovering from brain injuries; notably a lack of comprehensive and coordinated services targeted to the specific needs of these patients. In response, a group of rehabilitation therapists – specializing in occupational, physical and speech therapy – joined together to open an outpatient rehabilitation centre specifically tailored to the needs of working-age patients recovering from brain injuries. In 2003, planning and preparations for the centre began and start-up costs were self-financed by the leadership team. With no similar model for the delivery of rehabilitation services in Switzerland in place, the leadership team developed care guidelines and protocols based on their own expert knowledge and practical experience, supported with input from other providers. In 2005, after securing a guarantee for reimbursement of services from insurance companies, the centre – coined Rehapunkt, meaning "rehabilitation point" – opened. Initially offering rehabilitation services just one day per week, professional networking helped build patient lists and, by 2008, the centre had expanded to a larger space and was open five days per week. Occupational therapists are employed directly by the centre. All other professionals, including physiotherapists and speech therapists, rent rooms at the centre and are contracted to provide services. Patients enrol for services through referral from inpatient rehabilitation centres and follow a six-month rehabilitation programme tailored to their individual needs and goals. General practitioners receive regular updates on patients throughout the programme to support continuity of care upon completion. Approximately 40% of centre patients have been able to successfully return to work after completing the programme, with an additional 30% of patients able to return to work in some capacity. Presently, the centre continues to grow and is currently seeking a larger space to enable further expansion. Additionally, the integrated multidisciplinary Rehapunkt model has been replicated by two other centres in Switzerland.

Problem definition

During the early 2000s, rehabilitation services for patients with brain injuries in Switzerland were largely focused on the needs of the growing population of geriatric patients. However, this left a gap in services targeted to the specific needs of working-age patients who, following a brain injury, required specialized care designed to facilitate their return to work (Box 1).

Moreover, patients with brain injuries required care from a mix of different specialists - including occupational therapists, physiotherapists and speech therapists - to provide the comprehensive range of services needed to support return to normal functions. However, the various providers needed for the effective rehabilitation of patients with brain injuries were fragmented, leaving patients with the burden of seeking care from multiple providers in different locations. Furthermore, a lack of communication between providers prevented coordinated delivery of care plans, leading to patients' symptoms being treated separately, rather than as part of a complex whole.

Box 1
What problems did the initiative seek to address?

- Rehabilitation for brain injuries largely organized around the needs of geriatric patients, failing to meet specific rehabilitation needs of younger patients.

- Multiple providers needed for effective rehabilitation of patients with brain injuries, but physical separation and a lack of communication between providers resulted in fragmented care delivery.

Health services delivery transformations

Timeline of transformations
In the early 2000s, gaps in available rehabilitation services for working-age patients recovering from brain injuries drew concern from a group of rehabilitation therapists working in Bern, Switzerland. In response, this self-formed leadership team proposed opening a comprehensive rehabilitation centre to provide services specifically targeted to working-age patients (Table 1). In 2005, after two years of planning, the centre – coined Rehapunkt, meaning "rehabilitation point" – was opened. The centre has gradually expanded over time, acquiring additional building space and extending opening hours to help accommodate increasing demand for services. At present, Rehapunkt continues to grow and its model is being replicated by other centres in Switzerland.

Description of transformations
Selecting services. The centre offers a comprehensive package of outpatient rehabilitation services to patients following a brain injury; services offered include occupational therapy, physical therapy, speech therapy and a range of complementary therapies, as well as counselling and coaching. Services are geared towards helping patients return to work and are specifically tailored to needs of patients aged 18-70 years. The centre offers both group-based and individual therapies; group therapy is considered particularly important by the initiative's leaders for supporting successful rehabilitation. Services are organized in a six-month programme and, if necessary, services can be extended following programme completion.

Designing care. The centre works from WHO's International Classification of Functioning, Disability and Health (ICF) framework for measuring health and disability. Centre-specific protocols and processes were developed by the leadership team based on their expert knowledge and many years experience working in this field; experts at a nearby hospital also provided technical input.

Upon discharge from inpatient care, patients referred to the centre enter a six-month care programme and attend the centre two full days per week. Clinical experience of the initiative's leaders indicated six months is the typical amount of time needed for patients to sufficiently regain functioning. During the programme patients receive three evaluations, allowing personalized care plans to be constructed based on individual goals, needs and progress.

Organizing providers. A variety of health professionals have been brought together to work as a multidisciplinary team. Co-location of providers within the centre means patients can now access all the different services they need at one location. "We have all the therapies under one roof. ... We really try to have providers work together to be one process." In addition, each patient is assigned a personal case manager to oversee and coordinate their care. Patients are referred to the centre directly from inpatient rehabilitation facilities, the aim being to have patients enrolled in centre services "the day they come home" to ensure continuity and avoid regression due to a lag in care. In turn, the centre has established a feedback system with general practitioners to ensure continuous care when patients graduate from the centre.

Table 1
What were the chronological milestones for the initiative?

2003	Therapists specializing in rehabilitation of brain injuries conceive idea for Rehapunkt centre to address observed service gaps; first meeting to plan the initiative held.
2003–2005	Planning period for the initiative; building location selected, care pathways developed and negotiations held with insurance companies to secure reimbursement for services.
2005	Rehapunkt opens and begins offering integrated occupational, physical and speech therapy services one day per week.
2005–2008	Demand for services offered by the centre gradually increases and patient lists grow.
2008	Larger building space acquired for centre and opening hours extended to five days per week; additional services added.
Present	Continued delivery of rehabilitation services at Rehapunkt; further expansion of centre planned.

Managing services. Start-up costs for the centre were largely self-funded by leaders of the initiative, with supporting funds donated by a partner's business and a local church. Infrastructural investments included securing a building space for the centre and making necessary renovations to support activities. Management of the centre is overseen by the leadership team, consisting of the head occupational therapist, physiotherapist and speech therapist. Occupational therapists are directly employed by the centre, but physiotherapists and speech therapists rent rooms at the centre and are contracted to deliver services; contracted employees are free to see their own patients in addition to those enrolled at the centre. Other health professionals are contracted on an ad hoc basis to deliver specific services as needed. Regular staff meetings help to facilitate a coordinated system.

Improving performance. The centre offers on-the-job training and ad hoc training courses for qualified individuals needing to improve their skills. Meetings, known as quality circles, are held quarterly between the leadership team to review performance and adjust processes as necessary to improve quality and functioning of centre services. A more comprehensive review is held between all providers at the centre annually.

Engaging and empowering people, families and communities
The centre's goal is to help patients regain the highest possible level of functioning in daily and professional life. There is a strong focus on helping the patient achieve independence through skills-training and patients are actively included in care decisions and encouraged

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Lack of integrated rehabilitation services targeted to working-age patients with brain injuries.	Integrated rehabilitation services targeted to working-age patients with brain injuries available within Rehapunkt centre; services offered include occupational, physical and speech therapies.
Designing care	
Lack of guidelines for delivery of integrated rehabilitation services to working-age patients with brain injuries.	Centre works from ICF framework developed by WHO; centre-specific processes and guidelines developed based on knowledge and experience of the leadership team; patients follow a six-month personalized care plan.
Organizing providers	
Health professionals isolated from each other and organized in separate locations; lack of communication between providers results in poor continuity of care for patients.	Health professionals co-located within the centre and work in multidisciplinary teams; case manager assigned to each patient to coordinate care; referral networks established with inpatient facilities; feedback sent to general practitioners.
Managing services	
Centre not yet in operation.	Centre start-up costs primarily self-financed by leaders; necessary building space acquired; centre managed by lead occupational therapist, physiotherapist and speech therapist; occupational therapists employed directly by the centre, but physiotherapists and speech therapists contracted to deliver services.
Improving performance	
Centre not yet in operation.	Training provided to centre staff as needed; meetings held between leadership team every three months to review performance; whole-staff meeting held annually.

to participate in their care. Patients work with a case manager to define goals and establish a personalized care plan. Patients' relatives or other support network members are welcome throughout the care process and, once patients regain sufficient functioning, their employer may also be included. When ready, patients return to work for a trial period and, during this time, an exit plan is developed with strategies to help patients continue making progress beyond the programme.

Health system enabling factors

As a single-centre initiative, formal policy changes to support the new model of services delivery have not yet been required. Instead, the centre has managed to develop within the existing health system structures to effectively provide services (Table 3). A key enabler for the initiative was the guarantee for reimbursement of services from the compulsory health insurance providers and accident insurance companies. Professionals working at the centre bill insurance companies directly for services rendered and the centre is required to complete an annual evaluation of activities for insurers.

Partnerships with universities offering occupational and physical therapy programmes allow university students to complete required practice placements at the centre. As part of their placement, students are provided with data collected by the centre to complete research projects. While data is collected by the centre, the centre itself has not conducted a formal performance evaluation.

Outcomes

While no formal outcomes are available to date, measures to monitor the performance of the centre are in place and research is conducted by university students as part of their practical work placements completed at the centre.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Centre is required to report to insurance companies who pay for services.
Competencies	• Partnerships with universities allow occupational and physical therapy students to complete required practice placements at the centre.
Information	• University students completing practice placements at the centre conduct research on activities using data collected by the centre.

Approximately 40% of patients have been able to successfully return to work after completing the Rehapunkt six-month rehabilitation programme, with an additional 30% able to return to work in some capacity. Leaders of the initiative attribute a large part of the programme's success to its unique use of group rehabilitation, noting that patients appear to significantly benefit from this type of care. Additionally, the integration of patients' family and employers was reported to be another key influencer of positive patient outcomes.

Change management

Key actors

The idea for Rehapunkt was formed by an entrepreneurial occupational therapist who, already running an occupational therapy practice, was well positioned to observe gaps in services and had the necessary skills to conceive of a new practice to help address these. Going on to become the owner of Rehapunkt, the centre was designed and managed together with a self-formed leadership team composed of colleagues at partner physical and speech therapy practices who were also motivated by the issue. This leadership team first met in 2003 and, together with input from local physicians and experts at a nearby hospital, designed and implemented

Rehapunkt. This leadership team continues to oversee and manage the centre today, meeting regularly to coordinate necessary activities and strategize improvements.

Initiating change

With a motivated leadership team in place and the idea for Rehapunkt having been developed, attempts were made to generate necessary start-up funds through fundraising. However, as insufficient funds for necessary investments in infrastructure were raised, eventually the centre had to be largely self-financed by initiative leaders, which meant limiting its scale to control costs. Future financial viability of the centre was secured early on through extensive discussions with insurance companies to guarantee reimbursement for services rendered. Insurance companies were already reimbursing services proposed by the centre when delivered separately, but needed to be convinced to extend reimbursement for integrated services delivery; securing support from insurance companies was described as a crucial step in developing the centre.

Implementation

As Rehapunkt was unique in its approach to the delivery of rehabilation services, management

and clinical processes were adapted as needed based on operational experience, facilitated by quarterly review meetings between the leadership team. While starting out small, the centre gradually grew its patient list through word-of-mouth via leveraging professional networks, including a professional organization for occupational therapy in Bern as well as a national professional organization for rehabilitation. Over time, these networks helped raise awareness of the centre, generate referrals and build demand for services. While the centre has grown significantly from when it first opened, fluctuations and uncertainty in demand are described by the leadership team as a continued challenge requiring careful scheduling and consideration.

Moving forward
The centre plans to continue operations at the local level, gradually expanding to accommodate increasing demand for its services. The leadership team also hopes to widen the targeted population by extending services to patients with conditions such as multiple sclerosis or Parkinson's disease. While initiative leaders plan to continue operating Rehapunkt at the local level, its model has already been replicated by two other centres and there is considerable interest from other parties in establishing similar centres around Switzerland. Rehapunkt will continue to support the proliferation of its model through observation of its practice and providing coaching to interested centres.

Highlights
- Direct clinical experience of the multi-professional leadership team helped draw awareness to gaps in services delivery and aided the design of practical services to address observed needs.
- Co-location of providers within the centre increased coordination of services and ease of access for patients; external professional relationships and networking were important for generating referrals and growing the initiative.
- Gradually building the scale and scope of the initiative allowed time for sufficient resources to be collected and partnerships established; the initiative advanced with steady but sustainable growth.

Integrating delivery of tuberculosis services in primary care in Tajikistan

Overview

With one of the highest tuberculosis (TB) incidence rates in the WHO European Region and increasing concern over multidrug-resistant TB (MDR-TB), strengthening TB services is high on the government agenda in Tajikistan. The first national TB programme, launched in 1996, was followed by efforts to introduce Directly Observed Treatment, Short-Course (DOTS) in the late 2000s. The National TB programme 2010–2015 aims to systematically address remaining gaps in services delivery, working to provide primary care-led TB services. Reorganizing services delivery has allowed more than 70% of TB patients to now receive services in outpatient facilities. Over 3000 health workers have been trained on providing TB care in primary settings and annual accredited trainings are now in place. The Ministry of Health and Social Protection and Ministry of Education have also worked to adapt formal education of health workers for optimal TB services provision. Other cross-ministry partnerships have formed and a National Coordination Committee on TB, HIV/AIDS and Malaria brings together government officials from each ministry to collaborate on TB reduction. Nongovernmental organizations (NGOs), through roles in both policy-development and decision-making, partner with the government to enable services delivery transformations, with the majority of TB programme funds sourced internationally.

Problem definition

In 1996, with a TB prevalence rate of 376 per 100 000 population, Tajikistan had one of the highest rates of TB in the WHO European Region (Box 1).[1] Since then, rates of TB have continued to fluctuate above the Regional average with a prevalence rate of 154 per 100 000 population in 2012 compared to the Regional average of 53 per 100 000 population that same year.[2] Poor TB outcomes have been attributed to the suboptimal delivery of TB services, including concentration of TB treatment in hospital settings, poor coordination with primary care and weak monitoring systems. Furthermore, the continued rise of multidrug-resistant TB (MDR-TB) poses additional challenges. At present, estimated rates of MDR-TB are reported as 8% of all new cases and 52% of retreatment cases, ranking Tajikistan among the WHO European Region's highest MDR-TB burdened countries.[3]

Box 1
What problems did the initiative seek

- Incidence rate of TB in Tajikistan among the highest in the WHO European Region.
- Rising rates of MDR-TB.
- Concentration of TB treatment in hospital settings with limited role for primary care.

to address?

Health services delivery transformations

Timeline of transformations
Responding to high rates of TB, the Government of Tajikistan developed and approved the first National TB Programme 1996–2000, followed by the Concept of Public Health Reform and second National TB Programme 2003–2010 (Table 1). During this time the role of the primary care sector in TB services delivery was strengthened and full coverage of DOTS was achieved. To continue successes already accomplished and address persisting weaknesses in TB services delivery, the third National TB Programme 2010–2015 was approved by the government in 2010. A midway assessment of the latest programme was conducted in 2012 and a final evaluation is planned for 2015.

Description of transformations
Selecting services. TB treatment is provided according to DOTS across the country. Patients now have greater access to outpatient services, putting focus on increasing the number of TB services available in primary care. Expansion of available TB drug treatments and nutrition services is planned using funds redirected from hospitals.

Designing care. Under the National TB Programme 2010–2015, the majority of TB patients (and almost half of MDR-TB patients) are

Table 1
What were the chronological milestones for the initiative?

1996	First National TB Programme 1996–2000 affirmed by the government to address concerning TB statistics.
2002	Government signs Concept of Public Health Reform with the aim of developing the role of primary care.
2003	National TB Programme 2003–2010 launched.
2004	Piloting and scaling up of DOTS; grant from The Global Fund accelerates DOTS uptake.
2007	Full national coverage of DOTS achieved.
2010	National TB Programme 2010–2015 launched, including elements of DOTS Plus which covers MDR-TB.
2012	Midway assessment of the National TB Programme 2010–2015 conducted.
Present	Continued implementation of the National TB Programme 2010–2015 with a final evaluation planned for 2015; National TB Programme 2016–2020 approved by the National Coordination Committee on HIV/AIDS, TB and Malaria.

treated as outpatients. A national TB treatment manual based on DOTS supports the development of outpatient treatment. Treatment begins after a patient receives three positive saliva smear tests. The decision to start and finish treatment for a patient is made by the National TB Medical Council. Patients who meet an initial set of criteria are required to receive intensive treatment in hospital and later transition to supportive outpatient treatment.

Organizing providers. Providers are organized across four levels of care. One National TB Centre acts as the main body responsible for coordination of services delivery for the four subordinate regional TB centres and 28 district hospitals. Coverage of TB providers has increased in outpatient settings as a result of directing resources away from hospitals and training primary care providers to manage TB patients. Patients can access outpatient care in their own districts and, if requiring hospital admission, will be transferred back to local outpatient facilities upon discharge. All information transfers are coordinated through the National TB Centre; the National TB Medical Council meets biweekly to discuss patient transfers and arrange for patient records to be sent where needed.

Managing services. Every district has a family medicine manager who oversees primary care providers. Both family medicine and TB managers oversee TB care at the district level and are responsible for responding to performance feedback. Resources are being redirected from hospitals to primary care and clear targets have been set to reduce the number of TB hospitals from 33 to 24 and TB beds from 2550 to 1800 by 2015. NGOs are instrumental for supporting the delivery of TB services to marginalized populations and more challenging cases.

Improving performance. Training in DOTS has been provided to 3000 health providers across all care levels, including outpatient providers and laboratory technicians. The National TB Programme 2010–2015 emphasizes the importance of monitoring and evaluation. The work of health providers delivering TB services is constantly monitored at the national level. Primary care facilities are required to report on four TB indicators: case detection, successful treatment, contact investigation and preventive services coverage. A midway assessment of the National TB Programme 2010–2015 was conducted in 2012 to evaluate progress achieved so far and to help plan future activities. A final assessment for the programme is planned for 2015.

Engaging and empowering people, families and communities
The government has solicited public support in working to strengthen TB services through recruiting and training of volunteers – such as active citizens, religious leaders and people who have been treated for TB – to help raise public awareness and reduce stigma surrounding the disease. TB education has also been incorporated into the school education system to increase population health literacy regarding TB.

Health system enabling factors
All national TB programmes implemented since 1996 were officiated through government decree, ensuring a strong legislative framework for reforms and sustaining prioritization of efforts to strengthen TB services (Table 3). Current activities are guided by the National TB Programme 2010–2015; the Programme aims to build on previous TB programmes and address weaknesses identified by the comprehensive system analysis that was jointly conducted by the government and WHO.

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
National coverage with DOTS but gaps in TB services exist for high-risk groups; lack of preventive services; TB services overly specialized.	DOTS introduced into primary care; targeted TB screenings carried out in high-risk groups; available drug therapies and nutrition services expanded.
Designing care	
TB care delivered according to DOTS in inpatient settings; no guidelines for provision of TB services in primary care.	National TB Control Guideline informs care delivery in primary settings; National TB Medical Council oversees care initiation and termination decisions; most patients begin treatment in outpatient settings; patients requiring intensive treatment initially admitted as inpatients and later transitioned to outpatient care.
Organizing providers	
TB providers concentrated in secondary and tertiary settings; coverage of TB providers is low; no coordination with primary care exists.	National TB Centre coordinates and directs patient care; shift of TB providers to outpatient settings has increased coverage and access; patient records follow patients between facilities.
Managing services	
Resources concentrated in secondary and tertiary settings; TB services predominantly funded through international grants; NGOs play a large role in TB services delivery.	Reduction targets set for TB hospitals and beds; resources shifting to primary care; family medicine and TB district level managers work to meet performance targets and respond to central feedback.
Improving performance	
Limited TB training opportunities available in primary care.	DOTS training provided to 3000 health providers across all care levels; monitoring of key TB indicators regularly conducted.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• National TB programmes officialized through government decree; National TB Programme 2010–2015 is the current strategy in place. • Concept of Public Health Reform committed the government to strengthening primary care.
Incentives	• Beginning to redirect funds away from inpatient centres; absence of clear mechanism to redirect funds towards primary care at present. • Decreased funding for inpatient services has incentivized providers to relocate to lower-level care settings.
Competencies	• Ministry of Health and Social Protection approves annual TB training plan; national training team, regional training team and national training coordinator are the responsible authorities overseeing accredited trainings.
Information	• Primary care facilities required to report on TB indicators; monitoring of indicators led nationally with quarterly evaluations.

Decreasing funds for highly-specialized TB services has incentivized the delivery of TB treatment in primary care and outpatient settings. Formalizing annual training programmes through accreditation has helped ensure primary care providers continually develop and improve clinical competencies. A national training team, regional training team and national training coordinator are the three authorities responsible for overseeing accredited trainings.

Outcomes

Positive outcomes have been reported as a result of the current National TB Programme, in addition to the compounded effects of improvements achieved with previous programmes (Box 2). TB care has shifted into lower-level settings, making TB treatment easier and more accessible for patients. Positively, data indicate declines in the number of newly detected TB cases since 2010.

Box 2
What were the main outcomes of the

- Government statistics and WHO data indicate a steady decrease in the number of newly detected TB cases between 2010 and 2014.
- TB hospital beds declined from 920 per 100 000 population in 1990 to 444 per 100 000 in 2011; 35% of the proposed target cuts have been achieved at present.[4]
- TB care is increasingly provided on an outpatient basis and 70% of all new patients are treated as outpatients from day one of treatment; 48% of new patients with MDR-TB are treated as outpatients.[4]
- MDR-TB treatment coverage among diagnosed patients increased from 63% in 2011 to 89% in 2014.[3]

initiative?
Change management
Key actors
TB reduction efforts are being directed by the national government with oversight and leadership from the Ministry of Health and Social Protection along with the support of international development agencies and NGOs (Box 3).

Box 3
Who were the key actors and what

- **National government and National Coordination Committee on HIV/AIDS, TB and Malaria**. Developed and introduced national TB programmes; led health system reforms to strengthen primary care; gradually increasing allocated government funds for TB activities; works with development partners to achieve National TB Programme 2010–2015 goals.
- **Ministry of Health and Social Protection**. Responsible for overseeing national TB programme.
- **The Global Fund**. Primary funder for the National TB Programme 2003–2010 and 2010–2015.
- **WHO**. Supported scale up of DOTS in Tajikistan; conducted research on the effectiveness of outpatient TB treatment; provides ongoing technical and evaluation support for activities.
- **NGOs and development agencies**. Provide financial and technical support to National TB Programme 2010–2015; offer TB services in districts where coverage is poor.
- **National TB Medical Council**. Centrally coordinates and directs delivery of TB services.

were their defining roles?

Initiating change

The government led the development of the first national TB programme in 1996 in response to rising incidence of TB. While there was strong national commitment behind the programme, limited funding hindered its effectiveness. The second national TB programme aimed to introduce DOTS and received strong support from international development agencies and NGOs, including a grant from The Global Fund, which accelerated national rollout of DOTS. Building upon previous efforts, the third national TB programme was designed as a stronger approach to address remaining weaknesses in TB care. The national government and the National Coordination Committee on HIV/AIDS, TB and Malaria led development of the National TB Programme 2010–2015, supported by international organizations. Research jointly conducted by the government and WHO was essential in convincing the government to increase outpatient TB services under the Programme.

Implementation
Recent activities have been guided by the aims, objectives and targets outlined in the National TB Programme 2010–2015. A holistic view to addressing the TB burden has been taken with the Programme extending its reach beyond the health sector to involve other government ministries. Ministries work together in cross-ministry partnerships coordinated through the National Coordination Committee, which includes representatives from each ministry, as well as United Nations agencies, local and international NGOs and members of the affected population. The Ministry of Health and Social Protection is currently working on establishing the Agency of Population TB Protection whose main aim will be to influence other ministries to participate in the fight against TB.

Partnerships with NGOs and international development agencies have been crucial to the

implementation of the National TB Programme 2010–2015. These organizations have provided technical guidance and expertise, supported training of health providers, provided necessary resource investments and filled gaps in TB services delivery. While implementation of the National TB Programme 2010–2015 has depended heavily on collaborative partnerships between government officials and international organizations, public support has also been crucial and volunteers recruited and trained by the government have played an important role in raising awareness of TB, reaching target populations and helping to reduce stigma.

Moving forward
The final assessment of the National TB Programme 2010–2015 will provide insight for the future direction of subsequent national

TB programmes. The government is gradually taking on increasing financial responsibility for TB services delivery and has the goal of becoming independent from external funding to ensure the sustainability of

Highlights

- Aligning to previous efforts and learning from previous experiences enabled a stronger approach moving forward.
- Developing a cross-ministry approach ensured united government support and greater stability for the initiative.
- Strong partnerships between the government, international organizations, NGOs and members of the affected population contributed to an infusion of technical and personal expertise, in addition to providing resources to support activities.
- Shifting resource allocation was a mechanism to drive organizational shifts in services delivery.

TB care.

1 World Health Organization. (2014). *TB burden estimates.*
2 World Health Organization. (2015). *European health for all database.* Retrieved from http://data.euro.who.int/hfadb
3 World Health Organization. (2014). *Tuberculosis country profiles: Tajikistan.*
4 World Health Organization Regional Office for Europe. (2013). *Extensive review to tuberculosis prevention, control and care in Tajikistan.* Dushanbe: Author.

Developing an integrated information system in the former Yugoslav Republic of Macedonia

Overview

In 2006, the Government of the former Yugoslav Republic of Macedonia launched a strategy to develop an integrated health information system in an effort to streamline information flows and reduce artificially inflated waiting times. Working in partnership with the Health Insurance Fund, the Ministry of Health designed and implemented a web-based appointment platform, coined MyAppointment. General practitioners now register patients for services in MyAppointment, enabling online tracking of patients to prevent duplicate registration for services, improve accuracy in measuring access and facilitate timely coordination of care. Patients also have access to the platform to monitor appointments and view waiting times. The rollout of MyAppointment was carefully designed to be compatible with existing technological infrastructure. Synergizing with existing infrastructure is credited with accelerating rollout of MyAppointment and minimizing investment costs. Shortly after the launch of MyAppointment, a reduction in waiting times was observed. Additional features have since been incorporated into the information system, including e-referral and e-prescription applications, and the system continues to evolve under guidance from the new e-health department within the Ministry of Health. Moving forward, focus has been put on using data collected by the information system to guide services delivery improvements at the stewardship level.

Problem definition

In the early 2000s, lack of coordination and standardization in patient registration contributed to long waiting times for health services (Box 1). Patients often registered multiple times in different locations for the same service due to general distrust in the referral system and concerns over long waiting times. Paper-based referrals contributed to inefficiencies, limiting coordination between providers and preventing duplications from being addressed. While government reforms had successfully generated extensive investment in information technology across the health system, these efforts were not systematized, limiting their ability to effectively contribute to optimizing services delivery.

Box 1
What problems did the initiative seek to address?

- Long waiting times for services.
- Lack of coordination and standardization in referral practices.
- Dependence on paper-based referrals and inconsistent use of technology.
- Limited communication between providers.

Health services delivery transformations

Timeline of transformations
In response to increasing patient dissatisfaction coupled with a desire to align with European Union (EU) recommendations on e-health ahead of potential EU candidacy, the Government of the former Yugoslav Republic of Macedonia led an initiative to develop an integrated electronic information system (Table 1). In 2011, the resulting MyAppointment platform was officially launched and the information system continues to be improved and expanded today.

Description of transformations
Selecting services. Through the use of technology and the MyAppointment platform, the initiative works to ensure that services in the basic benefit package are optimally available and more easily accessible to the public.

Designing care. The new e-referral and MyAppointment application supports streamlined care

Table 1
What were the chronological milestones for the initiative?

2005	General practitioners required to register as private entities with the Health Insurance Fund; online submission of reimbursement requests gradually phased in.
2007	Health Strategy of the Republic of Macedonia: Safe, Efficient and Just Health Care System prioritizes the development of an integrated information system.
2009	Strategy for Development of an Integrated Health Information System launched.
2010	Ministry of Health launches an in-depth scoping investigation into key information challenges; development of information system led by the Ministry of Health.
2011	MyAppointment platform launched; additional applications gradually layered in.
Present	Ongoing expansion and improvement to the information system.

transitions, with general practitioners now able to effectively manage patients' movement through the health system. All referral mechanisms now flow through the MyAppointment platform, enabling improved care planning by both providers and patients.

Organizing providers. Communication between providers across care levels has improved, facilitated by electronic medical records. Coordinated referrals and reduction in services duplication have reduced waiting times and increased patients' access to providers.

Managing services. The information system has allowed health managers access to real-time patient data, providing insight on service use patterns and helping managers to better organize and distribute

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
National Health Insurance provides universal coverage; comprehensive benefits package available to population.	Focus on enhancing available services with e-health.
Designing care	
Absence of clear patient referral pathways.	Patient referral pathways clearly defined.
Organizing providers	
Weak gatekeeping ability of general practitioners, with many patients self-referring to specialists; long waiting lists for specialists; lack of communication among providers allows patients to register on multiple waiting lists.	Improved communication and coordination between providers through MyAppointment platform; coordinated referral processes prevent duplicate patient registrations and support gatekeeping role of general practitioners.
Managing services	
General practitioners have access to computers with internet access; lack of real-time service use data for health managers prevents effective organization and management of resources.	MyAppointment platform compatible with existing technological infrastructure; health managers have access to real-time service use data to enable better organization and management of resources.
Improving performance	
No formal training opportunities in e-health available to providers.	Trainings offered to providers to enable effective use of MyAppointment.

resources. Managers are able to study data to identify, for example, popular appointment times, provider demand and prescription patterns. Consequently, managers are now able to make data-driven adaptions to services delivery like increasing the number of providers available at certain times of day, recruiting certain provider profiles and pre-ordering sufficient supplies.

Improving performance.
Trainings were provided to general practitioners and other health professionals to enable effective use of MyAppointment. Since its introduction, the information system has expanded beyond its original objective to provide information to health providers to now also enable managers to use data for planning performance improvements.

Engaging and empowering people, families and communities
A national media campaign was launched to inform the public about MyAppointment and highlight the political prioritization of reducing waiting times. The campaign was designed to emphasize public accountability for respecting the new appointment system to encourage improved adherence to procedures in place.

The Ministry communicated to the public the importance and need to respect the system and the appointments they make. ... In this information campaign it was made clear if you have made an appointment through the system, you should respect this; making people feel liable, that there is a set of rules that they should abide by.

MyAppointment has given patients access to reliable information on waiting times for services across the country. Patients can view information, such as which cities providers are located in, when providers are available and waiting times for services. This publicly available application is "a good tool

in an indirect way for patients to see which providers are particularly busy". Having access to this information can help patients make decisions about where to seek care and allows them to easily track their appointments.

Health system enabling factors

System-level support for the initiative has been strong (Table 3), with the Ministry of Health guiding efforts through the Strategy for Development of an Integrated Health Information System. During the early phases of the initiative, the Ministry of Health provided assistance to health facilities to improve existing infrastructure and software, easing the transition towards the new system. A new e-health department

has also been created within the Ministry to support continuous development of the information system. As part of the effort to expand the information system, all 33 disease registries are currently being integrated to enable statistical analysis of risk factors at national, regional and local levels. This will support health system planning and the design of targeted, locally adapted interventions. Data collected through the information system will also be used to develop new profiles for health providers who can "support the care processes of patients in a more coordinated way". Supportive legislative changes are expected to take place to enable further improvements in the coordination of patient care; for example, accrediting nurses to work as care coordinators.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Strategy for Development of an Integrated Health Information System guides development of initiative under Ministry of Health oversight. • New e-health department created within the Ministry to oversee the initiative and support development of e-health.
Incentives	• Contracted providers required to electronically submit reimbursement requests to the Health Insurance Fund.
Competencies	• Necessary conditions being developed to accredit nurses to support care coordination.
Information	• New information system provides data directly to the Ministry of Health to enable evidence-based health system planning. • Ongoing integration of all 33 disease registries into the information system will enable risk analysis at national, regional and local levels.
Innovation	• Over 3000 applications developed as part of the information system; applications include the MyAppointment platform, e-referral and e-prescription.

Prior to the initiative, the Health Insurance Fund, who is responsible for collecting and allocating funds and contracting providers, transitioned towards electronic reimbursement requests, pushing contracted providers to acquire the necessary technological infrastructure in order to receive reimbursement. The initiative built on this electronic foundation, capitalizing on technological infrastructure investments already made to accelerate uptake of MyAppointment by providers. "It was not an official law or decree that mandated providers to realign their practice, but the conditions really motivated the changes that took place."

Outcomes

Improvements in waiting times were observed within just a few months of launching MyAppointment, with the effort to improve reporting and monitoring of patient flows generally regarded as being highly successful (Box 2).

Box 2
What were the main outcomes of the initiative?

- Waiting list times dropped from as high as 17 months down to just a few days; the longest waiting times for services are now just two weeks.
- Over 1 500 000 electronic medical records had been created by the end of 2014, covering approximately 75% of the population.[1]
- Approximately 20 000 000 electronic prescriptions and over 3 600 000 e-referrals are made annually through the information system.[1]

Change management
Key actors
Top-down leadership from the government, in partnership with the Health Insurance Fund and health providers, drove the initiative forward. The Ministry created the overarching action framework and established a new e-health department to support development, management and improvement of the information system. The Ministry worked closely with the Health Insurance Fund to develop the information system and its associated applications. Additionally, the Health Insurance Fund played a key role in promoting providers' use of the system through contract agreements with general practitioners.

Initiating change
A comprehensive study on health system challenges and information exchanges informed the Strategy for Development of an Integrated Health Information System, helping establish the necessary framework to guide change. Within this Strategy, the Ministry of Health assumed a leadership role over the initiative and carried out a scoping investigation to inform the specific design of the information system. As the Health Insurance Fund had already established links with general practitioners, a partnership was formed between the Ministry of Health and the Health Insurance Fund to design a system compatible with existing infrastructure. Together these partners developed the MyAppointment platform and other applications.

Implementation
The new e-health department within the Ministry of Health provided guidance throughout implementation and helped reduce the burden of change on providers. Ministry assistance offered to health facilities and providers enabled implementation to progress more rapidly. Assistance included provider trainings on the new information system and regular meetings with general practitioners, academics and other stakeholders to enhance the system's usability. Capitalizing on existing technological infrastructure supported the implementation process and allowed rapid uptake of the new information system.

This attempt to recycle resources and make use of things already in place was a huge part of the success of this effort. Had it not been done as such, this would have been a huge undertaking, a mess really, taking much more time and resources than was the case. Another three to four years as a minimum.

Moving forward
Recent efforts have focused on ensuring sustainability of the initiative and closing gaps in population registration within the MyAppointment system. The focus moving forward is on finding ways to leverage data collected through the system to inform and support services delivery.

Now is the time to go back and reflect on the changes that have occurred in the past years and strategize how we can make most use of the available data that we now have. ... What this has meant for services delivery and our understanding of population needs. What are the results that the system is showing us? Now is the time to see what we can gain from the system's insights and use and apply this for further improvements.

Highlights

- Alignment with previous investments in technological infrastructure enabled rapid uptake of the new information system by providers and economical use of existing resources.

- A comprehensive investigation built understanding of problems and supported the development of an informed solution to directly address key challenges.

- An effective communication plan, including public campaigns and efforts to gain public trust, was essential to ensuring successful implementation and uptake of the new information system.

1 Chichevaliev, S. & Milevska-Kostova, N. (2014). *E-Health policy implementation in Macedonia*. Rotterdam: The Erasmus Observatory on Health Law. Retrieved from http://www.erasmusobservatoryonhealthlaw.nl/Uploads/E-Health%20policy%20implementation%20in%20Macedonia(1).pdf

Implementing clinical audits to improve standards of care in Turkey

Overview

In 2011, following feedback from both the Social Security Institute of Turkey and patients on the suboptimal delivery of services, the Ministry of Health conducted a review of medical services. The review brought to light evidence of the overprovision of care, particularly minor operations, radiological exams and hospital stays. In response, the Ministry devised a national auditing initiative in conjunction with stakeholders to address this problem. The Ministry implemented Audits of Compliance with Medical Indication (ACMI) to increase government oversight of health services in alignment with care standards in place. While health care institutions initially resisted the proposed changes, discussions were eventually successful in gaining their support by explaining that the aim of the initiative was to improve the quality and performance of services without imposing penalties on providers or facilities. With stakeholders on board, a literature review was conducted to identify priority targets and a multidisciplinary committee of experts was convened to help plan the initiative, design auditing tools and guide the implementation process. The plan put forward was to conduct annual peer-led audits across medical specialties to improve providers' adherence to national guidelines. A pilot audit of intensive care units helped refine the initiative's design prior to scaling up. Audits for 10 specialties have been conducted on approximately 50 000 patient records in over 1000 institutions to date. Auditors are providers who are considered experts in the services being audited; using their clinical knowledge, auditors are asked to assess a random selection of files from institutions across the country to determine whether national guidelines are appropriately being followed. Once an audit is complete, results are reported back to institutions, who are held accountable for performance improvements via an annual reassessment process overseen by Provincial Health Directorates. Standard of care and adherence to clinical guidelines are reported to have improved and reductions in contraindicated services have been described. At present, the Ministry of Health is looking to expand the initiative to implement audits for all medical specialties across all levels of care. The Ministry is also considering refinements to the initiative, such as the inclusion of financial incentives for auditors to increase efficiency, as well as public reporting of audit results to increase accountability and further encourage performance improvements.

Problem definition

In 2010, patient feedback on health services indicated suboptimal services delivery (Box 1). Complaints were concentrated around the unnecessary performance of minor operations and radiological exams, as well as unwarranted hospital stays. Utilization data reviewed by the Ministry of Health confirmed the trend of overprovision of services beyond that clinically recommended, as did health insurance reimbursement data reviewed by the Social Security Institute. This weak adherence by providers to standards and clinical guidelines appeared to stem, in part, from a lack of monitoring and evaluation.

Box 1
What problems did the initiative seek to address?

- Overprovision of medical services, particularly minor operations, radiological exams and hospital stays.
- Inconsistent adherence of providers to care standards and guidelines.

- Weak monitoring and evaluation systems resulting in a lack of accountability for providers.

Health services delivery transformations

Timeline of transformations

In 2011, after becoming aware of the overprovision of select medical services, the Ministry of Health met with stakeholders to devise a solution (Table 1). In 2012, a decision was made to implement medical auditing and a scientific commission was convened to help develop necessary tools. Following a pilot audit of intensive care units, actions were taken to routinize auditing across several medical specialties. Today, the auditing initiative is being expanded across medical specialties and the Ministry of Health continues to devise improvements for the initiative.

Description of transformations

Selecting services. The initiative, while not altering the selection of services, has worked to ensure that services across facilities are being provided optimally to patients, eliminating unnecessary procedures.

Designing care. The initiative supports increased attention and adherence to existing protocols and care guidelines, particularly for selected priority improvement areas where auditing has already been introduced.

Organizing providers. Secondary and tertiary level institutions across public and private sectors are randomly chosen for auditing. Auditos are experts in their field and are asked to complete audits on a voluntary basis, with the exception that a provider acting as an auditor is prohibited from auditing their own institution.

Managing services. Implementation of audits has served to increase the management function of executives at secondary and tertiary institutions across public and private sectors. Through the mandatory collection and analysis of health services data, audits ensure that managers have sufficient oversight of services delivery, as well as the necessary information to adjust the organization of services to increase efficiency and effectiveness; recommendations provided to managers as part of the audit process support these functions.

Improving performance. Annual audits have been introduced across a number of priority service areas in all public and private, secondary and tertiary level institutions. Audited clinical specialties include intensive care units, radiological imaging services and coronary angiography units. Plans in place intend to extend audits to cataract operations, knee and hip prostheses, lumbar disc herniation operations, hysterectomies, caesarean sections, medical laboratory examinations and family physician interventions. Patient records are selected for audit through random sampling and necessary data is collected through an online portal where selected institutions are required to upload requested patient files, including scans, test results and utilization data. Collected information is then compared with current national guidelines for each service. Institutions receive performance results privately from the Ministry of Health and are required to make necessary improvements based on feedback. Provincial Health Directorates monitor performance improvements through annual reassessment audits of institutions. "We [government] share the outcome with them [institution] and inform them of the specifics of their situation, whether it is positive or negative, and inform them of the fact that their situation will be reassessed to monitor progress."

Health system enabling factors

Mandatory collection and analysis of services delivery data required for audits helps to ensure that

Table 1

What were the chronological milestones for the initiative?

2010	Ministry of Health receives feedback from patients and the Social Security Institute about overprovision of contraindicated medical services.
2011	Ministry of Health convenes stakeholders to strategize solutions to observed problems; idea for an initiative to introduce auditing proposed.
2012	Literature review conducted to identify priority areas to audit; Ministry of Health convenes a scientific commission to help develop necessary auditing tools and guide implementation; pilot audit of intensive care units conducted.
2013	Actions taken to routinize auditing processes and extend auditing to other medical specialties; Provincial Health Directorates called upon to conduct audits under Ministry of Health supervision.
Present	Ministry of Health planning further expansion of audits across all medical specialties.

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Recent health system reforms increased comprehensiveness of available services.	Reduction of contraindicated services provision.
Designing care	
Evidence-based guidelines and care standards in place, but poor adherence observed.	Improved adherence to guidelines and standards.
Organizing providers	
Focus on strengthening primary care and gatekeeping to higher-level services.	Expert providers within each audited specialty conduct audits on a voluntary basis; providers do not audit their own institutions.
Managing services	
Recent health system reforms allowed infrastructural investments and modernization.	Strengthened management capacities and increased oversight over services delivery within audited institutions.
Improving performance	
No auditing of health care services carried out.	Auditing for several priority service areas now carried out; audit performance results reported back privately to institutions; performance improvements monitored through annual reassessment audits.

institutions adhere to national care standards and guidelines (Table 3). Furthermore, annual reassessments hold institutions accountable for making necessary improvements in response to performance feedback. While feedback is currently confidentially reported and privately returned to institutions, the Ministry is considering an open reporting process which would make performance rankings publicly available to further increase transparency and accountability.

An online portal was created to allow required audit information to be conveniently gathered and accessed as needed. Both institutions and auditors access the portal through specially designated usernames and passwords. Institutions are required by the Ministry to upload medical records and other documentation for auditing. Auditors access and review this information to complete evaluations according to standardized assessment forms. While auditors currently perform evaluations on a voluntary basis, financial incentives are currently being considered by the Ministry to increase productivity.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Institutions accountable to the Ministry of Health and Provincial Health Directorates for performance.
Incentives	• Auditors perform evaluations on a voluntary basis at present; financial incentives currently being considered to increase productivity.
Information	• Institutions required to upload necessary data for auditing; regular monitoring and evaluation of this data performed. • Publicly available ranking system based on audit results currently under consideration as a tool to further motivate performance improvements.
Innovation	• Online auditing tools and a web-based auditing portal developed.

Outcomes

Approximately 50 000 audits across over 1000 health care institutions covering 10 medical specialties have been conducted to date (Box 2). As a result of increased government oversight of services delivery, contraindicated service provision is reported to have decreased; for example, stays in intensive care units decreased by 5%.

Box 2
What were the main outcomes of the initiative?

- Approximately 50 000 patient medical records have been audited across more than 1000 institutions to date.
- Contraindicated service provision is reported to have decreased; access to services for patients with indicated medical need is reported to have increased.
- Reductions in contraindicated service provision have resulted in reported cost savings.

Change management

Key actors

The Ministry of Health led the initiative with support from other actors in response to concerns brought forward by the public about the overprovision of certain services (Box 3). The Social Security Institute, motivated by rising expenditures, played a key role in pushing action on the issue. A scientific commission – composed of ministry representatives and experts in proposed audit areas from universities and nongovernmental organizations (NGOs) – was established by the Ministry to collectively design the initiative and provide guidance throughout its implementation. While the Ministry continues to provide oversight for the initiative, activities have been increasingly devolved to Provincial Health Directorates who are responsible for managing annual reassessment audits at the local level. Auditors are expert providers within audited fields and perform this work on a voluntary basis. While the Ministry of Health was able to convince auditors that performing audits "was their civic duty," financial incentives are now being considered to motivate efficiency improvements.

Box 3
Who were the key actors and what were their defining roles?

- **Ministry of Health**. Conceived and implemented the initiative through the audit and evaluation department; continues to provide oversight and monitoring of audit data at the national level; continues to work on strengthening and expanding the initiative.
- **Scientific commission**. Composed of ministry officials and experts from NGOs and universities; helped plan the initiative and develop necessary auditing tools.
- **Provincial Health Directorates**. Manage annual reassessment audits at the local level under Ministry of Health supervision.

Initiating change

Feedback from patients reporting the overprovision of certain medical services, supported by evidence from the Social Security Institute, prompted the Ministry of Health to initiate action on the issues brought forward. Policy-makers agreed that a systematic method to assess the quality of services, with attention to controlling health costs, was needed. While health care institutions' initial response to proposed changes was unfavourable, lengthy discussions, meetings and presentations with representatives explained the goal of the initiative was not to impose penalties or sanctions, but to generate information on how to improve the system. Once this was understood, these stakeholders were more supportive and willing to cooperate.

Implementation

A pilot audit to test the initiative was launched with support from the scientific commission and, following refinement to processes, auditing was gradually phased in across 10 medical specialties. The time it took to complete an audit was two to three times longer than expected – 12 to 18 months versus the anticipated six – due to the lack of incentives in place for auditors and competing demands on their time. However, for the most part the audit process ran smoothly and the necessary information was made available by institutions and uploaded to the online portal as required. Responsibility for reassessment audits has been devolved to Provincial Health Directorates and the Ministry of Health is working with these agencies to strengthen their capacity to fulfil this role.

Moving forward

Adjustments to the initiative based on results achieved to date are currently being deliberated. To accelerate the implementation process, the Ministry of Health is considering providing financial incentives to auditors. The Ministry is also considering publicly ranking institutions based on audit results in an effort to drive further improvements in services delivery through competition. The Ministry plans to extend services covered by audits to all medical specialties and continue to provide strong support and oversight for the initiative moving forward. However, it is anticipated that Provincial Health Directorates will play an increasing role in the auditing process.

Highlights

- Auditing was implemented as a means to improve adherence to national guidelines through increasing transparency and accountability in services delivery across health care institutions.
- Lengthy discussions with stakeholders and clear communication of the initiative's aims were essential for establishing sufficient buy-in to begin implementation.
- Establishment of data collection and analysis systems was a critical step in improving and optimizing services; strong data collection with corresponding monitoring and evaluation was paramount to the initiative's success.
- While the initiative was led by the Ministry of Health, regional health authorities played an important role in supporting the auditing process and providing oversight of institutions as the initiative expanded.

Strengthening the response to noncommunicable diseases in Turkmenistan

Overview

Shifting disease patterns and an ageing population have contributed to a rise in noncommunicable diseases in Turkmenistan, accounting for 81% of all-cause mortality in 2011.[1] With the anticipated doubling of the elderly population by 2030, concerted action to improve population health and reorientate the health system to manage the rising burden of noncommunicable diseases has received widespread support. In 2013, the WHO European Ministerial Conference on the Prevention and Control of Noncommunicable Diseases in the Context of Health 2020 was convened in Ashgabat, Turkmenistan, from which Member States adopted the Ashgabat Declaration on the Prevention and Control of Noncommunicable Diseases in the Context of Health 2020. The Conference served to accelerate the development of a response to noncommunicable diseases. An intersectoral steering committee spanning 38 government ministries and departments was established to design the National Health 2020 Action Plan 2014–2020 to guide implementation of the Ashgabat Declaration in Turkmenistan with support from WHO. A baseline assessment of risk factors for noncommunicable diseases, conducted using the WHO STEPwise approach to surveillance (STEPS), helped inform the Plan's design. Building on the existing primary care network, as well as several recent national initiatives to improve population health, the proposed Plan aims to improve health promotion and disease prevention; increase population health literacy and individual engagement with health; modernize existing care facilities; introduce electronic communication technology; and conduct research on noncommunicable diseases. In 2014, the Plan was officially adopted by presidential decree and is currently in the early stages of implementation. Ongoing data collection and surveillance by the Ministry of Health and Medical Industry will allow the impact of the Plan to be evaluated as it progresses.

Problem definition

Noncommunicable diseases have become the leading cause of morbidity and mortality in Turkmenistan, accounting for 81% of all-cause mortality in 2011;[1] cardiovascular disease alone accounted for nearly 30% of all-cause mortality in 2010.[2] Despite changing health needs, the health system of Turkmenistan has remained predominately orientated around the delivery of acute, reactive services and, thus, ill-equipped to meet the growing burden of chronic disease. With the elderly population expected to double by 2030 to 7.9%, the health system of Turkmenistan faced increasing pressures to prioritize health services delivery transformations in order to meet further expected increases in chronicity and multimorbidities (Box 1).

Box 1
What problems did the initiative seek to address?

- High level of chronic disease within a rapidly ageing population.
- Orientation of the health system towards acute, reactive care rather than proactive, chronic care.

Health services delivery transformations

Timeline of transformations
Observing demographic shifts and rising chronicity in the early 2010s, the national government has set noncommunicable diseases high on the agenda. In late 2013, the WHO European Ministerial Conference on the Prevention and Control of Noncommunicable Diseases in the Context of Health 2020 was convened in Turkmenistan's capital, Ashgabat. The subsequent adoption of the Ashgabat Declaration by Member States inspired the push to develop a national strategy on noncommunicable disease prevention and control in

Turkmenistan (Table 1). Securing approval by presidential decree in May 2014, the Plan is currently in the early stages of implementation.

Description of transformations
Selecting services. An important focus of Turkmenistan's response to noncommunicable diseases has been the development of disease prevention services, including increased access to immunizations such as the human papilloma virus (HPV) vaccine, improving screening programmes for priority chronic diseases, improving monitoring of key risk indicators such as blood pressure, blood glucose levels and cholesterol, and the provision of health education to chronic patients to aid self-management.

Designing care. Guidelines already in place for the prevention and management of chronic diseases have been updated to reflect current evidence and best practices. New standards for the diagnosis and treatment of noncommunicable diseases are currently in development and an emphasis on health education and patient self-management has been highlighted in order to help increase patients' role in the care planning process.

Organizing providers. Primary care facilities are well distributed across the country with plans to continue to reduce the population typically covered per general practitioner, prioritizing also an increased number of supporting health professionals in primary care practices. The anticipated introduction of electronic communication technology in 2017 aims to strengthen communication channels between providers to improve coordination.

Managing services. The majority of care continues to be managed through polyclinics at the district level under direction from the Ministry of Health and Medical Industry of Turkmenistan. At present, other actors, including local nongovernmental

Table 1
What were the chronological milestones for the initiative?

2013	WHO European Ministerial Conference on the Prevention and Control of Noncommunicable Diseases in the Context of Health 2020 held in Turkmenistan; Ashgabat Declaration adopted by Member States.
2013–2014	Baseline assessment survey carried out; development of a national plan to guide the prevention and control of noncommunicable disease begins.
2014	National Health 2020 Action Plan 2014–2020 approved by presidential decree; implementation of Plan begins.
Present	Continued implementation of the National Health 2020 Action Plan 2014–2020.

organizations have been involved in implementing programmes promoting healthy lifestyles and preventing noncommunicable diseases. Health facilities are being modernized and equipped with a standardized level of basic equipment to promote consistent quality of care across rural and urban areas.

Improving performance. General practitioners and paediatricians have participated in ad hoc trainings on health promotion and noncommunicable diseases, with additional conferences planned for all health professionals.

Engaging and empowering people, families and communities
Recent efforts to increase population health literacy and empower individuals with health information are helping to build a more participatory approach to health services delivery. Mass health education campaigns are led by the national Health Information Centre, which regularly organizes television and radio broadcasts covering issues linked to noncommunicable diseases; for example, the television programme "Health of the Nation – the Country's Wealth". The Centre also regularly prints and distributes leaflets and other materials on health

promotion and disease prevention. Patient access to electronic medical records is being gradually phased in towards the increased involvement of patients in their care; several areas in Ashgabat already offer this service. Electronic educational materials for patients are also being developed.

Health system enabling factors
Over the past two decades, there has been strong government support for health improvement and steady financial commitment to the health system. Furthermore, Turkmenistan has adopted strong tobacco-control laws, a national nutrition programme and other health promoting policies and strategies in recent years. The National Health 2020 Action Plan 2014–2020 for the implementation of the Ashgabat Declaration builds on these positive trends (Table 3). Approved by presidential decree in 2014, the Plan and proposed health reforms have benefited from widespread support across all government ministries and departments.

The national Health Information Centre has been charged with developing relevant training programmes for health professionals

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Services available for detection and management of noncommunicable diseases and associated risk factors; essential drugs, tests and procedures to manage chronic conditions generally available.	Strengthening of interventions to reduce noncommunicable disease burden; key focus areas include promoting healthy environments, increasing health education, expanding immunization programmes, improving screening and strengthening chronic disease management.
Designing care	
Government approved guidelines exist for the treatment and management of the most common noncommunicable diseases.	Guidelines on the prevention and management of noncommunicable diseases updated to reflect current evidence and best practices; patients expected to play a greater role in care planning as health literacy improves.
Organizing providers	
Strong primary care network in place; general practitioners each serve populations of around 1000 people; specialists concentrated in urban areas; weak communication channels among providers.	Plans to encourage relocation of specialists to underserved areas; introduction of electronic communications to link providers anticipated in 2017.
Managing services	
Strong network of health facilities across the country, but need for modernization; health facilities managed at the district level.	Planned introduction of electronic communication technology and updates to health facilities; civil society organizations play a key role in supporting healthy lifestyle programmes.
Improving performance	
Need to strengthen professional capacities in the areas of health promotion and noncommunicable diseases.	Ad hoc training programmes and conferences on health promotion and noncommunicable diseases offered to all health professionals.

to support the implementation of new health promotion and disease prevention services. University curricula for health professionals are being updated to include increased training on health promotion, disease prevention and noncommunicable disease management. Additionally, new medical specialties relating to noncommunicable diseases will be created. Special training opportunities are also to be made available to specialists as an incentive to work in underserved areas. Financial incentives, such as housing assistance, will also be offered to specialists to further encourage relocation.

Responsibility for surveillance of noncommunicable diseases and associated risk factors is shared across several offices within the Ministry of Health and Medical Industry of Turkmenistan. The WHO STEPwise approach to surveillance (STEPS) was adopted prior to the initiative and representative baseline data on the current status of risk factors for noncommunicable diseases was collected from a nationally representative sample. Continued data collection and monitoring will allow progress made through the initiative to be evaluated. Adoption of electronic medical records, currently being phased in across the country, will further facilitate the monitoring of health system performance and population health.

Outcomes
Leaders of the initiative hope to achieve further gains in life expectancy over the next decade as a result of actions taken to reduce the burden of noncommunicable diseases in the population. However, the initiative is still in the early stages and outcomes remain to be seen. The complexity of attributing any population health improvement directly to specific actions taken through the initiative is recognized.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• National Health 2020 Action Plan 2014–2020 officially adopted by presidential decree in 2014. • Recent government laws, policies and strategies align with the Plan; these include strong tobacco control legislation, a healthy nutrition programme and national strategies for cervical and breast cancer reduction.
Incentives	• Financial incentives will be offered to specialists taking up practice in underserved areas.
Competencies	• Health Information Centre develops and provides continuing education to health professionals. • University curricula will be updated to include increased training on health promotion, disease prevention and noncommunicable disease management.
Information	• STEPS assessment carried out prior to initiative; representative baseline data collected on population risk factors for noncommunicable disease. • Electronic medical records system currently being rolled out nationally. • Guidelines for the assessment and monitoring of the initiative are in place and align with the WHO global monitoring framework for noncommunicable diseases.

Change management
Key actors
The Ministry of Health and Medical Industry of Turkmenistan has worked to build national commitment to addressing the challenges of noncommunicable diseases in Turkmenistan, with partnerships across government ministries (Box 2). Intersectoral collaboration was described as a key factor in promoting inclusive participation across government sectors and achieving broad political support for activities. An intersectoral government committee was established to collectively develop the National Health 2020 Action Plan 2014–2020. WHO and many other international organizations and foreign governments provided assistance and support to the committee in developing the Plan; for example, through training support and sharing of best practices. While implementation of the Plan falls under the remit of the Ministry of Health and Medical Industry, intersectoral working continues to be important in realizing its goals.

Box 2
Who were the key actors and what were their defining roles?

- **National government.** Led development of the National Health 2020 Action Plan 2014–2020 to address noncommunicable diseases in Turkmenistan; appointed an intersectoral steering committee to oversee design and implementation of the initiative.
- **Steering committee.** Composed of 38 different government ministries and departments; developed initiative through a collaborative intersectoral approach.

Initiating change
One of the driving forces behind the initiative was the strong political will to improve population health and the commitment of financial resources to this cause. The decision to develop the National Health 2020 Action Plan 2014–2020 was inspired by an international conference organized by WHO, which was convened in Turkmenistan in 2013. "Through the 2013 conference held in Ashgabat, it was decided to ramp up our response to noncommunicable disease and also assume a position of regional and global leadership." The Ashgabat Declaration endorsed at the closing of the conference further motivated national action within Turkmenistan and provided a guiding framework for change.

Implementation
Implementation of the initiative is currently in the early stages and is being guided by the steps laid out in the National Health 2020 Action Plan 2014–2020.

Moving forward
The international forum – Vision for a Healthier Future: Building on our Achievements – was held in Ashgabat in July 2015 to reflect on progress achieved by the initiative so far and share experiences. Implementation of the National Health 2020 Action Plan 2014–2020 is set to continue until 2020, at which point progress will be reviewed to determine future steps.

Highlights

- International attention on key issues was leveraged to generate national momentum and political will for health reform.
- A strong understanding of challenges, supported with baseline data of population health, facilitated the development of the initiative and allowed tailoring to meet population needs.
- Intersectoral partnerships across government ministries helped to keep the initiative on the political agenda and safeguarded health reforms from being undermined by other sectors' policies.
- A well-organized public communication plan and provision of patient education helped improve population health literacy and garner support for the initiative.

1   Institute of Health Metrics and Evaluation. (2013). *Global burden of disease cause patterns*.
2   World Health Organization. (2013). *Strengthening the response to noncommunicable diseases in Turkmenistan*. Copenhagen: Author. Retrieved from http://www.euro.who.int/en/countries/turkmenistan/publications3/strengthening-the-response-to-noncommunicable-diseases-in-turkmenistan

Strengthening primary care in Voznesensk, Ukraine

Overview

In Ukraine, the highly-centralized health system posed organizational challenges for the provision of efficient, high-quality and people-centred care in Ukraine. Persistently high rates of hospitalization have been attributed to the hospital centric design of services delivery and the allocation of resources skewed in favour of specialized care. In the early 2000s, following national reforms which decentralized financial and managerial control over the health system, the district of Voznesensk began an innovative local reform process, aiming to strengthen primary care and introduce family-based medicine. As a result of these local reforms, general practitioners located in outpatient clinics across the district now oversee the majority of patient care, including the management of patients admitted to day hospitals attached to these clinics. Local overhaul of provider payment mechanisms replaced fixed salaries for general practitioners with fee-for-service payments. Investments in technological infrastructure, supported with grant funding from the Ministry of Health, created a district-wide electronic patient registration and medical records system. Electronic medical records facilitate increased communication across levels of care and help promote continuity of care between providers. Local support for the initiative remains strong and Voznesensk continues to pilot new financing mechanisms and serve as an innovative model for primary care reform in Ukraine.

Problem definition

Ukraine's health system remains largely centralized and disease-orientated. Gatekeeping at the primary level was weak, with services delivery concentrated in specialized settings. The population often sought care directly from specialists, perceiving services in higher-level settings to be better quality. These conditions led to the overuse of hospital services and strained health system budgets, skewing the allocation of resources to higher-level settings to the detriment of primary care (Box 1).

Box 1

What problems did the initiative seek to address?

- Services delivery concentrated in higher-level care settings.
- Weak gatekeeping at primary care level.
- Patients perceived care quality to be superior in higher-level care settings.
- Overuse of specialized care strained health resources.

Health services delivery transformations

Timeline of transformations
Although primary care was identified as a national priority in the 1990s, comprehensive legislation and regulation on general practice and family medicine wasn't developed until the 2000s. Slow advancement of reforms at the national level, however, served to drive innovation by local actors in anticipation of national reforms. Within this context, the district of Voznesensk experimented with initiatives designed to align services delivery with the principles of family medicine (Table 1). Today, Voznesensk continues to actively implement changes and serve as an example of primary care reform in Ukraine.

Description of transformations
Selecting services. In Voznesensk, shifting towards a more proactive basic services package has been prioritized in an effort to reduce reliance on highly-specialized care. Preventive services have been prioritized through the introduction of an annual medical exam in primary care. Additional services now available in primary care include basic diagnostic and lab testing, immunizations, maternal and child health services and a wide spectrum of acute and chronic disease management services.

Designing care. Locally adapted care protocols have been established in Voznesensk to dictate services delivery pathways across levels of care. An electronic information system using international classifications of disease has been implemented to help guide care decisions.

Organizing providers. In Voznesensk, multiple general practitioners are co-located within outpatient clinics. Each general practitioner is paired with two nurses; one nurse works directly with the general practitioner in an assistant capacity, while the other performs

Table 1
What were the chronological milestones for the initiative?

1992	Principles of Legislation on Health Care declares primary care strengthening as a key policy goal.
2000s	Development of national legislation and regulation to support primary care strengthening; in 2000, Order of the Ministry of Health (No. 214) approves step-by-step guide for family medicine implementation in primary care.
2001	Piloting of primary care reforms begins in Voznesensk.
2004	Electronic information system introduced across Voznesensk.
Present	Continued commitment to primary care strengthening in Voznesensk; ongoing commitment to developing primary care at the national level.

community outreach services and home visits. A midwife is also available at clinics and is responsible for family planning, maternal health services and gynaecological referrals. Establishment of strict referral mechanisms, where patients are now required to see a general practitioner before receiving specialist care, has strengthened general practitioners' gatekeeping role. An electronic information system has been implemented to support communication between providers across care levels and facilitate referrals. All health providers have access to patients' electronic medical records, enabling sharing of information and feedback to general practitioners.

Table 2
How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Lack of primary care services; majority of population in Voznesensk accesses specialized services for basic health needs.	Expansion of services offered in primary care; shift away from specialized care; annual medical exams introduced for all local residents.
Designing care	
National care protocols guide services delivery.	Care continues to be provided according to national protocols; new electronic systems guide services delivery using international classifications of disease.
Organizing providers	
Concentration of providers in secondary and tertiary settings; weak gatekeeping by primary care; limited communication between providers across care levels; patients seek services in specialized centres further from their homes; care access restricted by limited opening times of some specialized centres.	Improved gatekeeping by primary care; shift of providers into primary settings; majority of services provided by general practitioners co-located in outpatient clinics; each general practitioner works in a team with two nurses; electronic medical records facilitate referrals and communication between providers.
Managing services	
Primary care facilities lack necessary equipment and are in need of updating; computers rarely available in outpatient settings.	Primary care chief manages outpatient clinics and oversees general practitioners' activities; infrastructural investments made in outpatient clinics.
Improving performance	
Not applicable in this case.	Informal education sessions held for local providers on new care models and computer systems; peer mentorship trains new providers.

Table 3
How has the health system supported transformations in health services delivery?

System enablers	Example
Accountability	• Development of national policies provided a framework for reforms and increased legitimacy of local efforts in Voznesensk.
Incentives	• Shift from salary to fee-for-service payment for physicians in Voznesensk. • Information on lost earnings provided to general practitioners in Voznesensk when registered patients seek specialized care without referral.
Information	• District-wide electronic patient registration system collects data on service use and population health.

Managing services. Reform efforts have devolved greater financial and managerial responsibility over services delivery to the local level, working to support local management of care facilities. Outpatient clinics are overseen by a primary care chief who "has the opportunity to evaluate the work of every general practitioner at any time". Clinics have been equipped with the necessary technological infrastructure to support use of the electronic information system. Additionally, basic infrastructural investments have been made in clinics, including the provision of new medical equipment.

Improving performance. Informal education sessions were held for providers in Voznesensk to explain the new model of care and provide training on the electronic information system. Ongoing training needs for new physicians entering primary care are managed through peer mentorship. "When a new doctor comes, we don't specially train them. An experienced colleague will instruct them." Implementation of the electronic information system has allowed for the systematic collection of patient data, supporting local tailoring of services to patient needs.

Engaging and empowering people, families and communities
Efforts taken to strengthen primary care services have promoted patient choice, with patients now able to access care closer to home. After receiving specialized care, patients are provided with a summary of their treatment and have access to electronic records showing what care was received and actual cost data. While patients are not required to pay, this tool serves an educational purpose to increase awareness of costs among patients and encourage responsible use of health services.

Health system enabling factors
The development of national policy and legislation for primary care stimulated local primary care strengthening efforts and provided increased support for reforms in Voznesensk (Table 3). In Voznesensk, financing reforms have aimed to stimulate productivity improvements by shifting from salary-based to fee-for-service payments. Additionally, when registered patients seek specialized care without a primary care referral, general practitioners receive information on lost earnings. This serves as a motivational mechanism to encourage general practitioners to cultivate positive relationships with patients to ensure that they are the initial contact for care.

Outcomes
Quality indicators for primary care show services delivery improvements, with the local population in Voznesensk generally reporting satisfaction with care (Box 2). Furthermore, economic analysis indicates that both efficiency and quality improvements have been achieved in Voznesensk.

Box 2
What were the main outcomes of the initiative?

- The majority of care in Voznesensk is now initiated in primary settings, rising from 20% to 72%.
- Over 85% of patients who start treatment with a general practitioner now complete treatment with a general practitioner.
- The number of ambulance visits for patients with chronic disease dropped from 9% to 3%.
- Efficiency indicators show improvements; the number of hospital beds declined, bed turnover increased and cost-benefit ratios improved.
- Health care resources continue to shift from secondary to primary settings; outpatient care costs climbed to 65% of the local health care budget in 2012.
- The majority of Voznesensk residents gave a positive evaluation of care quality (70%) and were supportive of family medicine (63%).

Change management
Key actors
The initiative was inspired by the prioritization of primary care led

by the Ministry of Health. However, most activities occurring under the initiative were championed at the local level. The Chief Physician at Voznesensk's Nykolai Homenyuk Central Regional Hospital was a key actor leading the diagnosis of services delivery barriers in Voznesensk and designing innovative local solutions to overcome challenges. These efforts were further supported by the Mayor of Voznesensk who acted as a strong advocate for the initiative and helped secure necessary funding for activities.

Initiating change

After examining the existing local health system, health officials in Voznesensk became aware of the need to increase efficiency. However, as closing hospitals was politically unpopular, another method to drive efficiency improvements was needed. With political support from the Voznesensk City Mayor and grant funding from the Ministry of Health, the Chief Physician at Voznesensk Nykolai Homenyuk Central Regional Hospital pushed the initiative forward

as a means to indirectly stimulate necessary efficiency improvements. Leaders of the initiative worked hard to explain the new model to health providers and communicate its advantages.

Implementation

"Successful implementation of the innovative approach to provision of medical services in Voznesensk became possible with leadership, a great team and a good idea." With the appropriate incentives and tools put in place, general practitioners and nurses worked as a team to implement necessary changes. Technological investments

allowed many reforms to be carried out automatically, reducing the burden on providers and easing the transition process.

Moving forward

The initiative continues to receive strong support at the local level and hopes to expand further. National support for primary care strengthening has moved at a slower pace, but the national government has shown increased commitment to primary care reform in recent years. As an innovative model, Voznesensk will continue to serve as an example of primary care reform in Ukraine.

Highlights

- Effective leadership combined with political and financial support created a stable platform on which to build reforms from the bottom-up.
- Aligning local initiatives with national priorities proved valuable for gaining legitimacy and support for the initiative.
- Availability and capacity to collect and share data was fundamental for improving communication between health providers and increasing continuity of care.

Integrating health and social care in the Scottish Highlands, United Kingdom

Overview

Increasing chronic morbidities combined with an ageing population have contributed to greater health and social care needs in Scotland. Despite a broad government agenda to increase integration between health and social care, services in the Highland region remained divided between the National Health Service (NHS) Highland (health services) and the Highland Council (community and social care), resulting in fragmentation and suboptimal services delivery. In an effort to decrease fragmentation, the Highlands embarked on a mission to accelerate local integration of health and social services in 2010. There was strong support for the initiative from the outset across senior management from both organizations and extensive stakeholder engagement generated widespread buy-in across all stakeholder groups including trade unions, providers and the public. After careful consideration, a lead agency model was selected for implementation, whereby NHS Highland became the lead agency for all health and social care for adults and the Highland Council became the lead agency for children. In this way, the unique needs of these different populations could be addressed without arbitrary separation of health and social systems. In 2012, change activities advanced at a rapid pace and the new model was officially launched. Both organizations share responsibility for allocating budgets and setting joint objectives according to terms laid out in the established five-year partnership agreement which runs until 2017. While services at the public interface remain largely unchanged, organization and management of services delivery is more coordinated and streamlined. Professional relationships have improved and teamwork has increased as a result of the new shared vision and organizational culture. The relationship between NHS Highland and the Highland Council remains strong and the partnership agreement is expected to be renewed in 2017. Furthermore, in 2014, the Scottish government passed legislation requiring other districts to adopt integrated delivery models, elevating changes made voluntarily in the Highlands to a national platform.

Problem definition

Ageing population trends have contributed to an increase in chronic disease in Scotland, with the main causes of mortality being circulatory disease, cancer and chronic respiratory disease. Addressing complex chronic diseases, especially in vulnerable populations such as the elderly, requires holistic approaches to care, often beyond the scope of the health system. While national policy in Scotland has supported integration of health and social services since the early 2000s, meaningful integration in practice was limited. Persisting fragmentation between health and social care locally, such as observed in the Highlands, resulted in reports of overlapping services and weak cooperation across sectors (Box 1).

Health services delivery transformations

Timeline of transformations
Since the early 2000s, the Scottish government has encouraged integration of health and social care systems (Table 1). However, integration at the local level has been slow to develop in practice. In response, in 2010, an initiative to restructure the organization of health and social services to address persisting fragmentation was developed in the Highlands. In 2012, after a two-year preparatory period, the new organizational model was officially launched and care in the Highlands continues to be jointly managed by NHS Highland and the Highland Council under this new model today. Furthermore, the Scottish government has recently enacted legislation mandating all districts across Scotland adopt integrated care models.

Description of transformations
Selecting services. Community health and social care services are now stratified based on age rather than type of care provided, with infants and children represented by the Highland Council and adults (aged 18 and over) by NHS Highland. To expand the package of health and social services, home-care services and telemedicine for the management of select chronic conditions have been introduced in an effort to help patients avoid hospitalization.

Table 1

What were the chronological milestones for the initiative?

2000s	Series of government policies advocate for integration of health and social care in Scotland; NHS Highland and the Highland Council work closely together at the local level, but fragmentation between health and social care systems persists.
December 2010	First formal meeting between NHS Highland and Highland Council to design a new integrated care model for the region.
June 2011	Two further meetings held between NHS Highland, the Highland Council and stakeholder groups to design a new integrated care model; lead agency model selected and approved for implementation.
June 2011–April 2012	Preparatory work for implementation of the lead agency model in Highland; adjustments to local legislative and organizational frameworks made.
April 2012	Lead agency model officially launched in Highland; new accountability arrangements and organizational structures take effect.
2014	Public Bodies (Joint Working) (Scotland) Act passed by Scottish government; Act requires all districts to implement integrated care arrangements.
Present	NHS Highland and the Highland Council continue to work in partnership under the lead agency model.

Designing care. Procedures in NHS Highland are in the process of being adjusted to incorporate social care and capitalize on community resources, placing a greater emphasis on keeping people in their own homes where possible.

Organizing providers. Health providers and social workers have been merged and professionals for each population now all work for the same organization. Professional roles and scope of practice have been clearly structured and clarified among providers, highlighting the need for everyone to adapt to enable integration. "Work in the last two years has focused on developing the teams and the knowledge and understanding across health and social care. ... The real breakthrough changes happened when we co-located some staff and I guess they were learning through proximity." Social workers have been integrated into both general practices in the community and hospital settings. Barriers between health providers and social workers have been dismantled and mutual respect across these groups is building. "The way we can evidence this is that people now call their colleagues to work jointly with them on issues." Communication is further facilitated by new rules which allow sharing of patient records between health providers and social workers now that they are part of the same organization.

Managing services. NHS Highland and the Highland Council developed a new single governance, financing and management structure by adopting a lead agency model. As part of the new arrangements, some 1500 staff transferred between NHS Highland and the Highland Council and over £90 million moved between budgets.[1] All adult social care previously delivered by the Highland Council was transferred to NHS Highland, who now oversees planning and delivery for those services (as the lead agency for adult care) according to jointly agreed outcomes and budgets under the terms of the partnership agreement. The Highland Council has the same responsibilities, but for children instead of adults. Bridging these two organizations has prevented overlap in functions and allowed each to lead services delivery for their area of expertise.

Improving performance. There were no formal trainings offered through the initiative but efforts were made to inform and educate staff on the new vision for health and social care in the Highlands. DVDs and other informational materials were sent out to staff to provide education on changes. A new culture of shared learning and understanding across disciplines has developed as a result of the vision between NHS Highland and the Highland Council. "Professionals have begun to make their own teams to talk about their experiences and learn from each other."

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
Comprehensive package of health and social services provided free-of-charge to population.	Increased emphasis on home care and community services for chronic care needs.
Designing care	
Care model favours intensive, provider-led intervention; limited focus on building patient independence.	New procedures being designed to better incorporate social services; strong focus placed on prevention, anticipatory care and promoting patient independence.
Organizing providers	
Health providers and social workers have limited understanding of each other's roles, being described as "oil and water"; overlapping roles result in patients having "several people showing up to their door"; data protection rules prevent sharing of information across organizations.	Clarification of professional roles has reduced professional overlap; social workers integrated in general practices and hospitals; co-location of health providers and social workers encourages team-working; barriers between health providers and social workers dismantled and patient information more readily exchanged.
Managing services	
Separate governance, financing and management of health and social care delivery; NHS Highland manages health services; Highland Council manages social care and community health.	Unified management of health and social care for adults (NHS Highland) and children (Highland Council); partnership agreement in place between these two organizations to ensure delivery of services according to jointly agreed budgets and objectives.
Improving performance	
Different organizational cultures inhibit shared learning across disciplines.	United vision across NHS Highland and the Highland Council fosters a culture of teamwork and shared learning.

Engaging and empowering people, families and communities

The initiative has orientated itself around people and put them at the centre of all decisions. "The person is at the centre of what we do and everyone delivering care, whether social care or health care, is wrapped around that individual and is working towards developing care for that individual." One of the key aims is "to enable someone to return to their independence". Staff "now see that they have a very valued role in actually helping that individual to become more independent". While it was initially difficult for staff to shift their mentality from that of a carer to an enabler, "once staff realized what they could do to help maintain independence they have grasped it with both hands". The push to shift more services into home and community settings is further supporting individuals to maintain their independence. Professionals have also been given flexibility to design services to best meet people's needs. For example, one residential care facility invites people with chronic conditions and their informal caregivers to occasionally spend the night to allow informal caregivers reprieve.

Health system enabling factors

Responsibility for social care and community health in Scotland is delegated to 32 local councils. Local councils are represented on NHS Boards and work in varying levels of partnership to coordinate health services for their local populations. While the Scottish government's policies supported integration of health and social care, there were no formal requirements for NHS Boards and local councils to integrate. Recently, the Scottish government has strengthened their commitment to integration with the passing of Public Bodies (Joint Working) (Scotland) Act in April 2014. The Act mandates NHS Boards and local councils to integrate their budgets and holds them jointly accountable for outcomes. "They are changing legislation now in Scotland to mandate boards and councils

to work together similar to the Highland way, either using the lead agency model or an alternative body corporate model."

Outcomes

"In most cases integration is the platform that enables everything else to come together in the outcomes we seek." As a result, direct impact of the initiative is difficult to quantify, but leaders informally report observational improvements in professional culture, as well as patient and community engagement.

Change management

Key actors

The initiative benefited from strong support at the highest level within both NHS Highland and the Highland Council, with these organizations jointly driving forward change (Box 2). "Where you have had a real driving commitment and vision from people at the top, then often that really pushes the process." Changes also received support and backing from the Scottish government and significant time and effort was invested in stakeholder engagement.

We had a project management structure that involved the Scottish government and was led by the two chief executives who engaged the trade unions on both the Council and NHS. It involved considerable discussion and involvement with the public and representatives from the various user groups.

Box 2

Who were the key actors and what were their defining roles?

- **NHS Highland**. Senior leaders worked in partnership with the Highland Council to lead design and implementation of the initiative; responsible for managing health and social care for adults.

- **Highland Council**. Senior management worked in partnership with NHS Highland to lead design and implementation of the initiative; responsible for managing health and social care for children.
- **Project management team**. Oversaw design and implementation of initiative; coordinated necessary developments and activities across legal, financial, human resource and information domains.

Initiating change

NHS Highland and the Highland Council first came together in a series of meetings led by senior management from both organizations to address observed fragmentation challenges causing suboptimal care delivery. While change was initiated in a top-down approach, involving stakeholders early proved essential for ensuring widespread buy-in for change.

We did a lot of work with the public in terms of consultations and information about what was happening. Trade unions we engaged very early on with our partnership forum which met on a regular basis. We had trade unions to ensure that, as a staff point of view, we were not changing roles and responsibilities and they were very supportive on the main understanding of what we were trying to do and the process we were following with the staff.

Most staff across NHS Highland and the Highland Council were supportive and relaxed about the changes. Certain groups, such as some nurses, were initially resistant and there was some outcry about the transfer to a different organization. Leaders "deconstructed conversations and defences" from these groups and identified hidden concerns about professionals' own

position, role and status. Once identified, concerns were addressed through further discussion.

Leaders of the initiative described the fast pace of the change process, criticized by some as being too "maverick", as crucial for generating the necessary momentum to "energize and drive" the initiative forward. This was balanced by "a safe approach" which could halt the initiative at any time.

One of the unique points was that the approach we took was a safe approach. We were working across the two organizations and both CEOs agreed to stop the line should there be anything that was detrimental to patients in Highland, but we knew we needed to build the momentum and push hard and fast to make the changes we needed to make. Because if we had a very formalized process, we were likely to get caught up in that process rather than actually making the transformation.

As a result of the rapid pace, design of the initiative was largely an iterative process with barriers addressed as they arose. While the initiative was "planned in terms of having a vision and timescale", leaders "let it develop". In order to sustain momentum, not every detail was fully worked out prior to implementation.

We didn't sort out every detail before transferring the services, but we recognized it was good enough. There needs to be a balance between diligence and good enough because if too much emphasis is put on every line and every detail then you will never integrate. We brought it to a stage that was good enough and we could transfer the functions.

Implementation

Much like the design process, implementation was also taken day by day. "A lot of it the end user has to test out and you just need to put it in place and see what happens."

Leaders resolved issues and barriers as they arose and a comprehensive issues log was implemented from the outset to capture and address staff and public concerns. A resource commissioning group has been set up to oversee and monitor the budget on a monthly basis to identify pressure points as they emerge; "this is still a learning point for each organization as to how we manage demands and pressures." Progress and transformations are reviewed biannually through a strategic commissioning group. Teamwork continues to be emphasized and professional respect across disciplines is growing, largely attributed to the single vision professionals now share from working under a united management structure.

Moving forward
The partnership is currently three years into its five-year implementation plan. However, the initiative "is a journey for which we don't expect to get to five years and just to drop. It is cut into five-year segments, so after the five years we will renegotiate for another five-year increment." The focus of the partnership moving forward is on improving the quality of services, building the concept of people-centred care and increasing community-based care through growing relationships directly with people and communities.

Highlights
- Broad political support for integrated care created a favourable environment for change; strong local support from senior management drove the initiative forward.
- Strong local engagement across all care levels ensured widespread buy-in for the initiative and reduced resistance to change across stakeholder groups.
- Design and implementation of the initiative was iterative and not every detail was worked out prior to its launch; leaders stressed the need for "balance between diligence and good enough".
- Creation of a single management structure for health and social care created a united vision across previously fragmented professional groups, serving to streamline services delivery and foster improved professional relationships.

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1 Meade, E., Baird, J., & Stark, C. (2014). Developing a Lead Agency Model for the delivery of integrated health and social care. *International Journal of Integrated care; Annual Conference Supplement, 14,* URN:NBN:NL:UI:10-1-116151

Establishing ambulatory care services for patients with tuberculosis in Uzbekistan

Overview

Throughout the early 2000s, tuberculosis (TB) became a growing public health concern in Uzbekistan as rates of multidrug-resistant tuberculosis (MDR-TB) increased. Rising numbers of patients with TB, combined with longer treatment periods required for the management of MDR-TB, called into question the sustainability of the current treatment model that required all patients with TB to be hospitalized during the entire intensive phase of treatment. Ambulatory treatment of TB was increasingly common in other countries, although not typical in Eastern Europe. In the autonomous north-western region of Karakalpakstan, a new design for services delivery was introduced by the Government of the Republic of

Karakalpakstan, in partnership with Médecins Sans Frontières (MSF), to provide a comprehensive TB treatment strategy with ambulatory care from day one (ACD1) at its core. The proposed efforts for strengthening services delivery have aimed to provide comprehensive TB care, including rapid diagnosis and directly observed treatment, for all patients in Karakalpakstan. Instead of mandatory hospitalization during the intensive treatment phase, ACD1 allows patients to initiate TB treatment in community settings. Systemwide changes, including a new legal framework and the decentralization of decision-making structures, have accompanied the initiative to allow for locally tailored services delivery. Extensive training for providers was carried out to allow

task shifting from TB specialists in hospital settings to generalist providers at the community level. In parallel, TB treatment guidelines and protocols have been simplified to ease their appropriate use by non-TB specialists. Complementary infrastructure and resource investments have ensured local health facilities are adequately equipped to safely deliver care and rapid diagnostic technology has been introduced. Since the initiative began, the proportion of patients receiving ACD1 treatment for TB has steadily increased; approximately half of all patients received treatment with the ACD1 model in 2012. Initially piloted in two of Karakalpakstan's 16 districts, the initiative has since expanded across Karakalpakstan.

Problem definition

Uzbekistan had one of the highest incidence rates of tuberculosis (TB) in the WHO European Region in the early 2000s, at 99 per 100 000 population in 2000.[1] While the incidence rate of TB began to decline in 2010, MDR-TB emerged as a growing challenge and was estimated to account for 23% of all newly diagnosed TB cases and 62% of retreatment cases between 2010 and 2011.[2] With a services delivery model requiring hospitalization of all TB patients throughout the intensive phase of treatment, the health system of Uzbekistan was unable to cope with

the high rates of MDR-TB, which had an intensive treatment phase lasting a minimum of eight months and a total treatment time of at least 20 months. When combined with the high number of individuals requiring care, these extended hospital admissions created a bottleneck in the delivery of TB services (Box 1). The continued use of a consilium model, whereby every decision on either drug-sensitive or drug-resistant TB went to a single group of specialists for consideration, further contributed to treatment delays. Patients waiting for treatment risked transmission to the population.

Additionally, the lack of segregation of drug-sensitive and drug-resistant patients in hospitals risked cross-contamination of TB strains.

Box 1
What problems did the initiative seek to address?

- High prevalence of TB and rising rate of MDR-TB.
- Increasing treatment delays resulting from the high number of patients with TB, longer treatment times required for

MDR-TB and continued use of a consilium model to review all treatment cases.

- Risk of ongoing transmission from TB patients waiting for treatment, as well as cross-contamination of drug-sensitive and drug-resistant TB strains between hospitalized patients.

Health services delivery transformations

Timeline of transformations

In 2010, recognizing the limitations of the existing services delivery model for contending with MDR-TB, Médecins Sans Frontières (MSF) put forward an alternate strategy for TB care (Table 1). The strategy proposed the expansion of ambulatory treatment for TB with the introduction of ambulatory care from day one (ACD1)* as the standard treatment for all patients. With approval from the Government of the Republic of Karakalpakstan, the new model was piloted in two districts, Karauzyak and Takhtakupir.

In 2011, following the success of this new approach, ACD1 was officially accepted as the new standard of care in the Republic of Karakalpakstan and rolled out across the region. Today, the proportion of patients receiving ACD1 continues to increase and efforts have been made to transfer management of the initiative to the Ministry of Health.

Description of transformations

Selecting services. Introduction of ACD1 has maintained the same pharmaceutical treatment as in inpatient care, but has worked to simplify the process. All services previously provided in hospital, including means assessments, adherence counselling, infection control and management of early side-effects have all been transitioned away from specialized TB facilities and into outpatient care.

In addition, a psychosocial care and counselling component has been added to provide health education, as well as social and nutritional support. Rapid testing has also been introduced, allowing patients to commence appropriate drug regimens as quickly as possible.

Designing care. Guidelines and protocols for TB treatment have been streamlined and standardized, with simplified protocols developed for the 10 most common drug regimens for drug-sensitive and drug-resistant TB to enable the delivery of treatment by non-TB specialists. Additionally, a new set of criteria to determine which patients are eligible to receive ambulatory TB treatments has been created by MSF, in partnership with the Ministry of Health, based on past experience and best practices. Patients with severe clinical conditions still require hospitalization.

Organizing providers. Considerable task shifting from TB specialists in hospital settings to generalist providers in ambulatory and community settings has taken place. In urban areas, TB treatments are now delivered out of polyclinics on an outpatient basis. In rural areas, providers supervise treatment and manage side-effects for patients but treatment regimens continue to be determined by a consilium of TB specialists. To facilitate this change in roles the organization of the consilium has been decentralized and responsibility for case review devolved to district-level providers.

Treating patients on an outpatient basis called for an influx of new staff, a shifting of professional roles and extensive training. To support health providers to fulfil their new responsibilities, clear roles have been defined and a nurse adherence officer has been appointed to each district to provide informational support at the district level. To assist community practices in managing new roles in TB care, non-TB nurses at rural medical centres have been tasked with overseeing the delivery of Directly Observed Treatment, Short Course (DOTS).

Table 1
What were the chronological milestones for the initiative?

Early 2010	MSF proposes the Comprehensive TB Care for All Strategy as a potential solution to the growing challenges in TB care observed in the Republic of Karakalpakstan.
August 2010	Government approves use of MSF's Comprehensive TB Care for All Strategy in Karakalpakstan; ACD1 approach piloted in two districts.
February 2011	ACD1 officially accepted as the model of care for TB in Karakalpakstan.
2011–2014	ACD1 approach scaled up across Karakalpakstan with all 16 districts covered by the end of 2014; gradual transition of responsibility for the initiative from MSF to the Ministry of Health.
Present	Continued transfer of responsibility from MSF to the Ministry of Health.

Managing services. MSF and the Ministry of Health currently share the responsibility for managing TB care. When the project began, management and implementation was largely directed by MSF; more recently, the Ministry of Health has demonstrated growth in their management capacity and has taken over responsibility for implementation in six districts. First- and second-line TB drugs are supplied by the Global Fund with MSF maintaining buffer supplies. MSF has full responsibility for managing drug procurement and the distribution of specialized second- and third-line TB drugs. MSF works closely with a central warehouse to ensure a steady supply of high-quality drugs and best-practice pharmacy management. Six dedicated vehicles, donated by the Global Fund, facilitate general medication and test sample transfers. Structural upgrades and renovations were carried out in hospitals and rural medical centres and GeneXpert has been introduced in microlaboratories to enable rapid testing of sputum samples at the district level without the need for specialist equipment.

Establishing this TB programme has meant a devolution of decision-making for TB diagnosis and treatment protocols which, prior to the initiative, were centralized within the Ministry of Health of Karakpalkastan, but have since been devolved to local councils in eight of nine districts where ACD1 has been implemented.

Table 2

How was the delivery of health services transformed through the initiative?

Before	After
Selecting services	
TB diagnosis and inpatient treatment programmes available to population.	Expansion of outpatient TB services; psychosocial care and counselling incorporated into TB treatment.
Designing care	
Guidelines and protocols for TB treatment in place, but lengthy and complicated; culture testing allows drug regimen personalization for patients, but takes several months to complete; all patients hospitalized during intensive TB treatment phase.	Guidelines and protocols for TB treatment simplified for easier implementation; introduction of rapid testing enables patients to start appropriate treatment sooner; patients can start (and continue) TB treatment in ambulatory settings.
Organizing providers	
TB care delivered by specialists in hospital settings; vertical organization of TB providers confines TB knowledge and skills to TB specialists; central consilium resides over all TB treatment initiation; all patients must be admitted to hospital resulting in isolation.	Task shifting from TB specialists in hospitals to generalist providers in ambulatory and community settings; consilium decentralized to district level; position of nurse adherence officer created to support delivery of TB care in non-TB specialized settings; TB care delivered closer to patients' homes, increasing access to care.
Managing services	
Management of TB care centrally organized with responsibility shared between Ministry of Health and MSF; testing managed by a central laboratory.	Gradual shift in management from MSF to the Ministry of Health; structural upgrades carried out in health facilities and rapid testing technology introduced in microlaboratories at the district level.
Improving performance	
Knowledge and skills relating to TB care limited to TB specialists.	Substantial training conducted to ensure non-TB specialists have necessary capabilities to deliver TB care; information toolkit developed to support implementation; nurse adherence officers receive additional training.

Improving performance. Substantial training was given to all providers on TB protocols, drug regimens and side-effects; an information toolkit to facilitate implementation of acquired knowledge was also made available. Additionally, MSF implemented a cascade-training programme to provide nurse adherence officers with the continuing education necessary to fulfil their role. Monitoring and evaluation of the initiative has been integrated with national efforts to strengthen the evaluation of TB, using a holistic measure developed for treatment outcomes. This information is compiled at district, regional and national levels to ensure consistently high-quality TB control.

Health system enabling factors

MDR-TB has drawn increasing focus and support from the Ministry of Health of the Republic of Karakalpakstan. The Ministry has been closely involved with the introduction of MSF's Comprehensive Care for All Strategy from the beginning of the project and has supported activities throughout. In 2011, the Ministry of Health issued Prikaz 39, formally recognizing ACD1 as the model of care for all TB treatment. Furthermore, the Ministry has drafted new legislation in support of each medical development and change in protocol, indicating their full support for policy reform and helping embed the initiative within the health system. Changes to the legislative framework have also enabled existing health system structures to be adapted to allow the diagnosis, care and treatment of patients with TB to be decentralized for greater control at the district level. Oversight of TB care has been devolved to district-level councils.

Outcomes

Only preliminary data on the impact of treatment with ACD1 is available

as the number of patients who have completed treatment remains modest. Early outcomes, however, are positive and suggest the initiative is performing at least as well as the institutional treatment model (Box 2).

Box 2
What were the main outcomes of the initiative?

- In 2012, approximately half of the 1420 patients who started TB treatment received ACD1; the proportion of patients receiving ACD1 has been steadily increasing over time.
- ACD1 enables patients to start TB treatment sooner; the median time between diagnostic sputum collection and starting treatment fell from six weeks prior to the initiative to less than two weeks in the beginning of 2015.
- ACD1 treatment success rates appear to match those of the traditional care model; success rate data for MDR-TB patients are not yet available due to longer treatment duration.
- Patients receiving ACD1 have shown better adherence to prescribed drug regimens during the non-intensive phase compared to previously hospitalized patients.

Change management
Key actors
With considerable experience and expertise in TB services delivery in the Republic of Karakalpakstan, MSF developed the Comprehensive Care for All TB Strategy and advocated for its introduction. The strong working relationship MSF had already developed with the Ministry of Health of the Republic of Karakalpakstan from collaborations on other TB programmes in the region helped secure government support for the initiative. The

Ministry demonstrated an increasing commitment throughout the 2000s towards addressing TB challenges; as TB was a high priority, the Ministry was a willing partner in the initiative. While introduction and early management of the initiative was led by MSF, the Ministry played a critical role in establishing the necessary legal frameworks to enable the initiative's successful introduction. Furthermore, while MSF continues to be involved in leading implementation of the initiative, a gradual handover of responsibilities to the Ministry has started, with the Ministry now responsible for implementation in six districts. It is expected that the Ministry will assume full responsibility for comprehensive TB programmes in the region by 2017.

Initiating change
In light of the urgent need to meet growing MDR-TB challenges, both MSF and the Ministry of Health were motivated to explore new models of TB services delivery. Strong evidence supporting the effectiveness of ACD1 treatment programmes and a wealth of examples of community-based TB programmes in other countries provided a starting point for the design of the initiative. Research on the implementation and operation of other ACD1 treatment models abroad was undertaken to gain understanding of the approach. Following this, a pilot study to test potential implementation strategies was carried out, helping determine the best way to proceed.

Implementation
The initiative was implemented in just two of Karakalpakstan's 16 districts before being rolled out across the region. The Ministry of Health led the development of the necessary political and legal framework on which to build the intervention and MSF led the coordination of managerial issues, such as conducting provider trainings and procuring certain TB drugs. Decentralization and division

of responsibilities was a key part of the implementation strategy and considerable time and resource investments were made in training local providers to take on new responsibilities.

Moving forward

MSF and the Ministry of Health continue to work towards increasing access to comprehensive TB treatment in Karakalpakstan. The Ministry has begun to assume greater responsibility over management of the initiative and, by 2017, will have full control over comprehensive TB programmes in the region.

Highlights

- An understanding of epidemiological and services delivery challenges was key for developing a solution that effectively met patients' needs.
- A supportive political and legal framework for the initiative was developed prior to implementation, helping to embed reforms within health system structures and create a sustainable foundation for the initiative prior to implementation.
- The considerable experience and legitimacy of macro-level partners, in this case MSF and the Ministry of Health, provided the necessary expertise to develop the initiative and secure necessary resources.
- Strong working relationships between key actors, established through a history of working together, helped carry the initiative forward.

1 World Bank. (2015). *World Bank development indicators*. Retrieved from http://data.worldbank.org/indicator/SH.TBS.INCD?page=3
2 Khamraev, A., Tillashaikhov, M., & Parprieva, N. (2014). The Path to Scale-up: Decentralisation and Ambulatory TB Care from Day 1 in Uzbekistan. Uzbekistan: Medecins Sans Frontieres
* Ambulatory care from day one (ACD1) enables patients to start TB treatment in ambulatory settings, avoiding the need for hospitalization. This approach is significantly different to the traditional model of care practised in Eastern European countries where all patients with TB are traditionally hospitalized during the entire intensive phase of treatment.

Annexes

Annex 1. Additional case abstracts

Establishing rehabilitation home care services for elderly patients in Austria

Walter Müller, Elisabethinen Hospital, Klagenfurt, Austria

Observing suboptimal health outcomes and high readmission rates for patients discharged from Elisabethinen Hospital in the southern Austrian region of Carinthia, geriatricians put forward a call for change. Backed by previous experience working in home care and rehabilitation programmes in Germany, change agents first convened meetings with the regional hospital network and local politicians to establish a new home care programme. In 2013, after securing funding from regional authorities, a two-year pilot project was launched. Under the initiative, elderly patients are discharged from hospital and entered into a personalized six-week home care programme delivered by a multidisciplinary home care team. The team works closely with patients and their caregivers, as well as general practitioners, to support and rehabilitate patients in home environments. After completion of the home care programme, patients return to the care of their general practitioner. An evaluation of the pilot conducted by the University of Klagenfurt demonstrated that patients participating in the home care programme had improved health outcomes, including lower rates of hospital readmission and reduced risk of falls, compared to patients not enrolled. Furthermore, cost savings of over €3000 per patient, a 56% reduction in care costs, were observed. Following the positive results of the pilot and widespread support across the local government throughout the project, the initiative has set out to be adopted beyond a pilot status.

Reducing inappropriate prescriptions in Upper Styria, Austria

Regina Roller, Medical University of Graz, Austria

In 2013, high rates of over-prescription and potentially inappropriate medications for elderly patients were reported in Upper Styria, Austria. To assess this situation and understand the root causes of this trend, health insurers contacted researchers at the Medical University of Graz. Results from further study found inconsistencies in prescribing practices, including out-dated lists of contraindicated medications. To address this, a programme was designed to provide general practitioners with training and guidelines for prescribing, while simultaneously studying local prescription patterns. Local elderly home residents were recruited to participate and their information was collected for tracking by researchers. In parallel, local general practitioners and nurses were given interdisciplinary training designed as problem-based learning. Three sessions were held to inform providers on identifying inappropriate medications and improving interprofessional communication. Professionals who completed these trainings were given the title of 'expert' by the sponsoring insurance company; the title serving as an incentive to participate. Additionally, all local providers were provided guiding documents to support appropriate prescribing patterns. While the evaluation of the initiative is not yet complete, an increase in the number of discussions between professionals regarding prescription patterns has been observed.

Aligning inpatient and outpatient care for people with personality disorders in Bruges, Belgium

Fanny Dumarey, North West Flanders Centre for Mental Health, Belgium

Fragmentation between inpatient and outpatient mental health centres serving the Bruges area contributed to high patient dropout rates during care transfers, and ultimately, elevated preventable readmission rates. In 2009, outpatient mental health providers working with patients with personality disorders raised this problem to their board of directors. Following meetings between boards for inpatient and outpatient centres, a joint initiative was approved to develop a shared therapeutic framework and increase care coordination. Between September 2009 and February 2010, a multidisciplinary working group planned the initiative and its overarching framework, as well as shared tools, documents and terminology. The rollout of this initiative has worked to ensure patients with personality disorders are treated according to a four-phase treatment model based on dialectic behavioural therapy. Regardless of the care entry point, each patient receives a standardized initial assessment and personalized care plan developed with patient input. All patient information, assessments and evaluations are recorded in both inpatient and outpatient information systems to ensure all providers have complete patient records. All centres use the same therapeutic framework and have complete patient records, ensuring patients can continue building on progress made in one setting when accessing another. Regular meetings and phone calls between providers further support improved coordination and continuity of care. Following initial implementation, patient satisfaction surveys are positive and dropout rates are reportedly lower. Programmes and services continue to be gradually expanded and support for the initiative remains strong.

Case management for individuals with alcohol dependency in Ghent, Belgium

Jurgen Magerman, Intensive case management programme, Belgium

In the context of high alcohol addiction, with the prevalence rate in Ghent nearly double that of the Flemish region, health providers grew increasing concerned with highly specialized residential services and lack of community support services available. In response, three psychiatric hospitals in Ghent united to explore an alternative services delivery model. An extensive literature review, conducted in partnership with the University of Ghent, led to the proposal for an intensive case management programme. A three-year government grant helped secure initial funding. According to the initiative, patients enter the programme while in residential care and work with an intensive case manager over a one-year period to develop external support networks. Case managers connect with a variety of actors in a patients' local community, such as general practitioners, community psychologists and general hospital providers, as well as family members and other informal caregivers. Case managers also assist patients with employment, financial matters and other social needs. The programme aims to empower patients to manage their addiction independently with support from their network to avoid relapse. Dramatic reductions in readmission rates for participating patients have been observed. With funding for the project soon ending, it is hoped that evidence from an evaluation of the programme, led by the University of Ghent, will help secure alternative funding sources.

Mental health empowerment for patients with Alzheimer's disease in Cyprus

Elena Gabriel, Ministry of Health, Cyprus

In response to an increasing trend in dementia among elderly patients, mental health staff employed by Nicosia's elderly day care centre in Cyprus, advocated for the introduction of a community-based mental empowerment programme. Funded by the Ministry of Health, nursing staff visited similar initiatives in Greece throughout 2011 to study new practices and extend their knowledge of clinical tools for the programme. After successfully pitching the idea to the director of the centre, the

initiative was officially launched in 2013. The programme is delivered at the centre using resources already available. Home care services are also available for patients with mobility problems. Patients are enrolled in the programme either through the centre or by referral from their health provider. A detailed clinical assessment is performed for each patient and a personalized care programme is developed based on the results. Patients receive a combination of individual and group cognitive behavioural therapy designed to improve memory, concentration, judgement, orientation and other cognitive perceptions. Programmes use music, scent, calendars and other sensory stimulators or tools to help recall patients' memories and exercise cognitive function. Support services are also extended to patients' families. Nurses have built relationships and work closely with other health providers, such as primary care physicians and mental health specialists, to ensure coordinated care for patients. While a formal evaluation is yet to take place, initiative leaders report observing successes in both patient satisfaction and health outcomes. The programme continues to be actively implemented and the Ministry of Health is working to scale up the programme by creating trainings on mental empowerment for community mental health nurses and developing standardized care pathways and guidelines for this service.

Developing the National Diabetes Programme 2012–2022 in the Czech Republic

Terezie Pelikánová and Oldřich Pospišil, Ministry of Health, Czech Republic

In 2011, national statistics in the Czech Republic indicated approximately a quarter of people with diabetes went undiagnosed and without treatment, putting them at risk of developing long-term health complications. In response, the Czech Diabetes Society collaborated with professional societies including the Czech Medical Chamber, Czech Association of Nurses and three national patient associations between 2011 and 2012 to develop the National Diabetes Programme 2012– 2022. The Programme was developed to reduce risk factors for diabetes by tackling obesity, low physical activity and poor diet, as well as to improve self-management through education delivered at approximately 100 specialized centres. To support this initiative, new legislation levying additional taxes on fat- and sugar-heavy foods, a media campaign supporting early intervention and diabetes awareness and care guidelines for diabetes-related care have been implemented. Improved care provision for common complications, as well as education sessions at specialized centres, are said to be improving earlier diagnoses. Implementation of the Programme continues, with the aim of securing sustainable funding from the Ministry of Health.

Designing integrated care pilots in the Region of Southern Denmark

Lise Døj-Bendixen, Region of Southern Denmark, Denmark

In early 2010, service gaps that left some health needs of the local elderly population unmet drew increasing concern among health professionals in Southern Denmark. Specifically, a lack of communication and sharing of information between providers was creating fragmentation in care for elderly patients with multiple co-morbidities. After voicing this problem, the physician began working with the administration for the Region of Southern Denmark, municipal providers and local general practitioners to devise a new approach to services delivery. A pilot study involving local general practitioners began in 2014 with the aim of increasing communication between service levels and providers, as well as across health and social services. Within the pilot, general practitioners are provided with a list of elderly co-morbid patients for whom they are responsible. General practitioners act as care coordinators, linking with any additional health or social care professionals as well as patients to create personalized care plans. Providers participating in the study complete competency training, enhancing non-clinical skills such as teamwork and communication. A shared information system has been implemented, helping to facilitate communication between professionals and the exchange of patient information. The pilot is financially supported by a 70 million Danish kroner (US$ 10.2 million) fund provided by the Region of Southern Denmark and the local municipality.

Development of a mental health network in Berlin, Germany

Frank Herrmann, Techniker Krankenkasse, Germany

In 2007, an analysis of insurance data highlighted significant costs linked to patients with mental disorders in Berlin. Observing an increasing trend in the incidence and prevalence of mental disorders, as well as the under-provision of mental health services in primary care, the insurer Techniker Krankenkasse initiated a Network Mental Health Programme. The Network awards contracts to general practitioners who offer mental health services in primary settings. Contracts are based on a package of services defined by Techniker Krankenkasse, with general practitioners responsible for contracting secondary services and coordinating patient care. A number of new services have been implemented under the Programme, including a 24/7 patient hotline. Provider remuneration has been shifted away from fee-for-service towards a payment-for-performance model, based on the estimated cost of each individual patient. General practitioners are responsible for managing all patient care. If a referral is necessary, these costs are transferred back to the referring general practitioner, providing an incentive for the coordinating role. Provider competencies have been strengthened through mandatory trainings and support programmes offered within the Network. Since implementation, reductions in severity of impairment due to mental disorders, crises and hospital readmissions have been reported. Additionally, the position of general practitioners has been strengthened. The programme continues to be actively implemented with ongoing adjustments and adaptations made to payment schemes as needed.

Information technology for elderly patients with chronic conditions in the Piedmont region, Italy

Dominga Salerno, Head of Telemedicine Services of Regional Health System, Italy

In 2011, in response to pressures from an ageing population and rising chronicity, the Hospital at Home initiative to improve home care services for elderly patients was launched. In Italy, patients directly seeking care for chronic conditions had increasingly overburdened hospitals and general practitioners were also unable to meet rising patient demands. For two years, change agents researched and planned the project, conducting a literature review of integrated care models, performing risk stratification for the local population and listening to patients' views on desired services. Under the newly designed care model, home care services are provided by a new multidisciplinary home care team, with mobile telephones used to carry out additional remote monitoring of patients. Trainings for the team were provided to increase knowledge and skills relating to both home care and technology. Patients also received training on how to use mobile telephones, as well as education on self-management to enable them to "become agents of their own health". Clinical indicators of health status, unnecessary hospital admissions and patient awareness of chronic conditions are all reported to have improved as a result of the initiative. The Hospital at Home service has proved popular with patients and their families, helping build grassroots support for activities. Convincing other health providers to collaborate with the multidisciplinary home care team was initially described as challenging, but with time and persistent advocacy efforts from the initiative's leader and patients, the majority of health providers are now supportive. The initiative continues to be actively implemented in the Piedmont region and advocacy efforts are being focused on engaging the regional and national government to enable the model to be scaled up across Italy.

Remote monitoring for patients with chronic disease in Italy

Simonetta Scalvini, Salvatore Maugeri Foundation, Italy

In the late 1990s, the waiting list for patients with congestive heart failure in the Lombardy region of Italy was lengthy, with less severe patients frequently sent home to wait for an operation. Limited mechanisms existed, however, to allow patients to be monitored at home, necessitating frequent hospital visits to monitor patient status. For many rural patients in the region, these visits were not

easily accessible. In 1998, a trial programme for remote monitoring was started with 10 patients. Personal computers were used to upload patient information and monitoring was conducted via telephone. Results of blood tests were faxed from participating general practitioners to the hospital. Following the success of the initial pilot, the programme has become the norm for many patients admitted for circulatory disease in the Lombardy region and is now used in 38 hospitals. Since 1998, however, technologies used have advanced. A specialized platform now allows nurses to videoconference with patients and new technologies allow patients to record their own measurements. Frequency of videoconferencing and exact measurements taken are determined by the severity and type of patients' conditions. Remote monitoring of patients has also been expanded to include conditions such as chronic obstructive pulmonary disorder and stroke rehabilitation.

Cardiovascular disease risk screening in Liepaja city, Latvia

Iveta Pudule, Centre for Disease Prevention and Control, Latvia

Cardiovascular disease is of increasing concern in Latvia, accounting for over half of all mortality in 2010. High rates of modifiable unhealthy behaviours such as smoking, alcohol abuse and unhealthy diet contribute to the problem, yet no national prevention programmes at the time was in place. The Cardiovascular Health Improvement Action Plan 2013–2015 was developed and approved by the Ministry of Health in 2012 to address this growing cardiovascular disease burden. Under the Plan, the Centre for Disease Prevention and Control – the main organization responsible for public health – designed a pilot cardiovascular risk-screening programme for men aged 45 and children aged 11. The city of Liepaja was chosen as the pilot site because the local population was considered to be generally representative and the municipal government was motivated to participate. Primary care providers were recruited to deliver the screenings, with 37 out of 49 general practices in the municipality choosing to participate. Training sessions for health providers were held in May 2013 and screenings were conducted from June to September 2013. General practitioners invited eligible registered patients to participate in screenings, conducted assessments and provided necessary follow-up care. Screenings were free-of-charge and involved a questionnaire and analysis of basic health indicators such as weight, blood pressure and cholesterol level. An algorithm developed by the Society of Cardiologists categorized patients' risk level and determined appropriate care pathways based on the results. Low-risk patients received general health advice; higher-risk patients were referred to specialist care at secondary-level health facilities. Over 1000 patients were invited for screenings during the pilot; uptake rates were higher among children (55%) than men (37%). Approximately 25 referrals to specialist care were generated and several serious cardiovascular conditions were proactively identified and treated. The pilot has provided the Centre for Disease Prevention and Control with data on conducting cardiovascular risk screenings in Latvia and a considerable effort has been made to collect feedback from health providers to further improve the programme.

Developing multidisciplinary mental health services in Latvia

Aigars Kisuro, Riga Centre of Psychiatry and Addiction Medicine Latvia

In the early 2000s, Latvia's mental health services model was out of date with best practices in other European countries and services delivery remained concentrated in large psychiatric hospitals. Following discussions with European colleagues and motivated by Latvia's pending ascension to the European Union (completed in 2004), the Ministry of Health developed the Population Mental Health Improvement Plan 2004–2009 to reform mental health services and phase in a new multidisciplinary approach. However, funding restraints prevented many planned actions. Attempting to capitalize on the lessons learned and move progress forward, the Ministry published the Population Mental Health Improvement Plan 2009–2014. Despite financial challenges, individual provider motivation has succeeded in introducing informal multidisciplinary team working in mental health services. Psychiatrists based in secondary or tertiary settings lead care management and refer patients

to other professionals across care settings, including psychologists, social workers and others. General practitioners are also playing an increased role in managing low-risk patients and patients prefer receiving care in primary settings due to lower stigma. Services available to people with mental disorders have expanded to include cognitive behavioural therapy, alternative therapies (music, physical) and a range of social support services including housing, employment and legal assistance. Although other professionals are increasingly caring for people with mental disorders, a lack of incentives and funding for their services continues to hinder their involvement. Professionals are moving in the right direction towards multidisciplinary care delivery. While progress is still in the early stages, the government remains morally supportive and continuing improvements in mental health was a key part of the Public Health Strategy 2011–2017.

Introducing national public health bureaus in Lithuania

Audrius Šceponavicius, Ministry of Health, Lithuania

Declining life expectancy in an ageing population with increasing rates of chronicity, poor cardiovascular outcomes and high prevalence of unhealthy behaviours triggered the Lithuanian government to launch an initiative to strengthen public health services. Basing their model on international systems, Ministry of Health officials planned the decentralization of public health services through an initiative to establish municipal-level public health bureaus. The Ministry of Health developed the necessary political and legal framework to promote the establishment of public health bureaus and financially incentivized municipalities to participate. Through shifting control over public health to municipal governments, the Ministry hoped to empower local leaders to improve health services and involve local communities in health. A network of 40 public health bureaus covering all 60 municipalities has now been established. Public health bureaus are responsible for implementing national and local public health programmes and have three main functions: health promotion for the general population, public health service provision in schools and health surveillance. Health education services offered to the population include, for example, dietary counselling, physical activity instruction and stress management classes. Inhabitants of municipalities where public health bureaus have been established the longest have demonstrably higher levels of health knowledge and awareness of public health. While recent improvements in health outcomes are attributable to many factors, the declining trend in life expectancy seen in the early 2000s has been reversed and cardiovascular-related indicators have shown improvement. Recently, the Ministry of Health adjusted financing mechanisms for the initiative to bring funding of public health bureaus entirely under the Ministry to ensure financial sustainability; bureaus are now allocated funding on a per capita basis. Public health bureaus continue to work to improve public health within their local municipalities supported by the Ministry of Health.

Developing case management for addiction services

Emilis Subata, Vilnius Centre for Addictive Disorders, Lithuania

Seeing predominantly chronic patients with a complex variety of social and health needs enter the Vilnius Centre for Addictive Disorders, physicians leading the Centre were frustrated by the heavy demand for social care that fell predominantly outside their scope of practice. With the exception of an initial diagnosis and the management of any prescriptions, care consisted largely of increasing motivation, improving social skills and coordinating with outside professionals – all of which could be done more efficiently and effectively by other providers. After realizing that providers in the practice were largely dissatisfied with the care they were providing, social workers started working in the Centre in 2009, generating treatment plans and providing information to patients. Social workers are now assigned to patients and play the role of case managers, responsible for developing three-month individualized treatment plans. In changing the scope of professional practice, a database was created to link social workers to health system professionals, improving their awareness of what services were available for referral. Additionally, training was provided to social workers teaching

them how to coordinate patient care. The initiative has been implemented on a municipal level and greater satisfaction among professionals working in the Centre has been reported. The initiative has since been submitted to the Ministry of Health as an example of care models for addictive disorders and is under consideration for expansion to other municipalities.

Building an intermediate ward at Hallingdal Community Hospital, Norway

Ingeborg Rinnaas, Hallingdal Community Hospital, Norway

In 2008, a coordination reform incentivized municipalities in Norway to prevent inappropriate hospital admissions and discharge patients from inpatient treatment earlier. New economic incentives stimulated the reform, with municipalities required to co-finance hospital services funded by regional bodies. Building on these reforms, a local working group of specialist and municipal providers, as well as administrative representatives from municipal and regional bodies, was appointed in Hallingdal region to design an intermediate ward for patients too sick to return to municipal care, yet sufficiently stable to remain out of general hospitals. After a binding agreement between the regional health trust and six local municipalities was signed in 2014, construction began on the intermediate ward within Hallingdal Community Hospital. Work is currently underway to build the infrastructure for the intermediate ward and establish a shared information system.

Introducing a low-threshold harm reduction programme in Portugal

Ricardo Fuertes, Grupo de Activistas em Tratamentos, Portugal

Identifying unmet HIV/AIDS-related care needs among men who have sex with men (MSM) in Lisbon, members of the Grupo de Ativistas em Tratamentos de VIH/SIDA (GAT) – a nongovernmental advocacy organization for people with HIV/AIDS – opened the Checkpoint LX Clinic in 2011 to provide HIV/AIDS testing for this group. GAT also recognized that HIV/AIDS was a significant problem for injection drug users: at that time Portugal had the highest HIV/AIDS incidence rate among people who inject drugs in Western Europe. When Lisbon City Hall announced funding for a community-rejuvenation project in a well-known drug area, GAT jumped at the "opportunity to put some feet on the ground with other vulnerable groups". Many local actors joined in the community project and frequent stakeholder meetings generated widespread community support for harm reduction initiatives. GAT used their experience with Checkpoint LX as a guide for developing a new centre, making adaptations in consultation with the new target group. The IN-Mouraria Harm Reduction Centre opened its doors in 2012, offering services including needle and crack pipe exchanges, as well as rapid testing for HIV/AIDS and associated coinfections. The Centre also provides social and legal assistance, such as Internet access and food donations. The Centre employs coordinators, nurses and social workers, yet many services are peer-led. Change agents described peer involvement as important for connecting with the target population. As laws require all HIV/AIDS treatment be provided by hospitals, the Centre collaborates with local hospital physicians to overcome care access barriers for Centre patients to strengthen continuity. Recent national austerity measures have created a more challenging environment for the Centre and national shortages of antiretroviral medication, needles, condoms and other materials have occurred. Nevertheless, the Centre has managed to continue offering services and now benefits from the new national HIV/AIDS strategy adopted by the government.

Developing community mental health centres in the Republic of Moldova

Jana Chihai, SOMATO, Republic of Moldova

In 2000, mental and behavioural disorders placed a large burden on health and social systems in the Republic of Moldova, with an analysis of mental health indicators showing a rising incidence across all age groups. In the late 1990s and early 2000s, the primary treatment method was through

a centralized hospital model, often resulting in discontinuity of services when individuals were discharged, in addition to placing a large burden on acute health services. In response to these challenges, a group of psychologists in Balti began working together to open a community health centre to provide early diagnosis and mental health awareness services, rehabilitation, and support services for patients' families. In addition, the community centre coordinates with local social services and offers three temporary inpatient placements for acute patients if needed. Patients are referred to the community health centre from inpatient hospital units or through self-referral. Referral mechanisms from primary care or general practitioners are still missing. With the success with this model and the issue of mental health reform climbing the political agenda, a national policy to improve mental health services was passed. These changes to legislation, supporting the introduction of community-based care, have encouraged the development of 17 community mental health centres across the Republic of Moldova.

Increasing continuity of care for outpatients with tuberculosis in the Republic of Moldova

Liliana Domente, Institute of Phthisiopneumology, Republic of Moldova

The Republic of Moldova is one of the 27 countries globally with the highest MDR-TB burden. Low rates of successful treatment and high rates of treatment interruption were determined to be contributing factors to increasing rates of MDR-TB across the country. In 2012, in response to these frequent disruptions in patient care, the Government of the Republic of Moldova opened communitarian centres which work in 10 regions across Moldova that have particularly high rates of MDR-TB to examine patients cause of interruption or lack of adherence to treatment and develop a plan with the necessary supports to begin a new course of treatment. The development of communitarian centres was put forward in the fourth National TB Programme 2011-2015. Communitarian centres run on an outpatient basis, with a group of diverse professionals working at each centre including psychologists, social workers, lawyers and a driver able to help registered patients get to an appointment. MDR-TB patients are referred to Communitarian centres by hospital TB doctors or by family doctors. Together with the health professionals the team at Communitarian centres works to determine causes of interruption to a patient's TB treatment and develop a plan, including reaching out to additional social services to resolve the challenges. Funding for the centres comes primarily from a Global Fund grant and the national insurance company. An evaluation of the Communitarian centres one year following implementation showed a 5% drop in morbidity and 23% drop in mortality among patients using the centres.

Development of youth-friendly health services in the Republic of Moldova

Rodica Scutelnic, Ministry of Health, Republic of Moldova

Recognizing limitations in services directed towards youth and adolescents in the Republic of Moldova, the national government undertook an assessment, finding that youth needed greater access to confidential health services. In response, the government piloted three youth-friendly health centres across the country. Centres provide services including routine medical check-ups, psychological assessments, testing and treatment of sexually transmitted diseases, post-abortion counselling, sexual assault counselling and services for victims of human trafficking. In addition, centres offer individual and group skills training for children and youth for dealing with problems such as peer pressure. In 2005, following the success of the pilot sites, the government approved additional centres and, in 2007, officially placed the centres under the mandate of the National Centre of Public Health.

Tackling chronicity in the Basque Country, Spain

In 2009, the newly-elected government for the Basque Country initiated the development of a system-wide strategy to address rising chronicity. Launched in 2010, the Strategy to Tackle the Challenge of Chronicity in the Basque Country aimed to meet the complex needs of chronic patients and reduce the impact of chronic illness by shifting to a more proactive health system, focused on promoting health rather than treating illness. Five health policies formed the core of the Strategy: population focus; health promotion and disease prevention; patient autonomy; continuity of care; and adapted interventions. Within these five policies, a subseries of 14 top-down and bottom-up projects were outlined. Projects included stratifying the population by risk, establishing a patient network, developing unified electronic medical records and other e-health solutions, advancing nursing responsibilities and conducting chronicity research. The government has supported health system reform through implementing top-down policies, realigning financial incentives and strengthening information systems. However, a distributed leadership approach equally recognizing the role of bottom-up initiative was central to the Strategy. Consequently, the government has nurtured the development of 11 health microsystems to coordinate local stakeholders and design locally relevant health solutions. Local actors on the frontlines of services delivery have been encouraged to devise innovative solutions to increase the coordination and integration of care, particularly for patients with chronic illness. In the first year of the Strategy's launch, 150 bottom-up projects were initiated at the local level.

The Chronicity Prevention and Care Programme in Catalonia, Spain

Joan Carles Contel, Department of Health, Spain

In Catalonia, an ageing population coupled with increased financial pressures warranted consideration of new care models. Within this context, the Ministry of Health for Catalonia developed, in 2011, the Chronicity Prevention and Care Programme to put forward an integrated care vision. The Programme aims to drive the system towards a new, collaborative care model for patients with chronic conditions. New tools are being implemented to facilitate this shift, including shared information systems, an integrated financing and commissioning scheme, virtual care technologies and opportunities for increased patient involvement. Implementation of the Programme has reportedly shown positive results, including better health outcomes and a reduction in preventable hospital admissions.

Improving maternal and child health in Turkey

Akile Uzuniar, Public Health Agency, Turkey

High maternal mortality rates (28.5 deaths per 100 000 live births) reported by the 2005 National Maternal Mortality Study in Turkey pushed maternal health up the government agenda. Between 2007 and 2009, the Ministry of Health led a pilot study across five of Turkey's 81 provinces to examine the causes of preventable maternal mortality and strategize solutions. Key activities included training health providers, strengthening population health promotion and increasing access to medical care during pregnancy. Official evidence-based national guidelines for prenatal, emergency obstetric and postnatal care resulting from this pilot were published in 2009. In parallel, the Ministry of Health has passed supportive legislation to improve safety standards and increase care access. Efforts to improve resources – including the procurement of new medicines and medical supplies, strengthening of blood banks and investment in ambulances – have been made. A new electronic medical records system with referral maps has improved referral processes and strengthened communication between providers. Several new maternal services have been made available, including vitamin supplementation programmes, parent education classes, intrauterine balloons for bleeding and a new Guest Mother Programme (which provides pregnant women living in remote areas with temporary accommodation near a hospital). Maternal mortality rates fell to 20 per 100 000 live births in 2010 and Turkey has been ranked by WHO among the countries most successful

in reducing maternal mortality. Pregnancy-related care guidelines have recently been updated and training on these has been incorporated into university curricula. Regular multidisciplinary stakeholder meetings are held between senior health management, health providers and external organizations to maintain focus on continuing improvements. Maternal mortality statistics are monitored closely and there is continued focus on evolving the initiative to further reduce maternal mortality.

Developing electronic medical records in Turkey

Seda Usubutun, Ministry of Health, Turkey

In 2003, the health system in Turkey relied largely on paper-based records and referral systems. Motivated by the new possibilities information technology presented for sharing patient information, as well as a desire to generate real-time information to aid policy decision-making, the Ministry of Health initiated the development of a comprehensive electronic medical records system. The process began by gathering input from stakeholders who regularly handled health information, including general physicians, laboratory technicians and hospital providers, among others. Establishing the necessary electronic systems and consolidating existing health information platforms continued until 2012 when all systems were centralized into a single platform, Health.Net. This platform allows collection of patients' information throughout the life course, sharing of information between providers across care levels and the generation of consolidated population-level data for Ministry use; in the future, the platform is set to provide patients access to their medical information. At present, Health. Net is close to completion, but data and privacy regulations are delaying implementation of some remaining features, including patient access.

Developing integrated services for people who use injection drugs in Ukraine

Maksim Demchenko, Light of Hope, Ukraine

High rates of mortality and morbidity from HIV/AIDS and tuberculosis (TB) among people who use injection drugs in Poltava, Ukraine, coupled with fragmented care provision to this marginalized population, drew the attention of the Light of Hope charitable association in 2008. In response, Light of Hope developed a solution to co-locate services for HIV, TB and harm-reduction. Operating outside of established norms, changes were implemented gradually, beginning by incorporating TB-related services within Light of Hope's existing needle exchange point. Once this practice was established, services were expanded to include appointments with physicians, gynaecologists and specialists. In 2011, Light of Hope applied to formalize this model of care at the regional level. In 2013, formal acceptance of the model allowed for its expansion across three institutions. Services continue to be delivered out of needle exchange points, where patients can now also seek on-demand treatment for TB, vaccinations and counselling, among other services. In addition, nearby social housing provides assistance with registration and documentation, temporary accommodation and food aid. Current efforts are focused on developing protocols and directives for providers working within service points.

Integrated delivery of HIV and tuberculosis services in the Odessa region, Ukraine

Svetlana Yespinko, Odessa tuberculosis dispensary, Ukraine

Incidence rates of HIV/AIDS, tuberculosis (TB) and HIV/TB coinfection are high in Ukraine and the rise of multidrug-resistant (MDR) TB is a significant concern. Facing regional rates of HIV/AIDS and TB almost double the national average, management at the tertiary-level TB dispensary in Odessa led a situational investigation, revealing significant gaps in the reporting of HIV/TB coinfection. Frustrated by the fragmented delivery of HIV/AIDS and TB services – arranged in parallel disease specific structures – the management team used the investigation's results to advocate for improved regional coordination and integration of HIV/AIDS and TB services. The management team first focused on building provider relationships through informal networking occasions for collective problem solving. These informal meetings evolved into official working groups to design protocols and tools to improve coordination between disciplines and address key problems. While an absence of national-level support has proved challenging, the management team has devised creative solutions to work around obstacles. As a result of the initiative, communication channels across disciplines have been opened, referral processes between providers simplified, services delivered by TB centres broadened to include HIV/AIDS services and multidisciplinary team working promoted. Care is consequently more coordinated and adapted to complex patient needs. Strengthening reporting mechanisms has been another key area of activity and has allowed more for reliable documentation, as well as monitoring and evaluation of activities. Despite the rise in cases of HIV/TB coinfection at the start of the initiative due to improved reporting, the first reversal in the upward trend of HIV/TB coinfection since 2007 was observed in 2012 and the initiative continues to foster improved coordination among HIV/AIDS and TB services.

Implementing school nursing services to improve responsiveness to young people's needs in England, United Kingdom

Wendy Nicholson, Department of Health, United Kingdom

Public health nurses play a significant role in leading and coordinating the delivery of public health interventions in England. In March 2012, the Department of Health launched the Getting it Right for Children, Young People and Families' Programme to provide school-aged children in England with a strengthened, more personalized school nursing service in sync with their needs. School-aged children are vulnerable to specific emotional, mental, physical and behavioural risks and school nurses have the professional competencies and skills to address these needs. Led by the Department of Health, the Programme evolved in close partnership with multiple stakeholders, including nurses, schools and, importantly, young people. The British Youth Council played a pivotal role in giving young people a powerful voice over shaping their new school nursing service. The Programme reaffirms school nurses as champions for child health and raises awareness of the broad array of complex services they are uniquely positioned to provide. While the core offering of school nursing services remains the same, there is increased focus on providing targeted support to children and young people with additional needs, as well as increasing awareness of school nursing services through improved visibility and access. School nurses now also deliver services outside of traditional school settings and the use of technology – including social media, text messaging and Skype – has helped nurses connect with children and young people. Commitment to meeting young people's needs has brought creative solutions and innovation into the school nursing service. The results of the Programme are already visible in terms of improved vaccination coverage and reductions in school absences, adolescent pregnancy, chlamydia prevalence and substance abuse. Additionally, quality performance feedback from children and young people show positive findings. Governing bodies continue to support school nursing, raising the profile of the profession and emphasizing the importance of public health interventions.

Whole-systems approach to integrated care in North West London, England, United Kingdom

Caroline Allnut, National Health System, United Kingdom

While there is over a decade of experience of local efforts and small-scale projects relating to patient-centred care in North West London, these initiatives have largely remained isolated within one sector or care level. Beginning in July 2011, an integrated care pilot began across all eight North West London boroughs to coordinate and integrate care for patients with the most complex health and social care needs. After gaining national support for the project through the Department of Health, a partnership team was brought together and an official pilot project devised. Under the project, 10 steps towards integrated care were established following a whole-systems approach that was rolled out over the next two years. Main features of the pilot include establishing multidisciplinary teams, increasing access to information across professions and care levels, and pooling budgets within care delivery trusts for the region.

Integrating health and social sectors in Northern Ireland, United Kingdom

Health and social care in Northern Ireland is predominantly publicly financed and almost entirely free at the point of use. However, in 2009, an overabundance of health and social care agencies and a desire to streamline services delivery led to the Health and Social Care Reform Act to reduce the number of agencies and redesign the governance of services delivery. In 2011, building on these changes, the policy document Transforming your Care was released with 99 proposals for the future of health and social services in Northern Ireland. It proposed a generalized "shift left" from hospitals to home and community settings, as well as the creation of 17 practitioner-led Integrated Care Partnerships to join together professionals from the full range of health and social services in each area. Transforming your Care is being activated through local implementation plans drawn up by Northern Ireland's five Health and Social Care Trusts, with the overall context being set by the Health and Social Care Board. As of 2013, all 17 Integrated Care Partnerships had been established. Implementation of the recommendations made by Transforming your Care is ongoing, with the vision for change to be complete by 2020.

Improving the quality of care in Scotland, United Kingdom

A rise in chronicity coupled with increasing public engagement in health issues created the need to update the Scottish health system. Building on previous reforms, the government devised the Healthcare quality strategy for NHS Scotland as a guiding document for furthering the development of people-centred, safe and effective health care services, aiming to take advantage of existing health system strengths to improve health services delivery. The Strategy called for increased cooperation, collaboration and integration within the health system and elevated the role of patients in the care process, establishing them as co-producers of health. Guided by the Strategy numerous regulations, policies and initiatives have been implemented to help achieve set goals. A strong monitoring and evaluation system, with clearly defined short and long term targets, helps ensure continued progress towards goals. Strong government leadership teamed with high public involvement and extensive collaboration among stakeholders has helped drive improvements in a variety of areas including patient satisfaction, health care associated infections and premature mortality, among others. Presently, the Strategy continues to serve as the guiding light for health system improvements in Scotland.

Annex 2. Comparison of findings with other relevant works

Comparison of findings	Preliminary review of case profiles	Implementation of system transformations[1]	Department of Health integrated care pilots[2]	Ten key principles for successful health system integration[3]	Project Integrate determinants if successful integrated care strategies	Delivering person-centred integrated care in OECD countries[4]	Coordinated care for complex chronic conditions[5]	Place-based systems of care[6]
Tailor transformations to specific needs and preferences of population groups.	●		●	●		●	●	●
Focus on bringing care closer to people.	●						●	
Design care pathways with people at the centre.	●		●	●			●	
Use explicit strategies to promote engagement with people and patients.	●				●		●	
Select services to address population needs holistically.	●			●				●
Apply best available evidence to improve services delivery pathways and develop care guidelines.	●			●	●	●		
Ensure institutional and workforce realignment follow new care pathways.	●		●	●	●	●		
Managing health services delivery requires clear goals matched with flexibility in processes.	●		●		●			
Tightening feedback cycles enables continuous performance improvement and learning.	●			●	●	●		
Aligning financial and non-financial incentives facilitates adoption of health services delivery transformations.	●				●	●		●
Make use of existing resources in piloting and wider-implementation as far as possible.			●			●		
Health services delivery transformations were more effective when accompanied by changes in accountability mechanisms.	●			●		●		●
Information technology improvements enables health services delivery transformations.	●		●	●	●	●	●	

Comparison of findings *continued*

Finding	Preliminary review of case profiles	Implementation of system transformations[1]	Department of Health integrated care pilots[2]	Ten key principles for successful health system integration[3]	Project Integrate determinants if successful integrated care strategies	Delivering person-centred integrated care in OECD countries[4]	Coordinated care for complex chronic conditions[5]	Place-based systems of care[6]
Information technology improvements enables health services delivery transformations.	●		●	●	●	●	●	
Research aides in promoting and sustaining health services delivery transformations.	●				●	●		
Strategies for planning, preparing and enhancing the health workforce are critical to support health services delivery transformations.	●				●	●		
Distributing leadership enables health services delivery transformations and drives outcomes.	●	●	●			●	●	●
Developing a vision and shared understanding of change is critical to unite all actors and stakeholders.		●	●	●		●	●	●
Undertaking health services delivery transformations disrupts the status quo in order to make way for a new organizational culture.	●	●	●			●		
Communicating strategically can increase the effectiveness of implementation.	●	●	●	●			●	
Evidence strengthens the case for change.	●	●			●	●		
Couple problems, agents, politics and resources to enable change.	●	●			●		●	
Non-health institutions are key partners in health services delivery transformations.	●						●	

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