

POLICY BRIEF 26

# How to support integration to promote care for people with multimorbidity in Europe?

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This policy brief is one of a new series to meet the needs of policy-makers and health system managers. The aim is to develop key messages to support evidence-informed policy-making and the editors will continue to strengthen the series by working with authors to improve the consideration given to policy options and implementation.

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### What is a Policy Brief?

A policy brief is a short publication specifically designed to provide policy-makers with evidence on a policy question or priority. Policy briefs:

- Bring together existing evidence and present it in an accessible format
- Use systematic methods and make these transparent so that users can have confidence in the material
- Tailor the way evidence is identified and synthesised to reflect the nature of the policy question and the evidence available
- Are underpinned by a formal and rigorous open peer review process to ensure the independence of the evidence presented.

Each brief has a one page key messages section; a two page executive summary giving a succinct overview of the findings; and a 20 page review setting out the evidence. The idea is to provide instant access to key information and additional detail for those involved in drafting, informing or advising on the policy issue.

Policy briefs provide evidence for policy-makers not policy advice. They do not seek to explain or advocate a policy position but to set out clearly what is known about it. They may outline the evidence on different prospective policy options and on implementation issues, but they do not promote a particular option or act as a manual for implementation.

Contents	
	page
Key terms / Key messages	7
Executive summary	9
Policy brief	11
Introduction	11
Findings	12
Discussion	16
Conclusions	17
References	18
Appendix 1	21
Appendix 2	21

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### **What is ICARE4EU?**

The Innovating care for people with multiple chronic conditions in Europe (ICARE4EU) project aims to improve care for people with multiple chronic conditions (multimorbidity) in European countries ([www.icare4eu.org](http://www.icare4eu.org)). An estimated 50 million people in Europe live with multimorbidity. The complex health problems of these people and their need for continuous and multidisciplinary care pose a great challenge to health systems and social services. From a patient perspective, improvements in, for example, the coordination of care and patients' own involvement in the decision-making and the care process are also important. ICARE4EU describes and analyses innovative integrated care approaches for people with multiple chronic conditions in Europe. By disseminating knowledge about innovative care programmes or practices, the ICARE4EU project aims to contribute to the improved design, wider applicability

and more effective implementation of integrated care for people with multimorbidity. Observations from the ICARE4EU project are described in five policy briefs and key elements of multimorbidity care are addressed from the following perspectives: patient centredness [1], use of eHealth technology [2], integration (this one) and financing systems [3]. A final policy brief [4] integrates all lessons learned from the ICARE4EU project on how care in European countries could be improved for their citizens with multiple chronic conditions.

**How do Policy Briefs bring the evidence together?**

There is no one single way of collecting evidence to inform policy-making. Different approaches are appropriate for different policy issues so the Observatory briefs draw on a mix of methodologies (see Figure A) and explain transparently the different methods used and how they have been combined. This allows users to understand the nature and limits of the evidence.

There are two main ‘categories’ of briefs that can be distinguished by method and further ‘sub-sets’ of briefs that can be mapped along a spectrum:

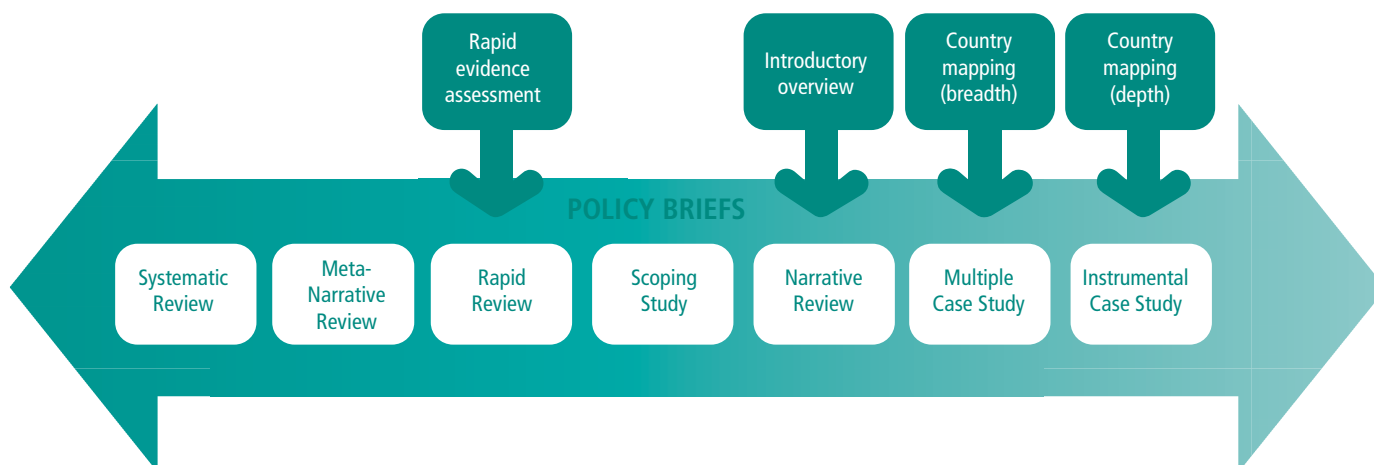
- **A rapid evidence assessment:** This is a targeted review of the available literature and requires authors to define key terms, set out explicit search strategies and be clear about what is excluded.

- **Comparative country mapping:** These use a case study approach and combine document reviews and consultation with appropriate technical and country experts. These fall into two groups depending on whether they prioritize depth or breadth.

- **Introductory overview:** These briefs have a different objective to the rapid evidence assessments but use a similar methodological approach. Literature is targeted and reviewed with the aim of explaining a subject to ‘beginners’.

Most briefs however, will draw on a mix of methods and it is for this reason that a ‘methods’ box is included in the introduction to each brief signalling transparently that methods are explicit, robust and replicable and showing how they are appropriate to the policy question.

**Figure A: The policy brief spectrum**



Source: Erica Richardson

## Acronyms

<b>EU</b>	European Union
<b>GP</b>	General Practitioner
<b>ICARE4EU</b>	Innovating care for people with multiple chronic conditions in Europe
<b>INCA</b>	Integrated Care
<b>MD</b>	Medical doctor
<b>POTKU</b>	Potilas kuljettajan paikalle (Putting the Patient in the Driver's Seat)
<b>WHO</b>	World Health Organization

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## Table, figure and boxes

<i>Table</i>		page
<b>Table 1:</b>	Competencies supported in the programmes (n=101), %	16
 <i>Figure</i>		
<b>Figure 1:</b>	Patient stratification in the POTKU project, Finland	14
 <i>Boxes</i>		
<b>Box 1:</b>	Methods	11
<b>Box 2:</b>	Integrated care dimensions	12
<b>Box 3:</b>	Collaboration in health and social care: Barriers and facilitators	13
<b>Box 4:</b>	A care pathway for people with multimorbidity in Finland	15
<b>Box 5:</b>	The model of two case managers in Valencia, Spain	15
<b>Box 6:</b>	Flexible ad-hoc collaboration in the Silkeborg Hospital, Denmark	16





## Key terms

- **Integrated care** is when organizations and staff work together across professional and institutional boundaries to provide seamless care. It often involves the joint development of flexible and continuous care processes and care pathways.
- **Multimorbidity** means having multiple chronic conditions at the same time and (typically) complex needs that require the involvement of several care providers. It is a significant and growing challenge to Europe's health systems, with some 50 million people already affected.

## Key messages

- Integrated care initiatives do not currently focus on multimorbidity, but they can serve as models for services for people with multimorbidity, offering ideas on how to coordinate or customize care and overcome the fragmentation that comes from "disease oriented" systems organized around single medical specialities.
- The practical examples of integrated care for multimorbidity are still in their early phases but it is already clear that implementing integration requires real effort.
- Policy-makers trying to encourage integrated care for multimorbidity need to know that:
  - Primary care is often the most appropriate base for initiatives but must have the full cooperation of specialized care;
  - Effective connections between health and social care are key and should be an explicit policy objective;
  - Linking formal and informal care (e.g. patient associations, relatives as carers) ought to be part of any holistic approach.
- There is a continuum between fragmented (segregated) care and full integration. Policy-makers and providers can move care towards integration by:
  - Stratifying people with multimorbidity according to their needs and the resources available to support them which helps care pathways and care inputs to be coordinated efficiently;
  - Promoting a culture of information sharing across organizational, professional and status boundaries, including by encouraging interdisciplinary meetings;
  - Developing information and communication technology that allows professionals and patients to share information easily wherever they are based;
  - Making sure new initiatives are treated as part of regular care and, not separate from the everyday work of professionals.
- Other pre-requisites for implementing integrated care initiatives are:
  - Tailoring models to fit the specific (national or regional) health and social care context;
  - Support and commitment from management at all levels (from strategic to frontline);
  - Training in collaboration and other relevant skills (ideally as part of health and social care education);
  - Evaluation to capture the impact of integrated care (supported by relevant training).



## Executive summary

### The policy issue: supporting integration to promote care for people with multimorbidity

The reorientation of health systems to deal with multimorbidity is one of the major challenges facing high income countries. It is also an issue in the management of care organizations and necessitates a review of current care delivery. The fragmented, single disease focused structure of current health and social care systems does not adequately meet the needs of people with multiple chronic conditions. Patients with multimorbidity need services from several care providers – health centres and general practitioners in primary care, hospitals, inpatient and outpatient clinics, nursing homes, rehabilitation facilities, home care and pharmacies. Integration and coordination of care are needed to provide effective, appropriate and good-quality services for people with multimorbidity.

The need to coordinate and customize care for this patient group has been identified in most European countries, but implementation is still in its initial phase. This policy brief asks: How can we strengthen integration at the organizational and inter-organizational level to care for people with multimorbidity in European countries?

### Integration in innovative care programmes in Europe

The ICARE4EU findings show that several promising changes in organizational structures and processes have been developed and implemented in Europe to improve the care of people with multiple chronic diseases. In most of the programmes identified, multimorbidity was not the main focus so integrating initiatives specifically targeting this patient group were rare. However, awareness of the growing importance of multimorbidity has risen throughout Europe.

Many of the integrating programmes identified in the ICARE4EU project covered only part of the health care sector. Most programmes involved the primary care sector and specialized care was addressed quite extensively. However, social care was rarely a part of the programmes. Informal care (e.g. patient associations, relatives as carers) was also not often involved in the programmes identified. Care for people with multimorbidity requires a clear medical orientation and thus the coordination of care between primary care and specialized care is and will continue to be at the core when developing care for this patient group. A holistic approach to the patient, however, necessitates that social care and the whole environment of the patient including informal care arrangements need more attention.

### Policy implications

Findings from the literature and the ICARE4EU project can serve as an inspiration for both (local) governments and the management of health and social care organizations to support and promote integrated care for people with multimorbidity. There are a number of policy directions for organizations and their management:

- Different ways to coordinate care for patients with multimorbidity beyond the 'silos' of separate care providers are needed in different countries (e.g. level of integration).
- Integrating social and health care more intensively would benefit patients with multimorbidity and therefore should be promoted, e.g. through ad hoc initiatives and programmes. In addition to multiprofessional collaboration, inter-organizational collaboration could also be supported and promoted.
- Care for people with multimorbidity and its related competencies such as collaboration skills need to be recognized in health and social care education.
- Support from the management and commitment of the management at all levels (strategic, operational, front-line) seemed essential for successful integration. Coordination of care and collaboration between professionals does not happen spontaneously.
- Stratification of patients according their needs and resources could help to coordinate care and enable care providers to develop alternative, customized care pathways for patient groups with different needs.
- It seemed important that integrating programmes were implemented as part of regular care, not separate from the everyday work of professionals.
- Care pathways connecting diverse care providers and professionals can be developed, which take into account the medical expertise needed in the care of patients with multimorbidity.
- Collaborative activities need to focus on sharing and producing joint knowledge between professionals to improve the care of patients with multimorbidity. For example, in addition to traditional teamwork, ad hoc meetings and consultations could be utilized.
- The role of information and communication technology facilitating the communication among professionals and between professionals and patients seems crucial.
- Collaboration can be initiated by linking professionals whose work includes similar tasks but who are situated in different organizations. In this kind of arrangement there are only organizational, rather than professional and status-based boundaries to be overcome, which may facilitate collaboration.
- In order to manage and coordinate care effectively, managers at all levels of care organizations need to know more about how to evaluate the impacts of integration.

### What to consider when implementing?

The integration of care and relevant competencies of care professionals are needed to provide effective, appropriate and high-quality services for people with multiple chronic diseases. Administrative reforms of the health and social care system in many countries form a basis for system integration at macro level, but much effort is needed to guarantee the actual implementation of integration in these reforms at organizational and professional level.



## Policy brief

### Introduction

Multimorbidity has been described as the ‘most common chronic condition’ [5]; the total number of people with multimorbidity in the EU is about 50 million [6]. Multimorbidity is any co-occurrence of multiple chronic conditions within one person [7]. The prevalence of multimorbidity is especially high among older people [8].

Multimorbidity is associated with several individual problems, such as disability and functional decline, poor quality of life, depression and polypharmacy [9–13]. In addition, multimorbidity is connected to the economic burden of health care and high health care costs [10, 12]. The fragmented, disease based structures of current health systems do not meet the needs of people with multimorbidity [14].

Reorientation of health systems to deal with multimorbidity is one of the biggest challenges in high-income countries [15]. It also concerns the management of care organizations and makes a review of current care delivery necessary. Patients with multimorbidity need services from several care providers – health centres and general practitioners in primary care, hospitals, inpatient and outpatient clinics, nursing homes, rehabilitation facilities, home care and pharmacies [14]. Emerging concern about multimorbidity has created new requirements to co-ordinate and integrate health services, inside and between provider organizations [15]. Integration and coordination of care are needed to provide effective, appropriate and good-quality services for people with multiple chronic diseases [16].

Integration in the context of multimorbidity implies that both care organizations and professionals have to come ‘out of the silos’ and work together to develop innovative, flexible and continuous care processes and care pathways. This challenge concerns not only health care, but also social care, communities and the patients themselves with their families and caregivers [17]. To achieve integration, the financial, professional and educational boundaries between care providers need to be overcome. Further, joint working and multiprofessional collaboration require an appreciation of different kinds of skills thereby extending the initial scope of professional competencies in the undergraduate education.

In this policy brief we view integration in the context of multimorbidity at organizational, inter-organizational and professional levels. The framework on integrated, people-centred health services calls for a new vision of how care services are managed and delivered [18–20]. This policy brief addresses the principles of this framework regarding the reorientation of the care, coordination of the services within and across sectors and reorientation of the health workforce [18]. The brief provides examples of how integration, in particular coordination of care, collaboration between professionals and related competencies have been addressed in care organizations in order to improve the care of people with multiple chronic conditions. In particular, this

### Box 1: Methods

For policy-making, insights from practice and from scientific literature are useful and provide information on health care changes which can lead to more integrated care. Therefore, this policy brief also uses observations collected as part of the ICARE4EU project. This policy brief combines a rapid review of the research literature with results from a survey (see Appendix 1 and 2). The literature review focused on publications about integrated care in general and integrated care in the context of chronic care, but special attention was paid to publications that discussed integrated care in care for people with multimorbidity; however, studies on this topic found to be scarce.

Under the ICARE4EU project, information was gathered on 101 innovative care programmes in 24 European countries. Eight of these programmes were considered especially innovative and were therefore visited to obtain a more in-depth understanding of their particular characteristics. Appendix II provides detailed information on the research into innovative care programmes in European countries.

brief draws on potential and promising initiatives identified in the ICARE4EU project (see Box 1).

### The policy issue: supporting integration in the context of multimorbidity

The disease-based or age-group based structure of current health and social care systems fragments care and does not meet the needs of people with multiple chronic conditions [14]. To better serve the increasing number of people with multimorbidity, more attention needs to be paid to how to decrease this fragmentation of health and social care systems through integration.

The overall question addressed in this brief is: **“How can we strengthen integration at organizational and inter-organizational levels to promote care for people with multimorbidity in Europe?”**

Integration is a multidimensional phenomenon. This brief focuses on the following important areas of integration: (1) Coordination of care across organizational boundaries, (2) collaboration between care professionals and (3) professional competencies. Overcoming organizational and professional boundaries are key issues in integrated care. The development of professional competencies is necessary to enable the orientation of professionals towards integrated ways of working.

Accordingly, the following three sub-questions will be addressed:

- What are the most promising organizational and inter-organizational arrangements that support integrated care for people with multimorbidity?
- How can multiprofessional and inter-organizational collaboration between care professionals be promoted?
- How can professional competencies regarding multimorbidity care be strengthened?

## Findings

### Coordination of care across organizational boundaries

Integration is a useful way of thinking about a range of approaches that can be deployed to increase coordination, cooperation, collaboration and networking across different components of health service delivery [16]. However, there is no precise definition of integrated care [21–25].

Integrated care has many dimensions but this brief focuses mainly on organizational and professional levels. In this approach (see Box 2) person-focused population-based care is the guiding principle for achieving integration across the care continuum, with different integration processes playing inter-connected roles on the macro- (system integration), meso- (organizational, professional) and micro-level (clinical, service and personal integration). Functional integration (e.g. communication and IT) and normative integration (e.g., shared cultural values) ensure the various levels interconnect [26].

**Box 2: Integrated care dimensions [27, 28]**

Level	Dimension	Description
Macro	System integration	A horizontally and vertically integrated system, based on a coherent set of (informal and formal) rules and policies between care providers and external stakeholders
Meso	Organisational integration	Inter-organizational relationships (e.g. contracting, strategic alliances, knowledge networks, mergers), including common governance mechanisms, to deliver comprehensive services
Meso	Professional integration	Inter-professional partnerships based on shared competencies, roles, responsibilities and accountability to deliver a comprehensive continuum of care
Micro	Clinical integration	The coordination of person-focused care in a single process across time, place and discipline
Micro, Meso, Macro	Functional integration	Key support functions and activities (i.e. financial, management and information systems) structured around the primary process of service delivery to coordinate and support accountability and decision-making between organizations and professionals
Micro, Meso, Macro	Normative integration	The development and maintenance of a common frame of reference (i.e. shared mission, vision, values and culture) between organizations, professional groups and individuals

The outcomes of integration are usually connected with population and personal health outcomes, financial and organizational outcomes, resource utilization and positive experiences of users, carers and care professionals. However, there are still difficulties in measuring and thus showing clear evidence of the impacts of integration [22, 29–34]. In the context of multimorbidity, assessing the outcomes of integration is still more difficult due to the complexity of the phenomenon [22].

### Collaboration between professionals

Coordination of care through organizational and inter-organizational arrangements may be considered the first step towards integration. However, bringing professionals together is not enough: the ultimate success of integration depends on how relationships between human beings work [34]. An important challenge for the management of health and social care organizations is to identify the main dimensions, facilitators, barriers and main benefits of multi-professional and inter-organizational collaboration [1].

There is ample literature on the nature and dimensions of collaboration in health and social care, in particular related to multiprofessional collaboration [35]. The main concepts related to collaboration are sharing, partnership, interdependency and power [34, 36]. This four-dimensional model of multiprofessional collaboration addresses the importance of common goals, with patient-centredness being one of the most important goals connecting care professionals. Knowing each other personally and professionally and having trust in each-others' competencies are important indicators of successful collaboration. The model emphasizes the significance of management in giving support and creating facilities for collaboration. In addition, the formalization of responsibilities e.g. through agreements and protocols and providing infrastructure for information exchange are addressed. Shared aims, trust, commitment and open communication systems are also requirements for effective interprofessional collaboration [37]. The social processes and power embedded in professional relationships need to be considered, while collaboration threatens '*exclusive ownership of knowledge and expertise*' and thus also professionals' autonomy and status [37].

When dealing with patients with multimorbidity, professional hierarchies are not the only boundaries to be addressed. In addition to multiprofessional collaboration, inter-organizational collaboration is needed [38]. 'Boundary tensions' caused by the boundaries between different organizations (related to different cultures, languages, work practices, payment barriers, differences in structural and even in physical settings, etc.) may become additional obstacles to arranging seamless and continuous care for patients 'shared' by several care organizations [39]. Box 3 presents common barriers to and facilitators of multiprofessional and interorganizational collaboration identified in the recent literature [40, 41].

**Box 3: Collaboration in health and social care: Barriers and facilitators [40, 41]**

	Facilitators	Barriers
Organizational and inter-organizational issues	<ul style="list-style-type: none"> <li>• Aims and objects (e.g. a shared purpose, involvement of staff in the development process)</li> <li>• Clear assignment of roles and responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>• Organizational difference (e.g. competing visions, attitudes towards risk management)</li> </ul>
Cultural and professional issues	<ul style="list-style-type: none"> <li>• Flexibility</li> <li>• Co-location of collaborative partners</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of access to information technology, incompatible IT systems</li> <li>• Presence of separate management structures</li> </ul>
Contextual issues	<ul style="list-style-type: none"> <li>• Strong management and professional support</li> <li>• Mutual trust and respect</li> <li>• Joint training</li> </ul>	<ul style="list-style-type: none"> <li>• Different philosophies and values of professionals</li> <li>• Power, hierarchy</li> <li>• Financial issues</li> <li>• Different steering and legislation systems</li> </ul>

Collaboration has the following outcomes: better organizational effectiveness, better quality of care and patient safety, better knowledge sharing, staff involvement and staff satisfaction [35, 37]. Despite a firm conviction that multi- and interprofessional collaboration has a positive impact, evidence of its effects on patient outcomes or on professional and organizational outcomes is ambiguous [42, 43]. More research is needed to understand the nature of the collaboration and its potential benefits in different contexts [35].

### Professional competencies needed in multimorbidity care

Professional competencies are *“essential complex knowledge based acts that combine and mobilize knowledge, skills, and attitudes with the existing and available resources to ensure safe and quality outcomes for patients and populations. Competencies require a certain level of social and emotional intelligence that are as much flexible as they are habitual and judicious.”* [44] There are five clusters of competencies that enable integrated care: 1) patient advocacy, 2) effective communication, 3) team work, 4) people-centred care and 5) continuous learning [44]. In particular, skills in sharing knowledge and collaborating with other professionals from different disciplines, organizations and professions are needed in the care of people with multimorbidity to ensure a common view of the complex problems and to guarantee the continuity of care.

Overall, the competencies of health and social professionals have improved significantly in recent decades. Studies of care professionals and their competencies have mostly focused on specialized nurses or physicians in different specializations [45, 46], but there is a lack of studies of multimorbidity care competencies specifically.

In addition, because of the diversity of people with multimorbidity, the focus of competence development should potentially be on interprofessional practices and knowledge sharing, which concern the development of a cohesive practice among different professionals from the same organization or from different organizations [47]. Such interprofessional practices with the increasing knowledge

among people with multimorbidity and their informal carers highlights the need for general competencies, such as interaction and collaboration in multimorbidity care.

A comprehensive framework for multimorbidity care competencies would probably be impossible to develop because of the variation in the needs of people with multimorbidity. However, for example, the identification of people with multimorbidity that have several social, cognitive, and functional problems will be an important competence for different professionals in the future [48]. From the human resources management perspective, it is important to manage the competencies of different actors and organizations in care processes, although it is not clear who should lead these processes [49].

### Findings from the ICARE4EU Project

In this section we describe the ICARE4EU findings about advances in care coordination, collaboration of care professionals and professional competencies in current programmes for people with multimorbidity across Europe. The findings are based on a survey which identified 101 innovative programmes and the eight selected programmes which were visited and analysed in detail by ICARE4EU researchers (see Appendix 1). Below in particular Danish, Finnish and Spanish (Valencian) in-depth programmes are used as examples to describe the ways of integration at the practical level.

### Crossing organizational boundaries

The ICARE4EU survey findings indicated that most of the programmes to integrate care for people with multimorbidity involved primary care. Connections between primary and specialized care were addressed more often than those between social and informal care. Eighty per cent of the 101 programmes improved integration of care services and collaboration between care providers in 93% of the programmes. Primary care was involved in 70% of the programmes, university hospitals 41% and social care 27%.

The aims of the programmes identified gave quite a similar picture of their focus on integration within, rather than

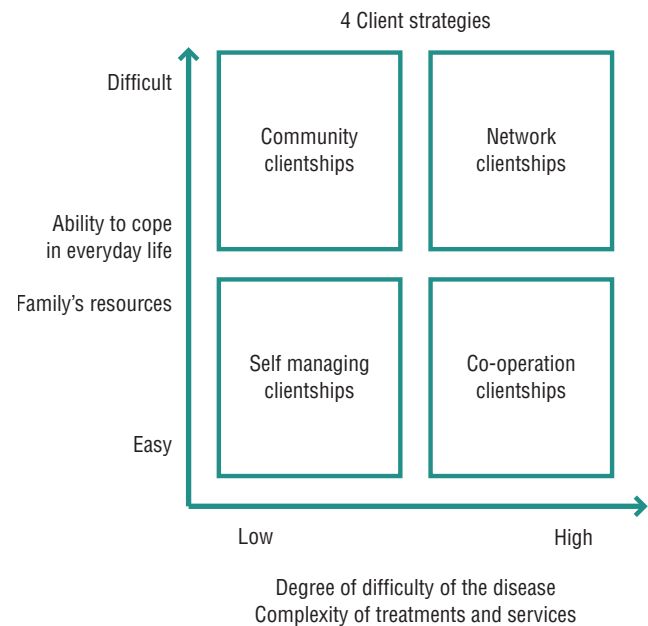
between, the organizational and professional ‘silos’. In general, increasing multi-disciplinary collaboration was mentioned as one of the main objectives in 79% of the programmes and improving care coordination in 70%. However, improving the integration of *different units* was among the main objectives in only 55% of the programmes and integration of *different organizations* was included even less frequently, in only 48%. Improving the involvement of informal carers was mentioned as one of the main objectives in 46% of the programmes.

### Patient stratification as a basis for coordinating care

People with multimorbidity are not similar and their needs differ. Different kinds of patients in different kinds of environments need different kinds of care. Thus stratification of patients forms an important starting point for coordinating care for people with multimorbidity [50, 51]. Regarding resource allocation, it is reasonable to focus special care arrangements on the most complex patient groups. In the ICARE4EU in-depth study in the Valencia region of Spain a definition of complex cases not only refers to multimorbidity but also to other related problems, such as frequent changes in a patient’s situation, polypharmacy, need for care at home and lack of social support [52]. The stratification of patients in the Valencian programme draws on the Kaiser Permanent Risk Stratification Pyramid with four different population groups [13]. At the bottom of the pyramid is the majority of the population, the healthy ones, and at the top come highly complex chronic and palliative care patients. Each of these groups needs a different care approach based on their needs: from health promotion and prevention to self-care and disease management and finally, in the case of highly complex patients, case management. In the Valencian programme highly complex patients are identified through electronic health record systems. Extra attention is paid to them by offering special care arrangements depending on the complexity of each patient’s situation.

Another example of stratification of complex patients was introduced in the Finnish POTKU programme [53, 54]. It is based on two dimensions (see Figure 1). The first focuses on the complexity of the disease and related treatments and services needed. The second concerns the patient’s ability to cope in everyday life and the resources of the family. Based on this stratification, four client strategies have been defined. For example, self-managing patients need less help whereas a group called network clients need support from multiple actors including formal health and social care as well as informal carers. Health care professionals determine which strategy suits a certain patient with the help of ‘medical parameters’ (clinical protocols) and by connecting the professional’s opinion with the patient’s own views and experiences. For example, a self-management assessment form is completed by the patient and discussed with a professional. Thus people’s own holistic and experiential knowledge about their diseases and lives is taken into account when determining which strategy best suits the patient and what services should be offered.

Figure 1: Patient stratification in the POTKU project, Finland [53]



### Special care pathways coordinate care and connect professionals

A care pathway is “a complex intervention for the mutual decision-making and organization of care processes for a well-defined group of patients during a well-defined period” [55]. It is a plan which guides the care of a defined patient group and ‘maps out’ the activities for professionals involved in care [56]. Over half (55%) of the 101 programmes identified in the ICARE4EU project indicated that care pathways were at least a substantial part of the programme.

In the Finnish POTKU programme, based on the classification described above (see Figure 1), a care pathway for people with multimorbidity was developed [54]. The care pathway is a tool for care professionals to help them provide appropriate care and support for each of the four patient groups and to allocate the limited resources of the care system most effectively. The aims of treatment, the focus of the treatment plan and responsibility for the coordination of care differ between groups. The care pathway with information links connecting diverse care providers and other related information is available to care professionals as an online resource. Altogether, this stratification of patients forms the basis for delivering customized care services for patients with complex needs. However, both the stratification model and care pathway are fairly new tools and not yet fully implemented in practice.

Another example of a patient pathway connecting diverse health care professionals is the Clinic of Multimorbidity and Polypharmacy in Silkeborg Hospital, Denmark [57]. The clinic offers a same-day service where people with multimorbidity and polypharmacy receive a comprehensive assessment of their disease status from a multidisciplinary team consisting of a variety of professionals (Box 6). In addition to forming a link between the specialists, this care pathway also



**Box 4: A care pathway for people with multimorbidity in Finland [54]**

In Pirkanmaa Hospital District in Finland, the Centre of General Practice (PETE) is responsible for the development of care pathways. The pathways are seen as instruments to trigger the development of processes and cooperation between diverse care providers. The pathways are planned in multidisciplinary groups together with representatives from primary health care, specialized hospital care and social care. In addition, opinions for the draft versions of care pathways are elicited from patient organizations and health centres.

The pathway for people with multimorbidity is based on four patient 'clientships' (see Figure 1). Identifying the clientship of a patient guides the care professional in specifying how the care is to be arranged: e.g. who is responsible for the coordination of care and what supportive tools patients can be offered. For example, in self-management clientship, the aim of care is to support self-management. The tools for this could include health coaching, a health library and electronic contacts with health service providers (e.g. the patient books an appointment (when needed) with her/his regular GP/family doctor online and gets the results of laboratory tests by text message). In network clientship clear coordination of care is needed (e.g. a joint care plan prepared with a multiprofessional care team and a case manager or some other care coordinator appointed to be responsible for the coordination of care). The pathway documentation with related forms (e.g. self-assessment form, health care plan), contact information of key actors (e.g. patient associations) and links to information is available (in Finnish) for every professional at an open online portal [www.terveysportti.fi](http://www.terveysportti.fi). *"The care pathway is a systematic way to make visible what services are available, to share knowledge about what to offer to patients."* (Head of PETE, [54]).

connects primary care and specialized care: one important aim of the clinic is to support GPs caring for people with multimorbidity. By referring a patient to the clinic a GP receives multidisciplinary feedback on where to focus aftercare for that particular patient. After the comprehensive assessment at the clinic, patients are referred back to their regular GP. Like several other alternative patient pathways developed in the Silkeborg Regional Hospital, the pathway offered by this clinic challenges the habitual way of thinking about arranging care.

Altogether, especially when based on patient stratification, patient pathways can be considered one tool for coordinating the cooperation of professionals around a patient's needs. Although the form of the pathways varies, they seem to either form a concrete link between professionals or at least serve as a navigator for the professionals to show which health and social care actors should be included in the care of patients with complex needs.

**Case managers build bridges between 'silos'**

Case managers for patients were assigned in 41% of the programmes of ICARE4EU survey. Case managers are often considered one of the key elements to enhance the coordination of care for people with multimorbidity [58, 59]. The task of a case manager is to serve as a link between a patient and the various care professionals involved in the patient's care.

**Box 5: The model of two case managers in Valencia, Spain [52]**

Two case managers in the Valencian model of integrated care collaborate closely in order to coordinate the care of people with complex problems [60, 52]. The case managers have shared clients, common goals and similar functions, but they work in different spheres: one in a hospital setting and the other in the health centre in the community. The client is usually a patient living at home, cared for by an informal carer (e.g. spouse) but who also requires both primary and specialized care services. Both case managers know their own context (hospital or community); to be acquainted with the services and contact persons in both of these contexts could be too demanding. The case managers get to know each other personally, which makes the collaboration easier. The two separate but connected roles form a two-way link between primary and specialized care organizations, which previously operated separately. The possibility for direct contact and knowledge sharing between professionals at the same level in separate organizations enabled seamless continuity in the care of patients with multiple complex problems.

*"In the process of a complex case, several agents participate in a perfectly coordinated way... We bring together and standardize the contribution of all the agents involved in the chronic patient care"* (Case managers in La Plana department, Valencia).

In Valencia, Spain, integration of care included an innovative model which used two nursing case managers [52, 60]. The two separate case managers work at the interface between hospital units and home care. The hospital case manager (located in a hospital or Hospital-at-Home unit) and the community case manager (located in a health care centre in the community) collaborate closely in order to ensure patients receive integrated and continuous care. The community case manager is responsible for mobilizing the 'intervention' (starting the collaborative care process for a new patient) and for arranging care at home. The hospital nursing case manager is responsible for hospital admissions and planning the hospital discharge to ensure continuity of care during and after the patient's stay in hospital. The collaboration between the two case managers – supported by additional information and communication technology (ICT) such as tablets to monitor patients both in hospital and at home – formed an efficient bridge at the practical level between the silos of primary and secondary care and proved a key facilitator for effective collaboration. However, in building bridges between these silos, the importance of ICT for sharing patient information proved crucial.

**Professional boundaries hinder collaboration**

The most common practices used to strengthen integration in the programmes described in the ICARE4EU survey were multiprofessional care groups (in 68% of the programmes) and multiprofessional development groups (54%). In the former, the main focus was on patient care, in the latter it was on organizational development. Both practices are related to the benefits and problems of multiprofessional collaboration described above (see Box 3).

In the ICARE4EU survey the programme managers were asked to evaluate collaboration between different care providers and professionals based on their experience of

the programme. In general, both factors promoting or hindering collaboration were evaluated very positively, which may say more about collaboration in the programmes themselves than the actual collaboration achieved outside the programmes. Another explanation for the extremely positive response may be that the project managers were not fully aware of the problems related to collaboration.

One novel way of connecting diverse health care professionals identified in the research was that offered by the Clinic for Multimorbidity and Polypharmacy in Silkeborg Hospital, Denmark [57]. In addition to forming an innovative pathway for the patient, the clinic is also an example of how multidisciplinary collaboration between care professionals can be accomplished in an innovative way. Many of the obstacles to collaboration, such as lack of time, professional boundaries, bureaucracy and rigid hierarchy could be overcome by flexible ad-hoc ways of collaboration (Box 6).

### Care professionals and new competencies

According to the ICARE4EU survey, the competencies of care providers in multimorbidity were generally improved in 88% of the programmes. More specific questions showed that programmes mainly supported professional competencies in care delivery, which from the management perspective is especially relevant for the integration of services and care providers. Most programmes addressed enhancing collaboration as a competence. Competencies to support patients' self-management and diagnostics were also mentioned. More general competencies such as change management, development, ICT or financial skills concerning multimorbidity were less frequently supported in the programmes (see Table 1).

### Outcomes of integration

The ICARE4EU findings elicited little evidence on the effectiveness of the integrated care activities implemented in the 101 programmes. The reasons for this include the limited time-scale of the programmes and the design of the programmes' evaluation criteria. Integration, coordination and collaboration may have been the aims of the programmes as such, but their connection to the impacts measured such as the health outcomes of patients, reduced hospital admissions or cost savings were not self-evident. It may be difficult to prove and measure the actual impacts of integration due to the complex, multifaceted and context-dependent nature of integrative initiatives [22]. In the future it may be advisable to pay more attention to the structure-process-outcome evaluation of various integrated care programmes.

## Discussion

Both the literature review and ICARE4EU findings show that several promising integrated care initiatives have been developed and implemented in Europe to improve the care of people with complex needs. In most of the programmes identified, multimorbidity is not the main focus so integrated care initiatives targeting this patient group in

### Box 6: Flexible ad-hoc collaboration in the Silkeborg Hospital, Denmark [57]

In the Clinic for Multimorbidity and Polypharmacy in the Silkeborg Hospital (Denmark) a comprehensive assessment of the patient is done by a multidisciplinary conference consisting of several professionals. The implementation of the conference draws on the flexible ad-hoc "Plastic Organic Groups" method developed and implemented in the Silkeborg Hospital, which aimed to lower the barriers to multidisciplinary collaboration (see Hujala et al. 2015a). To facilitate participation, the conference is arranged during the lunch break, when people are not occupied by other duties. For the same reason, the duration of the conference is only about twenty minutes. The medical doctor (MD) responsible for the process presents a well-prepared summary of the patient's medical history and present state. Before the conference the patient has been interviewed by the MD, pharmacist, care coordinator, physiotherapist and occupational therapist. In the conference the medication and future treatment options, including a thorough assessment of polypharmacy, are discussed together by all the actors, including the relevant specialists available in the Silkeborg Hospital. During the conference the professionals have to reach consensus on the patient's care. The presence of all professionals, the principle of equality, avoidance of unnecessary power hierarchies and swift flexible implementation seemed to enable efficient multidisciplinary knowledge sharing between the professionals.

*"I think we have to continuously address that people will have to work in a different way. It should be part of the specialist's education, not just to be an expert of one's own narrow field but also to be able to sit down at the table and listen to what the others say, and to share information (...) this should be an integral part of any doctor's education". (MD of the Clinic)*

Table 1: Competencies supported in the programmes (n=101), %

	YES	NO
Professional competencies in care delivery	81	19
Collaboration competencies	77	23
Competencies of care providers to support self-management of patients	66	34
Professional competencies in diagnostics	58	42
Change-management competencies	49	51
Developmental competencies	37	63
ICT competencies	34	66
eHealth competencies	30	70
Financial competencies	20	80

particular are rare. However, awareness of the significance of multimorbidity has increased throughout Europe and integration is assumed to be one of the ways to improve care for this patient group.

According to the ICARE4EU findings, many of the integrated care programmes covered only part of the health care sector. Most initiatives were in primary care, although cooperation with specialized care was a considerable part of them. Initiatives that promote integration of health and social care were quite rare. Accordingly, the role of informal care (e.g. patient associations, relatives as carers) appears weak in integrated care programmes. Multimorbidity care requires a clear medical orientation and thus the coordination of care between primary care and specialized care is and will continue to be at the core when developing

integrated care for people with multimorbidity. A holistic approach to the patient, however, necessitates that social care and the whole environment of the patient including informal care arrangements are paid more attention in future.

### Limitations

A limitation of the findings from the ICARE4EU project is that only eight programmes were visited, thus we have limited insight in how aspects of integration are implemented in practice. Nevertheless, observations from the ICARE4EU project can still serve as an inspiration for both (local) governments and the management of health and social care organizations to support integration to promote care for people with multimorbidity.

### Policy implications

- Different ways to coordinate care for multi-morbidity patients ‘beyond silos’ could be fostered and developed for the health and social care systems.
- Integrating social and health care more intensively would benefit patients with multimorbidity and therefore should be promoted, e.g. through ad hoc initiatives and programmes.
- In addition to multiprofessional collaboration, inter-organizational collaboration should also be supported and promoted.
- Care for people with multimorbidity and related competencies such as collaboration skills could be better addressed in health and social care education.
- Support and commitment from the managers at all levels (strategic, operational, frontline) in care organizations appear essential for successful integration. Coordination of care and collaboration between professionals does not happen on its own.
- People with multimorbidity are not similar; their needs and resources differ. Stratification of patients according their needs and resources could help to coordinate care and enable care providers to develop alternative, customized care pathways for patient groups with different needs.
- It appears important that integrated care programmes are integrated into regular care, rather than being separate from the everyday work of professionals.
- Care pathways connecting diverse care providers and professionals need to be developed, taking into account the medical expertise required in the care of patients with multimorbidity.
- Collaborative activities need to focus on sharing and producing joint knowledge between professionals to improve the care of patients with multimorbidity. This does not necessarily mean traditional teamwork but more arrangements enabling collaboration, such as ad-hoc meetings and consultations.

- One potential way to initiate collaboration may be to link same-level professionals who have similar tasks but who are situated in different organizations. In this kind of arrangement there are only organizational, not professional and status-based boundaries to be overcome, which may make the collaboration easier.
- In building bridges between silos, the importance of information technology for sharing patient information appears crucial.
- To integrate care effectively, managers at all levels of care organizations need more information about required competencies in care and how to evaluate the impacts of integration.

### Conclusions

Integration of care and the related competencies of care professionals is needed to provide effective, appropriate and high-quality services for people with multiple chronic conditions. The administrative reforms of the health and social care system in many countries form a basis for structural integration, but much effort is needed to guarantee the implementation of integration in these reforms at operational and practical levels. More evidence-based development work at the organizational and the inter-organizational level, which clearly addresses the needs of people with multimorbidity, is needed. Commitment from the management of care organizations is crucial. In addition, attention needs to be paid to how the comprehensive impacts of integration can be evaluated from different perspectives. Due to the complexity of multimorbidity, the evaluation needs to look not only economic benefits but also such important issues as quality of care, patient experiences and the quality of life of people with multimorbidity.

## References

1. Van der Heide I, Snoeijs S, Boerma W, Schellevis F, Rijken PM (on behalf of the ICARE4EU consortium) (2017). How to strengthen patient-centredness in caring for people with multimorbidity in Europe? Policy Brief No. 22, European Observatory on Health Policies and Systems.
2. Barbabella F, Melchiorre MG, Quattrini S, Papa R, Lamura G (on behalf of the ICARE4EU consortium) (2017). How to strengthen eHealth in caring for people with multimorbidity in Europe? Policy Brief No. 25, European Observatory on Health Policies and Systems.
3. Struckmann V, Quentin W, van Ginneken E (on behalf of the ICARE4EU consortium) (2017). How to strengthen financing methods to promote care for people with multimorbidity in Europe? Policy Brief No. 24, European Observatory on Health Policies and Systems.
4. Rijken M et al. (on behalf of the ICARE4EU consortium) (2017). How can we improve care for people with multimorbidity in European countries? Policy Brief No. 23, European Observatory on Health Policies and Systems.
5. Tinetti ME, Fried TR and Boyd CM (2012). Designing health care for the most common chronic condition—multimorbidity. *JAMA* Jun. 20, 307(23):2493–2494.
6. Rijken M, Struckmann V, Dyakova M, Melchiorre MG, Rissanen S, van Ginneken E (2013). ICARE4EU: improving care for people with multiple chronic conditions in Europe. *Eurohealth* 19(3):29–31.
7. de Bruin SR, Versnel N, Lemmens LC, Molema CC, Schellevis FG, Nijpels G, et al. (2012). Comprehensive care programs for patients with multiple chronic conditions: a systematic literature review. *Health Policy* 107(2): 108–145.
8. Barnett K, Mercer SW, Norbury M, Watt G, Wyke S and Guthrie B (2012). Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *Lancet* 308, Jul 7: 37–43.
9. Fortin M, Hudon C, Gallagher F, Ntetu AL, Maltais D and Soubhi H (2010). Nurses joining family doctors in primary care practices: perceptions of patients with multimorbidity. *BMC Family Practice* 11: 84.
10. Marengoni A, Angleman S, Melis R, Mangialasche F, Karp A, Garmen A, et al. (2011). Aging with multimorbidity: a systematic review of the literature. *Ageing Research Reviews* 10(4): 430–439.
11. NICE National Institute for Health and Care Excellence (2016). Multimorbidity: clinical assessment and Management. Available at <https://www.nice.org.uk/guidance/ng56>.
12. Smith SM, Soubhi H, Fortin M, Hudon C and O'Dowd T (2012). Managing patients with multimorbidity: systematic review of interventions in primary care and community settings. *BMJ (Clinical Research Ed.)* 345: e5205.
13. Smith S. M, Wallace E, O'Dowd T and Fortin M (2016). Interventions for improving outcomes in patients with multimorbidity in primary care and community settings. *The Cochrane Library*.
14. Boyd CM and Fortin M (2010). Future of multimorbidity research: how should understanding of multimorbidity inform health system design. *Public Health Rev* 32(2): 451–474.
15. OECD Health Reform: Meeting the Challenge of Ageing and Multiple Morbidities. OECD Publishing, 2011. Available at <http://www.Oecd.org/els/health-systems/49151107.Pdf>.
16. Nolte E and McKee M (2008). *Caring for People with Chronic Conditions: A Health System Perspective*. McGraw-Hill Education (UK).
17. Nies H (2014). Communities as co-producers in integrated care. *International Journal of Integrated Care* 14: e022.
18. World Health Organization (2016). Framework on integrated, people-centred health services. Report by the Secretariat. Available at [http://apps.who.int/gb/ebwha/pdf\\_files/WHA69/A69\\_39-en.pdf?ua=1](http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_39-en.pdf?ua=1).
19. World Health Organization (2015). WHO global strategy on people-centred and integrated health services: interim report.
20. World Health Organization (2013). Road map. Strengthening people-centred health systems in the WHO European Region. A Framework for Action on Integrated Health Services Delivery. WHO Regional Office for Europe. Available at [http://www.euro.who.int/\\_data/assets/pdf\\_file/0005/231692/e96929-replacement-CIHSD-Roadmap-171014b.pdf?ua=1](http://www.euro.who.int/_data/assets/pdf_file/0005/231692/e96929-replacement-CIHSD-Roadmap-171014b.pdf?ua=1).
21. Leutz WN (1999). Five laws for integrating medical and social services: lessons from the United States and the United Kingdom. *Milbank Quarterly* 77(1): 77–110.
22. Nolte E and Pitchforth E (2014). What is the evidence on the economic impacts of integrated care. *Copenhagen: WHO Europe*.
23. Hardy B, van Raak A, Mur-Veeman I, Steenbergen M and Paulus A (2003). Introduction. In Raak A, Mur-Veeman I, Hardy B, Steenbergen M and Paulus A (eds). *Integrated care in Europe. Description and comparison of integrated care in six EU countries*. Maarsse, the Netherlands: Elsevier Gezondheidszorg.
24. Kodner DL and Spreeuwenberg C (2002). Integrated care: meaning, logic, applications, and implications – a discussion paper. *International Journal of Integrated Care* 2: e12.

25. Shaw S, Rosen R and Rumbold B (2011). What is integrated care? An overview of integrated care in the NHS. *Nuffield Trust [Serial Online]*.
26. Goodwin N, Dixon A, Anderson G and Wodchis W (2014). Providing integrated care for older people with complex needs: lessons from seven international case studies. *London: The King's Fund*.
27. Valentijn PP, Schepman SM, Opheij W and Bruijnzeels MA (2013). Understanding integrated care: a comprehensive conceptual framework based on the integrative functions of primary care. *International Journal of Integrated Care* 13: e010.
28. Valentijn PP, Boesveld IC, Van der Klauw, Denise M, Ruwaard D, Struijs JN, Molema JJ, et al. (2015). Towards a taxonomy for integrated care: a mixed-methods study. *International Journal of Integrated Care* 15: e003.
29. Ahgren B and Axelsson R (2005). Evaluating integrated health care: a model for measurement. *International Journal of Integrated Care* 5: e01.
30. Paljärvi S, Rissanen S, Sinkkonen S and Paljärvi L (2011). What happens to quality in integrated home care? A 15-year follow-up study. *International Journal of Integrated Care* 11: e021.
31. Lyngsø AM, Godtfredsen NS, Høst D and Frølich A (2014). Instruments to assess integrated care: A systematic review. *International Journal of Integrated Care* 14: e027.
32. Strandberg-Larsen M and Krasnik A. (2009) Measurement of integrated healthcare delivery: A systematic review of methods and future research directions. *International Journal of Integrated Care*, 9, e01.
33. World Health Organization (2015). People-centred and integrated health services: an overview of the evidence: interim report.
34. D'Amour D, Ferrada-Videla M, San Martin Rodriguez L and Beaulieu M (2005). The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks. *Journal of Interprofessional Care* 19(S1): 116–131.
35. Schepman S, Hansen J, De Putter ID, Batenburg RS and De Bakker DH (2015). The common characteristics and outcomes of multidisciplinary collaboration in primary health care: a systematic literature review. *International Journal of Integrated Care* 15: e027.
36. D'Amour D, Goulet L, Labadie JF, Martin-Rodriguez LS and Pineault R (2008). A model and typology of collaboration between professionals in healthcare organizations. *BMC Health Services Research* 8: 188.
37. Fox A and Reeves S (2014). Interprofessional collaborative patient-centred care: a critical exploration of two related discourses. *Journal of Interprofessional Care* 29(2): 113–118.
38. Willumsen E, Ahgren B and Ødegård A (2012). A conceptual framework for assessing interorganizational integration and interprofessional collaboration. *Journal of Interprofessional Care* 26(3): 198–204.
39. Kerosuo H (2006). Boundaries in Action. An Activity-Theoretical Study of Development, Learning and Change in Health Care for Patients with Multiple and Chronic Illnesses. Helsinki: University of Helsinki.
40. Cameron A, Lart R, Bostock L and Coomber C (2014). Factors that promote and hinder joint and integrated working between health and social care services: a review of research literature. *Health & Social Care in the Community* 22(3): 225–233.
41. Sinkkonen S, Taskinen H and Rissanen S (2015). Sosiaali- ja terveystalvelujen integrointi ja johtaminen. In: Rissanen S and Lammintakanen J (eds) *Sosiaali- Ja Terveystalvelujen Johtaminen*. Helsinki: WSOYpro, 105–128.
42. Boulton C, Reider L, Leff B, Frick KD, Boyd CM, Wolff JL, et al. (2011). The effect of guided care teams on the use of health services: results from a cluster-randomized controlled trial. *Archives of Internal Medicine* 171(5): 460–466.
43. Kassianos AP, Ignatowicz A, Greenfield G, Majeed A, Car J and Pappas Y (2015). "Partners rather than just providers...": A qualitative study on health care professionals' views on implementation of multidisciplinary group meetings in the North West London Integrated Care Pilot. *International Journal of Integrated Care* 15:e011.
44. Langins M and Borgermans L (2015). Strengthening a competent health workforce for the provision of coordinated/integrated health services. Working Document, September 2015. WHO Regional Office for Europe. Available at [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0010/288253/HWF-Competencies-Paper-160915-final.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0010/288253/HWF-Competencies-Paper-160915-final.pdf?ua=1).
45. Cowan DT, Norman I and Coopamah VP (2005). Competence in nursing practice: a controversial concept—a focused review of literature. *Nurse Education Today* 25(5): 355–362.
46. Tilley DS (2008). Competency in nursing: A concept analysis. *Journal of Continuing Education in Nursing* 39(2): 58.
47. D'Amour D. and Oandasan I (2005). Interprofessionalism as the field of interprofessional practice and interprofessional education: An emerging concept. *Journal of Interprofessional Care*, 19(S1): 8–20.
48. Onder G, Palmer K, Navickas R, Jurevičienė E, Mammarella F, Strandzheva M, et al. (2015). Time to face the challenge of multimorbidity. A European perspective from the joint action on chronic diseases and promoting healthy ageing across the life cycle (JA-CHRODIS). *European Journal of Internal Medicine* 26(3): 157–159.

49. Heckman GA, Molnar FJ and Lee L (2013). Geriatric medicine leadership of health care transformation: to be or not to be? *Canadian Geriatrics Journal* 16(4): 192.
50. IHI (2015). Better Care and Lower Costs for Patients with Complex Needs. A IHI Triple Aim Collaborative 2015–2016. Institute for Healthcare Improvement. Available at [http://www.ihl.org/Engage/collaboratives/BetterHealthLowerCostsPatientswithComplexNeeds/Documents/2015\\_BetterHealthLowerCosts\\_Collaborative\\_Prospectus.pdf](http://www.ihl.org/Engage/collaboratives/BetterHealthLowerCostsPatientswithComplexNeeds/Documents/2015_BetterHealthLowerCosts_Collaborative_Prospectus.pdf).
51. Yankelovich D and Meer D (2006). Rediscovering market segmentation. *Harvard Business Review* 84(2): 122.
52. Barbabella F, Hujala A, Quattrini S, Papa R, Lamura G and Melchiorre MG (2015). The Strategy for Chronic Care in Valencia Region (Estrategia para la atención a pacientes crónicos en la Comunitat Valenciana), Spain. ICARE4EU Case Report. Available at <http://www.icare4eu.org/>.
53. Koivuniemi K, Holmberg-Marttila D, Hirsso P and Mattelmäki U (2014). Terveysthuollon kompassi. Avain asiakkuuteen. Helsinki: Duodecim Oy.
54. Hujala A, Rijken M, Taskinen H and Rissanen S (2015). The POTKU project. Potilas kuljettajan paikalle (Putting the patient in the driver's seat), Finland. ICARE4EU Case Report. Available at <http://www.icare4eu.org/>.
55. Schrijvers G, van Hoorn A and Huiskes N (2012). The care pathway: concepts and theories: an introduction. *International Journal of Integrated Care* 12: e192 (Special Edition Integrated Care Pathways).
56. Rees G, Huby G, McDade L and McKechnie L (2004). Joint working in community mental health teams: implementation of an integrated care pathway. *Health & Social Care in the Community* 12(6): 527–536.
57. Hujala A, Struckmann V, Taskinen H and van Ginneken E (2015). Clinic for Multimorbidity and Polypharmacy, Denmark. ICARE4EU Case Report. Available at <http://www.icare4eu.org/>.
58. Gustafsson M, Kristensson J, Holst G, Willman A and Bohman D (2013). Case managers for older persons with multi-morbidity and their everyday work – a focused ethnography. *BMC Health Services Research* 13: 496.
59. Hjelm M, Holmgren A, Willman A, Bohman D and Holst G (2015). Family members of older persons with multi-morbidity and their experiences of case managers in Sweden: an interpretive phenomenological approach. *International Journal of Integrated Care* 15: e011.
60. Gallud J, Soler P and Cuevas D (2012). New nursing roles for the integrated management of complex chronic and palliative care patients in the region of Valencia/Nuevos perfiles enfermería para el manejo integral de pacientes crónicos complejos y paliativos en la Comunidad Valenciana. *International Journal of Integrated Care* 12 (Suppl2).

## Appendix 1

For this policy brief we used data from various sources. First, we included European, national and regional policy and strategy documents about multimorbidity care and integrated care provided by the participating country expert organizations and/or identified via the websites of the European Commission and the World Health Organization. Second, we searched for relevant publications via online search engines (Web of Science, Scopus, Ebsco and Cinahl) by using combinations of the following key terms: integration, integrated care, coordinated care, care pathways, collaboration, professional competencies, chronic care, multimorbidity. Finally, publications identified from the reference lists of the articles found through these searches were also included.

## Appendix 2

### Selection of innovative approaches in European countries by the ICARE4EU project

In 2014, data on innovative care approaches at a national, regional or local level were collected via country expert organizations in 31 European countries. These organizations were asked to search for and report on all integrated care programmes that focus on multimorbidity within their country. The term 'programmes' refers to initiatives that (aim to) put integrated care for people with multimorbidity into practice. Initially, 178 programmes were identified by the country-experts. Based on pre-determined selection criteria, the ICARE4EU project partners considered 101 ongoing programmes, in 24 countries, to be eligible for inclusion in the database. Via the country experts, an online questionnaire, available in eleven languages, was provided to managers of the 101 selected programmes to collect detailed programme characteristics and outcomes.

Next, these 101 programmes were evaluated by the project team. Each programme was scored in five dimensions: a general score (assessing general aspects such as its evaluation design, perceived sustainability and transferability) and four scores that provided an indication of its level of 1) patient-centredness, 2) integration of care, 3) use of eHealth technologies and 4) its innovativeness in financing mechanisms for integrated care services as these aspects had been selected by the project team as different study perspectives on multimorbidity care. Based on these scores members of the project team built a long list of 25 programmes that had high scores. The second evaluation of these 25 programmes was based on the descriptive information gathered via the survey (e.g. the description of the aims of the programme, reported strengths and weaknesses) and any published evaluation reports. This resulted in a short list of so-called 'high potential' programmes. To decide whether or not to select a programme from this list for further study, the project team checked with the country expert and/or verified information by contacting the programme coordinator. In this way, eight programmes were selected for a site

visit. The eight programmes visited were operational in Belgium, Bulgaria, Cyprus, Denmark, Germany, Finland, the Netherlands and Spain. The results of these visits are described in eight case reports published on the ICARE4EU website ([www.icare4eu.org](http://www.icare4eu.org)).

### Selection criteria

Programmes were considered for inclusion in the ICARE4EU project if they met the following criteria:

- Should be aimed at a patient target group consisting of people aged 18 and older, with two or more medically (i.e. somatic, psychiatric) diagnosed chronic (not fully curable) or long lasting (at least six months) diseases, of which at least one has a (primarily) somatic/physical nature,
- Involve cooperation between at least two services (these services may be part of the same organization, for example services within a hospital, or may be part of different organizations, for example between medical care and social care),
- Have some formal status/formalized cooperation (any form),
- Will be or have been evaluated,
- Are currently running (2014), or finished less than 24 months ago or start within the next 12 months.









## ICARE4EU Policy Briefs

22. *How to strengthen patient-centredness in caring for people with multimorbidity in Europe?* Iris van der Heide, Sanne P Snoeijs, Wienke GW Boerma, François GW Schellevis, Mieke P Rijken. On behalf of the ICARE4EU consortium
23. *How to improve care for people with multimorbidity in Europe?* Mieke Rijken, Verena Struckmann, Iris van der Heide, Anneli Hujala, Francesco Barbabella, Ewout van Ginneken, François Schellevis. On behalf of the ICARE4EU consortium
24. *How to strengthen financing mechanisms to promote care for people with multimorbidity in Europe?* Verena Struckmann, Wilm Quentin, Reinhard Busse, Ewout van Ginneken. On behalf of the ICARE4EU consortium
25. *How can eHealth improve care for people with multimorbidity in Europe?* Francesco Barbabella, Maria Gabriella Melchiorre, Sabrina Quattrini, Roberta Papa, Giovanni Lamura. On behalf of the ICARE4EU consortium
26. *How to support integration to promote care for people with multimorbidity in Europe?* Anneli Hujala, Helena Taskinen, Sari Rissanen. On behalf of the ICARE4EU consortium

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The **European Observatory on Health Systems and Policies** is a partnership that supports and promotes evidence-based health policy-making through comprehensive and rigorous analysis of health systems in the European Region. It brings together a wide range of policy-makers, academics and practitioners to analyse trends in health reform, drawing on experience from across Europe to illuminate policy issues. The Observatory's products are available on its web site (<http://www.healthobservatory.eu>).