APRIL 2018

Health System Review

PORTUGAL

Phase I Final Report

World Health Organization
REGIONAL OFFICE FOR Europe

REPÚBLICA PORTUGUESA
SAÚDE

European Observatory on Health Systems and Policies
a partnership hosted by WHO

APRIL 2018

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Contents

Abbreviations

EU	European Union
GBD	Global Burden of Disease
GP	General Practitioner
IHME	Institute for Health Metrics and Evaluation
IT	Information technology
MoH	Ministry of Health
NHP	National Health Plan
NHS	National Healthcare System
NPAPP	National Physical Activity Promotion Program
OECD	Organization for Economic Cooperation and Development
PPP	Public Private Partnerships
WHO	World Health Organization

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Introduction

In November 2016, the Ministry of Health of Portugal, the European Observatory on Health Systems and Policies, and the Regional Office for Europe of the World Health Organization (WHO) initiated an assessment of the Portuguese health system in relation to its performance on key challenges and opportunities in the post-financial crisis recovery period. The programme of work included a review of the National Healthcare System (NHS) strengths and challenges. To provide focus, four key domains were used:

- Domain 1: Health and its determinants
- Domain 2: NHS sectorial reforms and human resources
- Domain 3: Person-centred, better integrated NHS
- Domain 4: NHS financing

In addition, the current Portuguese priorities were considered in the development of this report. There is ongoing public health reform, aiming at revitalizing public health services and public health delivery in Portugal. A new strategy for the National Health Plan (NHP) is also a priority. Efforts have been made to provide more and better quality person-centred care in the NHS as a part of the strategies of the New Public Health. This could be achieved using a two-fold strategy: focusing on the local implementation of the NHP on the one hand and on the promotion of health literacy on the other hand. However, achieving a more person-centred NHS is strongly dependent on the progress of key sectorial NHS reforms. Another priority is the digital transformation of the NHS, allowing for both professionals and users to access information and also tools which contribute to integrative care and people centredness. The digital transformation would also contribute to increase the transparency of the NHS, which is a good practice for governance.

First, the initial findings of the assessment were discussed with a panel of national and selected international experts and decision makers. The aim of this discussion was to identify key priorities and actions for strengthening the Portuguese health system which could serve as a basis for policy development and policy implementation.

For each of the four issues described above, a review was made with the aim of framing the issue and describing the Portuguese context. Then, a review of the ongoing responses was made, followed by a discussion of further actions in order to face the challenges identified when the issue was made. Whenever possible, examples of good practices and international guidelines were integrated in this report.

The review was conducted by a team of international and Portuguese health policy experts, and included extensive consultation with stakeholders from government, healthcare employees and academia. The preliminary findings from this review formed the basis for a policy dialogue in May 2017. This report presents the findings of this review, taking on board the comments and contributions of Portuguese and international experts in the Policy Dialogue.

Background

Similarly to other European countries, the health system in Portugal faces substantial challenges. These include demographic changes, patterns of deprivation and childhood poverty, unhealthy ageing, multimorbidity and physical inactivity and consequences of the financial crisis in the Portuguese NHS.

This report is divided in to four domains:

- Domain 1: Health and its determinants
- Domain 2: NHS sectorial reforms and human resources
- Domain 3: Person-centred, better integrated NHS
- Domain 4: NHS financing

Each of these domains is further described below and framed in the Portuguese context, together with a summary of the key challenges encountered in each one of them, followed by a summary of the main actions already taken in Portugal and suggestions for further actions to overcome the remaining challenges.

DOMAIN 1: HEALTH AND ITS DETERMINANTS

1.1 Demography

Portugal, in line with other European countries, has had profound demographic changes, reflected in the increase in longevity and the elderly population and in the reduction of the birth rate and the young population. The number of elderly people tripled in the last 20 years, and this trend is expected to increase in the coming years. The population of Portugal rose to 10.57 million in 2010, but has since fallen to 10.34 million (Simões et al. 2017). The Portuguese population is expected to decrease to 7.5 million by 2080, with a sharp increase in the proportion of the older population. The number of births has also been decreasing in the last decades. Portugal was the European Union (EU) country with the lowest fertility rate in 2014 (1.23 children per woman) and was also the Member State that registered the highest reduction in births between 2001 and 2014. The lack of policies to support parenthood coupled with the economic crisis may have contributed to this reduction.

Migration is also a key element in demographic changes. The study "Migration and macroeconomic performance: an exploratory analysis of the Portuguese case" found that the current crisis may ultimately cause lasting inflections in migration flows. In recent years there has been a gradual decline in immigration coupled with a sudden increase in emigration. These changes can be attributed to a need to escape from the economic crisis experienced by the Portuguese population. However, this increase in emigration will have important consequences for the Portuguese macroeconomic performance in the long run, in particular through the "brain drain" associated with the combination of increased emigration, ageing of the Portuguese population and a reduced immigration. Portugal faces a double challenge: preventing brain drain and attracting qualified immigration.

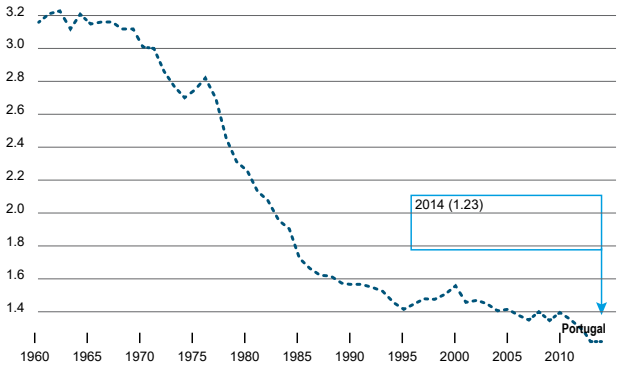
In Portugal the number of babies born alive have been decreasing in the last decades for several reasons, including the lack of policies that support parenthood and, formerly, the economic crisis. Portugal had the lowest fertility rate in the European Union in 2014, 1.23 babies per woman, and was also the Member State that registered the biggest births fall from 2001 to 2014.

1.2 Childhood and overall poverty, and employment patterns

Studies conducted in several countries demonstrate the impact of child poverty in areas as diverse as physical and psychological health, education and qualifications, aspirations and expectations, wages in adulthood, unemployment or dependence on social security (Eurochild & EAPN, 2013; UNICEF, 2007). Children growing up in poverty are more likely to fall ill throughout their lives and to die younger than children growing up in better financial conditions; they are also more likely to suffer from a chronic illness or a disability. The World Bank Group (UNICEF, 2016) notes the impact of poverty on well-being, employment prospects and expectations of poor children. They can develop low motivation, have low aspirations, hopes and dreams.

In Portugal, the phenomenon of child poverty was studied by Bastos and Nunes between 1995 and 2001 (Bastos e Nunes, 2009). They confirmed the vulnerability of children and the increased risks of poverty, especially among children who belong to single parents and in families where there is unemployment. Portugal has historically had relatively high levels of deprivation and poverty, and continues to have overall poverty rates above the EU average. This is particularly the case for children, and rates of child poverty rose significantly during the financial crisis period. This contrasts with the lower and generally declining risk of poverty in older people, as can be noted in Figure 1.

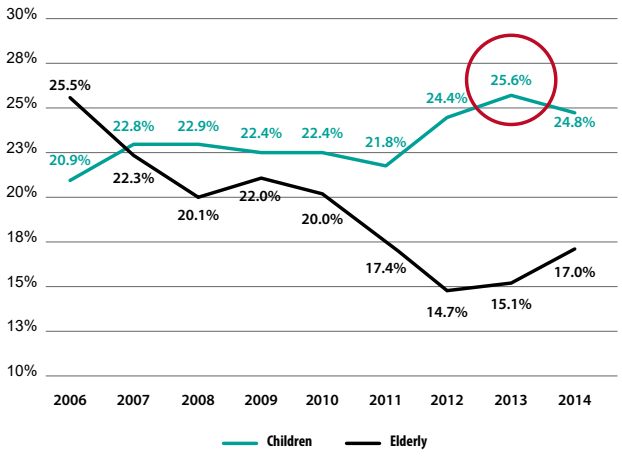
Figure 1. Fertility rates in Portugal 1960–2014



Source: Pordata, INE, Indicadores Demográficos, Anual.

The child poverty rate in 2015 was measured by the proportion of inhabitants with income lower than 5 268 euros per year (439 euros per month). In 2015, families composed of 2 adults and 3 or more dependent children and families with one adult and at least one dependent child have the highest risk of poverty (42.7% and 31.6%, respectively). (Report "Inequality of Income and Poverty in Portugal, the social consequences of the adjustment program" of the Francisco Manuel dos Santos Foundation, in September 2016).

Figure 2. Evolution of Monetary Poverty in Children and the Elderly, 2006–2014



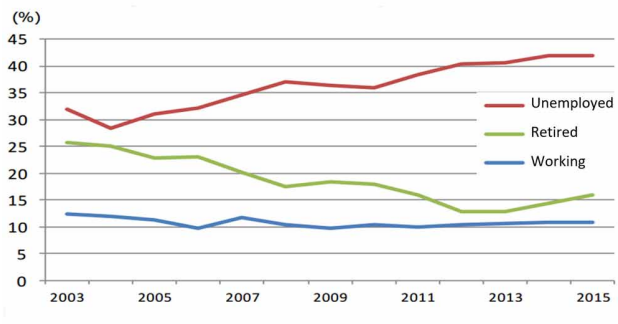
Source: National Institute of Statistics.

The "at-risk-of-poverty" rate in 2015 corresponded to the proportion of people with an annual net monetary income, per adult, equivalent or less than 5 268 euros (439 euros per month). This threshold, or poverty line corresponds to 60% of the median (8 780 euros) monetary income.

The risk of poverty is much lower among working people, and unemployment is higher in Portugal than the EU average. Additionally, rates of precarious employment are high in Portugal particularly among younger workers.

The poverty risk rate for the elderly population increased again in 2015, with 18.3% (17.0% in the previous year). On the other hand, a new reduction in the risk of poverty for those under 18 years of age was recorded in 2015: 22.4%, which is -2.4 percentage points (pp) compared to 2014. The poverty rate for adults was 18.2%, down 0.6 percentage points from the previous year (18.8% in 2014).

Figure 3. Population at risk of poverty by working condition in Portugal 2003–2015



Source: EU-SILC.

The risk of poverty for the unemployed population was 42.0% in 2015, maintaining the value registered in the previous year. The risk of poverty for the employed population was 10.9% in 2015, unchanged from 2014.

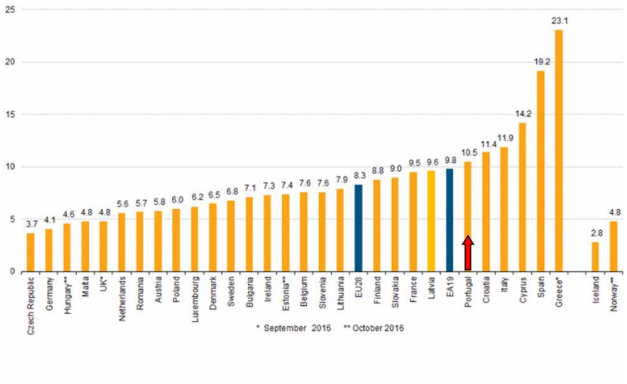
In 2015, the risk of poverty increased in the retired population, with a rate of 16.0% compared to 14.4% in 2014 (+1.6 pp). However, it has maintained the decreasing trend observed in the series for this indicator: minus 10 percentage points since 2003.

If we consider the at-risk-of-poverty rate before social transfers, the rate remains almost stable between 2013 and 2014 in the EU-28 while it rises a bit more in some EU Member States, with the largest increases registered in Belgium, Finland, Portugal (each 1.2 percentage points) and Sweden (1.4 percentage points).

Finally, the report "Inequality of Income and Poverty in Portugal, the social consequences of the adjustment program" of the Francisco Manuel dos Santos Foundation, in September 2016, concludes that one of the most affected vulnerable groups were "young families with children" and that in "2014 it is possible to verify that 58.4% of the poor population belongs to households with children."

Unemployment in Portugal is high by EU standards, with only 5 of the EU 28 countries having higher unemployment. This feeds both directly and indirectly (through associated poverty) into health needs. Young adults are at particular risk of unemployment and precarious work. According to the Monthly Provisional Employment Survey, the seasonally adjusted unemployment rate (15 to 74 years) was 10.5% in December 2016, with a clear trend towards further decline, see Figure 4).

Figure 4. Unemployment rates in Portugal, seasonally adjusted, December 2016



Source: Eurostat

The percentage of the population in a precarious work situation in European countries is 12.3%. However, countries like Portugal, Spain, Poland, Slovenia and the Netherlands have a far higher rate, more than 20%, young people are most affected because they cannot find a permanent job.

Between 2000 and 2015, more than 75% of employment contracts were considered precarious by the International Labour Organization – the same rate as in Spain, Slovenia and Greece. Precarious work has several consequences, both for companies, workers and the social economy itself, leading to less innovation, lower productivity, a risk to the sustainability of social security systems, difficulties in accessing credit and postponement in the decision to start a family.

1.3 Obesity and physical inactivity

Levels of obesity are rising, related to both unhealthy diets and low levels of physical activity. Of the population aged between 25 and 74 years old, 28.7% are obese, and 38.9% pre-obese. There is a strong socio-economic gradient with 43.1% of adults with only basic education being obese, but only 14.7% of those with a university education. Portugal already has a system for identifying, managing and combating pre-obesity in primary health care to prevent it from developing into more severe clinical conditions (PAI – Pre-Obesity/DGS). However, the system is still in the very early stages of implementation and only 5.2% pre-obese are registered in primary health care. The prevalence of childhood obesity at 8 years old in Portugal, measured by the same method (COSI/WHO study) seems to be stable over the last 3 measurements over 6 years.

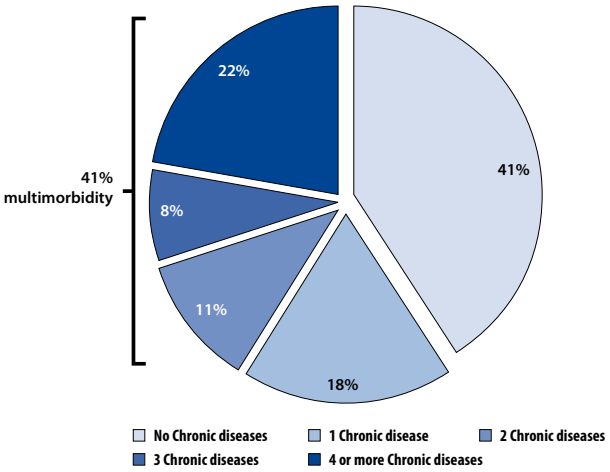
Physical activity levels in Portugal are among the lowest in Europe, in adults and particularly in teenagers. Up until 2016, physical activity promotion did not have a dedicated program at the Portuguese Health Ministry. This was changed with the creation of the National Physical Activity Promotion Program (NPAPP) which was introduced in June 2016.

1.4 Multimorbidity and mental health

Multimorbidity is closely related to age and socio-economic conditions and most adults attending primary health care have more than one chronic condition. Studies on the epidemiology of multimorbidity show that its prevalence increases with age, its onset is 10 to 15 years earlier in those living in deprived areas compared with the more affluent ones and is strongly associated with mental health disorders (Barnett et al., 2012.

Ageing means that more people are living with multiple chronic conditions (Rechel B, 2013). This has important implications for care delivery, since in most cases the treatment of one disease will be in the context of other chronic conditions. Figure 5 shows the distribution of the burden of chronic diseases in Portugal, with 41% of the NHS users having multimorbidity (more than one chronic disease).

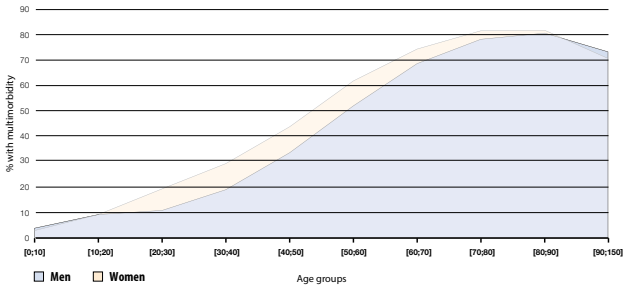
Figure 5. Burden of Chronic Disease in Portugal, 2016



Note: Percentage of NHS users with chronic diseases.

22% of the population has 3 chronic conditions and 4% has 5 or more. Diabetes is an example of a chronic disease which is associated with multimorbidity, posing major challenges to health systems across Europe. The rate of diabetes provides a useful indicator of the success of population level interventions. In Portugal, the prevalence of diabetes in the adult population increased from 11.7% in 2009 to 13% in 2013. It will probably rise with population ageing and may increase as a result of higher prevalence of obesity. The mortality rate from diabetes has been decreasing in the last years.

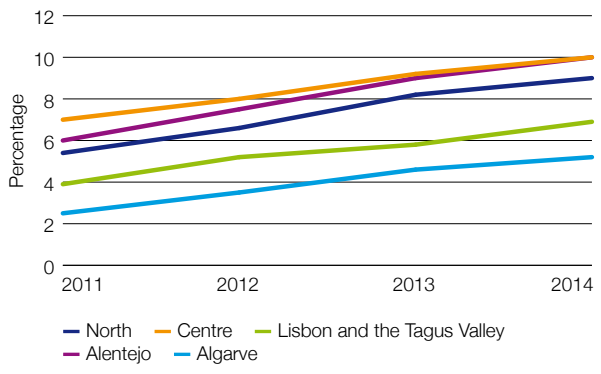
Figure 6. Multimorbidity in Portuguese population, by age group and gender



Mental illness has been identified as a problem that needs better services. There has been a shift away from hospital treatment of mental illness and there is evidence, in some diseases, of an increased use of medication. As is common in EU countries, there are identifiable gaps in mental health care.

Portugal has the highest per capita prescription of anti-depressants in the EU, with 60% of the DDD of psychiatric drugs prescribed in the NHS, at a national level, of 341 604 888. The increase was 5% compared to 2014 (the lowest in relative terms since 2011), and this value does not pose similar concerns to those of the previous group. The antipsychotics, also maintained a growth trend (since 2013) but only 2%, reaching 45 770 580 DDD, corresponding to 7% of the group of psychotropic drugs. Depressive disorders increased substantially in Portugal during the recent economic crises.

Figure 7. Depression among PHC (NHS) users in Portugal by health region



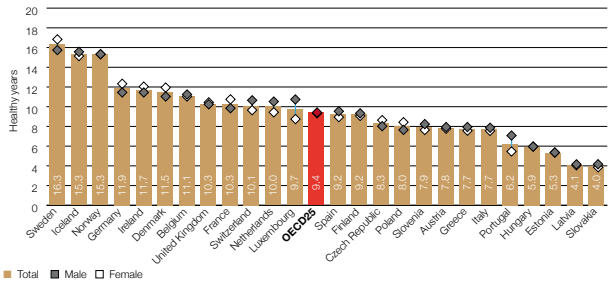
Source: DGS, 2016.

1.5 Unhealthy ageing

While life expectancy has increased, data suggest that relative to other comparable European countries, healthy life expectancy has performed less well. While some of this may reflect measurement issues, and may reflect past deprivation levels affecting this age group, the poor outcome compared to other countries is a concern.

In 2014 the life expectancy at 65 years was 19.2 years (17, 3 years for men and 20, 7 years for women). The overall life expectancy at 65 years in 2015 was 19.3 years (PORDATA, 2017).

Figure 8 Healthy life expectancy at age 65, in European countries



Source: Eurostat Database, 2017.

Note: Countries are ranked in descending order of healthy life expectancy for the whole population.

Selected recent and ongoing developments

In the budget for 2017 the government introduced a new tax for sweetened beverages, the tax is based on the sugar content (Law 42/2016, de 28 de November, articles 212.º, 213.º e 215.º). Whether this marginal increase in tax will impact on the consumer price and the effect on consumption, is still to be seen. Moreover, the Government introduced a law to ban sugary drinks and high density caloric food from the vending machines in NHS facilities.

A National Physical Activity Promotion Program (NPAPP) was introduced in June 2016, aimed at implementing the recommendations laid down by the WHO European Region's "Physical Activity Strategy 2016–2025" and the DGS's "National Strategy for the Promotion of Physical Activity, Health and Well-being 2016–2025". The main priority of the NPAPP is to establish an efficient and well-resourced multi-sectorial platform that can engage, coordinate, and monitor national initiatives to promote physical activity across all relevant sectors. NPAPP's specific contributions to a national Action Plan will focus on the health sector, with the aim of physical activity promotion becoming an integral part of the national health system, especially among primary care units.

Public health campaigns to reduce salt and sugar usage, as well as tobacco smoking have been planned.

A number of public health programs, within the National Plan Health framework are been implemented. For example, one of these national programs has been dealing with diabetes risk evaluation using FinDRisk score. Its implementation in primary care units resulted in 1.2 million risk evaluations being performed in 2014 and 2015 in asymptomatic people. The screened people with medium or high risk were then referred to a General Practitioner (GP) appointment. The national program to prevent diabetes developed an integrated care model based on a multidisciplinary approach.

Key challenges – the way forward

- The health system in Portugal will require long term strategies to tackle the health consequences of family deprivation, unemployment and child poverty which were exacerbated during the financial crisis.
- Population ageing and unemployment coupled with high migration of younger people of working age contribute to an ongoing decline of the Portuguese population. This affects the demand and the supply of health services.
- The majority of users of the NHS have one or more chronic diseases which has important implications for the delivery of services: services are no longer provided adequately in single disciplinary approaches. The increasing prevalence of multi-morbidity also calls for more attention to be paid to improving quality of life in elderly people and community and home care settings. Closer collaboration between health care and social care organization is of fundamental importance.
- There is a need for a particular focus on actions to improve healthy life expectancy, especially among older women.
- Diet and physical activity are among the most pressing population health challenges in Portugal, calling for continuing the current investment on effective and more equitable health promotion and disease prevention policy and implementation.
- Portugal has a strong record in development of health plans and strategies, and weaknesses in local approaches to implementation.

The National Health Plan provides a very useful basis for actions tackling these challenges, but much more is needed in terms of:

- Linking planning at national, regional and local levels;
- Closer working with NGOs and civil society to implement public health plans, creating broader opportunities for public participation;
- Further modernisation of the public health workforce and providing stronger support for the development of the local public health units;
- Wider use of health impact assessment to guide and monitor public health actions.

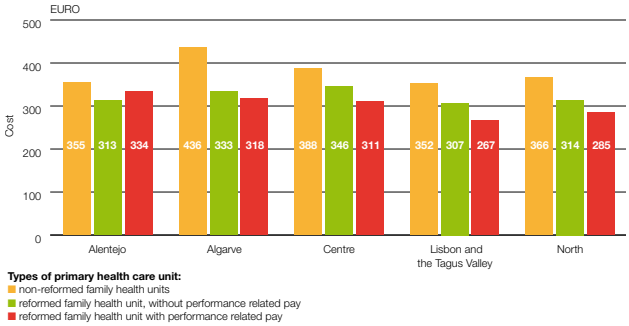
DOMAIN 2: NHS SECTORIAL REFORMS AND HUMAN RESOURCES

The Portuguese NHS is organized into five health regions and aims to provide access to all effective medical services on the basis of need. Though regulation, monitoring, control and financing of the public health system are within the central administration competences, the principle of decentralization and autonomy in the operational management of health organizations has been granted since the establishment of the NHS in 1979. However during the period of the financial crisis, there was a set of actions and policy measures that significantly diminished the extent of decentralization and autonomy of healthcare organizations within the NHS.

2.1 Primary health care

Primary health care reform has been strongly focused on transforming traditional health centres into network functional units, such as family health units, community health care units, others health specialties support units and public health units. Changes in family health care units towards contracted self-managed units, with performance related pay, have been made progressively over the last decade. The main purpose is to create more autonomous and multidisciplinary teams in primary care, and incentives for better performance (e.g. better follow up of patients, notably chronic patients, better pre and post-natal care, more cost-effective use of medicines). By the end of 2017 there were approximately 390 non-reformed family health units versus 505 reformed one. Of the reformed health care units, approximately 235 benefit from performance related pay, while 270 do not enjoy that benefit yet.

Figure 9. Therapeutic cost of controlled diabetic patients in family health care units, by type of unit, and health region



Source: BD NSCP (ACSS).

2.2 Long term care

The National Network of Continuing Integrated Care (RNCCI) is defined as a response focused on providing care to people who, regardless of age, are in a situation of functional dependency. The purpose of the Network is the rehabilitation and social reintegration and the provision and maintenance of comfort and quality of life, even in cases where no recovery is possible.

In January 2018 RNCCI is characterized by offering 8 224 inpatient responses and 5775 home care responses for adults. It also offers 10 inpatients and 10 ambulatory responses for children with complex chronic illness. Finally, it offers a diversity of inpatients home and care responses, totaling 197 beds/places, for young people and adults with severe mental illness and psycho-social dependence.

Care for children with complex chronic illness and for young people and adults with severe mental illness was offered for the first time during 2017 and is therefore in the experimental year.

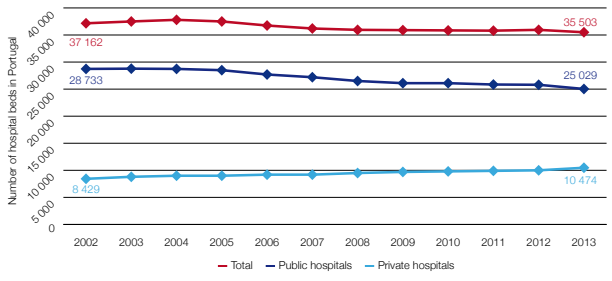
Figure 10. Long-term care services, by typology and health regions, 2017

	Health Region					
Typology of Units	ARS Alentejo	ARS Algarve	ARS Centro	ARS Lisboa and Vale do Tejo	ARS Norte	**Total**
Convalescence Unit	135	74	251	199	157	**816**
Palliative Care Unit	14	–	–	129	26	**169**
Medium Duration and Rehabilitation Unit	203	138	735	720	742	**2 538**
Long Term and Maintenance Unit	431	317	1 297	1 119	1 537	**4 701**
Pediatric Support Unit	–	–	–	10	10	**–**
Assisted Living	–	–	13	14	27	**–**
Home Support Team	–	–	8	8	8	**24**
Integrated Continuing Care Team	566	750	846	2 072	1 641	**5 875**
Maximum Support Residence	–	–	24	–	24	**–**
Moderate Support Residence	–	–	8	16	–	**24**
Residence of Autonomy Training	–	–	19	–	19	**–**
Residence of Autonomy Training – Type A	–	–	–	12	6	**18**
Integrated Pediatric Care Unit – Type 1	–	–	–	10	10	**–**
Socio-Occupational Unit	–	–	30	25	55	**–**
Socio-Occupational Unit – Childhood and Adolescence	–	–	20	10	30	**–**
Total	**1 349**	**1 279**	**3 175**	**4 351**	**4 186**	**14 340**

2.3 Hospital care

In Portugal, there are 113 public and 96 private hospitals. In 2013 there were 25,000 beds in public hospitals and 10,500 in private hospitals. There has been a reduction of 1,659 beds in total since 2002, but a rise in the proportion that are private.

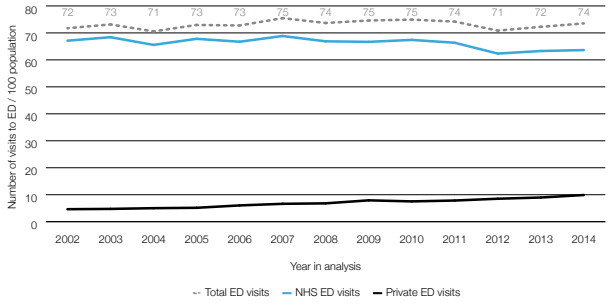
Figure 11. Number of beds in Portuguese hospitals



In 2002, private hospitals provided 16.5% of the total number of visits to Portuguese hospitals (around 1.6 million visits), while in 2013 they accounted for 29% (around 5.1 million consultations).

Portugal has rates of visits to emergency departments (ED) considerably higher than other OECD countries (OECD average 30.8 visits/100 inhabitants). That pattern has remained fairly constant over the years; however the ED visits in private facilities have risen, contrasting with a small decline in NHS ED visits. The literature points out that part of the demand for ED visits could be treated elsewhere more efficiently, namely in primary care by telephone-based services (McHale et al. 2013), these visits were designated as non-urgent or inappropriate. In Portugal a study found that up to 30% of these visits could be inappropriate (Pereira S, 2001). The ACSS access report states that 8.6% of the user and considered frequent users (4 or more visits in a year), those 8.6% represent 27.9% of the ED visits.

Figure 12. Number of visits to the Emergency Departments (ED) per 100 population in Portugal 2002–2014



Concerning the reorganization of the hospital network, there is still a major gap of evidence regarding the efficiency gains obtained by the merging and concentration of services, hospitals and management boards. Likewise, the internal and intermediate management of NHS hospitals also needs to be improved, since their autonomy has been reduced by the measures taken in the context of the economic and financial adjustment plan (Simões et al.,2017).

Hospitals are paid on global budgets based on diagnosis-related groups, with the possibility to reallocate resources across cost-categories. In addition to the transfers from the government, hospitals generate their own revenue, through flat rate user charges for outpatient and diagnostic services, special services (e.g. individual private rooms) and from privately insured patients. The contract covers several areas, like consultation, inpatient care, and emergency care, among others. A new system of incentives for hospital performance was created in 2017, which values comparisons and positive competition among institutions, identifying the differences in care performance and efficiency that now occurs in hospitals with similar characteristics, providing operational levers to encourage improved performance. This new mechanism considers a set of objectives that are used to make comparisons of performance among the hospitals of the NHS, organized in benchmarking groups, focusing on the areas of access, quality and efficiency.

Hospitals are reimbursed for the comprehensive treatment provided to patients for several chronic diseases: HIV infection, multiple sclerosis, pulmonary hypertension, different lysosomal storage diseases, familial amyloid polyneuropathy and selected oncological diseases (i.e. breast cancer, cervical cancer, colo-rectal cancer). The price for the comprehensive treatment was based on the clinical guidelines for each disease. It includes medicines, consultation, medical tests, etc. The aim was to make providers familiar with the guidelines and quality of care (Lourenço, 2016a). The independent assessment for the HIV/AIDS showed positive results.

2.4 Public-Private Partnerships (PPP)

The creation of Public-Private Partnerships (PPP) granted more autonomy to organizations by conceding the management of service units of care to private entities, or by the joint investment between them and the State (Barros, Machado & Simões, 2011). According to the current Portuguese PPP legal framework (Decree-Law n.º 111/2012, of May 23rd), a PPP is defined as *"(…) a contract or union of contracts through which private entities, designated as private partners, oblige, in a durable way, before a public partner, to assure, upon payment, the development of an activity tending to the satisfaction of a collective need, in which the responsibility for the investment, financing, operation, and associated risks, falls, in whole or in part, to the private partner"*.

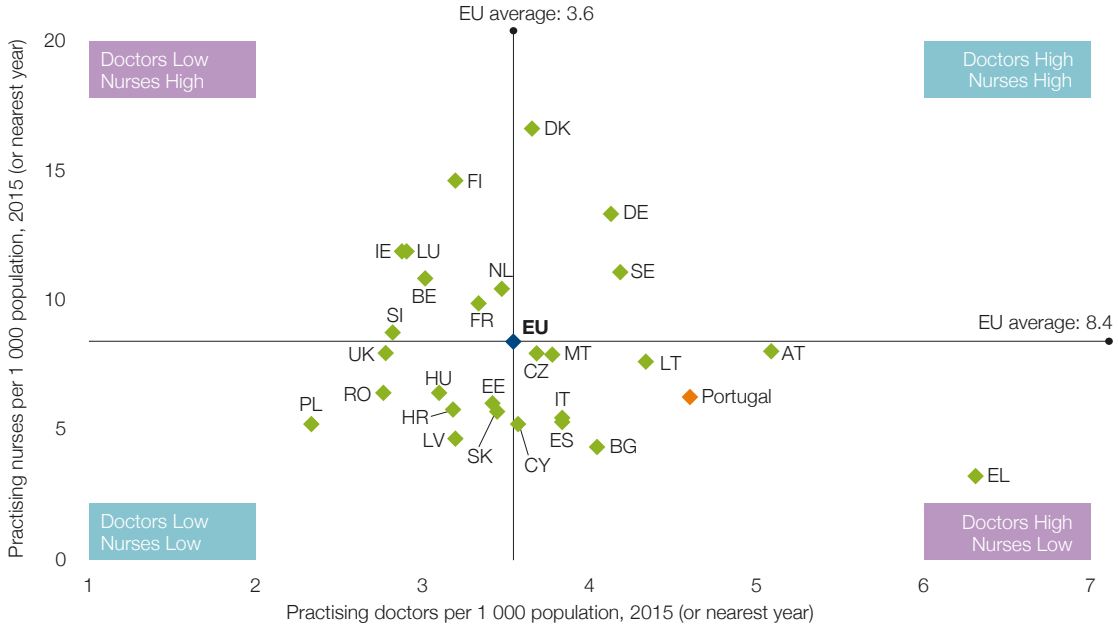
Research has shown that PPP hospitals are generally efficient, in particular the hospitals of Braga and Cascais, which presented outstanding positive results. However, it was not possible to identify statistically significant differences between the results of the PPP and the non PPP subgroups.

Results indicated that most PPP hospitals have on average a higher capacity for surgeries than the other comparable public hospitals, while they mostly present a lower than average percentage of hip fractures surgically repaired within 48 hours. Yet, all PPP hospitals presented a higher than average percentage of outpatient surgeries on planned surgical care for ambulatory care-sensitive conditions, which means a better performance than comparable hospitals, with significant statistical difference between groups. As far as the fulfilment of the maximum waiting times imposed by law is concerned, PPP hospitals presented a better performance than comparable hospitals in the case of surgeries, but a generally worse performance regarding first outpatient appointments.

2.5 Human resources

In 2014, the Ministry of Health employed 124 260 people, of which 97% were related to institutions providing primary and hospital care and 3% to central and regional technical and administrative services. Nurses are the professional group in healthcare with the largest number of workers, accounting for about one-third of all Ministry of Health (MoH) workers (38 089), although numbers are low when compared to international standards. The next largest group is medical staff (26 645, 22%), followed by operational assistants (24 600, 20%). In the case of medical doctors, about 67% are specialists and 33% interns.

Figure 13. Doctors/nurses ratio in Portugal



Source: OECD/European Observatory on Health Systems and Policies (2017).

Note: In Portugal and Greece, data refer to all doctors licensed to practice, resulting in a large over-estimation of the number of practising doctors (e.g. of around 30% in Portugal). In Austria and Greece, the number of nurses is under-estimated as it only includes those working in hospital.

In the period 2002–2013, the number of registered nurses increased continuously, with a total increase of about 24,000 professionals. This increase was equally strong for both women and men (an increase of 58% for women and 56% for men compared to the base year). The ratio of nurses per 1,000 population increased from 4.0 in 2002 to 6.3 in 2013. The number of doctors per thousand inhabitants also increased in the same period, from 3.2 to 4.3. In 2014 the role of family nurse was created (Decree-Law 118/2014). From 2009 until 2015, the nurses Council estimates that 12.500 nurses emigrated (Pereira, 2015).

Three quarters of nurses work in acute settings and a quarter in the community. A further shift to community settings will be needed if chronic diseases are to be effectively managed outside of hospitals.

The distribution of health resources does not match population characteristics. There is no correlation between variables such as total number of physicians, nurses, hospital beds, primary care units, and the ageing index. Municipalities with a higher ageing index do not get more resources, resulting in more limited access to health care from those populations. Rural areas, especially interior areas with low density of population (and in many cases declining populations) are poorly provided with skilled human resources (Simões, 2017).

The emigration of Portuguese health professionals is also stimulated by the difficulty for recently graduated nurses, dentists and diagnostic and therapeutic technicians to find employment, the low salaries offered in both the public and private sectors, heavy workloads, remuneration not being performance-related and limited career prospects. Further, the dynamics of medical school graduates and the retirement of Medical Doctors will generate a surplus that may not be absorbed by the healthcare system by 2025 (Santana, 2014).

The occurrence of the burnout syndrome in Portuguese health professionals is frequent, being associated with the perception of poor working conditions and reduced professional experience. The incidence of the burnout syndrome shows regional differences which may be associated with different and suboptimal conditions for health care delivery. At the national level, between 2011 and 2013, 21.6% of health professionals presented moderate burnout and 47.8% burnout. The perception of poor working conditions was the main predictor of the occurrence of burnout in Portuguese health professionals (Marôco, 2016). Promoting retention strategies that increase satisfaction with opportunities for career advancement among Portuguese nurses has the potential to override individual characteristics associated with increased turnover intentions (Leone, 2015).

An improved strategy for staff retention and motivation is needed. (Ribeiro, 2014). Promoting retention strategies that increase satisfaction with opportunities for career advancement among Portuguese nurses has the potential to override individual characteristics associated with increased turnover intentions (Leone, 2015).

The discussion about skill mix in the NHS only emerged recently. Despite, the exceptional training and qualifications of several health professions, the health system continues to be focused on physicians. As an example, the recent created role of Family Nurses requires more government measures (Simões et al. 2017).

2.6 Digital transformation

The development of eHealth in Portugal over the years was an important tool to improve governance, and the availability of data is now much better than a decade ago. Nevertheless, the available data are not always used to improve process and results. The eHealth market started in the late 80s and it has been evolving since then. Sometimes this is more market driven and other times more centralized in public providers. However, it is clear that Portugal is now in the forefront of eHealth in Europe. All the primary health care providers have electronic health records, most hospitals have electronic health records, there is already some interoperability between different software.

Selected past and ongoing efforts

Current priorities for the primary health care reform may be summarized as follows:

- Enhancing primary health care response, by gradually strengthening their professional capacity in areas such as oral health, psychology and nutrition and improving acute care management;
- Implementing a new contacting model for the primary health care functional units, more adapted to respond to the current need to improve primary health care performance;
- Improving the culture and tools for better health and clinical governance in primary health care, taking advantage of further developments of the Business Intelligence system now taking place.

The following developments are taking place in the Portuguese long-term care network:

- increase of responses in extension and diversity – a strategy of increasing the number of responses, with priority for home care, is underway. The diversity of responses to areas that lack some specificity (strategy for the care of people with dementia – already delivered) is being prepared;
- greater integration of the Network with social responses – although the current response is already integrated, this needs to be deepened, namely with multiple social responses such as home support services and residential structures for the elderly;
- reduction in the medium term in the number of people with functional dependency – adoption of the strategy for active and healthy aging (already submitted).

Several initiatives of decentralization and autonomy in the health system have occurred recently. Examples include the change in the status of several NHS hospitals to public enterprises, and the creation of Responsibility Centres, which increased the degree of autonomy in the day-to-day decision-making of organizations and services, especially in terms of acquisitions and recruitment. The XXI constitutional Government introduced the principle of free access and circulation (FAC) for users in the SNS (Order No. 5911-B/2016). With the implementation of FAC, the patient who needs a specialty hospital consultation, may, together with the family physician responsible for the referral, opt for any of the NHS hospital units where the specialty in question exists. Before, there was a network of pre-defined hospitals for referral from primary care, based on the place of residence. In principle this measure might increase efficiency and equity in the NHS. Simultaneously, the NHS started to release more information about waiting times. The most recent estimates show that approximately 12% of referred patients chose another hospital than the one previously assigned.

Key challenges – the way forward

1. Future initiatives should take into consideration the balance between the central functions of policy guidance and monitoring; and the autonomy of delivery health care organizations. The decrease in autonomy and the centralization of decision-making diminishes the capacity to find solutions adapted to the different organizations, and their unique contexts. Therefore, the decentralization of functions in the NHS, from central services to hierarchically inferior levels, namely for regional health administrations, hospitals and health centre groups should be discussed in order to optimize (Gulbenkian, 2015). Recognising that some of the recent centralisation was a response to external pressures, it is necessary to define more clearly what roles are useful at the regional level and to develop the structures and systems to allow these roles to be developed.
2. There is a need to improve the current pace of the primary health care reform, in order to provide similar quality of care to the entire Portuguese population as soon as possible. Also, the integration of primary care network with other levels of care remains a challenge, requiring measures to improve the continuum of care and the efficiency of the health system (see also Domain 3).
3. An approach is needed to implement policy – currently there remains a large gap between some clear policy directions and the mechanisms for implementing policy and managing change.

4. There is a need to clarify the policy goals in the interface of public and private provision, and to integrate the different sectors more effectively.
5. Systematic evaluation and review of service delivery models will be useful and timely. Gaining full advantage of these new models may require more autonomy of providers and will have some implications for local and national governance arrangements and their balance. It is likely that the best options will involve further moves to integrate care provision and to simplify the ways in which people access care.
6. Despite significant changes in skill mix, service provision in Portugal remains very doctor centred, and there is a need for a wider set of skills and a better configuration of professionals to meet the growing needs of people with multiple and complex chronic diseases.
7. In line with most European Union countries, human resource policy making and planning for service provision and management needs to be placed clearly ahead of the needs curve.
8. There is also a need to reduce outward migration of health care professionals and to examine in particular the incentives for retention and motivation of staff. While it can be difficult to compete on salaries with some other employers, the wider working conditions are important for motivation.
9. Portugal can be proud of progress in terms of the use of information and communications technologies in the health sector. This provides a good basis both for more efficient operation of the system and also to further develop the role of patients and families. It is important to retain the focus on these developments as drivers and facilitators of better service delivery and to make the best use of the potential for wider use of the data in research, monitoring, quality assurance and service development.

DOMAIN 3: PERSON-CENTRED, BETTER INTEGRATED NHS

3.1 Healthcare integration

The European Commission stresses that it is necessary to offer alternative care models to improve quality of life, health care and reduce avoidable hospitalizations and costs. The integrated care model should be based on better coordination among health and social care professionals, higher efficiency, improved healthcare processes, supported by information technology (IT) and new organizational models and use of technologies for remote care (e.g. at home or at work).

Care integration can be achieved with appropriate structures and appropriate care integration and procurement tools. There has been some innovation in contracting and procurement in Portugal (Simões et al., 2017) that has provided experience in the use of financing mechanisms that might be used as incentives for integration of care delivery, alongside the experience of integration of primary and secondary care delivery. In Portugal, the integration experiences of health care, particularly between primary health care (PHC) and secondary care already exist, but little is known about the effectiveness of these models in improving care delivery. This issue thus becomes important, not only because it is relevant to assess if significant efforts to integrate care have been made in Portugal but also because there is a particular experience of integration of PHC and secondary care which requires a deeper knowledge, specifically the model of local health unit (ULS in Portuguese). Still on the issue of evaluation, and especially the evaluation of health care integration, there is still a need for better methodologies and metrics for measuring the integration of care and there is also a lack of consensus on the terminology and on the concepts related to the integration of care.

Although there are still challenges to be addressed regarding the success of vertical integration, recent studies suggest that quality indicators such as readmissions decreased after a vertical integration, especially among patients with diabetes and complications (Lopes et al. 2017). Even though improvements were not found for all institutions or condition-specific groups, this study shows that merging acute and primary care providers is associated with reduced readmissions (Lopes et al. 2017). Vertical integration, in organizational terms, between primary and hospital care, was introduced in 1996, as Local Health Units (ULS in Portuguese), covering only a geographical areas in the NHS. Since than a number of projects, within and outside ULS, aiming at improving health care integration, have been implemented in Portugal. These projects focus on different aspects of health care integration, including case-management of highly complex patients, tele-communication between hospital and primary health care settings, more sophisticated referral systems between different levels of care, home care follow-up of post hospitalization. Interventions that include experts focused on discharge management, that include post-discharge rehabilitation and follow-up and those based on multicomponent strategies were most likely to be associated with significant reductions in hospital use for patients with single conditions such as heart failure and chronic obstructive pulmonary disease (COPD).

Remote monitoring of patients with COPD

One of the main objectives in the treatment of COPD is the prevention of hospital readmissions, as well as the improvement of survival. This program was already ongoing and this specific payment mechanism was applied in 2017, following a pre-established home protocol, according to the inclusion criteria and the objectives defined. Portugal has the second lowest asthma and COPD admissions in adults among EU21.

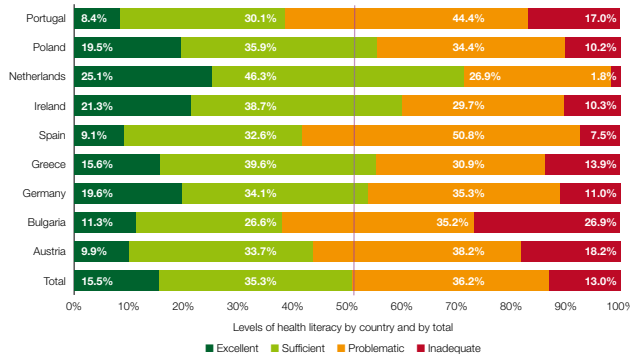
Telemonitoring program for status after acute myocardial infarction

The 30 day mortality after admission to hospital for acute myocardial infarction (AMI) in Portugal is slightly higher than the EU21 average. Appropriate treatment and follow-up of AMI also reduces avoidable readmissions and hospital stays, as well as improves patient survival. In these terms, a 2014 Telemonitoring Program for status after acute myocardial infarction was developed. There are also implemented "vias verdes coronárias" that is a pathway for faster access to hospitals with primary angioplasty.

3.2 Health literacy

When health literacy is compared across different European countries, Portugal appears in a less favourable position (Figure 14).

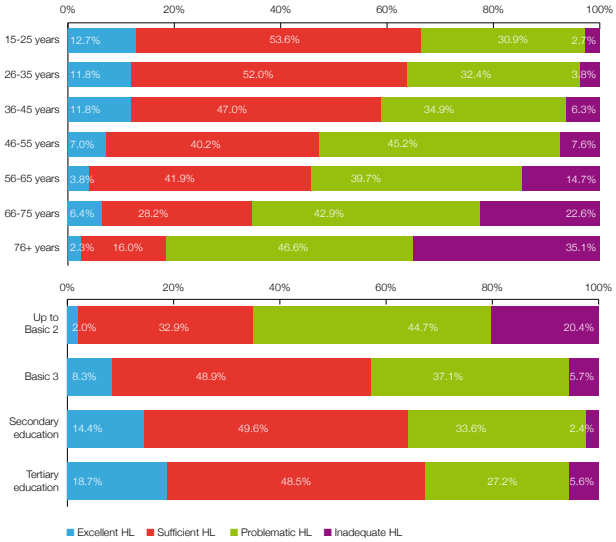
Figure 14. Comparing health literacy across selected European countries



Source: Pedro, Amarel & Escoval, 2016.

However two distinct groups can be identified in Portugal when it comes to health literacy: elderly people with lower education, and a highly educated young population. These two groups need different strategies as a health literacy target, (elderly people with lower incomes and educational resources are the most vulnerable group) in the use of health information in their daily routines. Figure 15 shows health literacy levels by age and education levels.

Figure 15. Health literacy levels by age and educational levels



Source: ILS-PT, 2014, CIES-IUL / Fundação Calouste Gulbenkian e HLS-EU Consortium (2012).

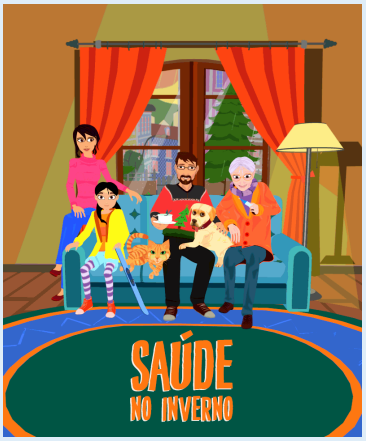
Selected recent or ongoing developments

Since 2016 new developments are taking place in Portugal concerning people centeredness and better health care integration. These can be summarized as follows:

NHS Portal

In 2016, the new government launched the NHS portal, with information mainly targeted for the user (3 million views in 1 year) aiming at better governance on the basis of enhanced communication, transparency and accountability on health and health care. Users can enrol into the "personal area" of the Portal in order to organize and manage their own health information and receive relevant health information or take advantage of more general information continuously updated, as for instance waiting times in the emergency department and for surgeries. Mobile applications, linked to Portal's information have developed.

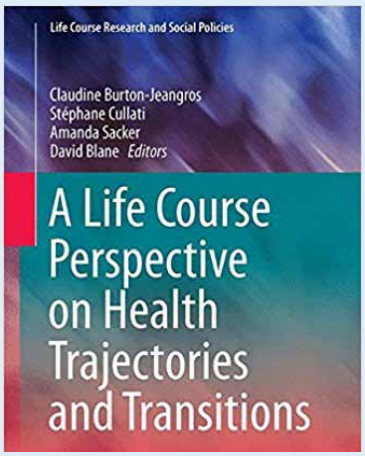
Since early 2017 the Portal offers a health literacy library and a new collection of thematic microsites presented as attractive digital books, covering areas such as "Preventing Falls", "Healthy Eating Habits", "Winter Health", "Positive Personal Relationships, Violent Behaviours and Health". Although details on the Portal's overall performance are not yet available, this is a step towards more informed and active users.



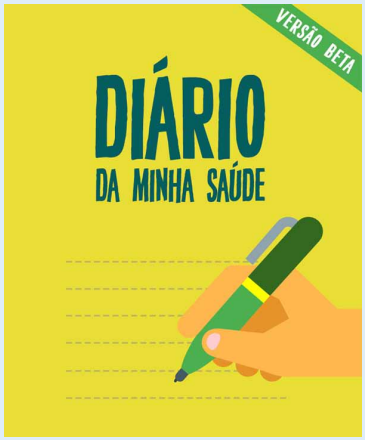
"Winter Health" digital book (3 million page visualizations between mid-January and mid-February).

Life-course health literacy and participation

A Health Literacy Promotion Strategy has been developed since 2016. This strategy follows a life-course approach and is based on three key pillars: (a) Information accessed through the NHS Portal (b) My Personal Diary, a tool to encourage people to organize their own health information and narrative (c) Community mediators (in health services, public libraries, schools and other community organization) to engage into "personal activation processes".

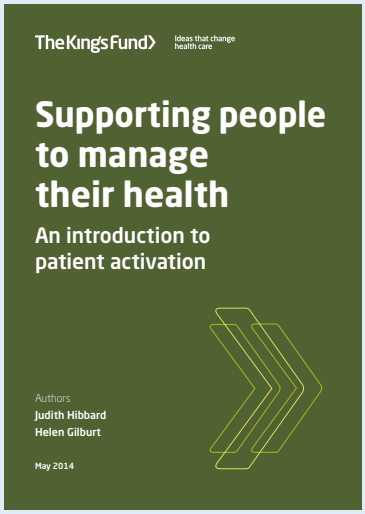


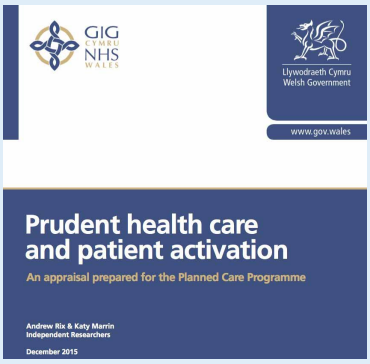
My Personal Health Diary, a tool to encourage people to organize their own health information and engage into "activation process", with the support of community mediators.



Community participation initiatives are now also becoming more active (see Charter below).

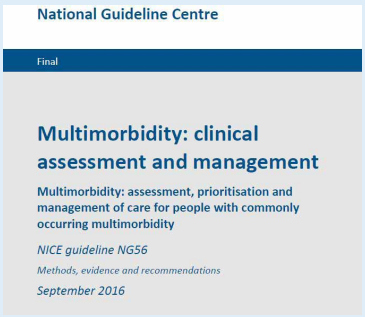
A Charter for Public Participation in Health (2017), promoted very visibly by a lay movement.





Managing patient trajectories across NHS organizations

The person-centred NHS upgrade is strongly focused on the multimorbidity challenge outlined above. For this purpose – managing patients with multimorbidity trajectories across NHS organizations – a considerable effort has been dedicated in developing and testing, a "personal health plan" prototype, since mid-2016, that is expected to become fully operational by early 2018.



An upgraded SNS 24 Contact Centre, since mid-2017, also assists guiding patients through the NHS.

Strategies to support patient-centred care for multimorbidity patients

Micro level (care provider)	Meso level (service suppliers)	Macro level (health system)
Involve patients (and/or informal carers) in **decision-making**	**Shared vision** on patient-centredness	A quality system that takes **patient-centred outcomes** into account
Negotiate **health goals** with the patient	**Training** for professionals in patient-centred care	A strong **primary care** system
Discuss **self-management support needs** with the patient	**Electronic patient records**	**Sector transcending** policy development, legislation and regulation
Personal care plans	**(eHealth) support** for self-management and communication	
	'Care **coordinator**' and a '**trusted** doctor' or' trusted nurse'	
	Personal care plans	
	Collaboration with care providers outside the health care sector	
	Flexible visits	

Source: ICARE4EU, Final Symposium, Brussels, March 2016.

A person centred, health care integration initiative

A comprehensive "person centred, health care integration initiative" (SNS+ Proximidade) has been designed and a pilot-project in the northern health region of the country has been implemented since mid-2017 in order to explore the best course of action in this domain. The key elements of this design are summarized in Box 1.

Box 1. Persons centred NHS upgrade – main dimensions

I. Health care – Integration
• Person-centred multimorbidity management
• Managing acute conditions
• Home care investment and coordination
II. Person centredness – Life course approaches
• Life course and health – local health plans
• Health literacy and participation strategies
• Promoting a person-centred NHS

A monitoring and evaluation exercise on this pilot project was commissioned with the Oporto University.

Managing integrated care and procurement

While the above pilot- project was been implemented, the Ministry of Health Portugal has invested 35 million euros in healthcare integration through an on-going call for 2 year projects. Five areas were prioritized: cancer screening, decreasing emergency room admissions, integrated homecare, user pathways and NHS internalization of services (e.g. laboratory tests). Examples of good practices reflecting integration of care and procurement which were implemented in Portugal include the remote monitoring of patients with COPD and the tele monitoring program for status after acute myocardial infarction were described above.

Key challenges – the way ahead

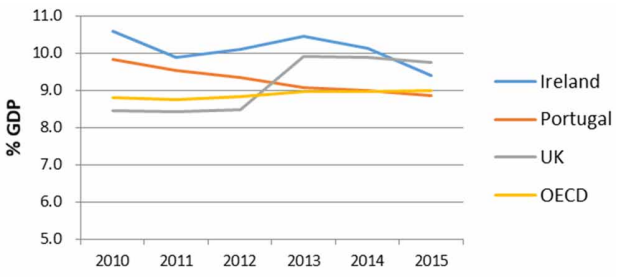
1. There is a good understanding in Portuguese health policy of the challenges from an ageing population with increased prevalence of chronic disease and multiple health conditions. The different innovations in service organization and delivery represent sensible responses to the challenges and are likely to improve access to and effectiveness of services.
2. While the direction of policy development is appropriate, there is a need for greater focus on evaluating and monitoring the effects of new models and on planning to expand the new care models across all parts of the country. Innovation in information technology use, and contracting and procurement might be further encouraged alongside explicit objectives of quality development and care integration but in-depth policy reviews would be beneficial prior to a nationwide systematic roll out.
3. An increase in chronic conditions and multi-morbidity calls for well-informed patients. As elsewhere, people and patients have long been underused as a resource for preventing and managing diseases.
4. Recently, more attention is being given to national programmes of health literacy and empowerment of patients, which need to be reflected in the newly emerging models of care.
5. Portugal is now in the forefront of eHealth in Europe. The new NHS portal is a potential game changer for access to services information. Health care integration will also require considerable investment in a person-centred integration of a large number of the current components of the Portuguese health information system.
6. It is very important that all social actors recognize this is a complex process of change that needs to be pursued during a considerable time period, requiring important cultural, managerial, technical and technologic transformations.

DOMAIN 4: NHS FINANCING

4.1 Public health expenditure over the financial crisis

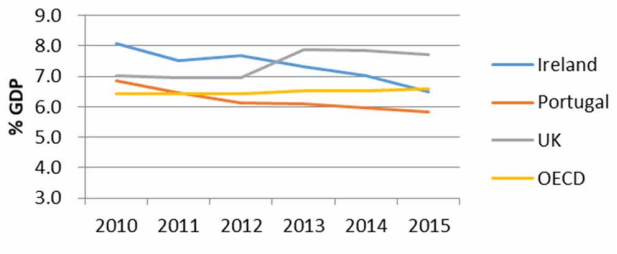
Health expenditure as a percentage of GDP decreased over the 2010–2015 period from 9.8% in 2010 to 8.9% in 2015 (Figure 16). Public health expenditure also decreased (5.8% in 2015), being currently slightly below the OECD average, as seen in figure 17. This is probably a result of the austerity policies on public spending.

Figure 16. Health expenditure as percentage of GDP



Source: OECD Health statistics. Current expenditure on health (all functions). Government schemes and compulsory contributory health care financing schemes. All providers. (dataset 5.1 Health Expenditure).

Figure 17. Public Health expenditure 2010–2015



Private health expenditure remained relatively stable (3% in 2015), suggesting that the decrease in public expenditure was not compensated by an increase in private expenditure. However, out-of-pocket payments in percentage of total health expenditure increased over time, representing 28% in 2015.

The contribution of user fees to NHS financing is low. Before being increased in 2012, user charges represented 0.74% of the NHS total revenue in 2010, and 0.95% in 2011. In 2012, they accounted for 1.7% of the NHS total revenue and about 2.0% in 2015. This increase was due to the increase in user charges, but also to an improvement in its collection. Out-of-pocket expenditure increased over the crisis period. Out-of-pocket payments in Portugal are mainly associated with dental care, medicines and user charges. There was a decrease in the proportion of out-of-pocket on medicines, which was probably the result of the decrease in price, since patients' co-payment decreased 13% and ambulatory volume of dispensed packages increased 11%, during the period 2011–2016.

Being aware of the high out-of-pocket expenditure, the MoH implemented some measures to reduce its impact. In 2016 user charges were reduced, exemptions were widened and patient transportation (non-urgent) is now free of charge for vulnerable groups (Portaria n.º 83/2016, de 12 de abril). Moreover, some programs to financially support the underprivileged regarding health care were implemented and the burden of expenditure on medicines was lowered. Regarding non-urgent transportation of patients, a new legal framework eliminated the payment for patients with a disability ≥ 60% and low income, included an exemption for minors with a life limiting disease and economic insufficiency, and eliminated the user charges for patients with cancer, transplants and chronic renal disease having peritoneal dialysis or haemodialysis at home.

A programme of additional health benefits was created to support those with a lower income who spend a large part of their resources on health, especially medicines and other goods with low contribution of the State, aiming to reduce inequalities and improve the quality of life. Additional health benefits are reimbursed at a percentage of the costs incurred by the beneficiaries. For drugs, glasses and dental prostheses, this covers only the portion not reimbursed by the State. This programme is monitored by a centralized information system (SISBAS). SISBAS enables the registration of requests for reimbursement and expenses made and not yet reimbursed, as well as the transmission of the information regarding the respective payment orders and the effective settlement of the reimbursements. The Executive Director of the ACeS (Primary Healthcare Clusters), or an appointed person, makes the final decision on the assignment of the additional health benefits. In case of approval, ACSS liaises with social security for the purpose of reimbursement to the user (ACSS, 2015). Some municipalities also made financial support available for people in social and economic deprivation.

4.2 Effects on access to care and care delivery

As described in Domain 2, access to primary care has been stable over the 2010–2016 period. Hospital consultations increased, including first appointment to hospital. Inpatient hospital care remained stable over time as well. Surgical activity also increased since 2010 (+15.5%). However, there is evidence of an increase in waiting lists for hospital consultation, increase in the median time from the referral from GP to ambulatory care appointment in the hospital (this has increased by 2 days since 2010, and is now 82 days). Regarding surgical care, in 2011 and 2012 there was an increase in the cancelations and percentage of waiting times above the legally acceptable. (ACSS report page 76).

The reduction of costs with non-urgent transportation of about 30% was one of the measures imposed by the MoU (3.83 MoU). This measure might have had impact on access to care because of the increase in the burden of indirect cost to patients. One study found a significant effect of the change in transport regulation in the demand for emergency room attendance, especially for polyvalent emergency department and for older patients. These results support the conclusion that indirect costs may be more important than direct cost in determining healthcare services demand when co-payments are low and the exemptions schemes are wide, especially for older patients (Ramos & Almeida, 2016).

If expenditure reductions did not have an effect on access, the quality of care could have been affected. The financial constraints does not seem to have affected the control of chronic disease. For example, the number of patients with diabetes controlled improved. In 2014, 80% of the patient registered in primary care (with a registry of HbA1c) have the diabetes controlled, and it has been improving over time. (Adapted from Observatório Nacional da Diabetes, 2015, Diabetes: factos e números (Dataset 5.2.Diabetes)).

4.3 Financing new infrastructure

Current expenditure decreased from €10,069 million in 2010 to €8,876 million in 2015. Capital expenditure decreased from €386 million in 2010 to €110 million in 2016 (provisional data), showing a decrease in the investments over this period. (See also HIT 2007, chapter 4.1.2. Infrastructure) .

Regarding infrastructure the cuts in public spending in general did not reflect in infrastructure problems during the crisis period, with the exception of some isolated cases. There are few reports about interruption of medical tests and treatment provision because of breakdowns in medical equipment. However, hospitals made an effort to keep core services running smoothly, channelling the available resources to the most important services.

One of the cost control measures implemented which is still ongoing since 2012 was a compulsory request for hospital/primary care investment authorization (infrastructure, medical equipment). This compulsory request is applied to all public entities for investments above €1 million or above €100,000 if they have debts. These investments are then analyzed by the central administration for health (ACSS). This measure slowed down investments in construction works (including those for maintenance) and medical equipment in hospitals. This was an important measure to control costs, but had an impact on equipment replacement and maintenance works. Despite the decrease in investment during the crisis period, in 2016 there was a new wave of investments, e.g. to adapt primary care buildings to provide dental care. In 2017, 14 new primary care buildings will be developed in Lisbon, which is one of the most deprived regions in terms of primary care. These construction projects will be financed by the Lisbon municipality.

Table 1. Current and capital expenditure in health

Expenditure (M€)	SEC 2010					
	2010	**2011**	**2012**	**2013**	**2014**	**2015**
I. Current expenditure	10 069	9 217	8 853	8 688	8 766	8 876
II. Capital expenditure	386	355	220	140	106	149
B. Total (I. + II.)	10 455.3	9 571.1	9 073.1	8 828.6	8 872.0	9 025.3

Source: ACSS (dataset 5.2 Current and capital expenditure).

Regarding the efficient development and maintenance of the infrastructure, it is worth mentioning some instruments for that purpose. As there are several planning instruments, aligning them has been the major challenge:

- Hospitals used to have a master plan for all hospital operation, services location and connections. This planning instrument was abandoned. Nowadays only few hospitals have a master plan approved.
- Hospitals have three years strategic plans that include investment planning for construction works and medical equipment. However construction works do not follow the master plan. Construction works are usually disaggregated from the overall hospital operation.
- Since 2013 all public entities including hospitals should do an annual plan for activities and budget in which should be included the largest investments. However not all hospitals are doing it.
- At the end of 2016, all public hospitals were surveyed about their needs of investment for the 2017–2019 period in order to plan the needs of financing for the same period.

Also, despite the individual plans, there is a lack of planning for infrastructure at national level, although there are instruments to do it. That could help to define national priorities of investment for hospitals and medical equipment replacement each year and allocate funds accordingly.

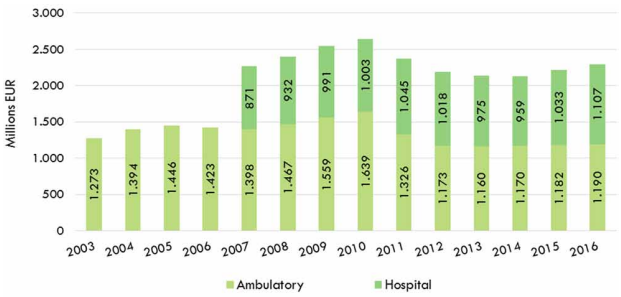
4.4 Pharmaceutical related policies and their impact

4.4.1. Managing down the cost of drugs

The economic and financial adjustment program set a number of measures to be implemented in the health sector in Portugal. Many measures focused particularly on the pharmaceutical market, given the high level of public pharmaceutical expenditure in Portugal (Simões et al. 2017). The pharmaceutical policy emerges as an essential component of the Portuguese health system, to guarantee access to efficient, safe and high quality pharmaceutical treatments, assuring a rational use and equity to all citizens.

In the period 2011–2014 the European Union Financial Stabilization Mechanism granted Portugal financial assistance with the commitment to enact a set of policies in the pharmaceutical sector, which resulted in a decrease of 240 million euros in public pharmaceutical expenditure.

Figure 18. NHS expenditures on medicines in million Euros, 2003–2016

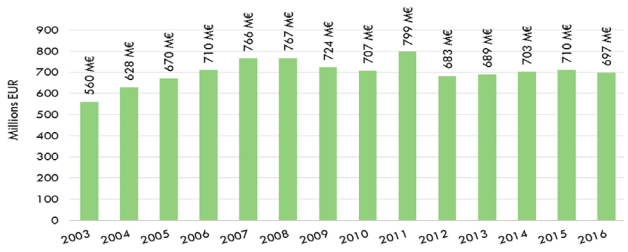


Source: Infarmed (2016).

From 2014 onwards the level of public expenditure has been monitored bearing in mind the introduction of innovative medicines: the ambulatory market has been increasing 0.5% per year and hospital consumption shows an increase of 8% in 2016 due to innovative medicines. The balance between pharmaceutical innovation and NHS sustainability gives HTA a central role to assess cost-effectiveness of new and marketed health technologies generating access to innovative medicines (see Figure 18).

For the period 2011–2016 patients' co-payment decreased 13%. Setting maximum price through the European price levels and reinforcing generics price competition were major factors to enhance savings for patients and the NHS. During the execution of the financial assistance plan, patients' savings were assured, with a reduction of 96 million euros on private expenditure.

Figure 19. Out-of-pocket expenditure in the NHS market



Source: INFARMED (2016).

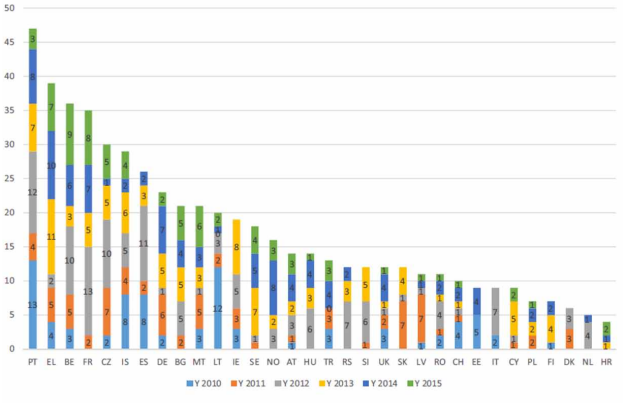
Figure 20. Number of packages dispensed in the NHS market

4.4.2. Pharmaceutical policies adopted

Pharmaceutical policies started long before the economic and financial adjustment program. For example, the introduction of a reference price system in 2003 promoting generics competition, annual price reviews, the setting of the reference price; administrative price reductions (2005, 2007 and 2010), and changes in co-payment rules and values. Since 2010 the package of measures had an impact on public expenditure, with a reduction in public expenditure on pharmaceutical products in ambulatory care and a slowdown in hospital expenditure.

In 2010 the administrative price reduction has set maximum prices for pharmaceutical products through international price referencing rules, and other co-payment rules for products included in NHS coverage. Portugal was the country with more implemented measures according to a survey done by PPRI – Centre of Pharmaceutical Pricing and *Reimbursement* Policies.

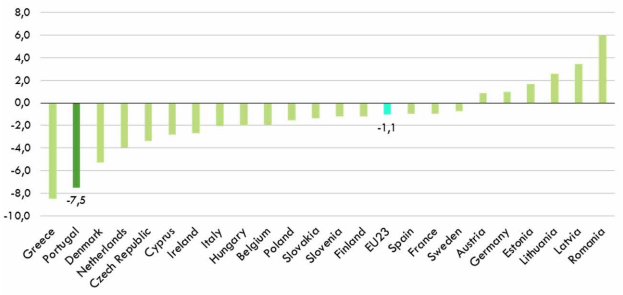
Figure 21. Policy interventions related to medicines: Survey of measures taken in European countries during 2010–2015



Source: Vogler et al.(2016).

In the pharmaceutical sector, the economic adjustment program for Portugal (2011–2014) focused on measures regarding in general the fields of public expenditure containment; pricing (revising the existing reference-pricing system, changing the calculation of profit margin, setting the maximum price of the first generic introduced in the market) and increasing the generics market share (prescription by INN, reducing administrative/legal hurdles to speed up the use and reimbursement of generics). Portugal was the country with the second highest reduction on pharmaceutical expenditure, which was mainly due to price reductions.

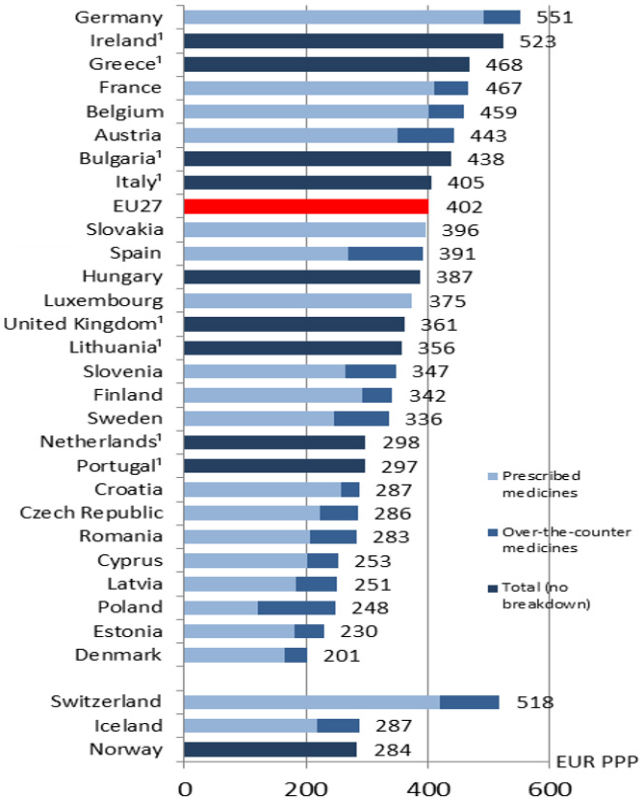
Figure 22. Average growth of the pharmaceutical market (%)



Sources: Health at a Glance: Europe (2016); OECD (2016).

Medicines' price reductions balanced the increase of consumption that occurred due to the uptake of medicines already on the market, and also due to the introduction of new medicines in the market. (Barros et al. 2015).

Figure 23. Expenditure on pharmaceuticals per capita, 2014 (or nearest year)



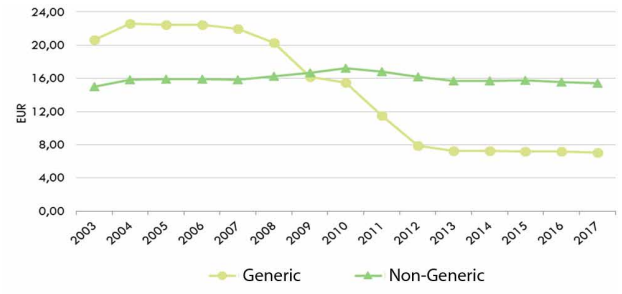
Sources: Health at a Glance: Europe (2016); OECD (2016).

Currently some of the assistance program measures are still being used to regulate the market, as for example, the annual price revision through international reference price system to set medicines prices in Portugal, showing the intention to maintain current public expenditure level at European standards, or the ongoing implementation of the e-prescription and e-dispensing system for medicines to reinforce expenditure monitoring. A centralized procurement model for medicines is evolving to a centralized prioritization by therapeutic areas for acquisition by hospitals avoiding an inequity scenario due to different budgetary situations. The universe of therapeutic areas is sustainably enlarging.

4.4.3. Pharmaceutical policies adopted – Biosimilar/Generic Substitution

In order to increase the use of generics a competitive pricing system allowed the price of the first generic to be set 50% lower than the reference medicine, and each generic that follows has to be 5% lower than the previous. Also, due to the mandatory prescription by INN, pharmacists are allowed to substitute brand name medicines for generics. Additionally, price setting rules allowed maximum prices to be defined – not fixed, reinforcing competition between pharmaceutical companies.

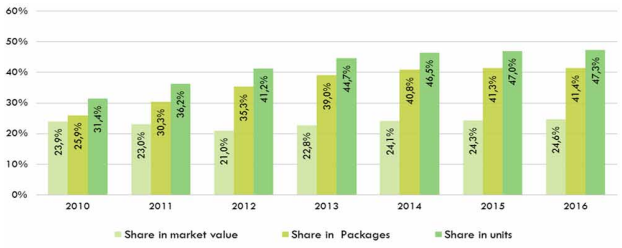
Figure 24. Average medicine prices, 2003–2017



Source: INFARMED, I.P.

In 2016, the share of generics was approximately 47%, considering the number of units in the NHS market. On the other hand, generics represent approximately 24.3% of NHS spending with pharmaceuticals in ambulatory care.

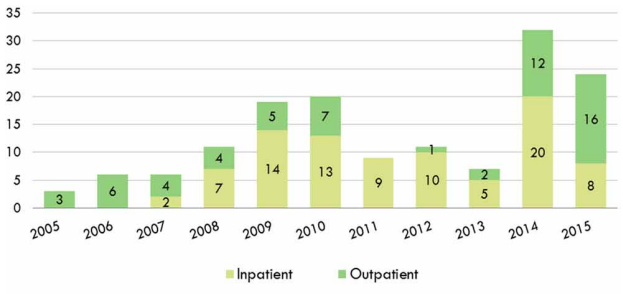
Figure 25. Generics Share, 2010–2016



Source: INFARMED, I.P.

In Portugal, Managed Entry Agreements (MEAs) have been used to enable national coverage of new medicines. MEAs represent a valuable strategic tool for overcoming the uncertainty associated with the introduction of medicines and ensuring the sustainability of NHS.

Figure 26. Number of MEAs celebrated in the inpatient and outpatient settings



Source: INFARMED, I.P.

To date, the MEA instrument most used in Portugal is the price-volume, followed by outcome guarantees and coverage with evidence developments. All MEAs monitoring outcome guarantees were concluded in 2014 and 2015, which may indicate a new trend towards performance-based agreements.

The analysis highlights the trend in Portugal for establishing MEAs with broader objectives, combining both financial schemes and performance-based agreements. Furthermore, it points out the trend towards the use of all types of monitoring tools and a greater number of instruments to achieve the policy goals.

Key challenges

1. The financial crisis reduced the availability of public financial resources for health services coverage and investments. This has led to some reduction of services, higher financial burden to households and lower incomes of health services staff. The reductions have directly affected patterns of health and services utilization of the Portuguese population.
2. Portugal has been relatively successful in having some user fees that do not significantly deter service use or produce serious impoverishment. However, in some cases where costs fall on service users there is evidence that this has led to undesirable changes in patterns of service use.
3. The decline in capital investments during the financial crisis has not yet been balanced off which suggests it to be an opportunity to modernize equipment, adapt infrastructure to newly emerging models of care and design future public-private partnership projects.
4. The current situation is the result of a number of historical structures that are no longer fully fit for purpose. The interface of public and private finance and service delivery is not managed to optimise the use of the overall health resources.

Past and current efforts

1. In 2016 user charges were reduced, exemptions were widened and patient transportation (non-urgent) is now free of charge for vulnerable groups (Portaria n.º 83/2016, de 12 de abril). Moreover, some programs to financially support the underprivileged regarding health care were implemented and the burden of expenditure on medicines was lowered.
2. Regarding non urgent transportation of patients, a new legal framework eliminated the payment for patients with a disability ≥60% and low income, included an exemption for minors with a life limiting disease and economic insufficiency, and eliminated the user charges for patients with cancer, transplants and chronic renal disease having peritoneal dialysis or haemodialysis at home.
3. Some municipalities also made available financial support for people in social and economic deprivation. The municipality of Évora, for example, supports for social intervention, housing and health expenditure. The purpose of this financial support was to reduce the proportion of patient expenditure on essential medicines for chronic diseases (the municipality subsidizes 50% of expenditure on medicines) and to subsidize expenditure on medical tests, treatments, consultation and prothesis (maximum of 150€ a year).
4. A program of additional health benefits was created to support people with low incomes who spend a large part of their resources on health, especially medicines and other goods with low contribution of the State, aiming at reducing inequalities and improving the quality of life.
5. Despite the decrease in investment during the crisis period, in 2016 there was a new wave of investments, e.g. to adapt primary care buildings to provide dental care.
6. In 2017, 14 new primary care buildings will be developed in Lisbon, which is one of the most deprived regions in terms of primary care. These construction projects will be financed by the Lisbon municipality.

Way forward

1. While there have been some impressive improvements in efficiency of service delivery, more resources will be needed in the future to compensate some current service deficiencies, to accommodate the increasing needs of an ageing population. The difficulties in motivating and retaining key professionals will also require some additional resources as well as new patterns of payments and incentives.
2. This means that great care has to be taken both in setting formal user co-payments and fees and in looking at patterns of entitlements.

3. Much can be learned from the (generally positive) experience of PPP in Portugal. While it has been possible to maintain services with some very old equipment, it is likely that more serious problems will occur in the near future unless an accelerated programme of renewal is put in place.
4. The impact of private health insurance and subsystems on patterns of care and health outcomes need to be further assessed and the role vis-à-vis the NHS more clearly defined.
5. It will be important for the government to take a comprehensive look at the roles of private funding and service to improve efficiency and reduce inequities.
6. Further policy analysis is needed to better understand the potential of payment systems to improve provider performance on outcomes of care. More could be learned from more systematic evaluation of the many (generally very sensible) initiatives in payment mechanisms that aim to provide more coherent incentives and to improve efficiency. Much can also be learned from the unsustainable budgets which led to large deficits in hospitals – there has to be a fine balance between incentives for greater efficiency and unachievable targets.

CONCLUSIONS AND RECOMMENDATIONS

Understanding the challenges and improving public health services

The combination of a history of poverty and deprivation, recent consequences of the financial crisis, a low birth rate and disadvantageous emigration patterns pose serious challenges for the health system in Portugal. In addition to the effects of population ageing and growing multimorbidity, emigration of early to mid-career workers has led to an imbalance in the population age structure and has some direct effects on meeting the needs for staffing health services. Direct effects of the financial crisis on the health system still remain, including poor condition of some equipment and buildings and losses of key staff.

As in other countries, health services need to evolve to address the new reality of managing multiple chronic conditions in patients with complex needs. Whilst life expectancy has been improving, there has been less success at improving healthy life expectancy. This requires a shift to more integrated arrangements to meet health and social care needs.

Portugal has a strong record on developing coherent and well-focused health plans, but there are significant weaknesses in linking and implementing plans at national, regional and local levels. Progress has been made in renewing the focus on public health measures, but further work is needed to strengthen this part of the health system and to modernise the public health workforce and its working conditions. There is also a need to strengthen monitoring and evaluation in this area.

Developing the Portuguese health system and improving service delivery

Some recent developments in the organisation of the Portuguese health system provide a basis for further work to improve the alignment of services to needs and to adapt towards a more efficient, more user-focused service. Whilst the population is likely to continue to decline, needs are likely to rise with ageing and multimorbidity. Some short-term actions to manage the financial crisis need to be replaced or complemented by longer-term changes that improve incentives, management, responsiveness and sustainability.

There is a large and growing need to tackle avoidable morbidity and improve health promotion at population and individual levels. There is a particular need to focus on promoting better health in older women. Further measures to encourage healthy eating and to increase physical activity are also priorities, building on the important existing initiatives (including the action to reduce salt and sugar intake).

To ensure that service delivery evolves in line with the key policy priorities, there is a need to make more coherent the relationships at national, regional and local levels, to make better use of links with NGOs and civil society and to learn from the Portuguese and international experiences in the use of public-private partnerships.

Portugal has led on some important innovations in local service delivery, particularly innovative primary health care reform, which needs to be more fully implemented in order to ensure equal access to quality health care to the entire Portuguese population. Better linkages are needed between levels of care and more scope for local decisions to address local challenges. These need to be evaluated and the lessons fed back to allow further progress to be made.

Towards better informed services and better informed patients, and better use of ICT to improve service delivery

Portugal is now in the forefront of eHealth in Europe, with the Portal and its current important developments being significant both for improving service access and delivery, and by providing a tool to significantly improve health literacy. As the numbers registered on the Portal increase the scope for both these roles will increase, with possible use of aggregate data to support planning and policy as well as data that will improve patient management. It will be important to continue to develop the systems with the clear vision of the potential benefits for patients and providers. There are also important potential uses in quality assurance, monitoring and evaluation of care delivery. In addition to further action to improve access to information (especially amongst people who have limited access to social media and internet resources) there is a need to mobilise a wider range of social actors and organisations to help build better health literacy. Improving health literacy and involving patients in decisions on their own health requires changes in attitudes and approaches as well as changes in systems.

Portugal aims to further evolve the health system towards being more people-centred. While ICT can play a key role, better care integration is also needed. Pilot projects in Portugal offer some important learning. People-centred care involves changes in care delivery, but also changes in attitudes and approaches of staff and patients.

Mobilising and managing financial resources

The financial crisis led to reductions in public healthcare finance, increased burden on service users, reduced capital investment and also led to some worsening of access to services. Whilst policies on user charges and exemptions were sufficiently well focused to reduce the harm done by fees, some worsening of access to care occurred, and some additional burden fell on service users. A range of initiatives helped protect service users from undue burdens, but they also led to some incoherence in access and entitlements. Measures are needed to improve the coherence and equity in the way the financial costs fall on patients and families. There are still people who are at risk of impoverishment from paying for health care.

The market for health care workers crosses international borders, and career opportunities exist within the private sector. Higher pay (some of which may be achieved in the context of agreed improvements in efficiency) will be needed for some staff groups to ensure motivation and retention. Increasing motivation may also require improved access to facilities and equipment. There is a need to improve the structure of payments and incentives to link objectives to activity and to improve motivation and retention of staff. There is some experience in Portugal and experience from across developed countries that can guide this reform.

The physical infrastructure and equipment need investment, some, but not all, of which may be achieved using public-private partnerships, drawing on experience of their use in Portugal. It is important to ensure that capital developments follow service needs and changing models of care.

The role of private health insurance and sub-systems brings some incoherence to the health system. It will be important to be clear what the roles and contributions are of parallel insurance systems and how can they contribute usefully to meeting health policy goals. This might be part of a wider consideration of the role of private finance and user fees.

As was found in some other countries that experienced funding reductions, the scope to manage the situation by improving efficiency is important but limited. In addition, some strategies only work in the short run. The residual problems include retaining and motivating staff, worsening of the condition of buildings and equipment, and some incoherence in the entitlements and access to services. Addressing these problems will require additional public resources. As fiscal conditions allow there is a need to plan for increased public investments in the public health system. This should be done in the context of continued measures to improve efficiency of service delivery, reform of skill mix to improve the balance of different professional groups, rigorous evaluation and health impact assessment and strategies to refocus service delivery towards health promotion and primary care.

Concluding comments

This review of the Portuguese health system has revealed some substantial challenges, some impressive developments and initiatives and some work to do. Since many recent developments are moving in appropriate directions it will be important to build on successful innovations and initiatives as well as to effect more substantial changes in areas such as strengthening health promotion, renewal of the infrastructure and developing more appropriate incentives.

The generally positive experience in developing plans needs to be backed up with better plan implementation and a culture of evaluation and learning. This will inevitably need a clearer understanding of responsibilities at different levels of the system. Centralisation during the financial crisis needs to be reversed in the context of a clearer definition or roles at national, regional and local levels; the roles of private payment and insurance need to be clarified, as do the roles of private providers of care and public-private partnerships; and better use also needs to be made of civil society. A cultural change is needed to bring informed patients into partnership in managing their health and decision-making.

The combination of historical patterns of deprivation, the consequences of the financial crisis and challenging demographic projections require a more rapid programme of change and system strengthening. Patterns of care across health and social care need to meet the challenges of multimorbidity and the need for better co-ordination across the different levels of health and social care. A better configured, better trained and better motivated workforce will be central to achieving changes in patterns and efficiency of service delivery.

The future vision for health care delivery will need some new buildings (often in different places), better equipment, new staff skills and flexibility. Better facilities are key to improving the patterns of care delivery and motivation of staff. It will be possible to gain significant benefits from the strong position in the use of information technology, both to improve health literacy, improve access to care, increase accountability and to inform the planning and management of health services.

Reforms and initiatives in the delivery of primary and secondary care show great promise, but more is needed to adapt to current and future needs. Some geographical areas remain underserved, and the linkages need to extend into long-term care.

The relative success of managing through the financial crisis and reduced resources needs to be complemented with some increased resources to meet current deficiencies and demographic pressures. These additional resources should use new resources to accelerate the implementation of reforms. With further careful analysis, well-focused actions and careful monitoring and evaluation it will be possible to meet the health care needs in Portugal more effectively and efficiently.

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