FUTURE FOR HEALTH

THE GULBENKIAN PLATFORM

Health in Portugal: a challenge for the future

The Gulbenkian platform for a sustainable health system

Background paper

FUNDAÇÃO CALOUSTE GULBENKIAN

In collaboration with **Health Cluster Portugal**

Contents

Section 1 - Introduction

The Gulbenkian Foundation has established this Commission in order to create a new vision for health and healthcare in Portugal, to describe what this would mean in practice and set out how it might be achieved and sustained.

There is widespread support in Portugal for the continuation of an equitable national health system, accessible by all citizens and based on principles of social solidarity. However, there is equally a general recognition that the current system, which has led to enormous improvements in the past, cannot satisfactorily meet the needs of the future in its current form and is increasingly unaffordable and unsustainable.

The Commission will focus on the promotion of health and prevention of disease; the provision of more varied community based and integrated services to meet the needs of the growing number of people with long term conditions; greater participation of citizens and patients; and the potential impacts of new knowledge and technologies.

It will develop a framework which sets out the roles, responsibilities and rights of all the different participants – from patients and citizens to the State and private and voluntary sector organisations - and which can be used to create a new national consensus in Portugal about health and healthcare.

At its heart will be a vision of a healthy and prosperous population and society where individuals are able to live lives they value and where, when they need to, they can access high quality, affordable and sustainable health services.

The Commission will focus on Portugal but its work will have global relevance and resonance. Portugal faces many of the same issues as other countries from the growth in non-communicable disease to tough financial constraints and its health outcomes and expenditure are consistent with international norms. The Gulbenkian Commission and Platform can show the way for other countries to follow.

The Process

The process adopted by the Commission will itself be important in establishing a future consensus and in building the motivation for change and the energy and momentum to carry it through the inevitable challenges. The process will be open and engaging, seeking ideas from and consulting with all sectors of the population, and drawing on experience and expertise from around the world.

Whilst the Commission will build on the successful history of the last 40 years, it will ensure that as wide a range of ideas as possible are considered from Portugal and around the world – no matter how – and that they are submitted to rigorous analysis and tested out with stakeholders.

Although the Chairman and 3 of the 6 other members of the Commission are from abroad, the study itself will involve a large majority of Portuguese citizens and be firmly based in Portuguese culture. In essence it will be a national study with global implications; facilitated externally but rooted in Portugal.

The report

The Commission will deliver a report to the Trustees of the Foundation in September 2014 which will:

- Provide a clear description, built on available evidence and reports, of the current situation in Portugal's NHS, the pressures it faces and the likely trends for the future

- Set out a vision for the future of the NHS which describes its aim and purposes; the roles and relationships of the different participants; the underpinning "social contract" between citizens and the state; the framework for governance, organisation, service delivery and health promotion and protection; and outlines future staffing and resourcing requirements
- Identify the key issues – political, professional and organisational – which Portugal's NHS, citizens and state will have to address to move towards this vision
- Make proposals for action

In addition, thinking and activity on improving health in Portugal will not stop when the Report is published and the Commissioners will therefore also consider how best some of the work might be carried on further, and/or how demonstration projects could be developed to take forward its proposals.

Section 2 – Health and health services in Portugal

This section provides a high level overview of health and health services in Portugal. It is structured in accordance with the Commission's brief and covers:

- Vision, aims and purposes
- The health of the population
- Services and service delivery
- The underpinning "social contract"
- The framework of governance, organisation and delivery
- Staffing and resourcing

The whole section draws very heavily on The European Observatory's 2011 Health System Review of Portugal [1] as well as on Government publications [2 3 4 5 6], external reports including [7 8 9], and more recent analysis of current developments. It contains a small number of figures and tables with a more extensive pack of information provided in Appendix 1.

The Commission's support team will make these documents and others available to Commissioners and the members of the Working Groups, and provide continual updating and additional research as necessary so that the Commission can fulfil its first task of providing in the final report "*a clear description, built on available evidence and reports, of the current situation in Portugal's NHS, the pressures it faces and the likely trends for the future."* All of this background material will be available through the Commission website in line with its policy on openness.

Vision, aims and purposes

Portugal, in common with other Western European countries, began the development of state social security measures in the late 1940s; although it was not till 1971 that the Government assumed responsibility for providing healthcare services to the population. The NHS was established as a universal, tax financed system in 1979.

The explicit goal of the health system is to protect the health of the population living in Portugal. The government may act to achieve this either by the direct provision of health services through the NHS or through contracting with private providers. According to Article 64 of the Portuguese Constitution, health policies should promote equality of access to healthcare for the citizens, irrespective of economic condition and geographic location, and should ensure equity in the

distribution of resources and use of healthcare services. Immigrants have the same access to healthcare as Portuguese citizens and the NHS cannot refuse treatment based on nationality, illegal immigrant status or lack of financial means.

Government policies have given priority to different aspects of health promotion and health services at different times and the positive results of these actions can be seen in, for example, the improvements in children's health, the narrowing of the differences between rural and urban areas and the development of long term care and primary care in recent years.

The Ministry of Health has an obligation under the Portuguese Constitution to formulate a plan for the NHS and, for the first time developed a national health strategy and healthcare policy with quantified objectives and targets in 1998. More recently, NHS priorities were brought together in 2004 in a National Health Plan (2004–2010) and a High Commissioner for Health was appointed in 2005 to ensure that it was implemented[10]. The Plan set out a road map for public health and reinforced national commitment to the NHS and to the values of social justice, equity and solidarity. It set out the major priorities and targets for the period, which included cardiovascular diseases, oncology, mental health, health of older people, HIV/AIDS and health promotion.

Preparatory work was undertaken for a new National Health Plan (2011–2016) which would build on its predecessor and incorporate the lessons from the first period of implementation. The changing political and economic situation means that this has not been finalised, and there is no longer a High Commissioner for Health in post. As we shall see later, a number of major policy changes have been introduced following the signing of the Memorandum of Understanding in May 2011 as part of the country's financial rescue plan[11].

The priorities were identified by the Ministry of Health in 2012 as being nutrition, cancer, cardiovascular disease, diabetes, respiratory disease, mental health, tobacco control and HIV/AIDS. These reflect the health needs of the population as described below.

The health of the population

The Portuguese people have seen significant improvements in their health over recent years, with life expectancy approaching the European average and particular improvements in child health. These improvements are attributed by the European Observatory to "*improved access to an expanding health network, continued political commitment, and economic growth, which led to improved living standards and increasing investment in healthcare"*[12].

There are, however, areas of concern particularly in deaths from avoidable causes, male life expectancy, disability-adjusted life expectancy and increasing problems of alcohol and obesity. There are also regional differences with more rural areas, which are less affluent and less well served by health services, having poorer health outcomes.

Portugal has a higher proportion of people living in rural areas than most of Europe. It is also believed to have the highest proportion of people living in absolute poverty amongst the EU15 countries[1314]. Where this is combined with geographical isolation, as in parts of the Southern Region of Alentejo, health problems can be particularly severe. Targeted action in recent years has started to close this gap to some extent. These inequalities in access to services and health outcomes are not, however, limited to the rural areas and there is evidence, for example, that illegal immigrants face particular problems despite their rights of access[15].

The country has an ageing population and its numbers may fall in the future due to a low birth rate, and thereby increase the ratio of dependent people to those of working age. Its patterns of disease

are broadly similar to other Western European countries which are also experiencing ageing of the population and seeing increases in long term conditions and non-communicable diseases. The main causes of death in recent years have been diseases of the circulatory system, malignant neoplasms (cancers) and diseases of the respiratory system as shown in Figure 1.

Figure 1
Main causes of death – percentage of total number of deaths, 1990–2009 (selected years)

	1990	1995	2000	2005	2006	2007	2008	2009
Diseases of the circulatory system	44.2	41.9	38.7	34.0	32.2	32.9	32.3	31.9
Malignant neoplasms	17.7	19.3	20.3	21.1	21.7	22.6	23.0	23.2
Diseases of the respiratory system	7.3	7.7	9.7	10.5	11.3	10.6	11.1	11.7
Diseases of the digestive system	4.5	4.4	3.9	4.3	4.2	4.4	4.4	4.4
Diabetes mellitus	2.6	3.0	3.0	4.3	3.7	4.2	4.1	4.4

Source: INE, 2009g [16]

There are, however, a number of distinctive features within this overall pattern. There is a large difference in life expectancy between men and women: 74.9 years as opposed 81.4 in 2008. Men have higher mortality from cerebrovascular disease and malignant neoplasms. There is also much higher mortality amongst men as a result of traffic accidents, with Portugal having the highest level in the EU15.

There are also high levels of diabetes, stroke and HIV/AIDS compared to other Western European countries, with diabetes in particular growing rapidly. More generally, there are high levels of deaths of both men and women from conditions amenable to healthcare. A study of 19 high-income countries found that Portugal had the 3rd highest rate of such deaths in 1997-1998 and the 2nd highest in 2002-2003[17]. While the decentralisation of mental health services has had a notable impact, a recent report has found that these services continue to suffer from serious deficiencies in terms of accessibility, equity and quality of care[18]. Mental health is now considered a national priority, and a National Mental Health Plan (2007-2016) has been established.

This pattern of disease and mortality is reflected in studies which show that Portugal has lower disability-adjusted life expectation (DALE) than the EU15 average – in other words, people suffer more disability at an earlier stage in life – and that men have a shorter DALE of 69 years as opposed to women with 72.

The position on child health is more positive with the indicators of child health near the European average, and infant mortality below (better than) the European average in 2008. Child health has been a target of Government and NHS action for many years and the European Observatory Report suggests that *"These trends may also stem from more than 30 years of policies, strategies, programmes and selective investments in perinatal, maternal and child care, in spite of political changes and discontinuities"*[19]. A study is currently underway to identify factors for this progress in child health[20].

Figure 2 shows how child health indicators have improved over 40 years. It reveals the very high level of maternal mortality in 1970 and the progress made since, and also shows that the fertility rate halved over this period.

Figure 2
Maternal and child health indicators, 1970–2009 (selected years)

	1970	1980	1990	2000	2008	2009
Perinatal mortality rate (per 1000 live births) a	-	23.8	12.4	6.4	4.4	4.6
Neonatal mortality rate (per 1000 live births) a	-	15.4	6.9	3.4	2.1	2.5
Fertility index b	3.0	2.3	1.6	1.6	1.4	1.4
Maternal death (per 100,000 live births) c	73.4	19.0	10.3	2.5	3.8	3.8
Adolescent pregnancy rates (age<20, per 100 live births) b	-	-	-	-	4.2	4.2

Sources: a INE, 2009g; b INE, 2009a; c INE, 2009f, 2009g.[21]

Many of the conditions discussed here are associated with social conditions and behaviour as well as with ageing. Successive Governments have recognised these problems and implemented public health measures and developed the public health service. Tackling these issues is becoming increasingly important, but it is by no means a straightforward task. The economic growth that the European Observatory Report credits with contributing to the health improvement has gone into reverse. Whilst smoking has declined amongst adults, it has risen in young people. Alcohol use and obesity are both increasing in the population as a whole. Portugal had very high levels of illegal drug usage in the 1980s and 1990s, with heroin addicts making up almost 1% of the population in 1999, and the highest rate of drug-related AIDS deaths in Europe. It became the first country to decriminalise drug taking in 2001, treating it as a public health issue. The position has subsequently improved with serious drug use reduced and drug-related deaths and infectious diseases both down markedly[22].

Services and service delivery

Portuguese people have access to a wide range of services across the spectrum, from health promotion advice to the highest levels of specialist treatment. They are required to register with a GP in their place of residence or employment and their first point of contact, except in an emergency, is expected to be with their local primary care service. Since 2007, they have also had access to a telephone help line, *Saude 24*.

Primary care offers many local services including general medical care, reproductive and child health and the provision of immunisation and health advice, but also plays a “gate keeping” role by managing referrals to specialist care. In practice, however, many patients go directly to their hospitals emergency departments when they perceive a need, rather than going to or via their primary care service. The result is that an estimated 25% of attendees at emergency departments do not need immediate treatment[23]. International comparisons show that attendances in emergency departments are proportionately twice as high as in England and 50% higher than in France.

Patients can use primary care, ambulatory care and diagnostic services which are provided not just directly by NHS units but also from private for-profit and not-for-profit groups and individuals, or groups of professionals working under contract or in cooperation with the NHS. NHS provision of dental care is limited with few dental care professionals, so people normally use the private sector. Most prescriptions have to be filled at community pharmacies although hospital pharmacies have recently been allowed to dispense. Non-prescription or over the counter medicines are now available in a number of specialised stores as well as in pharmacies, and prices are no longer fixed.

Specialist secondary and tertiary services are mainly provided in Portugal’s 189 hospitals, 77 of which are NHS ones, with non-emergency access generally provided by referral from primary care. Most of the bigger and more specialised hospitals are NHS ones, with the private sector, including

the not-for-profit *misericordias*, providing smaller units. Mental health is based around local mental health services with multidisciplinary mental health teams, ambulatory services in primary care and inpatient and emergency services provided in hospitals. Here again, services are provided by a mix of public and private providers.

Mainland Portugal has an integrated medical emergency service coordinated by INEM (*Instituto Nacional de Emergência Médica*), an indirectly managed part of the Ministry of Health. It has the responsibility to respond to emergency calls via the 112 telephone number, provide first aid at the scene, assist with transportation to the appropriate hospital and ensure coordination between all the participants in the system. The service is provided free of charge and, following full roll out of the coordinating centre CODU across the country between 2004 and 2008, there have been large increases in calls to the centre and journeys made by ambulances.

These changes to the emergency services are amongst the many reforms and initiatives over recent years designed to improve and expand services. Four of the major ones have dealt with primary care, public health, continuing and long term care, and hospitals respectively.

Primary care has been patchy and inconsistent in quality, resourcing and distribution. Patients have had difficulty accessing services, resulting in the high usage of hospital emergency departments, with particular problems for poorer and more geographically isolated people. There has been little provision of continuing and home care, almost no palliative care, and a perceived lack of motivation amongst GPs working in isolation on fixed salaries. In response to these problems the Ministry established new administrative and delivery structures and created a Task Force for Primary Healthcare in 2006 to guide the overall development of the service.

At the most local level primary care services have been grouped into family health units (*Unidades de Saúde Familiar,* USFs) which bring together 6-8 GPs, with a similar number of nurses and a small group of other staff to deliver services for a population of between 4,000 and 14,000. Smaller UCSFs have also been created to provide services to unregistered people and particular groups such as homeless people. USFs and UCSPs have been given a degree of autonomy and a payment structure that rewards productivity, accessibility and quality.

At the next level, 75 Health Centre Groups (*Agrupamentos de Centros de Saúde*, ACES) have been created to provide direction, coordination and support to primary and community services. They are responsible for ensuring that services are available to area populations, which range in size from about 50,000 to about 200,000 people. They have also taken on responsibility for integrating public health into the wider healthcare system.

Public health has also had problems of both image and capacity. The 2004 National Plan set out to strengthen it, provide better linkages into health services and give public health doctors a wider role in terms of the health of the population. Local public health structures now fall under the remit of ACES, alongside primary and ambulatory care, whilst maintaining their links centrally to the Directorate General of Health and the nationally run programmes of health education, promotion and protection.

One of the other major reforms has been in the area of providing longer-term care outside acute hospitals. The National Network for Integrated Continuing Care (*Rede Nacional de Cuidados Continuados Integrados*, RNCCI) was created in 2006 to develop this neglected area and coordinate the various providers of care in hospitals, local authorities, *misericordias* and the private sector within local networks. Whilst the national programme ceased in 2012, the local networks continue to provide convalescent care, medium-term care and rehabilitation, palliative care and day care. New protocols and partnerships were developed and the number of beds provided in this way grew from 3,173 in 2007 to 5,900 in 2012[24].

Hospitals have relatively long waiting lists for elective surgical procedures and have large numbers of beds occupied by patients in need of continuing care. The development of the RNCCI network has been designed partly to help with this, but there have also been reforms to the hospital sector. These have included giving greater autonomy to NHS hospitals and creating an effective provider-purchaser split. Most NHS Hospitals are now structured as Public Enterprises (*Hospitais EPE)*, with a smaller number as Public Companies (*Hospitais SPA),* and receive their funding through an explicit contracting process. At the same time, Portugal has developed private-public partnerships, with 6 new hospitals recently opened or under construction. The private sector has also opened 2 large hospitals in the Lisbon district alone, and begun to compete on a greater scale with the NHS.

The Commission's Working Group on health services and public health will review this whole area, looking at "*service design and delivery, quality improvement and public health – breaking down existing barriers between organisations, services and sectors where necessary, to meet health needs and support a healthy population."*

The underpinning "social contract"

There is no explicit NHS "social contract" in Portugal whereby the Government and citizens have set out what each can expect from the other with regard to the NHS. Nevertheless, a set of expectations about what citizens can expect from their Government and the NHS has grown up and been modified over time through legislation and policy, and through custom and practice.

The starting point is the Portuguese Constitution of 1976 which embodied the citizen's right to health to be delivered through "*a universal, comprehensive and free-of-charge National Health Service."* This simple statement has been clarified and qualified over the years, most notably in the following 3 ways:

1. At the time of the foundation of the NHS a number of health sub-systems (*subsistemas*) provided health cover for particular professions or groups of employees and their families, whilst a further small group of people had voluntary health insurance. Although there has been some consolidation, both sorts of schemes continue today, offer enhanced services to their members and receive state subsidy. The sub-systems receive state funding for every person who opts out of the NHS system, whilst the Government also offers tax relief on private insurance premiums. More than 20% of the population are members of 1 or more of these sub-systems, with 10% of the population alone in the civil service scheme, ADSE, run by the Finance Ministry.

   These schemes have come under increasing scrutiny as the financial problems in the health sector have worsened, both because of the costs of duplicating overheads and because they have a regressive effect in disadvantaging unemployed and poorer people. The bigger schemes such as the ADSE have developed expertise in contracting for services on behalf of their members; however, there is as yet no evidence that once adjustments are made for the education and economic status of their members, they secure better health for them than the NHS would.

2. The 1989 review of the Constitution changed its wording with regard to the NHS so that it became an NHS "*approximately free-of-charge*" in 1989. This allowed for the introduction of co-payments or user fees, known as "moderating payments" in Portugal. The impact of these moderating payments is significant, with Portugal being amongst the countries with highest such payments in Western Europe.

   As Figure 3 shows, more than 30% of total healthcare funding is from private sources, with more than 80% of this coming from out of pocket expenditure by patients (OOP payments),

the majority of which is co-insurance payments for pharmaceutical products, as well as the "moderating payments" for services provided directly by the NHS.

Figure 3
Funding mix for the health system (%), 2000–2008 (selected years)

	2000	2005	2006	2007	2008
Public funding	68.8	68.9	66.9	66.6	65.6
Private funding	31.2	31.1	33.1	33.4	34.4
of which					
Non-profit making institutions serving families	0.5	0.4	0.4	0.3	0.3
VHI	11.3	14.2	14.4	14.0	15.0
OOP payments	86.4	84.1	83.9	83.9	83.4
Other private funding	1.8	1.4	1.3	1.3	1.4

Sources: INE, 2010; Ministry of Finance & Ministry of Internal Affairs (2000–2008)[25]

3. In 1997 the Government introduced a Patients' Charter (*Carta dos Direitos e Deveres dos Doentes)* which sets out both the patient's rights to services and their duties to, amongst other things, look after their health, follow the health systems rules and avoid any unnecessary expense for the NHS.

   The Charter has been updated, most recently in 2007, but its effectiveness and impact have not been studied and there are no sanctions attached to it for violations by either party. It is, however, the closest approximation to a description of the underpinning "social contract" of the NHS as yet available in Portugal.

Government policies over recent years have emphasised the importance of engaging and involving patients as well as offering them an improving range of services. Patients can choose which GPs they register with, provided there are options available locally, but currently have little choice over hospital providers within the NHS system. They are, however, consulted over plans and changes in services and can participate through Community Councils in the management of primary care facilities through ACES. They also have access to complaints and redress procedures.

There is some evidence that citizens have become more active in looking after their own health in recent years, at least partly due to Government policy and the associated campaigns and screening programmes[26]. There are also a number of patients groups focussed on specific diseases, many of which are led by clinicians and may be financed by related pharmaceutical interests.

There is no standardised method for collecting and analysing patient satisfaction ratings although some studies have been done. The results of these, as summarised by the European Observatory Report, are that Portuguese people are quite happy with primary care provision. "*Over 70% of the respondents were very satisfied with their physician and their involvement in the decision-making process regarding their own health. However, some issues arise about the organization of services, as more than 55% of the respondents identified excessive waiting times and difficulty communicating with the GP."* Patients record higher levels of satisfaction with hospital services, although here too there is dissatisfaction with waiting times and some evidence of growing concern with emergency departments.

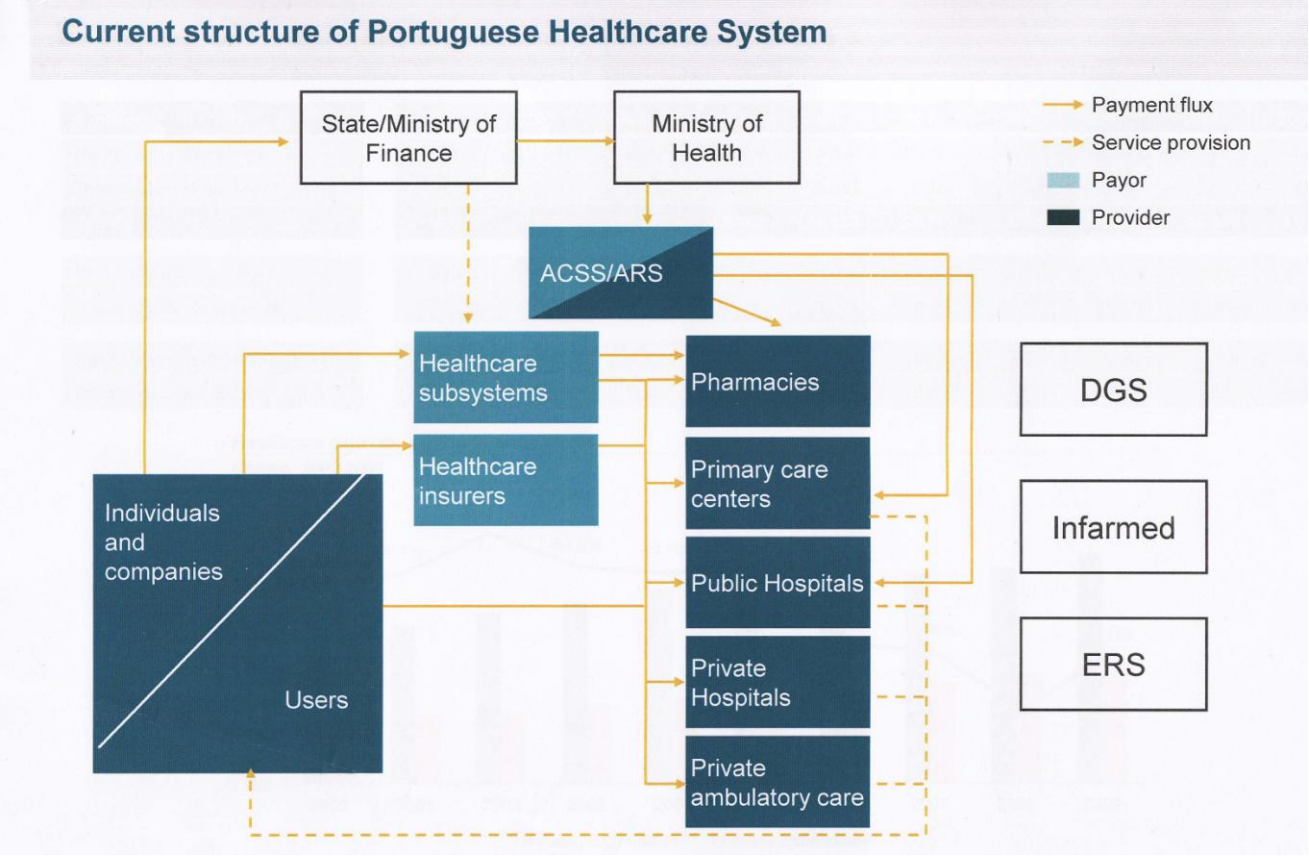
The Commission's Working Group on Citizens and the NHS will be reviewing this whole area in much more detail as part of its specific charge to "*look at the roles, rights and responsibilities of patients,*

citizens and … seek to create the foundation for a new national consensus and re-design of the existing system."

The framework of governance, organisation and delivery

The Portuguese NHS, like any other national health system that has grown up and been amended and re-amended over 40 years, is both complex and particular to the country. Appendix 1 contains diagrams that attempt to offer a full picture of the system and of its funding arrangements. There are, nevertheless, some salient features that can be brought out in this overview and by the simplified version of the system offered in Figure 4.

Figure 4



Source: Vaz, 2012[27]

The Ministry of Health provides the overall leadership and policy for the NHS and regulates the whole health sector. It undertakes many planning, regulatory and management functions either directly through its own officers or indirectly through public institutes or state owned companies. Its direct administration includes the Directorate General of Health with responsibility for all public health programmes, quality, epidemiological surveillance, health statistics and studies; the General Inspectorate of Health-related Activities providing audit services; the General Secretariat offering coordination and technical support; and the Authority for Blood and Transplantation. The organisational chart for the Ministry is reproduced in Appendix 1.

The 1979 law establishing the NHS stipulated that there should be centralised control but decentralised management and the direct management of the service is undertaken through 2

public institutions: the Central Administration of the Health System (*Administração Central do Sistema de Saúde*) and the Regional Health Administrations (*Administração Regional de Saúde*), which are shown in Figure 4 as ACSS and ARS.

The ACSS is in charge of the management of financial and human resources, facilities and equipment, systems and IT. It is also responsible for the definition of policy, regulation and planning of health and for working with the ARS on health service contracting.

The five regional health administrations – North, Centre, Lisbon and Vale do Tejo, Alentejo and the Algarve – each have a board accountable to the Minister of Health, and manage the NHS regionally. They undertake the strategic management of population health, the supervision and control of hospitals, and have direct management responsibility for primary care and NHS primary care centres. They are responsible for the regional implementation of national health policy objectives and coordinating all levels of healthcare, including the establishment of agreements and protocols with private bodies and liaison with Government bodies. The archipelagos of Azores and Madeira, also Portuguese territories, have their own regional health systems.

Services are provided, as shown in Figure 4, by a mixture of NHS organisations and private for-profit and not-for-profit organisations. The various central bodies – represented on the right of Figure 4 by the Directorate General of Health (*Direcção-Geral da Saúde*, DGS) the Pharmacy Regulator *Infarmed* and the Health Regulatory Authority (*Entidade Reguladora da Saúde*, ERS) – also play a variety of regulatory and service roles in relation to the service providers.

Figure 4 shows in the bottom left corner how funding comes into the system from individuals and companies in the form of tax, insurance premiums and moderating costs. The Ministry of Finance uses the 70%+ of tax funding to fund the Ministry of Health, while the sub-systems are subsidised directly from the Government budget. The Ministry of Health in turn funds the central and regional administrations, which alongside the sub-systems, fund the service providers.

With growing competition in healthcare and greater devolution in the NHS, the ERS was created in 2003 outside the Ministry of Health, and is responsible for competition policy and the economic regulation of the healthcare sector. It was reformed in 2009 and now aims to ensure that providers meet their requirements for service delivery, that access to healthcare and patients' rights are guaranteed and to ensure competition between providers.

Staffing and resourcing

The greatest benefit in healthcare and the largest cost comes from the healthcare workers themselves. In Portugal, as elsewhere, staffing amounts to more than 60% of total NHS costs. This sub-section examines some of the distinctive points about the health workforce in Portugal before going on to look at overall expenditure.

Figure 5 shows changes in the numbers of key groups of staff within the NHS over the last 2 decades. A number of points stand out within this picture of across the board increases:

- There has been a very large increase in nursing staff from a very low base. Portugal has proportionately more doctors and dentists than the European (EU27) average but still has fewer nurses and a low ratio of nurses to doctors
- Portugal is self-sufficient in clinical staff, with a small number of foreign doctors 1,903 or around 5% in 2007 and sufficient capacity in its medical and nursing schools to be a net exporter. The economic situation is likely to increase migration of clinical and other staff

- It is estimated that about half NHS doctors also work in the private sector; whilst many private doctors also work under contract in the NHS
- Many of the dentists and pharmacists work exclusively in the private sector and the trend has been increasing in recent years

Figure 5
Healthcare personnel, 1990–2008 (selected years)

	1990	1995	2000	2005	2006	2007	2008
Doctors	28 016	29 353	32 498	36 183	36 924	37 904	38 932
Dentists	667	1 411	3 321	5 056	5 665	5 629	6 033
Orthodontists	375	341	293	384	374	374	374
Nurses	28 154	34 225	-	48 155	50 955	54 079	56 079
Pharmacists	5 438	-	8 056	9 494	10 091	10 117	10 729

Source: INE, 2009d. [28] *Note*: Data are also available at http://www.pordata.pt/.

Almost all the people working within the NHS are civil servants: although there are some differences in terms and conditions between, for example, hospital doctors and GPs. Where hospital doctors are often on short-term contracts and have part of their pay determined by their hospital, GPs are usually on permanent contracts which are nationally determined. Some attempts have been made to introduce more performance-related contracts, but none have become widespread.

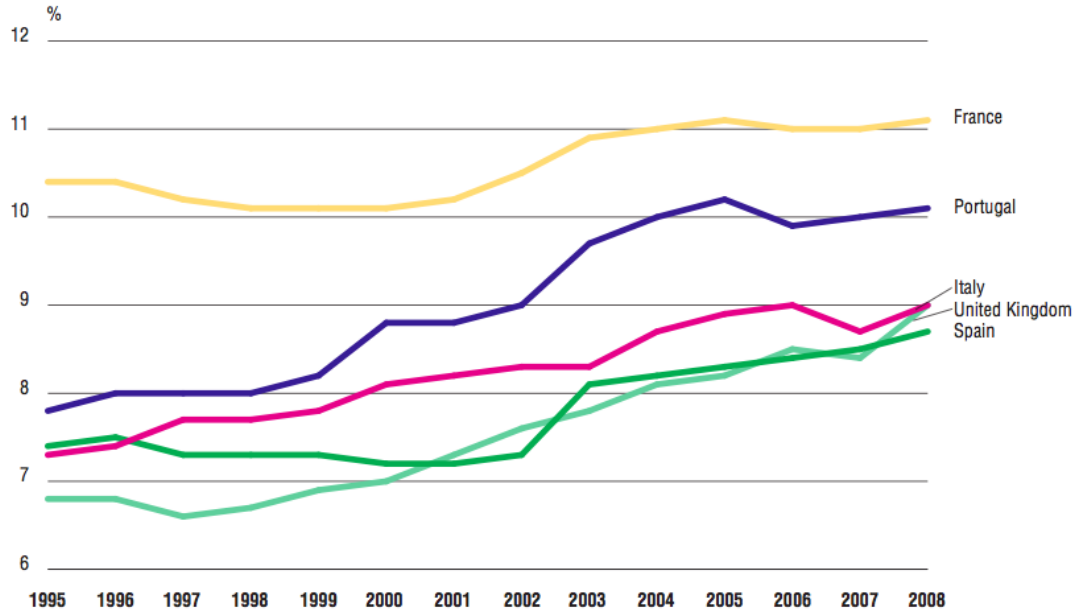
Although there are no systematic international studies available, anecdotes suggest that there has been relatively little extension of nurses' roles compared to some other Western European countries; in part perhaps due to the relative proportions of nurses in the system. Similarly, there seems to have been relatively little in the way of re-designing jobs or introducing new cadres, such as physicians assistants for example, compared to some of these other countries.

There are a number of professional associations and unions including 3 main ones for doctors: the *Ordem dos Medicos* and 2 unions, *Federação Nacional dos Medicos* and the *Sindacato Independente dos Medicos*. Practising physicians must belong to the *Ordem dos Medicos* which accredits and grants licences to practice; accredits and certifies specialist training; and applies the disciplinary code. There are also equivalent bodies for nurses, pharmacists, dentists and psychologists, which represent their professions and, like the doctors' ones, are regularly consulted by the Ministry.

The Commission's Working Group on *Staffing the Service*: will look at *human resources, management, professional and non-professional education and training as well as self care – exploring ways of making the most effective and efficient use of peoples' time, motivations and skills.*

Turning to overall expenditure, Portugal spent 1% more of its GDP on health than the OECD average in 2010: 10.5% as opposed to 9.5%. Figure 6 shows how spending has grown both in absolute and relative terms over recent years, but current cuts in public healthcare spending are likely to effect this over the coming years.

Figure 6
Trends in health expenditure as a share (%) of GDP in Portugal and selected countries, 1995-2008



Source: WHO Regional Office for Europe, 2011[29]

The authors of the European Observatory Report point out that public expenditure has grown as a proportion of this expenditure over the period and suggest that this may be in part due to an assumption that investment was needed in order to build up new facilities and to promote the expansion of NHS coverage. Whatever the causes, a few points stand out:

- Whilst lengths of hospital stay are comparable with other western European countries, occupancy is lower and day case rates are very low, but rising
- It has been extremely difficult to reduce hospital capacity despite this low occupancy. Closures of units in recent years have caused a political storm. As new hospitals have opened and as more continuing care beds have been created in the RNCCI network, there have been no significant reductions in acute beds
- There is high use of hospital emergency departments by the public in preference to going to primary care
- Pharmacy costs are relatively high
- There is no health technology assessment other than in pharmaceutical products

There has already been reference in this section to many of the reforms that the Ministry has introduced in recent years to improve services and increase productivity. They have included the strengthening of public health and primary care, the development of continuing care, changes in public hospital structures, increased provider competition and greater partnership with the private sector. The increased financial problems of the last few years mean that the NHS is now, however, experiencing cuts in its Government funding and needs to take further action.

The Memorandum of Understanding of May 2011 had more than 50 measures and actions concerning healthcare, most of which relate to issues raised in this paper. They include reducing expenditure on pharmaceuticals and changing prescription patterns; increasing “moderating payments”; reducing both the tax relief on private insurance and the subsidy provided to the sub-

systems; promoting more competition between providers; making cost savings in hospitals and improving management. They also proposed achieving a better distribution of doctors in rural areas, an increase in the proportion of those working in primary care, and a faster roll out of the family health units, the USFs and UCSPs.

Professor Barros's recent analysis of progress with these measures shows that many have already been implemented, while those concerned with the human resources issues and the management of the NHS have now been given 'on-going' status and await further action[30].

Key points for the Commission

Some of the key points for the Commission to consider that arise from this brief overview include:

- The importance of long-term conditions amongst the population, healthy ageing and improving men's health, as well as reaching the whole population equitably
- The continuing need for strengthening public health and primary care and re-designing services to meet the needs of the population
- The need to clarify the social contract, particularly in relation to sub-systems and moderating payments
- The potential opportunities that exist around technology and staffing structures
- The importance of effective hospital management in managing the quality of service and costs

Section 3 – Global trends and perspectives

Global trends

Health has become a much more important political and economic issue globally over the last 50 years with greatly increased demand from populations and very large increases in expenditure. As Figure 6 shows, expenditure as a proportion of GDP has gone up by almost 30% in some European countries in only 13 years. It has grown even faster, from a much lower base, in many middle-income countries. As a result there has been an enormous growth in health services and employment and the development globally of very large health and health-related industries.

Now however, health is going through major change, with 4 major disruptive trends affecting the way in which Western countries think about health and healthcare, and which challenge the very ways of organising and delivering health services that have been built up over these years of great expansion.

The first trend, which was noted earlier in Portugal, is the growth in long-term conditions and non-communicable diseases. These conditions have become both the greatest health burden and the greatest health cost, as populations age and modern medicine begins to control the more acute and infectious diseases. Tackling these conditions is now the highest priority in much of the world from India to Europe[31]. It demands a much greater emphasis on prevention and behaviour change and, in many ways, a different sort of health service from that we have all spent so many years developing.

The second, closely linked, trend is the changing role of citizens and patients. Citizens are now better educated, more demanding and less deferential towards health professionals and less likely to simply follow their advice or prescription without question. At the same time, individual's attitudes

and behaviours are increasingly both a part of the problem and of the solution in dealing with the growth of non-communicable diseases.

The third trend is the very rapid development in biological and information sciences and technology. We are only at the start of "personalised" medicine but already genetic testing and biological diagnoses are changing the way patients with a range of different conditions are treated[32]. Information and communications technology, meanwhile, is already bringing us new imaging and diagnostic techniques and the ability to monitor and treat patients remotely and at earlier stages in the development of their conditions. Taken together these developments offer us enhanced ability to plan for maintaining health rather than concentrating on tackling illness and disease.

The fourth trend is increasing globalisation and global interdependence in health and healthcare. Experience this century with SARS has already shown how new diseases can spread rapidly around the world, whilst old diseases like TB can become drug-resistant and pose new threats globally. Environmental issues such as climate change or nuclear accidents present similar problems. All countries share a dependence on shared surveillance systems and rapid response to epidemics. They are also dependent on the same groups of highly mobile health workers and, increasingly, the same drugs and knowledge base. There is also a steadily growing harmonisation of policies and approaches to health and healthcare, most notably in supranational bodies such as the EU, which imposes obligations and constrains the independent action of states.

These changes affect Portugal as much as anywhere else and are profound. We are in the middle of a paradigm shift in health and healthcare, where almost everything from service organisation to funding and professional education needs to change and adapt to the new environment. Portuguese leaders as well as others have drawn attention to both the problems and the opportunities. They have called for the development of new services[33]; for a new emphasis on prevention of disease and health promotion[34]; the empowerment of citizens and patients[35]; changes in professional education[36]; new funding arrangements[37]; and argued that *"a Nova Medicina exige por isso um NOVO MEDICO"*[38].

The difficulties of developing new services are compounded by the need to change and close older ones. In Portugal as elsewhere there have been public protests when, for example, smaller maternity units have been closed, and it is notable that no acute beds have been closed when new hospitals have been opened or when new continuing care facilities have been made available. A large part of the problem of change is in dealing with this legacy of older facilities and services.

These 4 global trends are often seen as simply adding to the costs of healthcare. The arguments are made that people are living longer with expensive conditions, they are more demanding, medical science can now do much more and new regulations and global health protection all cost more. There is some truth in this, of course. Some treatments are more expensive. Moreover, looking globally, more countries from China and India to South Africa and the United States are seeking to provide universal health coverage to their whole populations, providing more and more people with healthcare and thereby increasing expenditure.

The position is, however, much more complicated than this. There is, as we shall see later, enormous waste in the way healthcare is currently delivered, in part due to the "legacy" problem and the fact that existing systems designed for one set of problems are being used to deal with others. Moreover, there are enormous opportunities for reducing costs through the greater involvement of patients, better use of technologies and the re-design of jobs and professional roles.

The nature and the extent of the changes happening globally in health and healthcare have only really become apparent in recent years and few, if any, countries have addressed them yet in a

comprehensive way. Many, however, have made progress in dealing with some of the issues and there is much to be learned from their experience.

The Commission is in the privileged position of being able to consider the combined impact of all these changes and look around the world for the most promising developments so that it will be able to "*identify the key issues – political, professional and organisational – which Portugal's NHS, citizens and state will have to address to move towards its vision for the future … and make proposals for action."*

The major policy responses

The Governments of most Western countries have led a series of healthcare reforms over recent years as they tried to deal with and get ahead of these major changes in the environment. Portugal itself is typical in having had a series of reforms in recent years, which are a mix of changes in incentives and funding, in relationships between parts of the system, and developments in service delivery.

These reforms have taken place against the background of an increasing awareness globally of the importance of understanding the wider determinants of health: the social, environmental, economic and personal factors which influence the health of individuals and populations. These are apparent at every level, from the air we breathe to the education we receive and the food we eat. There is now an extensive literature on this subject[3940]. This growing awareness has led in turn to efforts by governments, including Portugal's, to join up policy across sectors and populations – linking education and employment with health, for example – and to promote links between private enterprise and public health systems.

Turning to the healthcare reforms themselves, these have fallen broadly into 3 groups. Many of the reforms globally have been based on economic analysis, with the introduction of some level of competition and market based behaviour, greater involvement of the private sector in state led health systems, and changes in service pricing and in incentives for organisations and individuals. Others have been concerned with quality and the development of standards to be used for commissioning services, the introduction of inspection and accreditation systems, and the use of quality improvement approaches. A further group has been concerned specifically with tackling the determinants of health and promoting public and population health.

Regional policy is also very important. In September 2012, member states of the World Health Organization (WHO) European Region, including Portugal, agreed on a new common policy framework, *Health 2020*, the goals of which are to "*significantly improve the health and wellbeing of populations, reduce health inequalities, strengthen public health and ensure people-centred health systems that are universal, equitable, sustainable and of high quality*"[41]. The framework identifies two key strategic directions: improving health for all and reducing health inequalities, and improving leadership and participatory governance for health. It stresses the importance of a multi-level and multi-sectoral approach, and the need for greater coordination and integration between a wide variety of stakeholders, including citizens, communities, civil society and governments. It follows the Health in All Policies (HiAP) strategy, which aims to strengthen the links between health and other policy areas such as agriculture, education, the environment, fiscal policies, housing and transport, based on increasing evidence that these are mutually effective[42].

The *Health 2020* framework seeks to address many of the health problems faced by Portuguese citizens. It prioritises health promotion policies and healthy ageing to tackle the growing burden of chronic diseases and ageing populations. It also emphasises that empowering people, citizens, consumers and patients is critical for improving health outcomes, health system performance and patient satisfaction. In line with the Portuguese Ministry of Health, the framework targets include

universal coverage and equity of access to health services. Furthermore, in September 2013 the annual regional committee meeting for WHO Europe will be held in Portugal.

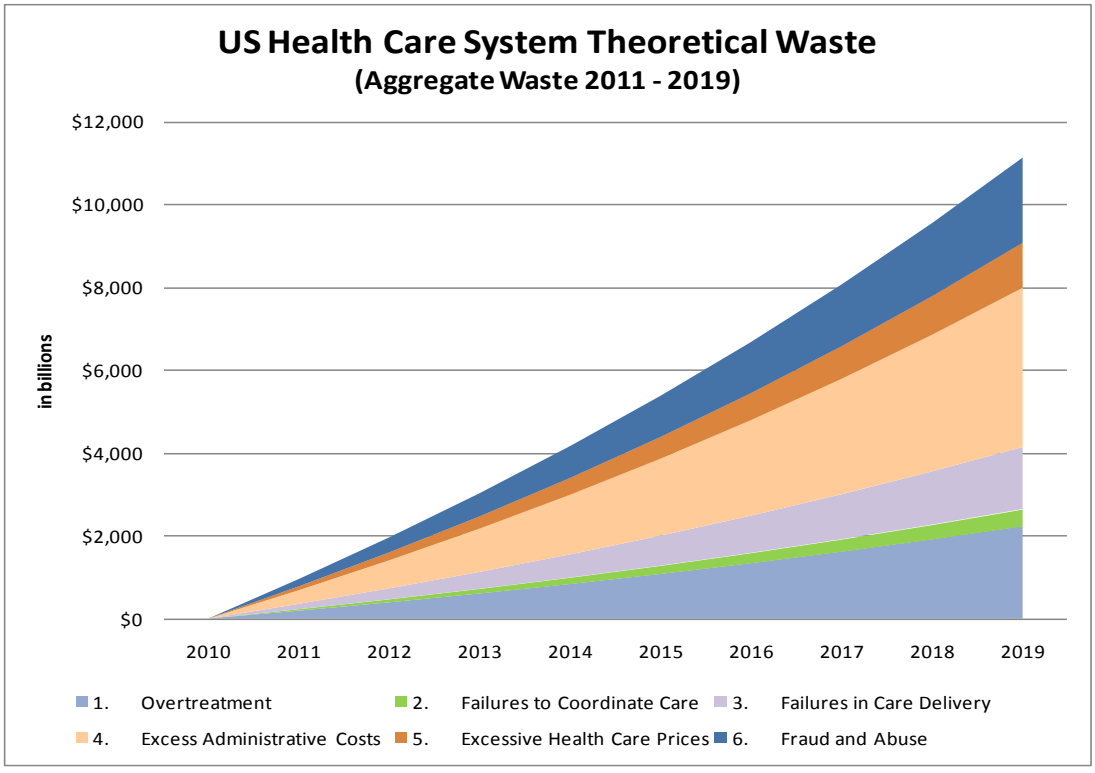
The Commission will examine both the evidence of impact and the problems associated with these various approaches. In doing so it will concern itself with both equity and sustainability, in accordance with its brief, and be conscious of the need to produce a Portuguese solution that will provide for the health and healthcare needs of Portuguese people and their families.

Against this wider global and European background, the Commission will make use of 2 models developed elsewhere which are now used in many European and other countries. Firstly it will frame the problem that Portugal needs to address as: how to achieve the *Triple Aim* of improved care for individuals, improved health for the population and, at the same time, achieve better value for money and reduced waste[4344].

In doing so the Commission will need to choose measures to describe improved care for individuals and improved health for the population but the concepts themselves are clear. The idea of waste in healthcare, however, needs further elucidation. Don Berwick and Andrew Hackbarth have described this in the US environment in terms of 6 categories: "*over treatment, failures of care coordination, failures in execution of care processes, administrative complexity, pricing failures, and fraud and abuse - the sum of the lowest available estimates exceeds 20% of total healthcare expenditures*"[45].

Figure 7 shows their estimates of the scale of the problem in the US today and the increasing cost of these categories of waste over future years if nothing is done to halt their growth. This idea of waste will be an important concept for the Commission's work.

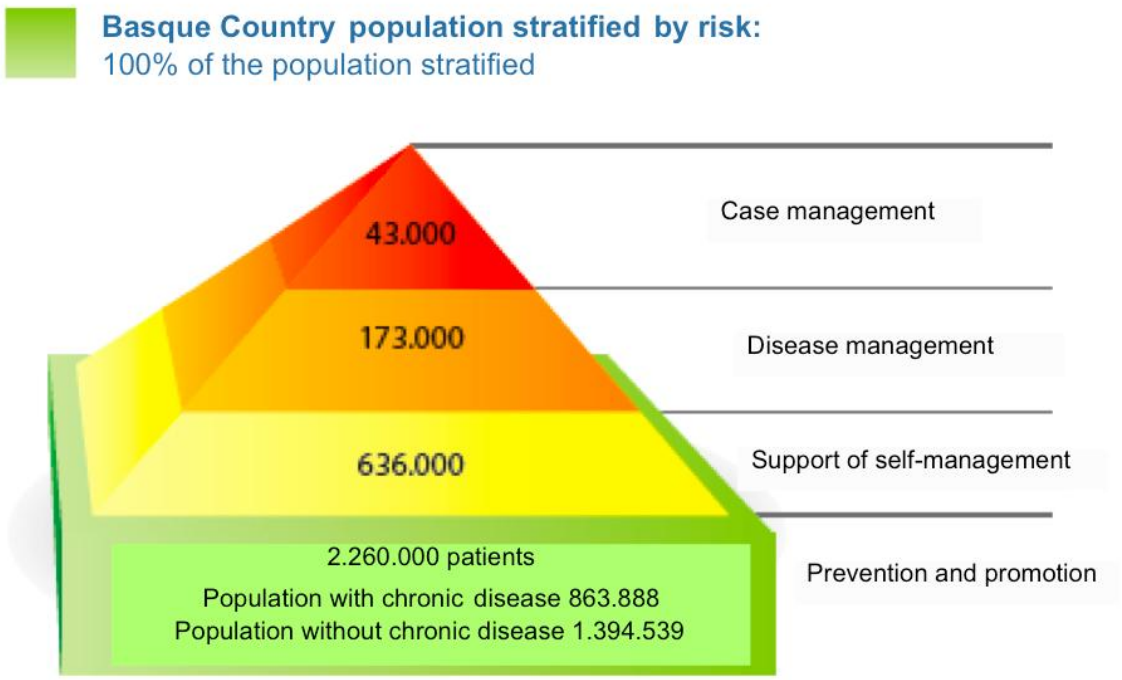
Figure 7
Projected costs of waste in US healthcare



Adapted by DM Berwick from source:[46]

The second model, which comes from the insurance industry via the US company Kaiser Permanente, is a way of stratifying risk. It recognises that some patients are much more at risk than others of needing healthcare support. Figure 8 shows how the Basque Government, faced with rising numbers of patients with long term chronic conditions, have adapted this model to divide their population into 4 groups according to their needs. They, like others, are now using this model to target resources to the patients that need them. The numbers in figure 8 are for the Basque country, but it is likely that risk stratification for Portugal would produce similar proportions in each segment of the triangle.

Figure 8
Diagram of a pyramid of population stratification



Adapted from source: Gobierno Vasco, 2010 [47]

As the work of the Commission develops it may well want to draw on other such conceptual models in use in Portugal and internationally which offer insights both into the problems being faced and into potential solutions.

Innovation in care, health and costs

Most innovation, of course, occurs outside Government independently of these sorts of reforms and, sometimes, despite them. There is a great deal of innovation happening in Portugal and good practice and best practices can be identified in many areas. Looking globally, the 3 most promising areas, which could have the biggest impact on all 3 parts of the *Triple Aim* are: the activation and engagement of citizens, patients and communities; the application of science and use of technology; and changing the skill mix of the health workforce through re-designing roles and improving

teamwork. A few examples of each from outside Portugal illustrate the potential impact of introducing innovations in these areas.

Most health education and healthcare is, of course, already delivered by patients, their families and their carers. Leaving aside the role played by mothers and many (mostly female) relatives; diabetics provide most of their own healthcare; the best treatments for colds and seasonal flu are self-prescribed over the counter remedies; and exercise and diet are excellent prophylactics. Healthy ageing is associated with having meaning in your life as well as some sort of social circle. Health professionals add little to most of these activities and it is reasonable to ask what more can people do for themselves?

The HIV Clubs of Southern Africa where HIV patients counsel and support each other in the absence of sufficient health workers are mirrored by the COPD self-help groups in the UK; whilst "expert patients" in Spain, the UK and the US offer help to staff and patients alike. Peer educators are better than professional staff at helping Asian women in England to change their diets and improve their health. Cancer patients in the US use social media to collect and disseminate information about new drugs faster than doctors' networks do, and contribute directly to pharmaceutical research. Meanwhile, in Jonköping in Sweden kidney patients do their own dialysis in a unit where they let themselves in with a swipe card at times to suit themselves, rather than to fit in with the hospital's timetable. This arrangement has reduced costs and cross-infection and improved patient satisfaction.

Systematic analysis and scenario planning which looked at likely costs of the English NHS over 20 years showed that the scenario where patients themselves were "*fully engaged*" in their own healthcare as informed and active participants was likely to be much the least expensive option for continuing to provide a universal and high quality health service[48]. There is potentially a great deal to be gained from a radical and determined approach to activate and engage, citizens, patients and communities.

If we turn to science and technology, the greatest immediate opportunity for improving services whilst reducing costs is in the use of information and communication technology. Here again there are many examples worldwide from patients receiving their test results electronically and using health 'apps' on their smart phones to clinicians having fast access to the information they need for urgent decision making. Health Cluster Portugal, which brings together academic, commercial and health service interests, has recently launched an ambitious project promoting technology to assist well being and healthy ageing, and the development of the capacity to do so in Portugal[49].

There has already been one large-scale randomised control trial done on the use of remote monitoring and access to healthcare. The *Whole Systems Demonstrator* in England provided remote monitoring and telephone and email access to clinicians in their own homes to a structured sample of 3,100 people over 12 months and compared their health and use of health services to a matched sample of 3,100 people who accessed the NHS in the traditional way. The results were compelling. Admissions to hospital were reduced by 20%, attendances at the emergency department reduced by 15%, cost fell by 8% and, to the surprise of researchers, mortality was 45% lower[50]. The approach is now being rolled out to the 3 million people in the country who are thought to be the most likely to benefit.

New biological analysis and diagnosis holds considerable promise for the future. Already we know with some diseases that if we can identify the patient's phenotype we can tell if a particular therapy will work or if we will simply be wasting money by treating them in the traditional way. Equally, studies have shown that early diagnosis of cancer not only improves survival rates for the patient, but also drastically reduces treatment costs[51 52].

Changing the skill mix of the health workforce through re-designing roles and improving teamwork is the most challenging of these 3 approaches. There are many successful examples around the world where health workers have taken on roles traditionally done by others: from physician assistants in the United States and nurse practitioners in Europe taking on new roles as diagnosticians and endoscopists to the development of new types of workers in primary care teams in rural Brazil.

There is little consistency world wide. Nurse anaesthetists are common in the US but not used in the UK. In contrast, midwives have a far bigger role in the UK than in the US, where doctors maintain their control of childbirth. One of the biggest systematic changes occurred in the UK in 2003 when carefully selected and trained nurses and other non-medical clinicians were allowed to prescribe from a limited formulary. This change was supported by many doctors but opposed by their professional representatives. In the event, research has shown that these prescribers are just as safe and consistent as doctors and that patient satisfaction has increased[53]. They are now an accepted part of the British NHS, and in 2012 non-medical prescribing was extended further to include controlled drugs[54].

In this area as elsewhere some of the most radical and successful innovations are coming from low and middle income countries where people without the resources or, crucially, the baggage and vested interests of the West are innovating more freely[55]. International studies of the work of *Tecnicos di Cirurgia* in Mozambique or cataract surgeons elsewhere in Africa, for example, have shown that they can be as successful as physicians and at far lower cost. Aravindh in India is now widely recognised as a world leader in providing high quality eye care at low cost, and does so in part through using health workers in different roles and emphasising teamwork[56].

Critics of changing skill mix are rightly concerned about patient safety and training and, worldwide, there have probably been more failures than successes in these types of schemes. However, there is clear evidence both that they can be very effective if done well and about how to do them well. The success factors are very simple: good leadership and planning; appropriate job design and recruitment of the right people; formal training and scope for progression; appropriate supervision and the ability to refer on; and recognition of an individual's contribution within a well functioning team[57].

There is obviously great overlap between these innovations as changes in technology, for example, may enable changes in skill mix and permit patients to play a bigger role in their own care. Individually, these approaches may have significant impact. Together they can be transformational.

The Commission will bring together these two approaches of pursuing the *Triple Aim* with what we may call the *Triple Gain* from these 3 groups of innovations. It will seek to identify how each of these innovations can impact on each of the aims as shown in Figure 8. How can technology, for example, improve care, how can it improve health, and how can it reduce costs and waste? 3 of the Commission's Working Groups will have a specific role with regard to one of these areas of innovation and potential gain.

Figure 9
Triple Aim and Triple Gain

	Citizens, patients and communities	**Science and Technology**	**Health workers – skill mix, new roles and better teamwork**
Improved Health			
Improved Care			
Better value for money and reduced waste			

It will not be difficult for the Commission and its Working Groups to identify interesting innovations happening in Portugal and around the world. The larger tasks will be to determine which will have the greatest beneficial impact in Portugal and, most importantly, how these can be implemented in practice and at sufficient scale to make a real difference in the country. The identification of innovation and best practice is not difficult, spreading it at scale is.

There are many barriers to change but the most important are probably the human ones: reluctance to change established habits and practices, concerns about what the outcome will be, and what impact change may have on employment and professional responsibilities and boundaries. Experience globally suggests that the best way of introducing most innovations is bottom up, working with the people most affected and giving them the space to lead and adapt the change. The most effective organisations in healthcare are those where everyone takes responsibility for improving processes and outcomes locally. The Commission will explore with the Working Groups how this can best be done in Portugal, drawing on the science of improvement and developing appropriate ways for developing and spreading the best innovations and practices.

Key points for the Commission

This brief review of global trends and perspectives suggests that the Commission and its Working Groups need to

- Understand the impact of the 4 major global trends in Portugal - the growth of long term conditions and non-communicable diseases; the developing role of the population in health and healthcare; the expanding scope of science and technology; and the increasing global interdependence in health and healthcare

- Frame the problem they are dealing with in terms of the *Triple Aim* – how to improve health, care, and costs simultaneously
- Learn from the experience of other countries in these 3 areas about how they have designed their health systems to secure and improve quality; promote health and prevent disease; and used economic levers to improve costs and productivity
- Identify and analyse waste in the system and plan how to reduce it
- Look for the highest impact innovations – *the Triple Gain* - particularly in activating citizens, patients and communities; using science and technology; and changing the skill mix, re-designing roles and improving teamwork in the workforce
- Explore how best to manage change in Portugal, develop the skills of quality improvement in the workforce and spread the best innovations and practices at scale

Section 4 - The work plan and process for the Commission

The structure and working arrangements of the Commission

The earlier sections have set the brief for the Commission and begun to shape how the various elements of the Commission will operate

The Commission will work through a 4 part structure made up of:

1. The Commission itself which will have overall control of the study and approve the final report for presentation to the Foundation.

   It will concentrate on the big picture – the vision, the social contract, the framework and governance - and on bringing together the insights from the Working Groups into a coherent whole. It will be concerned with the practicalities of how to manage change and implementation and will identify the key issues which must be addressed and make proposals for action.

   The Commission consists of a Chair and 6 other members. The 3 Portuguese Commissioners will bring insight and experience of the current health system with specialist knowledge of particular aspects or sectors. The Chair and the 3 external Commissioners will be able to bring knowledge of other systems and approaches as well as expertise and experience in running big systems.

2. Working Groups set up by the Commission to review particular topics and areas and make recommendations to the Commission.

   They will be concerned with the more local level of activity, what happens in reality, how particular problems affect the health and access to services of Portuguese people and families, and what innovations and changes could have the most beneficial impact. They will be asked to survey their area of responsibility and identify the most promising approaches to be followed.

Each Group consists of a Chair and 6 others from different backgrounds and at different stages of their careers who are able to bring particular perspective and expertise to the task. They cover:

1. **Health services and public health**: reviewing service design and delivery, quality improvement and public health – breaking down existing barriers between organisations, services and sectors where necessary, to meet health needs and support a healthy population
2. **Citizens and the NHS**: looking at the roles, rights and responsibilities of patients, citizens and others as well as at financial issues, governance and regulation – and seek to create the foundation for a new national consensus and re-design of the existing system
3. **Staffing the service**: covering human resources, management, professional and non-professional education and training as well as self care – exploring ways of making the most effective and efficient use of peoples' time, motivations and skills
4. **Harnessing knowledge, technology and innovation**: this will look at academia, industry and health service providers working together to make the best use of knowledge and technology – seeking ways to create a favourable environment for innovation, enhancing competitiveness in health related industries and fostering internationalisation to the benefit of Portuguese patients and citizens

There will be some overlap between the topics discussed by the Groups and some common themes such as patient engagement, quality and financing that will cut across them all. The Commission will review these with the Groups part way through the process and determine how best to handle them.

3. An Advisory Board made up of senior representatives of stakeholders in the health sector, which will be consulted by the Commission at the outset of the process, for discussion of interim reports and prior to publication of the final report.

   This consultative process will be reinforced by the support team using a website, blogs and social media to seek ideas, commentary and opinion from a wider group of participants across the country.

4. A support team working to the Chair of the Commission, which will be equipped to commission and undertake analysis and to support the logistics of the whole process and promote communications. Part of its role will be to ensure that the Commission has access to information on world best practice as well as to a clear understanding of what is happening today in all parts of Portugal. A second equally important part will be project management so as to ensure that the whole process runs smoothly and that communication and consultation is undertaken effectively.

   The support team will be led by a Project Leader supported by a Project Manager and will be the main point of contact for all parties.

Timetable

The Commission will start its work in February 2013, review preliminary reports from the Working Groups in the summer and present its final report to the Gulbenkian Foundation by September 2014.

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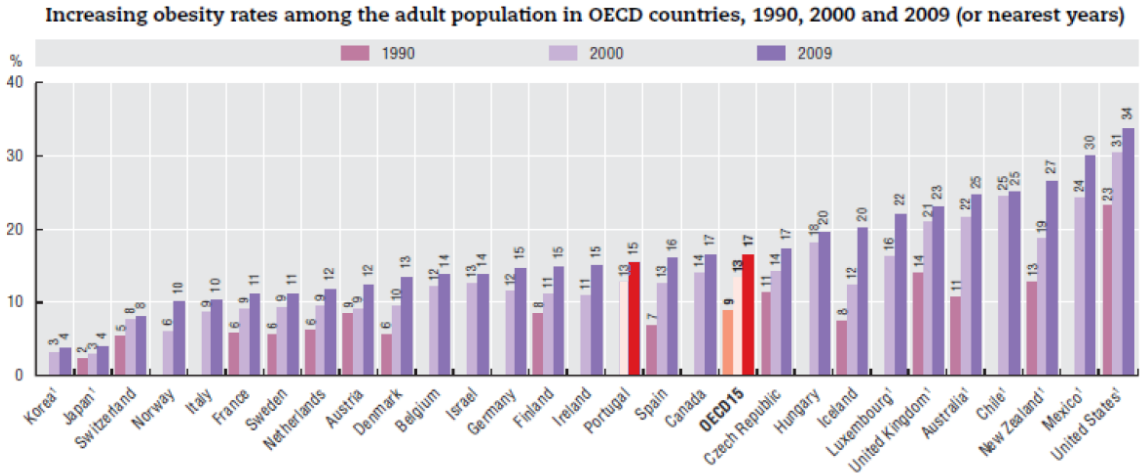
Appendix 1 – the essential facts and figures about health and health systems in Portugal

Epidemiology

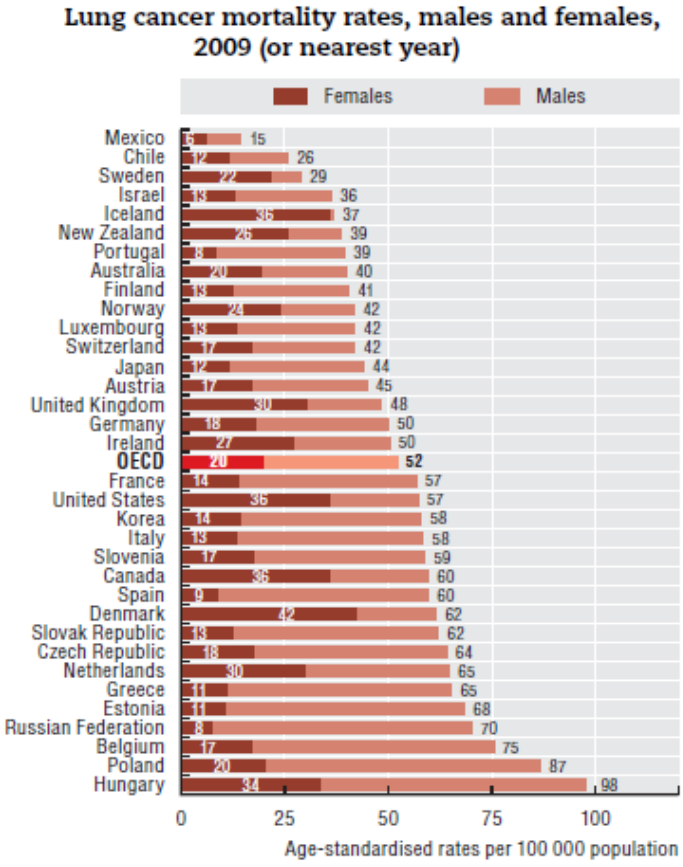
Figure 10



1. Data are based on measurements rather than self-reported height and weight.

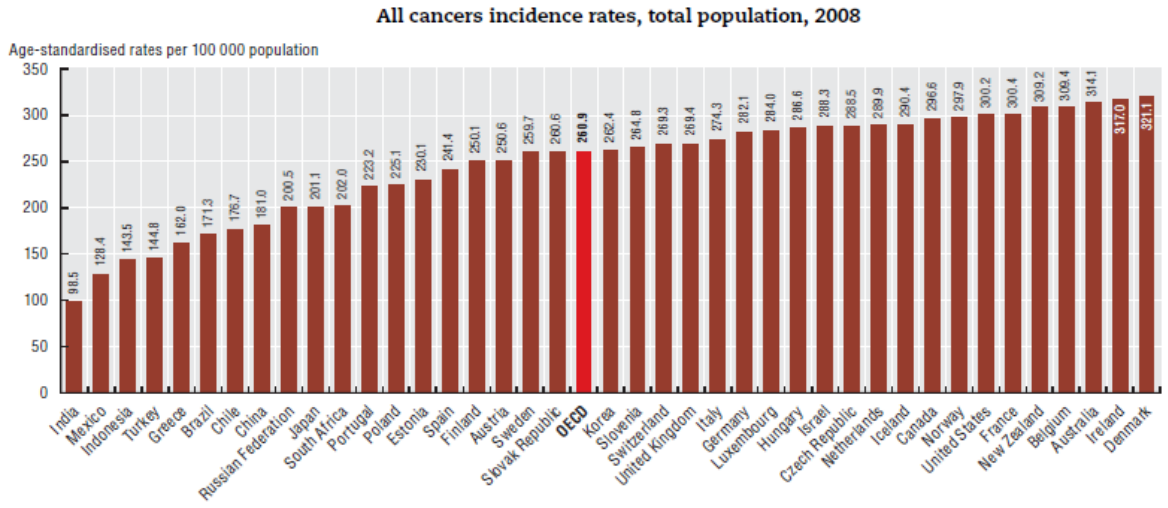
Source: *OECD Health Data 2011.*

Figure 11



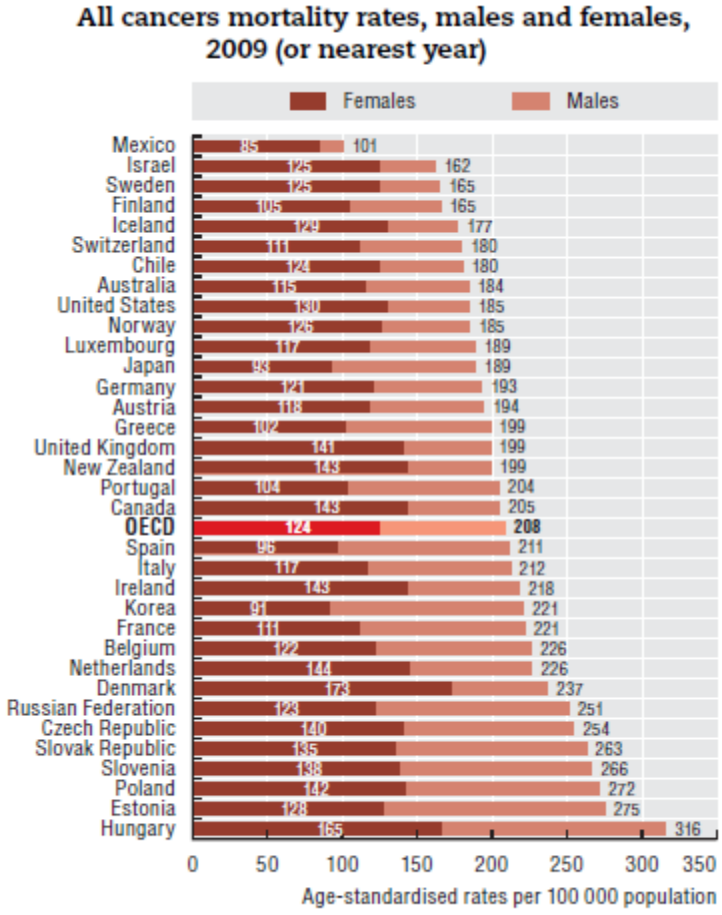
Source: *OECD Health Data 2011; IS-GBE (2011).*

Figure 12



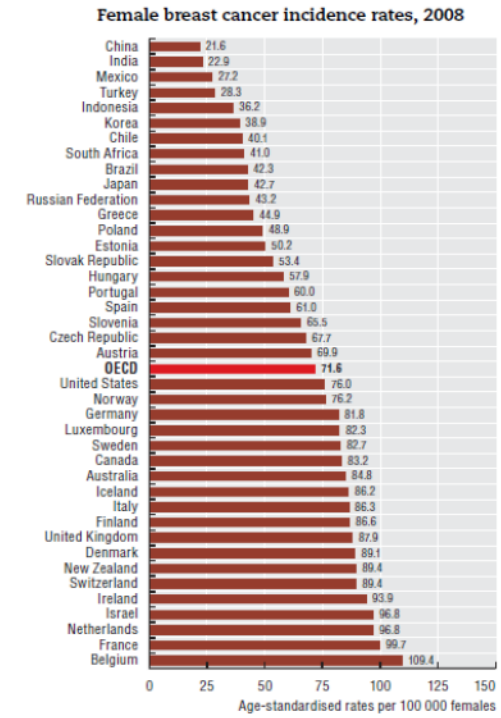
Source: Ferlay *et al.* (2010).

Figure 13

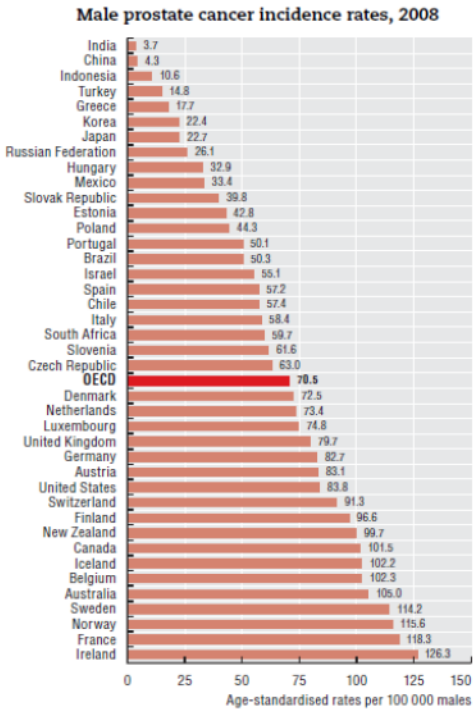


Source: OECD *Health Data* 2011; IS-GBE (2011).

Figure 14

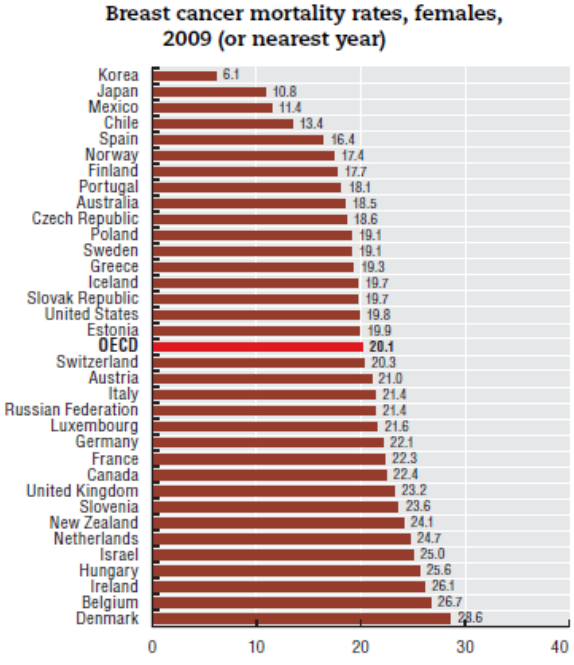


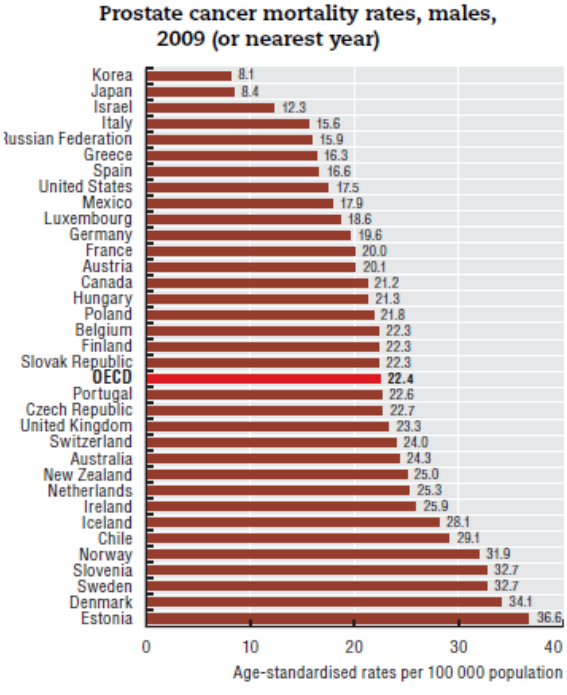
Source: Ferlay et al. (2010).



Source: Ferlay et al. (2010).

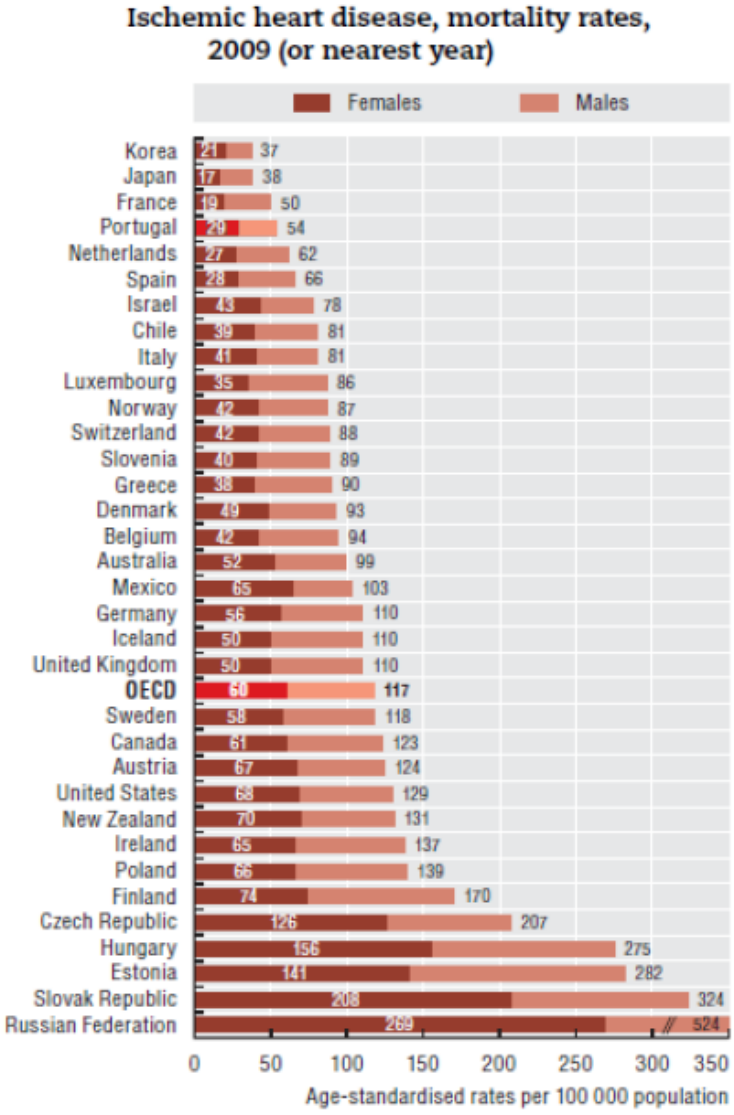
Figure 15





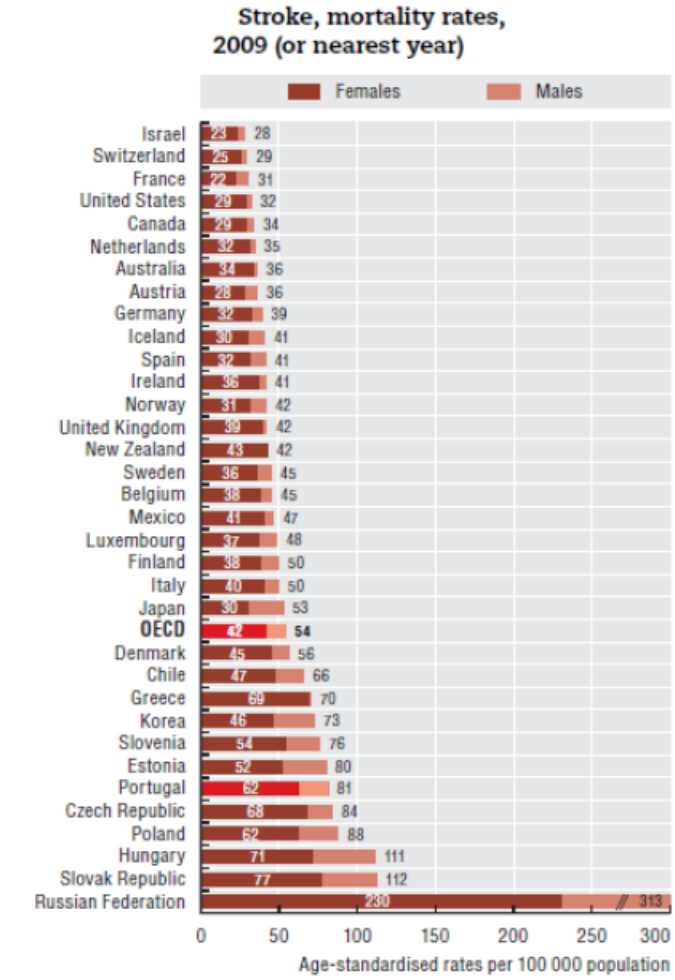
Source: OECD *Health Data* 2011; IS-GBE (2011).

Figure 16



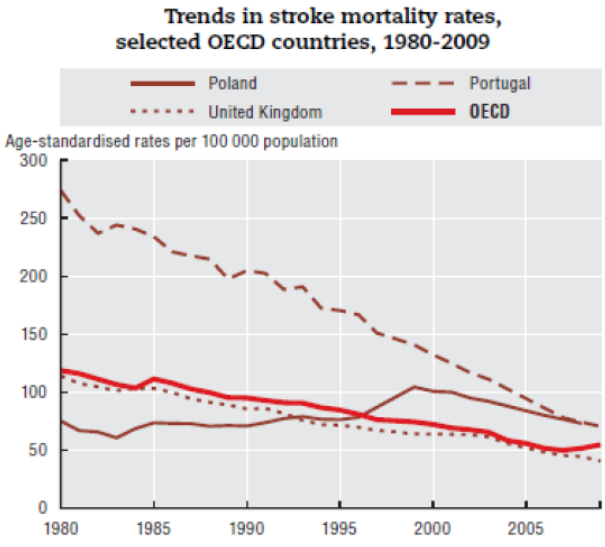
Source: OECD Health Data 2011; IS-GBE (2011).

Figure 17



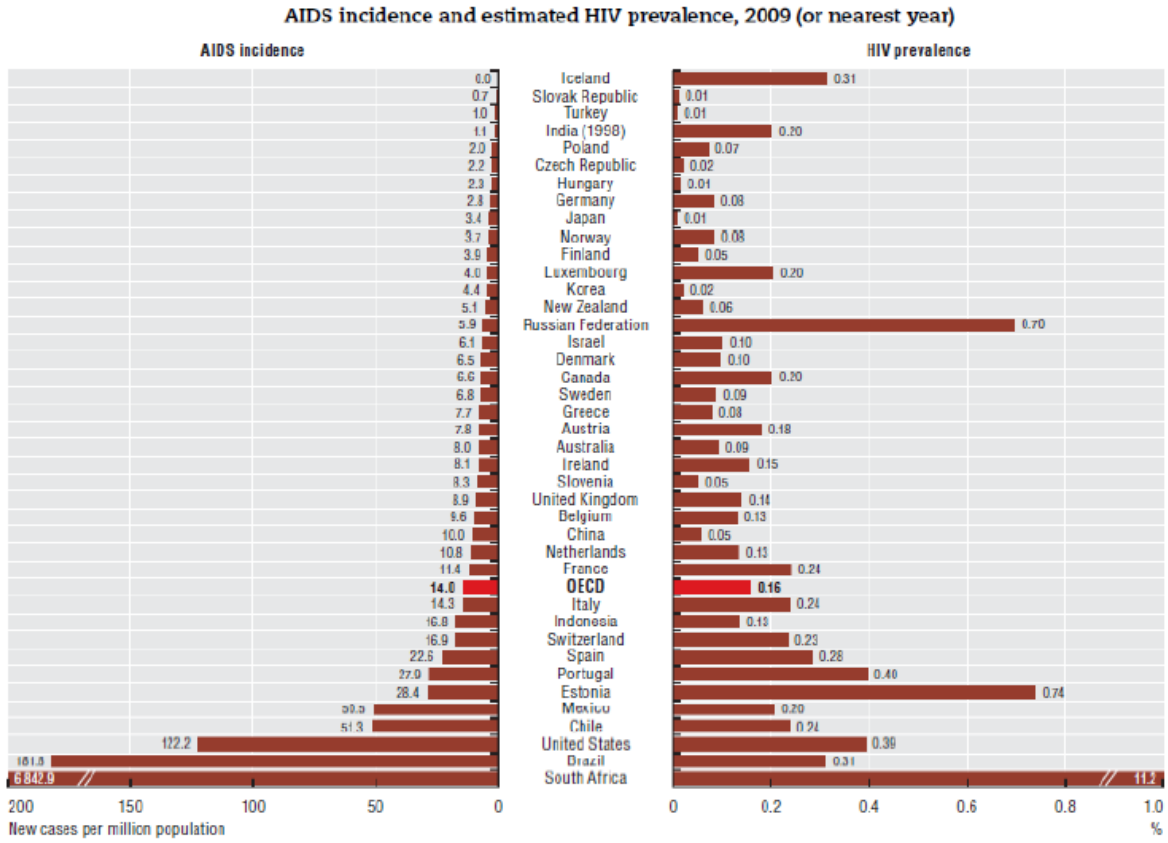
Source: OECD Health Data 2011; IS-GBE (2011).

Figure 18



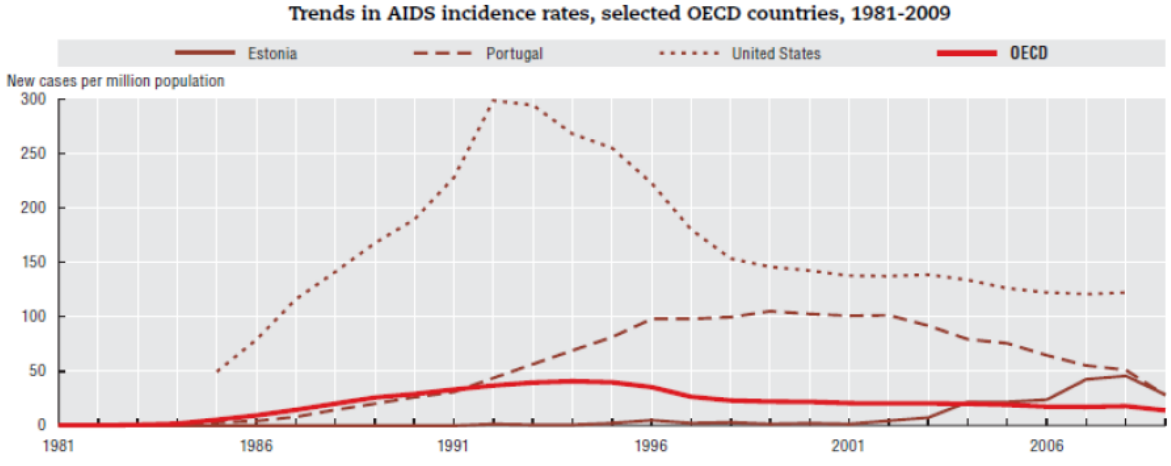
Source: OECD Health Data 2011.

Figure 19



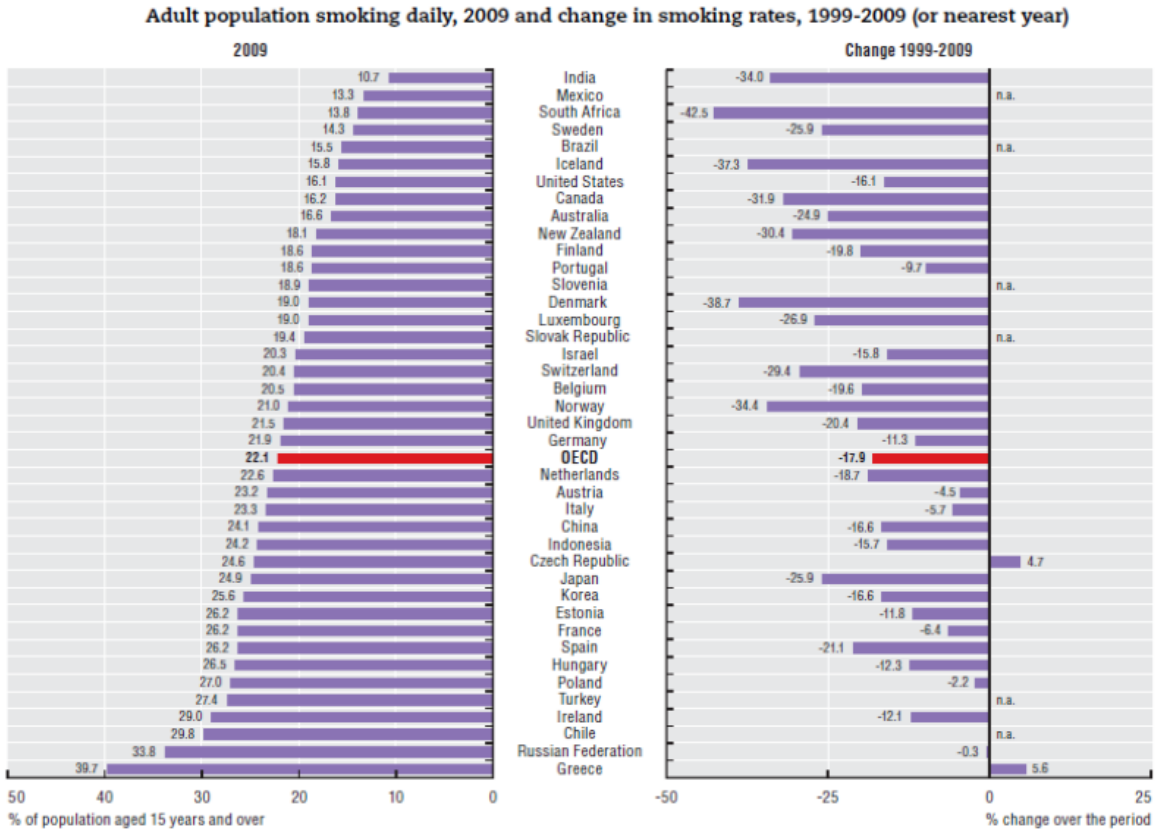
Source: OECD Health Data 2011; UNAIDS (2010).

Figure 20



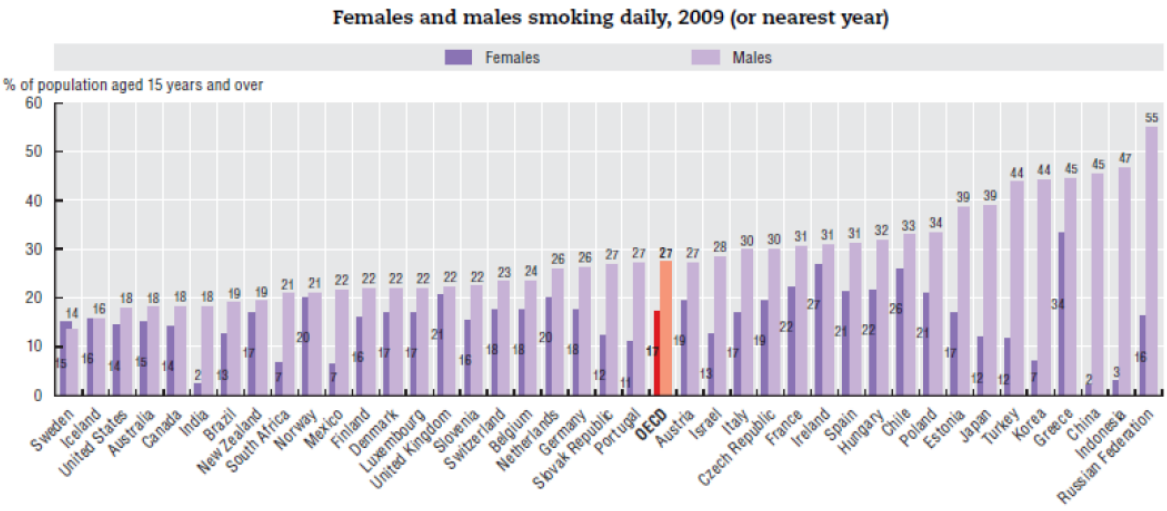
Source: OECD Health Data 2011.

Figure 21



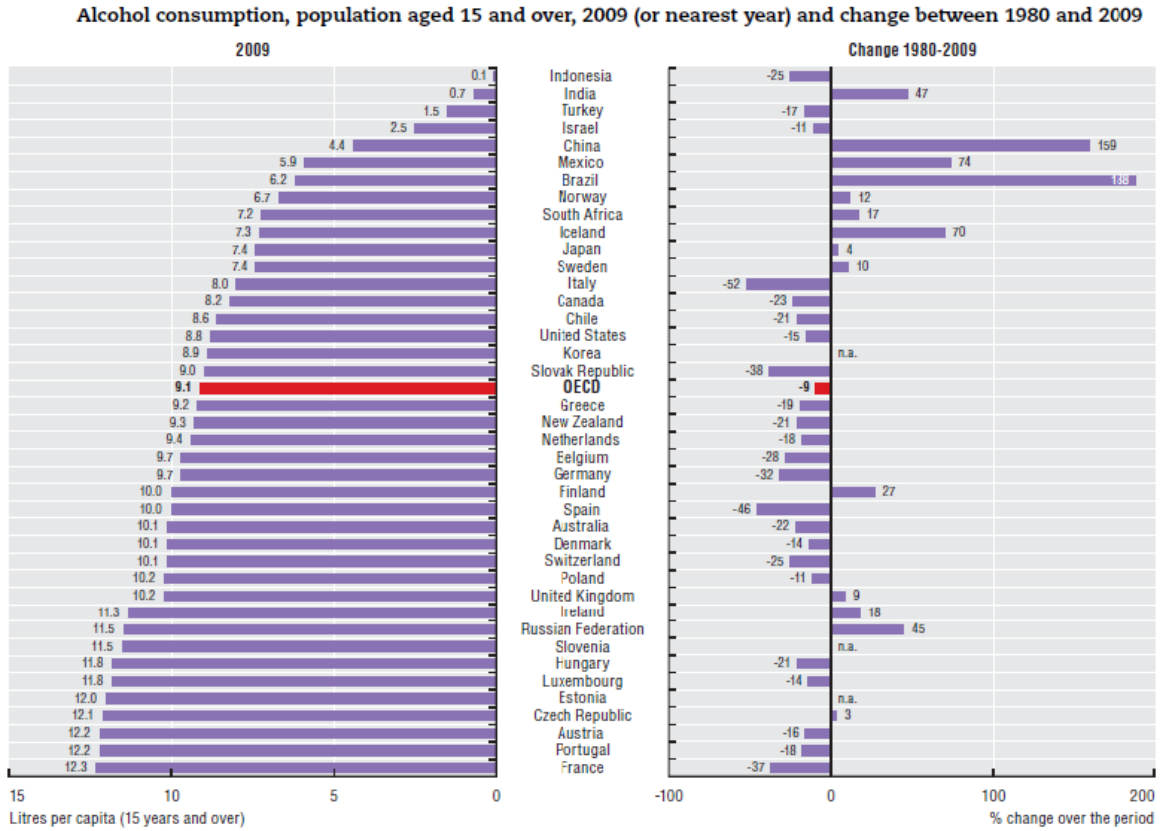
Source: OECD Health Data 2011; national sources for non-OECD countries.

Figure 22



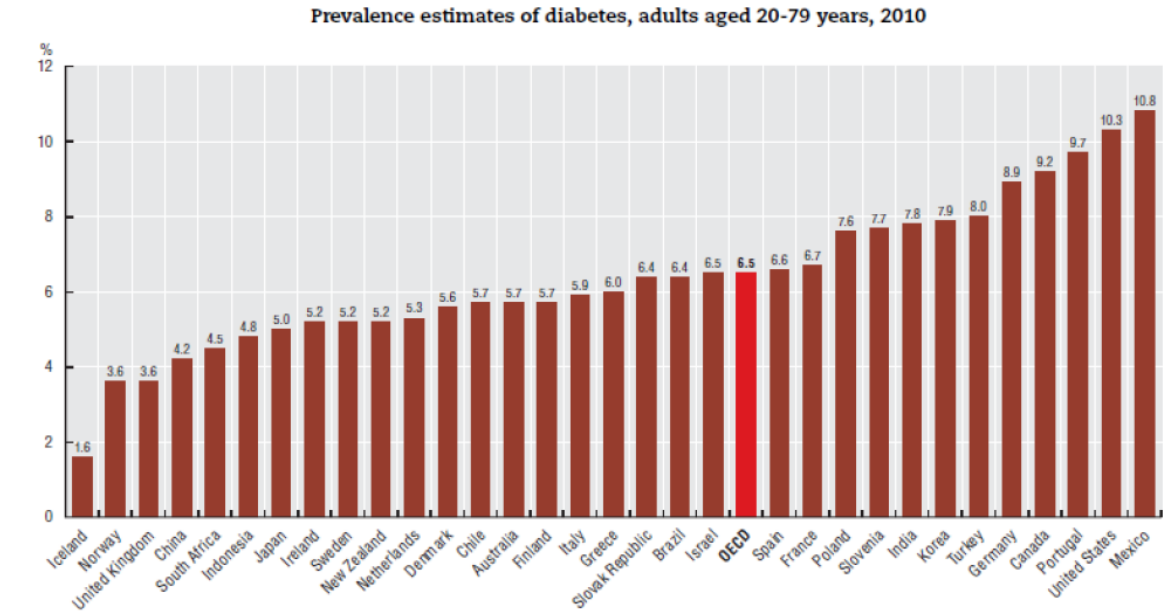
Source: OECD Health Data 2011; national sources for non-OECD countries.

Figure 23



Source: *OECD Health Data 2011*; WHO (2011a).

Figure 24



Note: The data cover both Type 1 and Type 2 diabetes. Data are age-standardised to the World Standard Population.
Source: IDF (2009).

Figure 25

Population/demographic indicators, 1970 to latest available year						
	1970	**1980**	**1990**	**2000**	**2005**	**2010**
Birth rate, crude (per 1 000 people)	20.8	16.2	11.7	11.7	10.4	9.5
Death rate, crude (per 1 000 people)	10.7	9.7	10.3	10.3	10.2	10
Fertility rate, total (births per woman)	3	2.25	1.57	1.56	1.41	1.32
Population density (people per km2)	94.37	106.18	108.49	111.18	114.66	116.29
Urban population (% of total)	38.8	42.8	47.9	54.4	57.6	60.5
Educational level – 9 years of school (%)	14.4	25.8	54	83.9	82.5	86.5[a]

Sources:World Bank, 2010

Notes: [a]2009

Figure 26

Mortality and health indicators, 1970–2008 (selected years)						
	1970	**1980**	**1990**	**2000**	**2007**	**2008**
Life expectancy at birth, female (years)	70.3	74.6	77.6	80.3	81.6	81.4
Life expectancy at birth, male (years)	64	67.5	70.6	73.2	74.9	74.9
Life expectancy at birth, total (years)	67.1	71.2	74.1	76.8	78.3	78.2
Mortality rate (per 1 000 female adults)	10.1	9	9.6	9.5	9.2	9.3
Mortality rate (per 1 000 male adults)	11.5	10.6	11.1	11.1	10.4	10.4
Mortality rate, crude (per 1 000)	10.7	9.7	10.3	10.3	9.8	9.8
Infant deaths per 1 000 live births	55.5	24.3	10.9	5.5	3.4	3.3
Probability of dying before age 5 years (per 1 000 live births)	-	29.2	14	7.3	4.2	4

Sources: INE, 2009a, 2009b, 2009c, 2009e; WHO Regional Office for Europe, 2010.

Health system structure

Figure 27

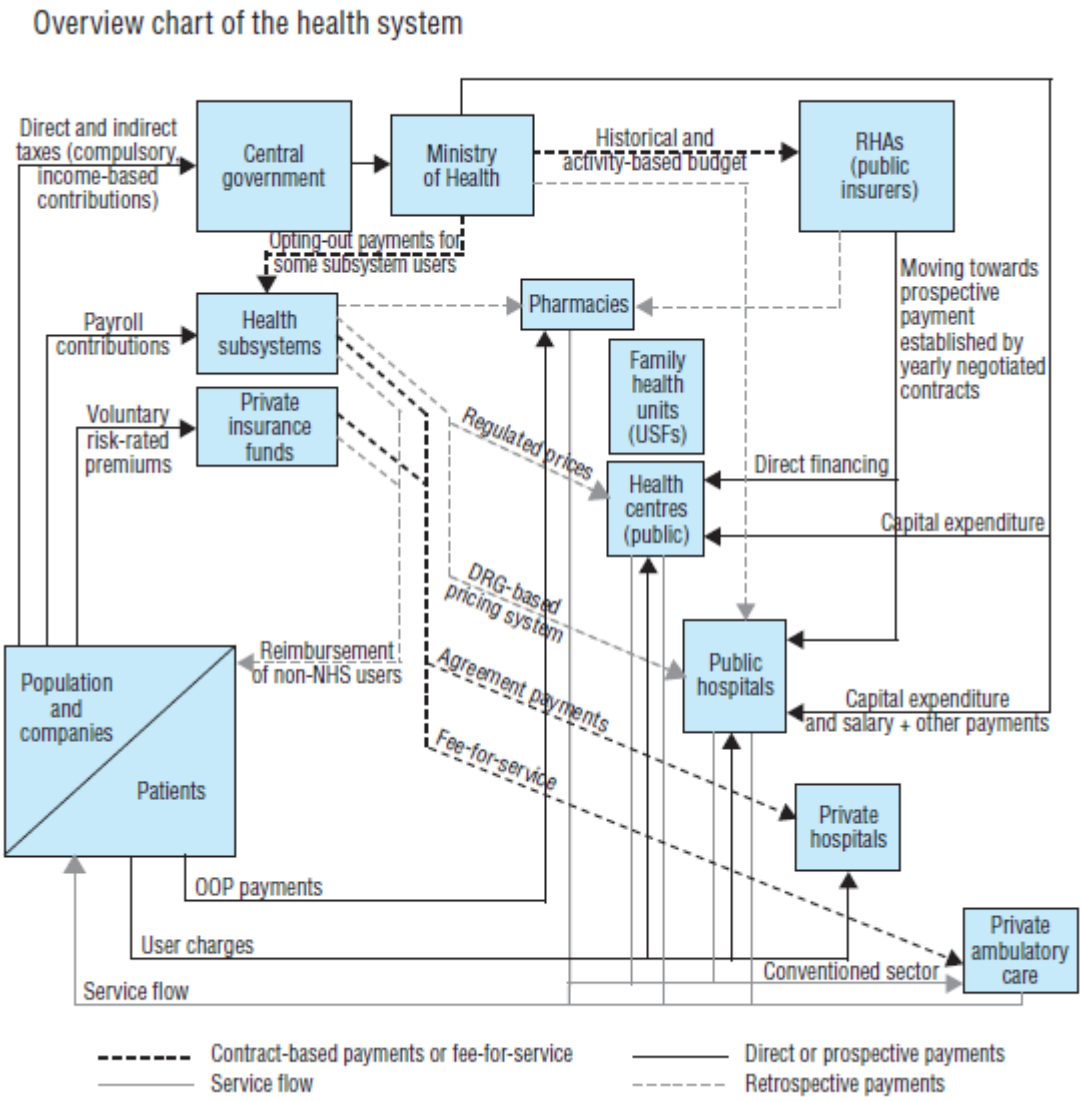
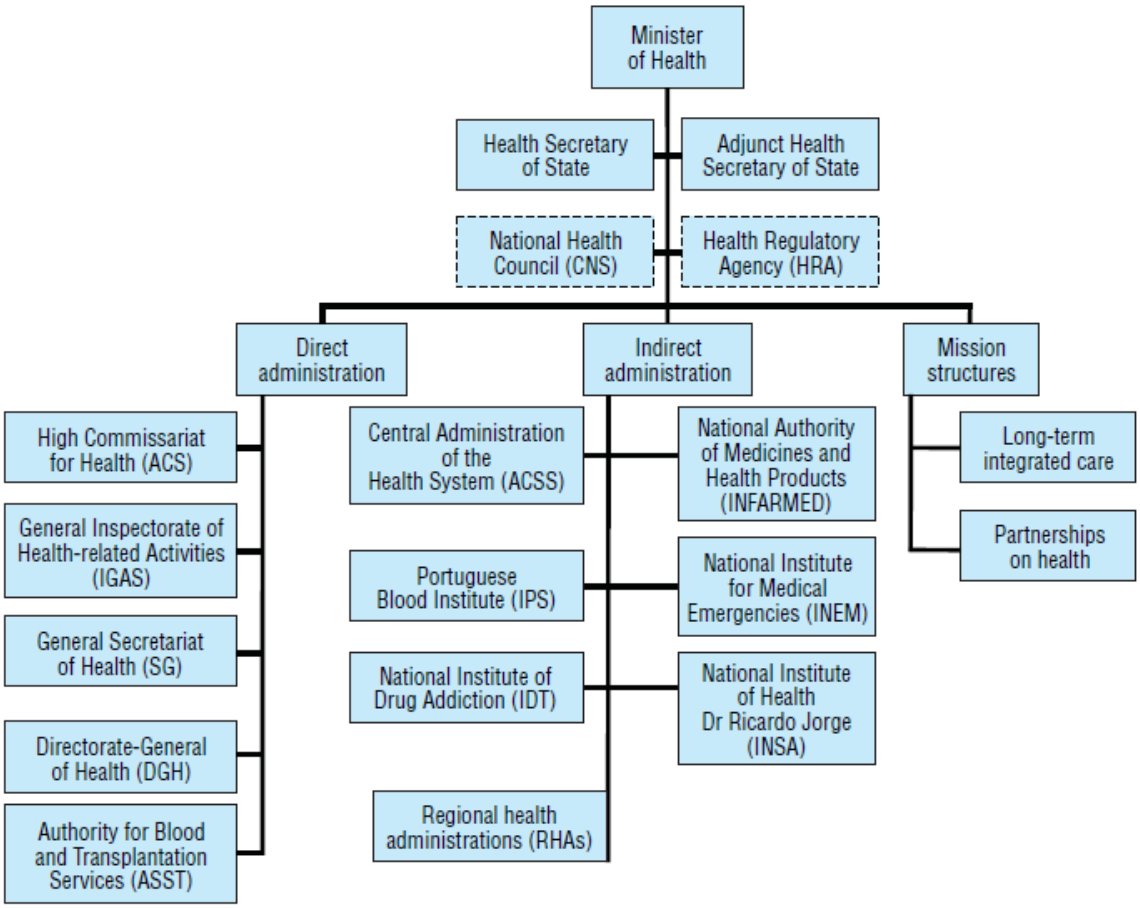


Figure 28

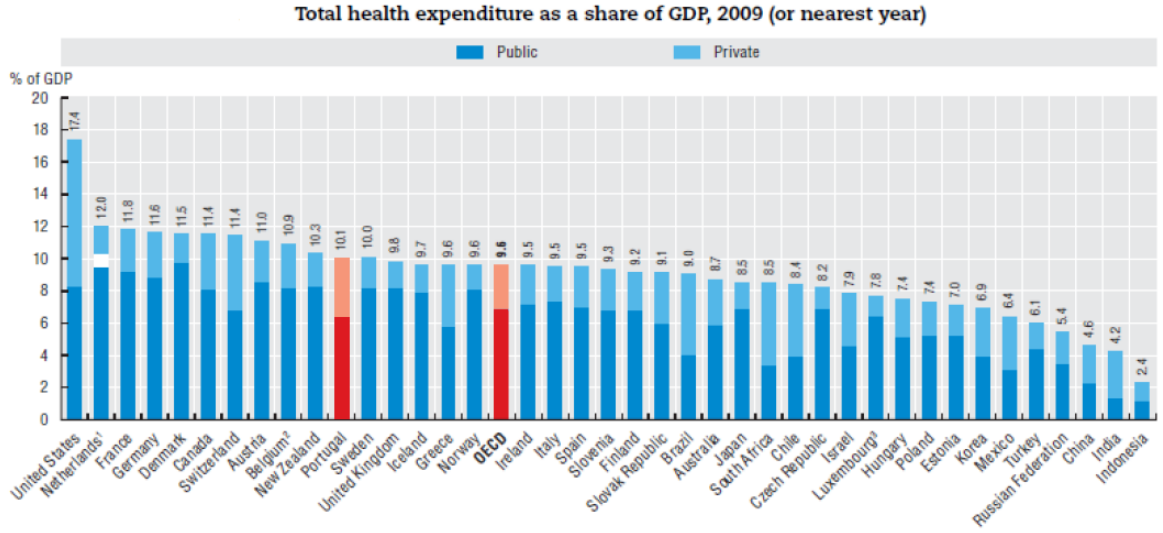
Organizational chart of the Ministry of Health



Note: Dotted lines represent some degree of independence from the Ministry of Health.

Finances

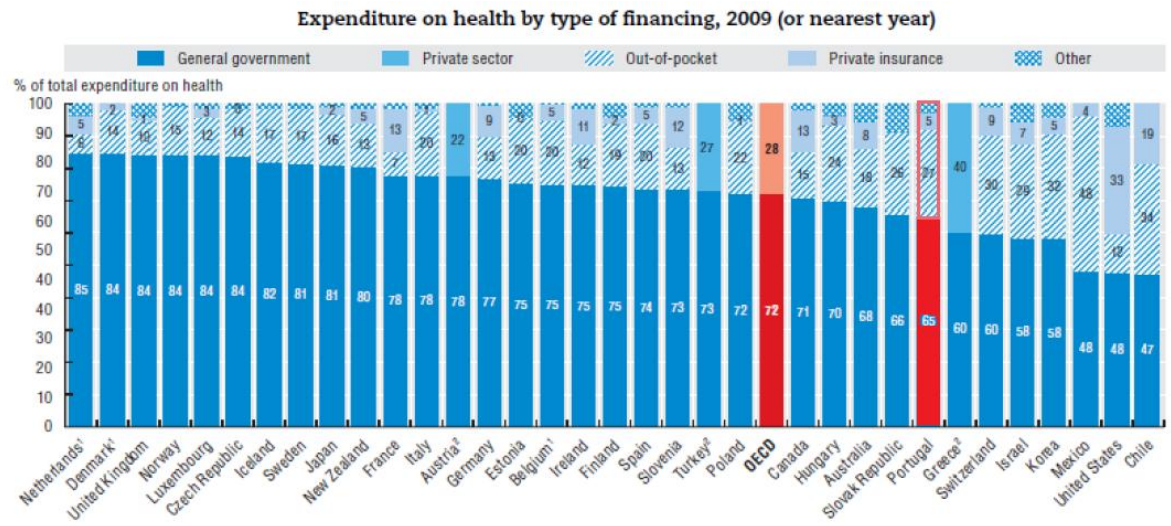
Figure 29



1. In the Netherlands, it is not possible to clearly distinguish the public and private share related to investments.
2. Total expenditure excluding investments.
3. Health expenditure is for the insured population rather than the resident population.

Source: OECD Health Data 2011; WHO Global Health Expenditure Database.

Figure 30



1. Current expenditure.
2. No breakdown of private financing available for latest year.

Source: OECD Health Data 2011.

Figure 31

Funding mix for the health system (%), 2000 - 2011												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010[a]	2011[b]
Public Funding	**69.4**	**69.7**	**70.8**	**69.9**	**69.7**	**69.8**	**67.8**	**67.6**	**66.1**	**67.6**	**67,3**	**65,5**
NHS	83.4	82.2	81.4	80.9	80.1	79.8	78.9	78.7	78.4	78.4	84.4	84.1
Public Health Subsistems	10.2	11.3	12.9	12.3	12.6	12.2	12.8	13.9	13.5	13.9	7.0	6.8
Other Public Administration Units	75.0	72.6	62.7	75.6	80.7	92.7	92.2	78.2	85.8	80.0	130.6	139.7
Social Security Funds	27.1	25.5	23.3	22.5	20.3	17.0	18.4	20.3	20.8	23.2	24.8	26.7
Private Funding	**30.6**	**30.3**	**29.2**	**30.1**	**30.3**	**30.2**	**32.2**	**32.4**	**33.9**	**32.4**	**32.7**	**34.5**
Voluntary Health Insurance	11.6	12.2	13.4	15.6	16.1	14.6	14.8	14.4	14.4	14.1	14,1	14,5
OOP payments	86.1	85.6	84.6	82.3	82	83.6	83.4	84	83.9	84.2	84,0	83,7
Non-profit-making institutions serving families	0.6	0.4	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0,3	0,2
Other private funding (except insurance companies)	1.8	1.7	1.6	1.5	1.4	1.4	1.3	1.2	1.4	1.4	1,6	1,6
Total (€)	**10,942,953**	**11,560,165**	**12,275,988**	**13,159,856**	**14,162,641**	**15,110,504**	**15,109,448**	**15,838,602**	**16,602,767**	**17,256,221**	**17,534,675**	**16,727,732**

[a] provisional values

[b] preliminary values

source: INE, Conta Satélite da Saúde

Figure 32

Total Health Expenditure by function (%GDP)												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total current expenditure (Individual and collective health care)	**8.5951**	**8.5968**	**8.7332**	**9.1724**	**9.4852**	**9.7949**	**9.3932**	**9.3543**	**9.6537**	**10.2409**	**10.155**	**9.7814**
Services of curative and rehabilitative care	5.28	5.24	5.33	5.62	5.79	6.05	5.69	5.68	5.88	6.32	6.28	-
Services of long-term nursing care	0.09	0.09	0.09	0.09	0.10	0.09	0.09	0.09	0.12	0.14	0.15	-
"Total exp. on in-patient care (curative,rehabilitative care and long term care)"	2.22	2.13	2.16	2.24	2.23	2.24	2.05	2.04	2.02	2.10	2.10	-
"Total exp. on day care (curative,rehabilitative care and long term care)"	0.38	0.32	0.32	0.33	0.35	0.42	0.39	0.42	0.51	0.66	0.65	-
"Expenditure on home health care services (curative,rehabilitative care and long term care)"	0.07	0.08	0.08	0.07	0.09	0.09	0.07	0.06	0.07	0.08	0.08	-
Ancillary services to health care	0.63	0.65	0.65	0.76	0.80	0.81	0.83	0.82	0.88	0.92	0.95	-
Medical goods	2.26	2.30	2.35	2.39	2.48	2.50	2.48	2.46	2.45	2.49	2.39	-
Prevention and public health services	0.19	0.18	0.19	0.19	0.19	0.20	0.17	0.17	0.18	0.21	0.22	-
Health administration and health insurance	0.14	0.13	0.12	0.12	0.13	0.13	0.14	0.14	0.15	0.16	0.17	-
Capital formation of health care providers	**0.701**	**0.665**	**0.562**	**0.561**	**0.564**	**0.558**	**0.639**	**0.640**	**0.565**	**0.574**	**0.571**	**-**

source: OECD.Stat

Figure 33

Health Expenditure by function (% Total Expenditure)												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total current expenditure (Individual and collective health care)	**92.46**	**92.82**	**93.96**	**94.23**	**94.39**	**94.61**	**93.63**	**93.60**	**94.47**	**94.69**	**94.68**	**9.78**
Services of curative and rehabilitative care	56.77	56.54	57.30	57.76	57.66	58.48	56.70	56.79	57.49	58.46	58.55	-
Services of long-term nursing care	0.97	0.98	0.97	0.92	0.95	0.90	0.85	0.92	1.17	1.29	1.35	-
"Total exp. on in-patient care (curative,rehabilitative care and long term care)"	23.89	22.95	23.29	22.98	22.19	21.68	20.47	20.39	19.78	19.45	19.55	-
"Total exp. on day care (curative,rehabilitative care and long term care)"	4.10	3.44	3.45	3.40	3.51	4.01	3.85	4.23	4.99	6.08	6.09	-
"Expenditure on home health care services (curative,rehabilitative care and long term care)"	0.79	0.86	0.89	0.71	0.94	0.86	0.74	0.64	0.65	0.72	0.73	-
Ancillary services to health care	6.82	7.03	7.03	7.85	7.99	7.87	8.23	8.16	8.61	8.50	8.83	-
Medical goods	24.36	24.85	25.33	24.55	24.63	24.17	24.76	24.63	24.00	23.02	22.29	-
Prevention and public health services	2.01	1.97	2.06	1.97	1.89	1.94	1.66	1.66	1.74	1.95	2.02	-
Health administration and health insurance	1.52	1.44	1.26	1.19	1.27	1.24	1.42	1.44	1.45	1.45	1.63	-
Capital formation of health care providers	**7.54**	**7.18**	**6.04**	**5.77**	**5.61**	**5.39**	**6.37**	**6.40**	**5.53**	**5.31**	**5.32**	**-**

source: OECD.Stat

Figure 34

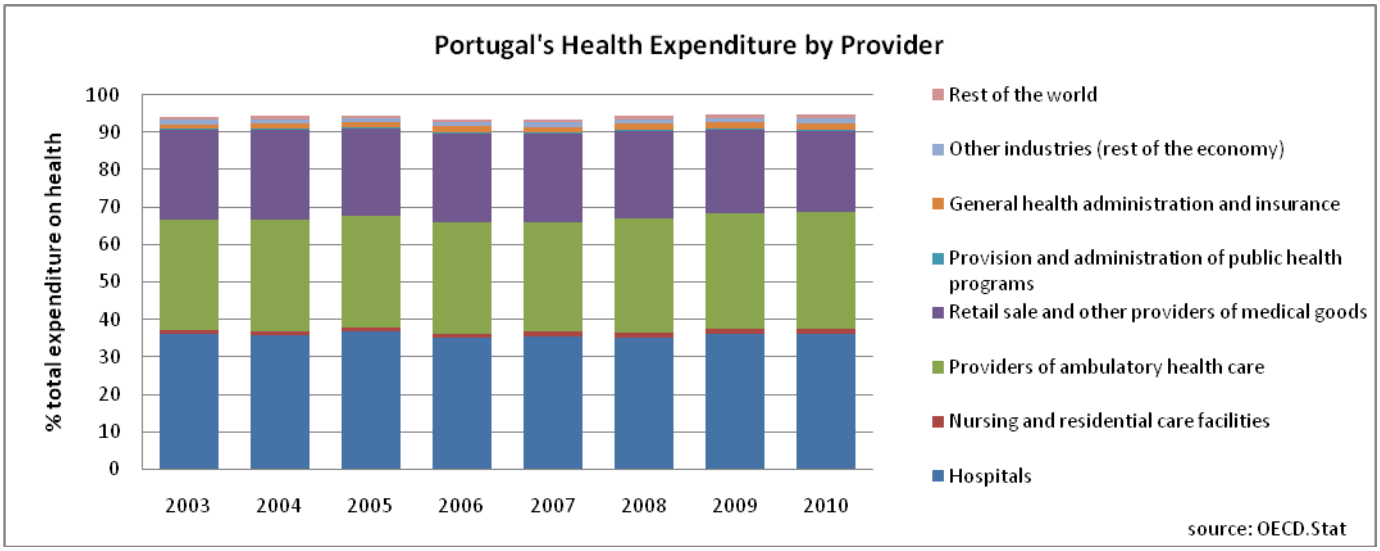
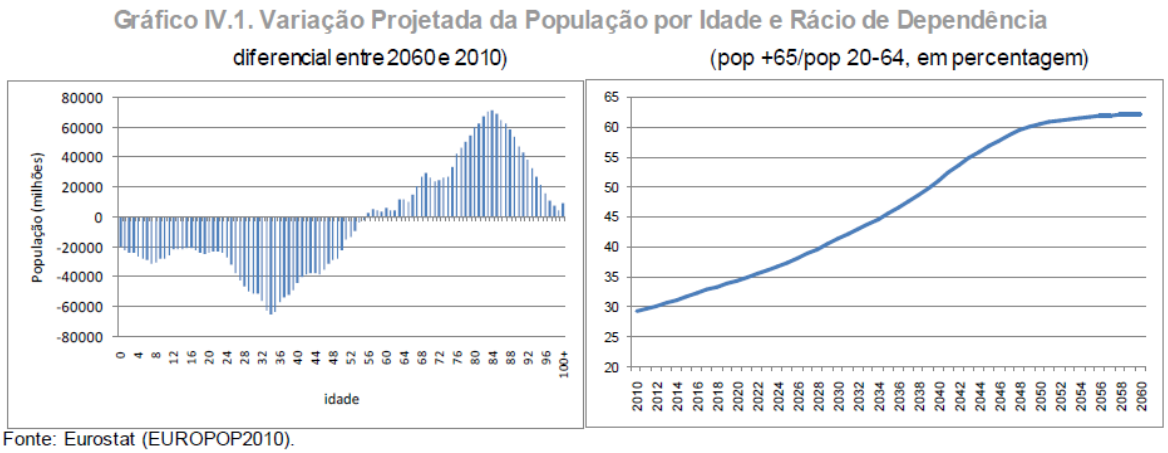


Figure 35

Map of Evolution of Effective Workers in 2011 (for Central Government)					
Ministry	31-Dec-2010	30-Jun-11	31-Dec-2011	Annual Variation	
				Nº	%
Organs of Sovereignty and Independent Entities	13550	13405	13451	-99	-0.7
Presidency of the Council of Ministers	5715	5642	5645	-70	-1.2
Ministry of Interior	49833	50132	48667	-1166	-2.3
Ministry of Agriculture, Sea, Environment and Spatial Planning	11095	10904	10531	-564	-5.1
Ministry of Nacional Defense	45313	44691	40283	-5030	-11.1
Ministry of Education and Science	238457	237892	235286	-3171	-1.3
Ministry of Economy and Employment	10781	10576	10271	-510	-4.7
Ministry of Finance	14035	13748	13885	-150	-1.1
Ministry of Justice	16714	16527	16408	-306	-1.8
Ministry of Foreign Affairs	3370	3304	3478	108	3.2
Ministry of Health	127361	126847	123355	-4006	-3.1
Ministry of Solidarity and Social Security	18065	17737	17386	-679	-3.8

source: DGAEP/OBSEP - SIOE

Figure 36



Fonte: Eurostat (EUROPOP2010).

Figure 37

Quadro IV.1. Despesas Relacionadas com o Envelhecimento da População

(em percentagem do PIB)

	2010	2020	2030	2040	2050	2060	Var. 2010-60
Pensões	12,5	13,5	13,2	13,1	13,1	12,7	0,2
Despesas de saúde	7,2	6,7	7,2	7,7	8,1	8,3	1,1
Cuidados continuados	0,3	0,3	0,4	0,4	0,5	0,6	0,3
Educação	4,7	3,9	3,5	3,5	3,6	3,7	-1,1
Desemprego	1,2	1,3	1,0	0,9	0,8	0,8	-0,4
Total sem desemprego	24,8	24,5	24,3	24,7	25,3	25,3	0,5
Total	**26,0**	**25,8**	**25,3**	**25,6**	**26,1**	**26,1**	**0,1**

Fonte: GTE.

Appendix 2 – the membership of the Commission and its constituent parts

COMMISSION

Chair – **Lord Nigel Crisp**, Chief Executive of the NHS and Permanent Secretary of the UK Department of Health 2000-2006, now an Independent Member of the House of Lords and an adviser and writer on global health. More at nigelcrisp.com

Donald Berwick – Former Administrator of the Centers for Medicare and Medicaid Services (USA). Former President and CEO of the Institute for Healthcare Improvement and clinical Professor at Harvard

Ilona Kickbusch – Director of the Global Health Programme at the Graduate Institute of International and Development Studies, Geneva.

Wouter Bos – Former Dutch Deputy Prime Minister and Minister of Finances. Management consultant and partner at KPMG.

João Lobo Antunes – Chairman of the Department of Neurosurgery at the Lisbon Medical School of University of Lisbon. Founder and President of the Institute of Molecular Medicine, Lisbon Academic Medical Center.

Jorge Soares – Director at the Calouste Gulbenkian Foundation (Innovation in Health Programme). Professor of Pathology at the Faculty of Medicine of the University of Lisbon.

Pedro Pita Barros – Professor of Economics at New University of Lisbon. Research fellow at the Centre for Economic Policy Research in London.

WORKING GROUP CHAIRPERSONS

Maria Céu Machado (**Staffing the Service**) – Former High Commissioner for Health, Head of Department of Paediatrics at Santa Maria Hospital and Professor at the University of Lisbon.

José Pereira Miguel (**Health services and public health**) – Professor of preventive medicine and public health at the Faculty of Medicine, University of Lisbon, President of the National Health Institute, former High Commissioner for Health, Ministry of Health (2001-2006).

José Carlos Lopes Martins (**Citizens, Patients of NHS**) – Former Secretary of State for Health (1993-95), Director and member of the Board of José de Mello Saúde private hospitals.

Peter Villax (**Harnessing knowledge, technology and innovation**) **–** Vice-President of Hovione Comp., Health Cluster Portugal Board director.

Email: healthinportugal@gulbenkian.pt

Glossary

ACES – *Agrupamentos de Centros de Saúde*, Health Centre Groups

ADSE – Health subsystem for civil servants

CODU – Urgent Patients Orientation Centre

COPD – Chronic Obstructive Pulmonary Disease

DALE – Disability-Adjusted Life Expectation

EPE – Organizational Public Entity

ERS – *Entidade Reguladora da Saúde,* Health Regulatory Authority

EU15 – European Union member States before May 2004

GDP – Gross Domestic Product

GP – General Practicioners

HiAP – Health in All Policies

INE – Instituto Nacional de Estatística

INEM – National Institute of Medical Emergency

NHS – National Health System

OECD - Organization for Economic Co-operation and Development

OOP - Out of pocket expenditure by patients

RNCCI – *Rede Nacional de Cuidados Continuados Integrados*, National Network for Integrated Continuing Care

SPA – Public Administrative Sector

UN – United Nations

USF – Family Health Unit

UCSP - Other Primary Care Units

VHI – Voluntary health insurance

WHO – World Health Organization

List of figures