

Country report Portugal – February 2015



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Prepared for the EACPR "Country of the Month" initiative

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Basic Information about Portugal

Portugal is made up of a continental region (89,102 km²) and the archipelagos of the Azores and Madeira (3,123 km²). It has been a Member State of NATO since 1949, the UN since 1955 and the EU since 1986, and has been part of the Eurozone since 2001. Portugal is a republic based on a parliamentary democracy.

Some key indicators:

Resident population estimated at the end of 2013 (no.)	10 427 301
Population density (no./ km ²)	113.1
Urban population (%) (2012)	62
Ageing index (ratio-%) (2013)	133.5
Social Security and public sector pension coverage as % of total population	40.6
% population with higher education	15.0
GDP per capita in EUR PPP (2012)	19 491
Total health expenditure per capita in EUR PPP (2012)	1 845
Life expectancy at birth, overall/male/female (years) (2012)	80.6/77.3/83.6
Infant mortality per 1000 live births (2013)	3
Euro Health Consumer Index score (2013) (ranked 16th out of 35 countries)	671
Income level (OECD) (2013)	High
GDP (current US\$ billion)	\$220.0

Sources: Statistics Portugal, Directorate-General of Health, Pordata, World Bank, Health Consumer Powerhouse, OECD Health at a Glance: Europe 2014

I. Structure of Health care in Portugal

Structure

The Portuguese health system currently consists of three coexisting and overlapping systems:

- The universal National Health Service (NHS)
- Special public and private subsystems for some professional sectors
- Voluntary private health insurance.

The NHS is the means by which every resident citizen, regardless of economic and social status, can access healthcare. The NHS includes the various levels of prevention, from health promotion and disease prevention to diagnosis, treatment and rehabilitation. In recent years, aiming to improve the performance and efficiency of the health system, a series of reforms have been put in place in the hospital and emergency network and in primary healthcare and the national long-term care network (convalescence, medium-term care and rehabilitation, long-term and maintenance and palliative care).

The NHS provides direct acute hospital care and rehabilitation (in some hospitals phases I and II of cardiac rehabilitation), general practice, and mother and child care.

In 2008, the organisation of primary care and public health was restructured with the creation of the Groups of Primary Care Centres. The mission is to ensure the provision of primary health care to the population of a given geographical area (120 000-200 000 population). These are designed to provide guidance, coordination and support to primary and community services, working together with Family Health Units, Personalised Healthcare Units, Community Care Units, Public Health Units, and Shared Care Resources Units. They were rolled out on a voluntary basis and are currently operating across nearly half the country. Currently there are 74 centres.

In 2013 there were 9.1 cardiologists per 100 000 population, 6% of whom are paediatric cardiologists.

Health promotion and prevention, at different levels, are strategic targets set out in interventions defined in Ministry of Health programmes. The National Health Plan 2012-2016 sets out goals and strategic directions, including quality in Health and Healthy Policies. Strategies for the enhancement of quality in health are based, among other concepts, on integrated governance, which includes risk management and the preparation of clinical and organizational guidelines. Strategies for the enhancement of healthy policies are based on regulatory measures, platforms and multisectoral partnership networks, planning and governance of health programmes. Public health services include health promotion and disease prevention at the community level and health impact assessment.

References:

Statistical Yearbook of Portugal 2013 (ESS)
[National Health Plan 2012-2106](http://pns.dgs.pt/), available at: <http://pns.dgs.pt/> (NHP Full version in English)

Finances

Total health expenditure in Portugal was 9.5% of Gross Domestic Product (GDP) in 2012, slightly above the OECD average of 9.3%, while public health expenditure was 5.9% versus 6.7% and pharmaceutical expenditure as a share of GDP was 1.8% versus 1.5%. The public sector is the primary source of health care funding, around 65% in 2012, below most EU countries (OECD average: 72%).

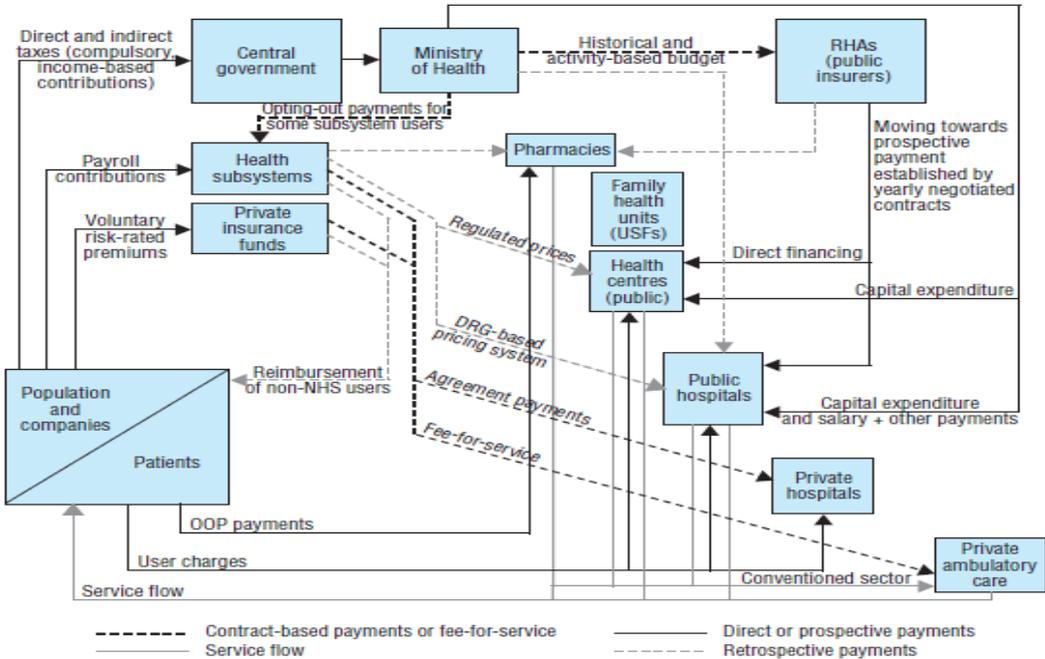
The health funding structure is complex. Over 90% of public expenditure comes from taxation and includes funding of direct care provision within the NHS. Private expenditure mainly includes out-of-pocket payments (OOP) and voluntary health insurance and subsidies to the health subsystems for public sector employees.

NHS funding in 2011 was 54% of all funding, and OOP spending was around 30%, mostly on co-payments in the NHS (pharmaceutical products, exams and user charges). Private insurance accounted for less than 6% of total funding. Public health subsystems and other public funding accounted for around 7% (2011). Exemptions from co-payments include family planning, pregnant women, children under 12 years, pensioners in low income, persons responsible for disabled young people, chronic diseases, such as diabetes and cancer, and socially and economically disadvantaged population. Currently around five million (half of the population) are exempt.

Current health expenditure by function in 2012 (or nearest year) was as follows: inpatient care (curative-rehabilitative) – 27%; outpatient care (home and ancillary services) – 45%; long-term care – 2%; medical goods (mainly pharmaceuticals) – 23%; prevention and administration – 4% (OECD 2014).

Most dental care (92%) and specialist consultations in private outpatient care (60%) are paid for on an OOP basis. Diagnostic services, renal dialysis, physiotherapy and cardiac rehabilitation programmes are commonly carried out under contractual arrangements with the NHS and/or subsystems.

Figure 1. Overview of the health system in Portugal



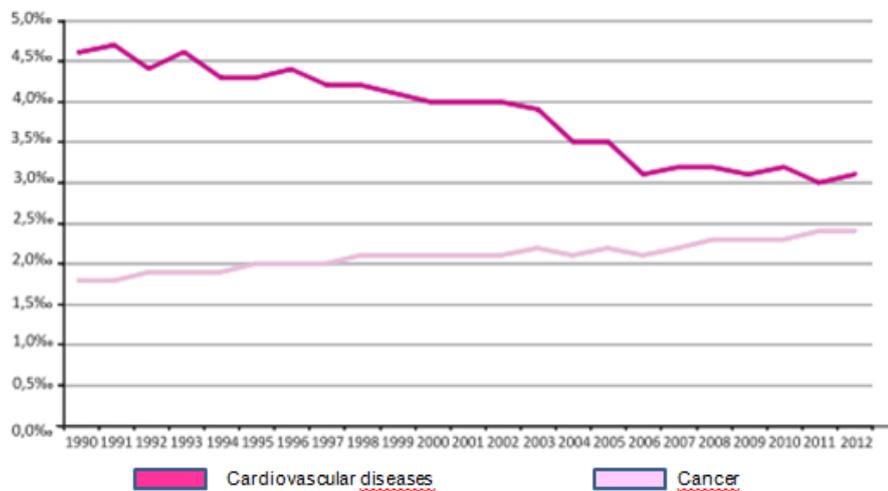
Source: Barros PP, Machado SR, Simões JA. Portugal Health System Review 2011.Vol. 13 No 42011.European Observatory on Health Systems and Policies.
(Reproduced with permission of the European Observatory on Health Systems and Policies)

II. Risk factor statistics

CVD mortality

In Portugal, the trend in mortality from CVD, defined as the difference in percentage of deaths between 1990 (45%) and 2012 (30.4%), is towards a marked decrease, while deaths from cancer continue to rise (Figure 2).

Figure 2. Trends in mortality from cardiovascular diseases and cancer in Portugal, 1990-2012



Source: Statistics Portugal, Mortality by causes of death (Statistical Yearbook of Portugal 2013)

Deaths due to diseases of the circulatory system, in 2012, were mainly associated to cerebrovascular diseases, accounting for 41% of these causes of death, as clearly seen for those aged 65 and older (Table I). However, the relative reduction in age-standardised death rates for ischemic heart disease (IHD) and cerebrovascular disease between 2007 and 2012 was similar (25%), and in 2012 the average age at death from these causes was, respectively, 78.5 and 81.2 years.

The variation of the potential life years of life lost due to CVD between 2012/2008 (18,9%) was similar in males (-19.10%) and females (-18.46%) but was higher for IHD (-20.90%) than for cerebrovascular disease (-15.17%).

Table I. Age-standardised death rates from CVD, IHD, and cerebrovascular disease per 100 000 population by gender and broad age group in Portugal, 2012.

	Overall	<65 years	≥65 years
CVD			
Overall	155.2	24.0	1 216.7
Males	177.6	36.0	1 323.0
Females	136.3	12.9	1 134.4
IHD			
Overall	35.3	8.1	254.7
Males	47.9	13.8	323.4
Females	25.2	3.0	205.2
Cerebrovascular disease			
Overall	63.3	8.6	505.7
Males	71.2	12.2	549.1
Females	56.8	5.4	473.0

Sources: Eurostat, OECD Health at a Glance: Europe 2014-2014, Statistics Portugal 2014, WHO/Europe, European Health for All and European detailed mortality databases, 2014; www.dgs.pt (in Portuguese), Portugal Doenças Cérebro-Cardiovasculares em Números 2014.

Percutaneous Coronary Intervention (PCI) resources

There are 28 PCI-capable centres in Portugal (19 public and 9 private), 2.6 centres per million population. Eighteen PCI centres provide a 24-hour service. Since 2011 Portugal has surpassed the European average for the most effective treatment for MI, primary angioplasty, with over 300 procedures per million population/year. Median door-to-balloon time for treatment of ST-segment elevation myocardial infarction (STEMI) was 55 minutes in 2013.

Reference:

www.spc.pt/APIC (in Portuguese)

Main CVD risk factors

Hypertension:

Age-standardised mortality from stroke in mainland Portugal decreased from 41.0 to 27.1 per 100 000 population between 2007 and 2012. If the death rate from stroke is an indicator of hypertensive status, this means that hypertension control has improved significantly.

Table II. Prevalence of cardiovascular risk factors in Portugal

Risk factor	Prevalence (%)	Remarks
Hypertension (≥ 18 years)	c. 42	2003, 2007, 2012, standard criteria, primary care, population-weighted prevalence (age 18-90 years)
Smoking (≥ 15 years)	18.6	2006, daily smokers
Smoking (≥ 15 years), men	27.6	
Smoking (≥ 15 years), women	10.6	
High blood cholesterol (≥ 18 years)	63.7	2007, ≥ 200 mg/dl or on treatment, population-weighted prevalence (age 18-90 years)
High blood cholesterol (≥ 18 years), men	63.4	
High blood cholesterol (≥ 18 years), women	63.9	
Obesity (adults ≥ 15 years)	15.4	2006, self-reported weight and height
Obesity (adults ≥ 20 years), overall	24.0	WHO 2008 estimates
Obesity (adults ≥ 20 years), men	21.6	
Obesity (adults ≥ 20 years), women	26.3	
Overweight (adults ≥ 20 years), overall	59.1	
Overweight (adults ≥ 20 years), men	61.8	
Overweight (adults ≥ 20 years), women	56.6	
Diabetes (adults aged 20-79 years)	9.6	2006, self-reported, prevalence estimate, age-standardized (World Standard Population)
Diabetes (adults aged 20-79 years), overall	13.0	2013, population-randomized, estimated from weighted prevalence (2009)
Diabetes (adults aged 20-79 years), men	15.6	
Diabetes (adults aged 20-79 years), women	10.7	
Physical inactivity (≥ 15 years), overall	53.9	WHO 2008 estimates
Physical inactivity (≥ 15 years), men	50.0	
Physical inactivity (≥ 15 years), women	57.5	
Intakes		
Saturated fat intake (% of calories)	10.8%	FAOSTAT 2007
Fruit and vegetable supply (grams per capita)	877	FAOSTAT 2009
Salt (grams per day)	12.3	WHO 2010 estimates
Salt (grams per day)	10.7	2011, national survey
Alcohol yearly consumption among adults (≥ 15 years) (litres per capita)	10.8	2010 (10 out of OECD34, ranked in descending order of values)

Sources: PAP study 2003; VALSIM study 2007; PHYSA study 2012; 2006 NHS; PREVDIAB study 2009; DYSIS Study Portugal; FAOSTAT 2013; [Infarmed Portugal Medicines Statistics 2013](#); WHO Noncommunicable Diseases Country Profiles 2014; WHO-European Region-Portugal 2013 (Nutrition, Physical Activity and Obesity); www.oecd.org/Portugal 2014; OECD Health at a Glance: Europe 2014; www.dgs.pt/Priority Health Programs/Health Statistics; www.who.int/countries (WHO 2014); <http://data.euro.who.int/hfad/>.

Smoking:

Despite information and Directives, tobacco consumption is still high in adults and young people of both sexes.

Hypercholesterolemia:

The high prevalence of hypercholesterolemia (over 50%) means that despite the use of antilipemics (9 871 160 packages were sold in 2013, 37% of the number of anti-hypertensives), most patients do not reach the target value in the ESC guidelines.

Obesity:

Obesity in adolescents and children as well as in adults is a challenge for the near future, due to the associated risks.

Physical inactivity:

Physical activity is considered the neglected dimension of prevention, and the health effects of inadequate exercise means it is a major public health problem of the 21st century.

Diabetes:

In Portugal, diabetes is probably the fastest growing health problem, reaching pandemic proportions. Diabetes cost the health system about 1.2% of GDP and 12% of health expenditure in 2012 (International Diabetes Federation Diabetes Atlas 2012).

Fruit and vegetable supply:

Portugal had a fruit and vegetable supply of 877 g per capita per day in 2009 (WHO/FAO recommendation: 600 g), but between 2008 and 2012 (INE, 2014) there was a decrease in availability, worsening the deficit according to the recommendations (Wheel of Food). Due to changes in domestic consumption in recent years the food supply level, for the period 2008-2012 changed, with a reduction of 4.0% in dairy products and of 10.6% in fruits supply (2009-2012).

Alcohol:

Over the past decade alcohol consumption has remained almost unchanged in the European region and in Portugal, where the prevalence of heavy episodic drinking (%), 2010 (≥ 15 years, both sexes) was 20.4 in population (1 in 5 adults) and 35.8 in drinkers only.

III. Main actors and Prevention methods

Who delivers?

Portugal has a decade long history of developing National Health Plans (NHP) in order to give strategic direction and coherence to the development and implementation of NHP to different levels of government and administration and as an orientation for all actors of the Portuguese health system including health services providers and citizens. The NHP 2012-2016 is seen as the national strategy to bring people and institutions together in order to discuss and exchange different perspectives and knowledge on health, and to promote engagement with and ownership of health policy and health system strengthening.

While governments have the primary role and responsibility in responding to the challenges of NCD, everyone has a part to play in prevention and control of CVD, including scientific societies, health workers, the media, and citizens. NGOs also provide important health services. Out of all these actors, we highlight three groups of health professionals.

General practitioners (GPs)

In 2013, there were 57 physicians specialising in general and family medicine per 100.000 population, just over one third of non-specialist doctors (residents in training, former GP's, researchers). GPs play a critical role in primary care and therefore in CVD prevention in clinical practice. They are the first to identify individuals at risk for developing atherosclerotic cardiovascular disease and can develop an alliance with the patient and family. A computer application developed by the Central Administration of the Health System enables GPs in health centres to record variables and access an interactive tool to estimate cardiovascular risk, similar to the European HeartScore.

Cardiologists

The main focus of cardiologists working in public and / or private hospitals is the secondary and tertiary prevention of CVD. However, the number of those working in cardiac rehabilitation teams is limited, both in hospitals (phase I-II) and in private centres. Primary prevention of CVD is not a priority in their day-to-day practice, except for patients with severe hypertension, obesity, diabetes or dyslipidaemias referred to a cardiologist by their GP.

Nurses

In 2013, there were 6.3 nurses per 1000 population certified by the corresponding professional associations (Statistics Portugal 2013), those providing services directly to patients (practising) and those working in the health sector as managers, educators, or researchers. In addition to their traditional functions many nurses, both in hospitals and in primary care, now have other roles, e.g. in education, health literacy, follow-up of chronic patients, health and disease registries, and control of hypertension and anticoagulation. They can improve access to care and reduce waiting times.

Where?

More and more health services provide integrated healthcare to all individuals, regardless of where or how the care is provided – primary care (health centres, communities, and households) and differentiated care (hospitals and rehabilitation centres), public or private. The health system tends to be person-centred and team-based.

Guidance

In Portugal, there are various scientific societies and associations that bring together health professionals involved in the area of CVD prevention (cardiology, hypertension, diabetes, general practice, etc.). The Portuguese Society of Cardiology has endorsed all ESC guidelines and translated all ESC Pocket Guidelines into Portuguese.

The Directorate-General of Health (www.dgs.pt) issues normative circulars and clinical norms developed in partnership with scientific societies, including on CVD (cardiovascular risk, major risk factors, diagnosis, and treatment).

Cardiovascular epidemiology is included in the core curriculum in medical schools. An introduction to risk assessment tools, including the European [HeartScore](#), is provided. In clinical years, all aspects of CVD (prevention, diagnosis and treatment) are also studied.

Quality control

Auditing and accreditation of healthcare services is part of the mission of the Department of Quality of the Directorate-General of Health.

All the indicators requested by the regional support team are available via information systems available at primary care level. Monitoring indicators include hypertension, diabetes, health of adults, and medical consultations related to smoking, obesity and alcoholism. The performance of public hospitals on the mainland is assessed annually, considering three indicators: mortality, complications and readmissions care.

The Portuguese Society of Cardiology in 2014 initiated the certification of its scientific meetings by the European Board of Accreditation in Cardiology, an important process to ensure the quality of continuing medical education.

IV. Main Prevention activities

Prevention activities are carried out in the fields of law, education, intervention and innovation by services, agencies and advisory bodies under the administration of the State and by non-governmental organisations (NGOs).

Legislation has been passed covering protection of citizens from both voluntary smoking and involuntary exposure to tobacco smoke and limiting the maximum salt content in bread; guidelines for labelling of pre-packaged food for human consumption have also been published.

Campaigns

Portuguese Society of Cardiology

- *The European Heart Health Charter*

Initiatives including the "Heart Shop", *7 Days for the Heart*, *Exercise in the Park*, and *The Health Minute*, are designed to raise public awareness of the ideas of the European Heart Health Charter (www.spc.pt, in Portuguese).

- *Act Now. Save a Life*

A public educational campaign has been developed to raise awareness of the symptoms of myocardial infarction (MI) and the need to act quickly and dial the national emergency number. Educational activities, distribution of leaflets, videos, educational workshops in companies, training of school students and teachers, cardiovascular screenings in companies, shopping centres, primary health care centres, pharmacies and the national parliament, have had coverage in newspapers and on TV and radio.

Portuguese Foundation of Cardiology

- *May: "Heart Month"* – The message to the population has a specific theme every year. The Foundation promotes intense publicity through various means: television, radio, cinemas, posters, billboards, various websites and the intranets of several companies. There are also meetings, workshops, talks, lectures, cardiovascular screenings and sporting events.

- *World Heart Day, International Women's Day, World Health Day, World Food Day, European Day of Healthy Food and Cooking, World No Tobacco Day, World non Smoking Day, World Diabetes Day.*

The Foundation, together with local authorities, develops initiatives for these international observance days on the themes set by international organizations such as the World Heart Foundation (<http://www.fpcardiologia.pt>).

Projects/Programmes

Directorate-General of Health

Nine national priority health programmes have been established, most of which include actions to promote interventions to reduce the main shared modifiable risk factors of non communicable disease (NCD): tobacco use, unhealthy diets, physical inactivity and harmful use of alcohol.

- *National Programme for Diabetes*
- *National Programme for Smoking Prevention and Control*
- *National Programme for Promotion of Healthy Eating*

- *National Programme for Cerebro-cardiovascular Diseases*

References: <http://www.dgs.pt/programas-de-saude-prioritarios.aspx>;
<http://www.dgs.pt/portal-da-estatistica-da-saude/diretorio-de-informacao/diretorio-de-informacao/por-serie.aspx>

National Institute of Preventive Cardiology

Two of the Institute's interventions, supported by grants from foundations and public entities and directed at the whole population (national and regional), stand out (www.incp.pt, in Portuguese):

- *Previous intervention: CINDI-Portugal (1987-1997)*

The Countrywide Integrated Noncommunicable Disease Intervention (CINDI) programme, designed with a multidisciplinary and multisectoral philosophy of integration, was expanded to about two-thirds of the population, and was followed by the 2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases and the WHO Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013-2020.

- *Almodôvar – the Healthiest Municipality (2010-2015)*

The Almodôvar Project, in a municipality of 8 000 inhabitants, based on the formation of partnerships with local entities, including the Health Centre, Schools Group and teams of health professionals, is an example of community action with various initiatives and the use of both traditional and modern media, including daily health charts on the internet. The activities are aimed at the promotion of health and early diagnosis, with screenings of blood pressure, blood glucose, cholesterol and triglycerides, among others, and advice on healthy lifestyles and referral for medical consultation if required. www.incp.pt

Portuguese Society of Cardiology

- "Stent for Life"

In 2011 Portugal joined the Stent for Life Initiative, a European platform that aims to improve the delivery of facilities that will reduce mortality and morbidity in patients with ST elevation myocardial infarction (STEMI), a life saving indication of percutaneous coronary intervention (PCI), by enabling direct admission to a PCI-capable hospital. After one year, improvements were observed in patient delays. www.stentforlife.pt in Portuguese

Calouste Gulbenkian Foundation

"For over 50 years the Foundation has been linked to many of the most important landmarks in Portuguese medicine. Its independent stance and support for public service means that it is also an integral part of the success of the National Health Service" (*Ministry of Health 2014*).

- *Health in Portugal: a Challenge for the Future*

A number of leading national and international personalities prepared a report on the structure of the health care system. The Foundation will support the three Gulbenkian Challenges proposed, one of which is the Diabetes Challenge.

References: The future for health – everyone has a role to play. Crisp ENR (ed). Lisbon: Calouste Gulbenkian; 2014. p. 1-221.

- *Innovation in Health*

This programme aims to promote and support projects that will help bring together the agenda of NCD and mental health care, supporting advocacy of a common approach as best practice for long-term clinical care of chronic diseases (*Global Health Agenda*); to incorporate science into health practices, reduce the gap between public health and clinical medicine, and qualify citizens through health education, promoting health literacy; to organise and support innovative training activities (*Training and Qualification - Health Professionals and Citizens Empowerment*); to change management procedures, assure sustainability, challenge concepts and organisational models, and enhance the participation of citizens in decision-making processes (*Healthcare models, systems and services - new organization models for healthcare*) www.gulbenkian.pt/healthinnovation.

Doutor Ricardo Jorge National Health Institute

- *e_COR: Prevalence of cardiovascular risk factors in the Portuguese population*

The main objective of this study is to determine the prevalence of major cardiovascular risk factors in the Portuguese population: social and behavioural (poor diet, sedentary lifestyle, smoking, alcohol consumption), biological (hypertension, obesity, dyslipidaemias, hyperglycemia/diabetes) and genetic factors (familial hypercholesterolemia, familial combined dyslipidemia, MODY type diabetes and thrombogenic risk). www.insa.pt

Education

Post-graduate education is available for both medical personnel and nurses, as well as for other allied professions related to CVD, including prevention. These are provided by medical schools but also in meetings organised by the various scientific societies involved in cardiovascular care.

V. Cardiac rehabilitation

After the initial enthusiasm for coronary percutaneous intervention, cardiac rehabilitation (CR) has been slowly growing in the last 35 years in Portugal.

The Working Group on Exercise Physiology and Cardiac Rehabilitation (GEFERC) of the Portuguese Society of Cardiology (SPC) has performed surveys of national cardiac rehabilitation at five-year intervals. Only centres with individualised exercise training programmes, secondary prevention programmes, and strategies for lifestyle modification and compliance with therapy, including education sessions, and using multidisciplinary teams, were considered.

In 2009 there were 18 CR centres (nine public and nine private), located in three large coastal urban regions: Lisbon, Porto and Faro. Inland and rural regions were not covered. Only 3% of MI patients underwent cardiac rehabilitation, and other patients, such as those treated by coronary artery bypass grafting (CABG) and with heart failure, were even less likely to undergo CR.

The recent 2014 survey shows that 10% of MI patients are now being rehabilitated, which represents an increase of over 300% compared to 2009. Other clinical conditions, like CABG and heart failure, are also more often being treated by CR, corresponding to 40% of all rehabilitated patients (60% of CR patients had been diagnosed with MI). Regarding 2009, six new centres began operating, but two (one public and one private) closed their CR programmes. There are currently 22 centres (12 public and 10 private), mostly performing outpatient CR, early (public) and late (private), and some in-hospital CR (public). The number of rehabilitated patients per centre has also increased in most cases.

Every year, a total mean number of 460 MI patients need to be rehabilitated in each of the 22 centres. However, most patients live far from CR centres, which are still clustered in large urban areas.

All centres have a multidisciplinary team, which includes a cardiologist (only one private centre has an internist with specialization in exercise and cardiac resuscitation), a physiatrist or physiotherapist, and a rehabilitation nurse, and most have a dietician and a psychologist.

Obstacles to CR include the small number and uneven geographical distribution of CR centres, financial constraints (no reimbursement for CR sessions, costs of patient transport), lack of legislative support for work absenteeism due to attendance at CR sessions), poor patient motivation and inadequate referral by physicians, which is also linked to disbelief in the efficacy of CR and fear of losing patients.

In order to overcome these obstacles, GEFERC have carried out the following actions:

- Preparation of a joint document with the Coordinator for Cardiovascular Disease of the Ministry of Health, covering the national picture of CR, obstacles, indications, and strategies for improvement of CR implementation, to be sent to all hospital

administrations, and available from the website of the Portuguese Ministry of Health.

- Production of a film on cardiac prevention and CR (*Heart in Hands*), aimed at patients and health professionals, available from the SPC's website in different languages, including Portuguese, English and Spanish (<http://www.spc.pt/cardioTV/colecao.aspx?ref=coracaonasmaos>)
- Publication of a book in Portuguese on CR (*Cardiac Rehabilitation Manual*), aimed at health professionals.
- Signing of a protocol between GEFERC and the Portuguese Association of Interventional Cardiology (APIC), in the context of the Stent for Life initiative, regarding the approaches to be adopted following MI, including strategies for improving cardiac rehabilitation and secondary prevention, involving interventional cardiologists and providing information to the general population and to patients.
- Production of an educational programme (*From Children to Parents*) in elementary and secondary schools, with teaching sessions by health professionals and debates, talks and exhibitions of drawings prepared by pupils concerning coronary artery disease, risk factors and prevention. These sessions are attended by parents and members of the GEFERC board, and end with a discussion, aiming to educate parents (many of whom have coronary disease or risk factors) through their own children, besides educating children themselves.
- Annual exercise activities, in different cities, for cardiac patients, extended to the general population (*Exercise in the Park, 7 Days for the Heart*), including screening for risk factors.
- Annual GEFERC meetings for physicians and health professionals.
- Campaigns in the media (TV, newspapers, magazines, and the internet) to communicate information on prevention and rehabilitation to the general population.

VI. The Future

Needs

Despite enormous progress in the control of CVD, we are far from achieving the full potential of prevention in the widest sense. Reducing the impact of CVD depends on successful prevention and control of modifiable risk factors (lifestyle changes) and on the optimal use of cardiovascular medical therapy.

Possibilities

- to qualify individuals through health education, increasing the availability of health information and promoting health literacy, which are essential measures to empower people and communities and to encourage them to take accountability for their health as citizens
- to attract professionals who see this approach as a positive development that can change patterns of health in the population
- to reduce the gap between public health and clinical medicine
- to organise and support innovative training programmes that will inculcate specific skills, including novel educational tools.

Obstacles

- cultural habits and expectations on the part of the public as well as of health professionals
- the medicalisation of everyday life
- commercial pressures to sell treatments and medical technologies that tend to disempower people, making citizens and patients passive consumers.

The EUROASPIRE surveys have shown that people think it is easier to buy a treatment that will cure them than to act to change risk factors, biological and behavioural, even after a cardiovascular event.

Plans on the national level

- **Smoking:** Portugal and all EU Member States are committed to bringing into force the laws, regulations and administrative provisions necessary to comply with the new Directive 2014/40/EU on tobacco products by 20 May 2016. There is strong support in Portugal for smoking cessation, which will include encouraging health professionals to carry out interventions, reducing the therapeutic costs of smoking cessation (it is expected that these will be reimbursable), and adopting the Protocol to Eliminate Illicit Trade in Tobacco Products.
- **Nutrition:** it is necessary to strengthen the role of families, health professionals and the education system concerning food, diet and nutrition; to set priorities based on regular and systematic collection of information on food habits, their determinants and consequences; to engage in an integrated manner with other sectors of society involved (the food industry, catering, etc.) in preventing obesity and promoting healthy eating habits.
- **Diabetes mellitus:** the Portuguese Diabetes Association, together with municipalities and the NHS, will lead local “diabetes coalitions” to tackle this problem with the support of health professionals, the Ministry of Health, schools

and businesses. It will link with national organisations from other countries to set out and deliver ground-breaking plans in this area (*Calouste Gulbenkian Foundation – The Diabetes Challenge*).

- **Collaboration:** The Portuguese Ministry of Health and the WHO have signed a country cooperation strategy, setting the vision for creating synergy and alignment between WHO leadership priorities and Portuguese national health policies for 2015-2020.

Plans for cardiac rehabilitation and prevention programmes

- **Education:** strategies will be pursued to start education for cardiac health early and to continue it after cardiac events targeted at health workers, patients and at the general population. This will include involvement of interventional cardiologists, general practitioners and other health workers.
- **Health economy:** a national economic study of CR is planned in order to persuade the government to establish more and better distributed CR centres, both in-hospital and in other health centres.
- **Home-based CR:** in selected patients in remote regions, home-based CR will be promoted, closely followed and in conjunction with hospitals and health centres.
- **Publicity:** efforts to publicize the benefits of CR in the media, particularly the internet and TV, will continue.
- **Extension:** It is to be hoped that by 2019 30% of MI patients will be rehabilitated and that CR in other cardiac conditions will be improved.