Joint Action on Chronic Diseases and Promoting Healthy Ageing Across the Life Cycle

Good Practice in the Field of Health Promotion and Primary Prevention

Portugal Country Review

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This country review has been developed based on the questionnaire ‘Good practice in the field of Health Promotion and Primary Prevention’ developed by EuroHealthNet, as part of Work Package 5, Task 1 of JA-CHRODIS.
Background

JA-CHRODIS is a European collaborative initiative that brings together over 60 partners from 26 European Union Member States. The collaborative partners are from areas including the national and regional departments of health and research institutions. They work together to identify, validate, exchange and disseminate good practice approaches for chronic diseases across EU Member States, and facilitate the uptake of these approaches across local, regional and national borders. The focus of JA-CHRODIS is on health promotion and primary prevention, with an additional focus on the management of diabetes and multi-morbid chronic conditions. One of the key deliverables will be a ‘Platform for Knowledge Exchange’, which will include both an online help-desk for policy makers and an information portal which provides an up-to-date repository of best practices and the best knowledge on chronic care.

Work Package (WP) 5 focuses on these objectives in relation to the package’s theme: Good Practice in the Field of Health Promotion and Primary Prevention. Furthermore, the objectives of WP 5 are to promote the exchange, scaling up, and transfer of highly promising, cost-effective and innovative health promotion and primary prevention practices for older populations. This will involve the identification, review, and validation of health promotion and primary prevention interventions for cardiovascular diseases, stroke, and type 2 diabetes and their modifiable behavioural and social risk factors. WP 5 will not only take into account lifestyles and health-related behaviours, but also the wider social and economic determinants that influence them.

The following Country Review provides an overview of the health promotion and primary prevention situation and approaches for cardiovascular disease, stroke and type 2 diabetes in Portugal. This review outlines relevant policies; implementation mechanisms; good practices, and whether and how they have been identified; and forecasting and cost-effectiveness studies that have been undertaken on the topic in Portugal. The authors of this report have also identified current gaps and needs of promotion and primary prevention of chronic diseases. The information in this report will contribute to subsequent WP tasks, namely the identification, exchange and transfer of promising practices to promote health and prevent strokes, cardiovascular disease and type 2 diabetes in Portugal.
The Health Promotion and Chronic Disease Prevention Landscape

Policy design and implementation

The Basic Law on Health (Law No. 48/90), the law in which the National Health Service (NHS) is constituted, provides that "the State promotes and ensures the access of all citizens to healthcare" (Base I, Principle 1) and that the NHS should "ensure access equity, in order to reduce the effects of economic, geographic and any other inequalities in access to healthcare" (Base XXIV). Furthermore, the Basic Law on Health states that the Health System is based on Primary Healthcare, and should be located near the communities, with intense articulation between the several levels of healthcare (Base X). Also according to the law, the NHS is characterised by ensuring equity of access to users, and aiming at reducing the effects of economic, geographic and any other inequalities in the access to healthcare (Base XX).

Portugal has a tradition of investing in upstream health promotion activities in order to tackle risk factors and integrate the determinants of health into public health, health promotion and disease prevention programmes.

During 2004-2010 Portugal had the National Health Plan, which spelled out the guiding principles and strategies for individuals and institutions to contribute to improvements in health outcomes in Portugal.

The Plan’s core strategic goals were based on the concept of health gains, with an emphasis on health promotion and disease prevention and the integrated management of diseases. Accordingly, the Plan gave priority to four national health programmes (cardiovascular diseases, cancer, HIV/AIDS and mental health) and had focuses on integrating the other 18 national health programmes by better managing chronic diseases and by promoting health in schools, at the workplace and in prisons. There is a set of specific targets, and the responsibility for monitoring national progress towards these targets rests with the Directorate-General of Health (DGH).

The National Health Plan 2012-2016 (http://pns.dgs.pt/nhp-in-english/), aims to continue many of the components of the previous plan by keeping values of social justice, equity and solidarity; and by maintaining some of the objectives and tools.

The NHP is a value-based and action orientated instrument, designed to be adapted to national, regional and local specificities. The overarching goal of the NHP is: “To maximise health gains through the alignment around common goals, the integration of sustained efforts of all sectors of society, and the use of strategies based on citizenship, equity and access, quality and healthy policies.”

The NHP is focused around four strategic axes and four goals for health systems strengthening:
**Strategic Axes:** 1) Citizens in health; 2) Equity in access to health care; 3) Quality in health; and 4) Healthy policies

**Goals for Health Systems Strengthening:** 1) Obtaining health gains; 2) Promoting supportive environments; 3) Strengthening economic and social support for health; and 4) Strengthening Portugal’s participation in global health.

One objective of the National Health Plan is to strengthen public health at both regional and local levels through the provision of epidemiological expertise and leadership functions in health promotion. At regional and local levels the main entities involved in the delivery of public health services are:

- local health authorities consisting of a public health team based in ACES;
- public health doctors and sanitary technical staff;
- Regional Health Authorities (RHA), supporting public health units within ACES; and
- General Practice (GPs)/family doctors, responsible for health promotion as part of their work, including family planning, antenatal services, and screening programmes.

The NHP 2012-2016 is completed by 9 National Priority Health Programs (NPHP) ([http://www.dgs.pt/programas-de-saude-prioritarios.aspx](http://www.dgs.pt/programas-de-saude-prioritarios.aspx)), which might help to frame how and which health services are provided to populations and individuals at various levels, and represents the whole spectrum of health promotion, disease prevention, diagnosis and treatment, and rehabilitation and palliation. The 9 NPHP are:

- National Programme for Cardio-Cerebrovascular Diseases
- National Programme for Diabetes
- National HIV/AIDS Programme
- National Mental Health Programme
- National Programme for Oncological Diseases
- National Programme for the Promotion of Healthy Eating
- National Programme for Respiratory Diseases
- Programme for Prevention and Control of Infections and Antimicrobial Resistance
- National Programme for Smoking Prevention and Tobacco Control (PNPCT)

According to the Law of the Fundamental Principles of Health (Law No. 48/90, Base I), health protection is "a right of individuals and of the community which becomes effective through the joint responsibility of citizens, society and state." Public health promotion is achieved through the activity of the State, articulated with civil society, particularly with the third sector. Citizens, public and private entities should collaborate in the creation of conditions facilitating the exercise of the right to health protection and the adoption of healthy lifestyles (Law No. 48/90, Base II).

The Ministry of Health's mission is to define and lead the national health policy, ensuring implementation and sustainable use of resources and the assessment of its results (Decree-Law No.
86-A/2011). It coordinates its action with that of the ministries responsible for related areas, whose departments should be involved in all activities to promote health, including specific areas in security and social well-being, education, employment, sports, environment, and economy (Law No. 48/90, Base VI).

Some institutions and agencies with responsibilities in the development, administration, implementation, supervision, monitoring and assessment of health promotion should be highlighted:

**Directorate-General of Health (DGS)** (Regulatory Decree No. 14/2012), which regulates, guides and coordinates the activities on health promotion, disease prevention and definition of technical conditions for proper care provision; it plans and programs the national policy for quality in the Health System; ensures the development and implementation of the National Health Plan; and also coordinates international relations of the Ministry of Health.

**National Institute of Health Doutor Ricardo Jorge (INSA)** (Regulatory Decree No. 27/2012) This Institute is a state laboratory, the aim of which is to increase gains in the public health sector, along with population health monitoring and epidemiological surveillance. It’s mission is to contribute, as a laboratory and provide differentiated assistance for gains in public health, through research and technological development, epidemiology and health services, ensure external laboratorial quality assessment, diffusion of science, stimulation of the capacitation and education and also providing services in the above-mentioned areas of expertise, including prevention of genetic disorders. INSA is responsible for conducting, coordinating and promoting health research on behalf of the Ministry of Health. It also has the objective of producing evidence for policy and action in public health.

**Regional Health Administrations** (Decree-Law No. 22/2012), which ensure access to quality healthcare at the regional level, match available resources to the needs, and implement health policies and programs in their area of promotion and intervention, offering Public Health Departments, Planning and Contracts.

**ACES (Groups of Primary Care Centres)** (Decree-Law No. 28/2008), which are responsible for the definition of health policy at the local level, which is articulated with the communities.

**Public Health Units**, integrated at ACES, (Decree-Law No. 81/2009) with Health Observatory functions in their geo-demographic area, are responsible for developing information and plans in the fields of public health and epidemiological surveillance; for managing intervention programs for health prevention, promotion and protection of the general population or specific groups; and for cooperating in exercising health authority functions.

The **Service for Intervention on Addictive Behaviours and Dependencies**, known as SICAD (Decree-Law No. 17/2012), has the mission of promoting the reduction of psychoactive substance abuse, preventing addictive behaviours and reducing addictions.
The Health Authorities (Law 48/90, Base XIX) at the national, regional and municipal level, attached to the Director-General of Health, provide intervention in situations that pose serious risk to public health, for which they have duties and special powers in surveillance and intervention.

In regards to health programs of NHP, the specific NPHP and also other programs (e.g. child and maternal health, ageing, work health, etc.) include all levels of intervention: health promotion, primary, secondary and tertiary prevention. The interventions are intended to be implemented by all the healthcare networks in accordance with their attributions and competencies – primary care centres and hospitals of the National Health Service (NHS) – and also by the private contracted health institutions.

Within the health public sector, health promotion and primary prevention interventions/projects may be initiated, developed and approved at all levels of the health governing bodies (national, regional, local).

Outside the health public sector there are many stakeholders that assume direct intervention in health promotion and wellbeing projects in accordance with their own field of action: ministries (like education, youth and sports), municipalities, and NGO. For example, municipalities assume an important action in health promotion and protection – namely for the young (e.g. child oral health, healthy behaviours), elderly, environmental health, and migrant populations – by developing specific projects in those groups and or by integrating these interventions in global projects like Healthy Cities, Elderly Friendly Cities, and Social Network.

In this sense, we can conclude that in Portugal, health promotion and primary prevention is implemented through the national, regional and local level of planning and funding. However, health promotion and primary intervention in Portugal has remained highly centralized.

Main public bodies and other organisations at the national, regional and local level

Some institutions and agencies with responsibilities in the development, administration, implementation, supervision, monitoring and assessment of health policies should be highlighted.

1. Public Bodies

1.1. National level

1.1.1. Directorate-General of Health (Regulatory Decree No. 14/2012), which regulates, guides and coordinates the activities on health promotion, disease prevention and defining technical conditions for proper care provision; plans and programs the national policy for quality in the Health System; ensures the development and implementation of the National Health Plan; and also coordinates international relations of the Ministry of Health.

http://www.dgs.pt/institucional.aspx?v=b5ef3dfe-6f5f-4ce3-8e86-fabad33830bf
1.1.2. National Health Institute Doctor Ricardo Jorge INSA (Decree-Law No. 27/2012) with a direct mandate for health promotion and disease prevention is a public organization of the Ministry of Health. INSA has a triple role: State Laboratory in the Health Sector, National Reference Laboratory and National Health Observatory. INSA is organized around technical and scientific areas like food and nutrition, infectious diseases, epidemiology, human genetics, health promotion and noncommunicable disease prevention and environmental health. The different departments, which are composed of all operative units, develop multidisciplinary programmes in problem-areas of public health, namely performing R&D, health monitoring, training, laboratory external quality assessment and general health services.

http://www.insa.pt/sites/INSA/English/Pages/NationalHealthInstituteDoutorRicardoJorge.aspx

1.1.3. National Authority of Medicines and Health Products (INFARMED) (Decree-Law No. 46/2012) is a government agency accountable to the Ministry of Health. The objective is to monitor, assess and regulate all activities relating to human medicine and health products, for the protection of public health.

http://www.infarmed.pt/portal/page/portal/INFARMED/ENGLISH

1.1.4. Central Administration of the Health System (ACSS) (Decree-Law No. 35/2012), which manages the NHS’s human and financial resources, facilities and equipment, information technologies and systems, and promotes organisational quality of healthcare providers, including training of professionals. The ACSS does not have a specific mandate on health promotion and disease prevention. Nevertheless, this organism of the Ministry of Health is responsible for global resource allocation and administration organization (finance, health workforce, infrastructure, investment) of the NHS and the health system as a whole. ACSS is responsible for the Terms of Reference for annual contracting processes (public and public-private) and systems performance evaluation according to established contracts. For these reasons ACSS has a huge influence on the inputs of resources for health promotion and disease prevention.

http://www.acss.min-saude.pt/

1.2. Regional Level

1.2.1. Regional Health Administrations (ARS) (Decree-Law No. 22/2012) (five bodies corresponding to the 5 Health Regions of mainland/continental Portugal), which ensure access to quality healthcare at the regional level; match available resources to the needs; and implement health policies and programs in their area of intervention, offering Public Health Departments, Planning and Contracts. ARS are responsible for the implementation and evaluation of health policies at the regional level, including health care contracting and Public Health Regional Services. In addition, they hold responsibilities to supervise primary care, hospitals and continuous care networks, and activities they perform which concerns the NHP, NPHP and other health programs and projects.

1.2.2. Regional Secretariats at Azores and Madeira autonomic regions – They are under the purview of the NHP but have regional autonomous health plans. Like ARS they supervise primary care, hospital and continuous care networks and their activities.
1.3. Local Level

1.3.1. ACES (Groups of Primary Care Centres) (Decree-Law No. 28/2008), are responsible for defining health policy at the local level, which is articulated with the communities. This includes:

- **Family Health Units (Unidades de Saúde Familiar - USF)**, are responsible for individual care. Annually contract the type and volume of care to provide. USF teams, with auto-regulated organization, have administrative autonomy.
- **Personalized Care Units (Unidades de Cuidados Personalizados - UCP)**, are responsible for individual care. The type and volume of care to provide is annually contracted with RHA by the Executive Council of the ACES.
- **Community Care Units (Unidades Cuidados na Comunidade UCC)**, UCCs provide health care and psychological and social support, at home and in the community, particularly directed at people, families and vulnerable groups at increased risk or with physical and functional dependency or illness that requires close monitoring of their situation. UCC also acts in health education, integration into networks of family support, and implementation of intervention mobile units.
- **Public Health Units (PHU)** (Decree-Law No. 81/2009) are local health observatory in their geo-demographic area, which are responsible for developing information and plans in the fields of public health and epidemiological surveillance; for managing intervention programs for health prevention; promotion and protection of the general population or specific groups; and for cooperating in exercising health authority functions. They are directly involved in health planning and evaluation and in the coordination of health promotion and primary prevention programmes and projects, namely in child and mother health surveillance, vaccination, diabetes, cardiovascular diseases, elderly health, cancer, health at schools and workplaces, and environment health, among several others. Public health professionals of PHU usually play fundamental roles in intersectoral planning, eg. in the production of Local Health Plans and by being involved in Healthy Cities projects (see below).
- **Shared Resource Assistance Unit** (Unidade de Recursos Assistenciais Partilhados URAP), provides consulting and assistance services to functional primary care units, and provides connections to the functional organization of hospital services.

1.3.2. Hospital network

- By its nature, a hospital’s mission is to provide individual health care. Nevertheless, hospitals have specific attributes in relation to health promotion and disease prevention and are essential for the accomplishment of many objectives of the NHP an NPHP. For example, in what relates to cardiovascular diseases, internal organization of specialized units for stroke or acute ischemic heart disease treatment represents a real impact not only in patient survival but also in quality of life and “primary prevention” of subsequent morbidity.
- Also worthwhile to mention are specific fields of action such as the engagement of hospitals in maternity networks like baby-friendly hospitals
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www.chrodis.eu

(http://www.unicef.pt/docs/lista-dos-Hospitais-Amigos-dos-Bebes.pdf) and less expressly in the Health Promoting Hospitals (two individual institutions in Portugal).

- Some other important examples relate to occupational health and work conditions or the impact of the external environment.

1.4. Other main organisations

In Portugal, there are several other organisations that implement policies and programmes for health promotion and primary prevention, namely organisations representing citizens and social interests, such as patient associations, private social solidarity institutions, “Misericórdias”, among other NGO.

Some activities of these organisations include:

- Public campaigns from patient associations, particularly for commemorative days, with social mobilisation actions (conferences, marathons, festivals, fairs, among others).
- Promotion of training and information for healthcare professionals and patients on issues such as individual responsibility in health, volunteering, vulnerable groups, and health literacy (eg. The Federation of Institutions Supporting Chronic Patients (FIADC) and the Health in Dialogue Platform).
- Representation of patient associations in the Monitoring Committees of national or vertical programmes, namely the National Programme for Control of Diabetes. Participation of patient associations in the discussion and implementation of an integrated management of disease programmes.

1.4.1. Portuguese Diabetes Association (Associação Protetora dos Diabéticos de Portugal – APDP) is a non-profit patient advocacy organization, the oldest of all the Diabetics Associations in the world, providing direct integrated chronic healthcare services to around 50,000 individuals (half of which are over 65 years) at its outpatient clinic. APDP also administers, through the School of Diabetes, courses for patients, their families, and healthcare providers. Collaborations with enterprises and academia are widely maintained, to further develop additional products and services addressing complications derived from diabetes, from blindness to amputation. APDP currently maintains several national and international ongoing projects related to disease prediction and prevention and to problems relevant for people with diabetes, including leading a consortium on the Action Group B3 of the European Innovation Partnership for Active and Healthy Ageing.
http://www.apdp.pt/

1.4.2. Portuguese Society of Diabetology (Sociedade Portuguesa de Diabetologia – SPD) is a Scientific Society composed of professionals whose work is related to the field of diabetes. The SPD’s mission is to promote research and education regarding diabetology and related subjects; provide scientific and policy making consultation on such matters; support the scientific development of its associates and their intervention in societal challenges. SPD endorses a dozen thematic workgroups and organizes the Diabetes Observatorium, which integrates information from several sources within the Health System to provide a clinical, logistic and financial annual report on the burden of
diabetes. It also developed PREVADIAB, the first National Diabetes Prevalence Study, and now a follow-up study.

1.4.3. Portuguese Cardiology Foundation (Fundação Portuguesa de Cardiologia) – Mission: to promote prevention, treatment and rehabilitation of cardiovascular diseases and stroke at all ages. Some initiatives include: May month of the Heart, cardiovascular screenings, and media campaigns. [http://www.fpcardiologia.pt/](http://www.fpcardiologia.pt/)

1.4.4. National Institute of Preventive Cardiology (Instituto Nacional de Cardiologia Preventiva) – The main objectives are the provision of better outpatient health care, throughout the natural history of cardiovascular diseases (and some other noncommunicable diseases with identical risk factors - obesity, diabetes, dyslipidaemia, metabolic syndrome, etc.), practicing "Primary" and "Primeval" prevention (health promotion and health education), "Secondary" prevention (early diagnosis and clinical guidance) and "Tertiary" prevention (further ensuring effective rehabilitation and social reintegration). [www.incp.pt](http://www.incp.pt)

1.4.5. Portuguese Society of Stroke (Sociedade Portuguesa do AVC) – SPAVC is a non-profit association, whose purpose is to prevent and reduce mortality, morbidity and disability due to stroke and to promote the study, research and education about this disease, by creating action plans and support, and identifying the most effective intervention levels, thus contributing to the improvement of health in Portugal. [http://www.spavc.org](http://www.spavc.org)

1.4.6. Portuguese Healthy Cities Network – The Portuguese Healthy Cities Network is an association of municipalities, formally established on October 10th 1997. It is under the political and technical co-ordination of the Municipality of Seixal and there are currently 29 municipalities integrated in the network. The mission of this association is to nationally spread and promote the Healthy Cities Project and the ideas that support e.g. the holistic approach to health, and the importance of the social determinants of health for the improvement of quality of life. It also aims to define local strategies in order to obtain health gains and enhance the co-operation and communication among the municipalities that integrate the Portuguese Network and the National Networks that participate in the Healthy Cities Project, in partnership with WHO. [http://redecidadessaudaveis.com/index.php/en/presentation#c](http://redecidadessaudaveis.com/index.php/en/presentation#c)

1.4.7. Portuguese Tobacco Control Coalition (Confederação Portuguesa de Prevenção do Tabagismo- COPPT) – The main objectives are:

- to act as a Coalition of National Non-Governmental Organisations acting on tobacco prevention, health promotion, environment and quality of life;
- to defend and promote comprehensive and integrated strategies on tobacco prevention;
- to strengthen and coordinate the NGO movement on tobacco prevention;
- to be a socially active and interventive partner, especially among policy makers; and
• to continue to intensify contacts to other national coalitions to become stronger by joint lobbying for our common targets and to strengthen capacities


1.5. Academic Institutions

1.5.1. ENSP - National School of Public Health (Escola Nacional de Saúde Pública) provides post-graduate teaching and research in health related areas, namely in public health and health policy and management. Established in 1966, ENSP is a pioneer institution in public health education in Portugal and Europe. ENSP invests in health promotion and innovation, through a broad network of national and international partnerships. Its goals are:

• to promote a student-oriented teaching/learning process with an integrated and dynamic vision of health systems and public health sciences;
• to promote scientific discovery, knowledge production and innovation practices in public health; and
• to connect research and teaching with action in public health, in order to establish itself as an effective influence in the emerging knowledge society. ENSP is partner at the Portuguese Healthy Cities Network and in local action-research projects, like Eat-well communities, and Prevention during ageing (see 3.)

http://www.ensp.unl.pt/ensp

1.5.2. ISPUP - Institute of Public Health (ISPUP)'s mission is to contribute to the development, dissemination and application of new knowledge in the public health domain, stimulate research and training of excellence, and improve and protect human population health. The research at the ISPUP comprises of epidemiological studies on risk factors for the major chronic diseases. Most studies relied on a population-based methodology, using mainly the case-control and cohort approaches. The Institute also promotes collaborative community-based research projects in public health. The ISPUP provides experience on methodological and substantive epidemiologic research, mainly based on three population cohorts - adults, adolescents and newborns, and focuses on genetic and environmental health determinants with particular attention to perinatal, cardiovascular and oncologic diseases and on the determinants and consequences of psychosocial (e.g. violence, quality of life) and behavioural factors (e.g. smoking, alcohol, diet and physical activity) in a life-course perspective on health and its determinants.

http://www.ispup.up.pt
Strategies and programmes

At the national level, Portugal has a National Health Plan (http://pns.dgs.pt/nhp-in-english/) fulfilled by 9 National Health Programs (http://www.dgs.pt/programas-de-saude-prioritarios.aspx).

More specifically, for cardiovascular disease and stroke, the National Programme for Cardio-Cerebrovascular Diseases is in the field (http://www.dgs.pt/programas-de-saude-prioritarios/paginas-de-sistema/saude-de-a-a-z/programa-nacional-para-as-doencas-cerebro-cardiovasculares.aspx).

The National Programme should allow for an integrated and comprehensive view of the different aspects of the National Health System's performance in this field, covering the three aspects recommended by the World Health Organization as its fundamental components: precise monitoring of reality; realistic prevention strategies; and defence of accessibility to care, particularly to those that are more differentiated. Recognizing the importance of preventive measures in reducing the incidence and burden of disease in the population implies the defining an integrated strategy that has multiple connection points and interdependencies with other national programmes. The deepening of broad common initiatives leads to the creation of very useful synergies.

The strategy for the prevention of cardio-cerebrovascular diseases should be based on two fundamental components. On the one hand, the adoption of healthy lifestyles, including: avoiding so-called risky behaviours such as smoking, and including components such as exercise, the fight against sedentary lifestyles, a balanced diet, and the fight against obesity. On the other hand, the correction of the so-called modifiable risk factors, including: hypertension, dyslipidaemia and diabetes, the latter being the subject of one of the national priority programmes.

In the field of hospital care, including multiple areas of differentiation, the recognition of the epidemiological importance and strong impact of myocardial infarction and stroke as pathological conditions responsible for high levels of morbidity and mortality, necessarily leads to a focus of the National Programme on the so-called stroke and coronary “Fast Tracks”.

This programme allows continuing projects, which were previously launched and using the synergies, to become achievable through the cooperation with its different departments.

As an immediate task, and as a result of the foregoing, a reformulation and updating process will be started concerning the reference document of the Programme, since the previous document "National Programme for Prevention and Control of Cardiovascular Diseases" dates back to 2006 (Revision published by Normative Resolution of the Directorate-General of Health of February 2006).

The drafting of "Clinical Orientation Guidelines" is also a powerful tool for creating scientific benchmarks for the different professional groups involved. The National Programme should increase its participation in this activity of great strategic relevance.

Several initiatives of Scientific Societies, including epidemiological studies and sectoral registries, constitute valuable contributions to the knowledge about the Portuguese reality. The national
programme shall cooperate with these projects, enlarging the epidemiological information collection base.

**Impact Goals of the National Programme for Cardio-Cerebrovascular Diseases**

a) Overall reduction in mortality due to circulatory system causes by 1%;

b) Reduction of global in-hospital mortality from acute myocardial infarction to 8% by 2016; and

c) Reduction of the overall in-hospital mortality from stroke to 13% by 2016.

**Operational Goals**

a) Annual publication of stroke and coronary Fast Track care indicators;

b) To increase the number of admissions through the fast tracks due to acute myocardial infarction and stroke by 10% (national total) by 2016;

c) To increase the number of percutaneous angioplasties in the reperfusion therapy of acute myocardial infarction by 20% by 2016; and

d) To increase the overall number of patients submitted to fibrinolytic therapy for stroke by 30% by 2016.

Specifically we refer to some examples of activities that have been developed at the national, regional and local level:

- Assessment of Cardiovascular Risk SCORE (Systematic Coronary Risk Evaluation): Guidance and evaluation of clinical practice;

- Publication of the journal “Portugal – Cardio-Cerebrovascular Diseases in numbers – 2013”: This report meets the goal of improving the epidemiological and statistical knowledge of the determinants of cardiovascular diseases, as stated in the National Programme for Cardio-Cerebrovascular Diseases;

- Establishment of the National Register of Cardio-Cerebrovascular Diseases: Promote the surveillance and diagnosis of the situation by creating the National Register of Cardio-Cerebrovascular Diseases; and

- Establishment of the interface between the brain and the cardiovascular SICO (IT System Certificate of Death).

Leading action on diabetes, Portugal established the **National Programme for Diabetes** ([http://www.dgs.pt/programa-nacional-para-a-diabetes.aspx](http://www.dgs.pt/programa-nacional-para-a-diabetes.aspx)). The National Programme for Diabetes Control exists in Portugal since the seventies, and has been updated and revised several times; it is one of the oldest national public health programmes.

The strategies foreseen in the National Programme for Diabetes are based on primary prevention of diabetes by reducing the known modifiable risk factors of the etiology of the disease; on secondary prevention through early diagnosis and adequate treatment according to the principle of equity; on
tertiary prevention through the rehabilitation and social reintegration of patients; and on the quality of the care provided to people with diabetes.

The National Programme for Diabetes should be implemented from a point of view of intervention, complementarity and coordination with the remaining Priority Health Intervention Programmes.

The National Programme for Diabetes is intended for the general population; however, the primary target population are people with diabetes with and without complications of the disease, pregnant women and people with an increased risk of developing diabetes.

**General Goals of the National Programme for Diabetes:**

a) To reduce the incidence of diabetes;

b) To reduce the incidence of micro- and macro-vascular complications of diabetes; and

c) To reduce diabetes-related morbidity and mortality.

**Specific Goals of the National Programme for Diabetes:**

a) To monitor the prevalence of diabetes and its complications and the corresponding evolution – An annual publication of the National Diabetes Observatory's report;

b) To develop early diagnosis of people with diabetes – Define the degree of risk of diabetes in 50% of NHS users, through a risk questionnaire;

c) To ensure access for people with diabetes to healthcare – Implement diabetes appointments in 80% of PHC institutions and hospitals;

d) To develop the coordination between levels of care – Implement the creation of Functional Coordination Units for diabetes in 80% of ACES;

e) To ensure systematic screening for diabetic retinopathy, diabetic foot and diabetic nephropathy – Achieve the target of screening 70% of people with diabetes;

f) To reduce the number of hospital admission episodes directly related to diabetes decompensation – 10% reduction in the number of admissions due to decompensated diabetes;

f) To reduce in-hospital lethality – 10% reduction of in-hospital mortality of people with diabetes;

h) To standardise professional practices towards an effective clinical and organisational quality and towards the satisfaction of people with diabetes – Publication of the Integrated Diabetes Care Plan by the end of 2012; and

i) To support basic, clinical and epidemiological research in all areas related to prevention and monitoring of diabetes – Promote 1 study and 2 annual conferences on relevant matters within this context.
**Intervention Strategies of the National Programme for Diabetes**

The intervention strategies aim at strengthening the organisational capacity and introducing best practice models in the management of diabetes. They are outlined according to the following guiding principles:

a) Primary prevention, by addressing the known risk factors, focusing mainly on modifiable risk factors of diabetes' etiology;

b) Secondary prevention, through early diagnosis of diabetes and its proper treatment, according to the principle of equity;

c) Tertiary prevention, through early diagnosis of diabetes complications, rehabilitation and social reintegration of people with diabetes;

d) Promoting the quality of the healthcare provided to the person with diabetes; and

e) Identifying barriers to the implementation of the Programme, through monitoring structures which identify existing barriers to its management, namely with regard to access of people with diabetes to adequate healthcare, according to the natural history of the disease.

The intervention strategies to be developed must be based on a solid health infrastructure that ensures:

a) Health professionals with the necessary training to meet the quality demands of the care to be provided;

b) The availability of information technologies, which facilitate timely access to the information required for the management of the Programme.

c) An organisational structure for the governance of the Programme, ensuring its effective implementation at all different levels of the Health System – central, regional and local structures; and

d) An organisational response of the heads of healthcare provision services in line with the strategies and priorities of the Programme.

The **National Programme for Diabetes** is developed according to the following intervention strategies:

a) Implementing community intervention programs, intended for the population in general, aimed at primary prevention of diabetes in collaboration, namely, with municipalities, schools and society in general;

b) Cooperating in the production of legislation which may contribute to environmental and social conditions that lower the risk of diabetes, from an intersectoral perspective not restricted to health, that puts diabetes in all public agendas;
c) Disseminating information about diabetes and its risk factors to the general population;

d) Identifying groups with increased risk of developing diabetes by applying the "Type 2 Diabetes Risk Assessment Form", which should be included in the primary care information and recording systems and should be applied to all NHS users;

e) Screening people with diabetes among the groups with increased risk of developing the disease;

f) Cooperating in the development and dissemination of standards and guidelines about or related to diabetes, under the responsibility of the Directorate-General of Health, to be distributed to professionals in primary healthcare, hospital care and long-term integrated care units;

g) Promoting the assessment of the clinical quality of the follow-up of people with diabetes at the different levels of healthcare provision - primary healthcare, hospital care and long-term integrated care;

h) Participating in the definition of the underlying contractual targets of the different levels of care provision;

i) Promoting, at schools, actions on the care to be provided to children and young people with type 1 or type 2 diabetes, so as to stimulate their full integration into the school community, the appropriate immediate assistance promoting solidarity and education on attitudes of non-stigmatisation and social accountability;

j) Promoting, at the competent institutions, the periodic dissemination to people with diabetes of the location coordinates of hospitals with diabetes appointments, as well as waiting times of appointments for diabetes, diabetic foot, high obstetric risk for diabetes and ophthalmology/eye diabetes, and waiting times for performing retinography, photocoagulation, cataract surgery and vitrectomy;

k) Promoting the assessment of national needs and the definition of the clinical parameters for allocation and use of Continuous Insulin Infusion Systems, in coordination with the competent services of the Ministry of Health, paying particular attention to children and adolescents with type 1 diabetes;

l) Ensuring access for people with diabetes to levels of care that are adequate to their situation, whenever possible from a preventive and bio-psycho-social well-being perspective, and the continuity of such care across the several provision levels of the health system, from a perspective of an integrated management of diabetes; and

m) Creating Programme support and monitoring structures (Scientific Commission and National Council), with an annual publication of a Progress Report.

Training strategies are addressed to health professionals and people with diabetes, and should be coordinated by the Regional Administration of Health (RAH) with monitoring from the Programme. Training strategies addressed to health professionals should rely on principles of continuous training.
and individual motivation. The promotion of education for people with diabetes is a fundamental premise in diabetes therapy, with the purpose of making them autonomous, and to know how to manage the disease on a daily basis. Training strategies addressed to people with diabetes should be based on an educational intervention aimed at optimising metabolic control, planning individual or group educational processes based on personal and cultural characteristics of each person, and ensuring the evaluation of the educational process and the integration of learning in everyday practices of each person.

**Monitoring of the National Programme for Diabetes**

The implementation of the National Programme for Diabetes is assessed through the following process and outcome indicators compared to the national population of identified people with diabetes. It is the responsibility of the Regional Health Administrations, in coordination with the Director of the National Programme for Diabetes, to set the targets for these indicators at the level of their regions, taking into account their different starting points and their particular contexts of implementation:

- **Prevalence of diabetes**;
- **Incidence of diabetes**;
- **Prevalence of gestational diabetes**;
- **No. of people with diabetes registered in Primary Healthcare**;
- **% of people with diabetes with HbA1c <=6.5 and % with HbA1c =>8.0**;
- **% of people with diabetes with blood pressure <130/80**;
- **% of people with diabetes with LDL-cholesterol <=100mg/dl (mmol/L)**;
- **% of people with diabetes with body mass index ≥25 kg/m2, ≥30 kg/m2 and ≥35 kg/m2**;
- **% of people with diabetes with microalbuminuria >30 mg/g creatinuria**;
- **% of people with diabetes under foot observation**;
- **No. of people with diabetes subject to retinopathy screening**;
- **No. of smokers with diabetes**;
- **No. of admissions due to diabetes**;
- **No. of days of hospitalisation due to diabetes**;
- **No. of people with diabetes submitted to bariatric surgery**;
- **No. of lower limb amputations due to diabetes (major and minor)**;
- **No. of patients on dialysis due to diabetes**;
- **No. of blind and partially-sighted people due to diabetes**;
- **No. of potential years of life lost due to diabetes**;
In-hospital lethality;

Mortality due to diabetes.

Specifically, we refer to some examples of activities that have been developed at the national, regional and local level:

- Handbook of good clinical and organizational practice in different levels of care within Type 2 Diabetes Mellitus;
- Publication of the journal "Diabetes Facts and Numbers";
- Stop Diabetes: Develop actions in the area of primary prevention in reducing the incidence of diabetes; Prevention Campaign launch "Portugal Stop Diabetes" by raising awareness of factors and risk behaviours, health education prevention of diseases, promotion of healthy lifestyles.
- Stamp Diabetes: Develop actions in the area of primary prevention in reducing the incidence of diabetes.
- Coordinating Functional Units of Diabetes in Primary Health Care and Integrated Units of Diabetes in Hospitals (Order n.º 3052/201): Improve the delivery of health care and promote good practice in reducing episodes of decompensation and hospitalization for complications of diabetes.
- Implementation, at the regional and local level, of Consultation Diabetes with the intention of standardizing the primary health care procedures regarding performance of Consultation Diabetes (Order n.º 3052/201).

The decentralized nature of the operationalization of national strategies, particularly with regard to the initiatives of activity and health promotion and primary prevention at the regional and local level, has resulted in not all measures being known.

Both the National Programme for Cardio-Cerebrovascular Diseases and the National Programme for Diabetes have a monitoring and evaluation framework and a focus on older populations.

The National Programme for the Promotion of Healthy Eating (PNPAS) (http://www.alimentacaosaudavel.dgs.pt/)

PNPAS aims to improve the nutritional status of the population, encourage the physical and economic availability of foods which constitute a healthy eating pattern, and create the conditions for the population to value, enjoy and eat them, integrating them into their daily routines. Adequate food consumption and the consequential improvement of the nutritional status of citizens has a direct impact on the prevention and control of the most prevalent diseases at the national level (cardiovascular diseases, cancer, diabetes, obesity etc.), but should also enable, simultaneously, the economic growth and competitiveness of the country in other sectors such as those related to agriculture, the environment, tourism, employment or professional qualification.
The strategy should allow the provision of foods which promote health and well-being for the entire population, be able to create citizens capable of making informed decisions about healthy foods and cooking practices, encourage the production of foods that are healthy and at the same time are able to boost employment, create balanced spatial planning and local economies, encourage local consumption and production methods that reduce impacts on the environment, reduce inequalities in the demand and access to foods that constitute a healthy eating pattern, and improve the qualification of those professionals that can influence the food consumption of the population.

**The PNPAS has five general goals:**

- **a)** To increase the knowledge about food consumption for the Portuguese population, as well as its determinants and consequences.

- **b)** To modify the availability of certain foods, namely in schools, workplaces and public spaces.

- **c)** To inform and empower the population in general, especially the most disadvantaged groups, on how to purchase, cook and store healthy foods.

- **d)** To identify and promote cross-cutting actions to encourage the consumption of good nutritional quality foods in coordination and integrated with other public and private sectors, namely in the areas of agriculture, sports, the environment, education, social security and municipalities.

- **e)** To improve the qualification and mode of action of the different professionals who, through their activity, may influence knowledge, attitudes and behaviours in the food area.

**Intervention areas of the PNPAS**

To reach the five general goals, the PNPAS proposes a set of activities distributed over six main areas:

- **a)** The systematic collection and aggregation of indicators of nutritional status, food consumption and its determinants over the life cycle, the assessment of food insecurity situations, and also the assessment, monitoring and dissemination of best practices with the goal of promoting healthy eating habits or eating habits that protect from disease, at the national level.

- **b)** The change in the offering of certain foods (with high sugar, salt and fat content), by controlling their supply and sales in schools, health and social support institutions and in the workplace; by encouraging a greater availability of other foods like water, fresh fruit and vegetables; by encouraging actions of nutritional reformulation of food products through a coordinated action with the food industry and the catering sector; or also through other activities that may influence food availability, taking into account the latest scientific knowledge and consensus.

- **c)** The increase in food and nutrition literacy, the empowerment of citizens from different socioeconomic and age groups, particularly the most disadvantaged ones, towards healthy choices and eating practices, and the encouragement of best practices on labelling, advertising and marketing of food products.
d) The identification and promotion of cross-sectional actions with other sectors of society – namely agriculture, sports, the environment, education, municipalities and social security – should allow to, inter alia, promote the adoption of a Mediterranean eating pattern, likely to encourage the consumption of foods of vegetable origin, seasonal, national, which use packaging or means of transport that reduce the emission of pollutants; develop electronic tools that enable planning healthy, easy-to-use and affordable menus with price information for individuals and families; and develop a network at the municipal level for monitoring best practices and projects in the area of the promotion of healthy eating for citizens.

e) The improvement of education, qualification and mode of action of different professionals who can influence quality eating habits, namely at the level of the health sector, schools, municipalities, the tourism and catering sector, or social security.

f) The improvement of the intervention and coordination methods of professionals and structures dealing with the phenomenon of obesity.

Monitoring of the PNPAS

The PNPAS must monitor and evaluate the strategies implemented, helping to define best practices for the promotion of healthy eating. Measurement indicators for assessing the implementation of the strategies and objectives proposed in the programme will be established. The results of this assessment will be translated into biannual reports.

Impact indicators of the proposed strategies:

a) Controlling the prevalence of overweight and obesity in child and school-age population, limiting growth to zero by 2016.

b) Increasing by 5% the number of school-age children who eat the recommended amount of fruits and vegetables on a daily basis.

c) Increasing by 5% the number of school-age children who eat a proper breakfast on a daily basis.

d) Increasing by 5% the number of consumers who use the nutritional label before purchasing food products.

e) Increasing by 10% the number of municipalities that regularly receive information about healthy eating.

f) Reducing by 10% the average amount of salt present in the main food contributors of salt intake by the population.


PNPCT has the vision to promote a healthy, totally smoke-free future.
This Programme, created by Order 404/2012 of the Assistant Secretary of State to the Minister of Health, and published in the Official Gazette, 2nd series, of 13 January 2012, is part of the National Health Plan (2012-2016) and aims to Increase the healthy life expectancy of the Portuguese population by reducing illnesses and premature mortality associated with the consumption and exposure to tobacco smoke.

**General Goals of the PNPCT**

- To reduce the prevalence of tobacco consumption (daily or occasional) within the population aged 15 or over by at least 2% by 2016.
- To eliminate the exposure to environmental tobacco smoke

The PNPCT is structured according to three core strategic axes: preventing the onset of consumption; promoting smoking cessation; and protecting from exposure to environmental tobacco smoke. These are supplemented by two axes of cross-sectional intervention geared towards information, education, assessment, training and research. The axes include:

1. Preventing the onset of tobacco use in young people.
2. Promoting and supporting smoking cessation.
3. Protecting from exposure to environmental tobacco smoke.
4. Informing, warning and promoting a social climate favourable to non-smoking habits.
5. Monitoring, evaluating and promoting vocational training, research and knowledge in the field of smoking prevention and tobacco control.

All these programmes are supported by national technical orientations and quality standards. The programmes contain specified objectives for the national level and some of them also contain some specifications for regional and local levels. All of them have a regional and local “translation” of their objectives and goals which are broken down by sex and age groups. They don’t explicitly present any specificity in relation to health inequalities and the socio-economic gradient (e.g. poor or migrants).

A monitoring and evaluation framework is included in all the programs. There are periodic publications on quantitative evaluation for each of them:

- [http://www.dgs.pt/paginas-de-sistema/saude-de-a-a-z/revista-da-dgs.aspx?v=b5ef3dfe-6f5f-4ce3-8e86-fabad33830bf](http://www.dgs.pt/paginas-de-sistema/saude-de-a-a-z/revista-da-dgs.aspx?v=b5ef3dfe-6f5f-4ce3-8e86-fabad33830bf)
The NHP has strategic axes regarding access and equity in health, so all national areas should consider equity in health and the socio-economic gradient. In Portugal, the following are identified as strategies and resources for the promotion of equity in the access to health:

- The use of information and monitoring systems.
- The implementation of specific projects aimed at obtaining additional health gains through the reduction of inequalities.
- The territorial organisation of healthcare services including the Primary Healthcare Network, Pre-Hospital Care, the Hospital Network and the National Long-Term Care Network.
- Articulation at each level of care, across levels and sectors, and among institutions.
- Citizen empowerment strategies.

The NHP 2012-2016 defines “Promoting supportive environments for health through the life cycle” as one of the Health Systems Goals. This goal adopted in it a perspective of the life cycle approach:

- Highlight the importance of early intervention on risk factors, crucial for the prevention of chronic disease and its complications through screenings, early diagnosis and promotion of patient compliance, as well as the rehabilitation and/or integration of people with disabilities.

The life cycle approach allows:

- Promoting an organisation and an integrated and continued intervention including primary, hospital and integrated long-term care on protection, risk, and other factors, as well as on biological, behavioural and social determinants, among others, from family planning and birth to death;
- Guiding society and healthcare towards the assessment of needs and intervention opportunities, in critical periods and windows of opportunity, throughout the life cycle (Women, Ageing and Health: A Framework for Action, WHO 2007), which may integrate environments and the input of other occupations, ensuring better implementation and ongoing monitoring of care; and
- Strengthening the responsibility of society for the specificity of critical periods and windows of opportunity of the healthy citizen and also of the acute and chronic patients and those in rehabilitation (Health-promoting Health Systems, WHO 2009).

Specifically, the former NHP recommends that interventions should be based on the principles of autonomy, active participation, self-fulfilment and dignity of the senior citizen. These develop within the family context; places of work and leisure; in communities; and in care institutions (e.g. nursing homes).

The drafting of health policies for this stage of the life cycle was supported by the following:

- DGS Health Programme: Implemented in 1 ARS (Alentejo) - National Programme for the Health of the Elderly (Normative Resolution No. 13/DGCG; DGS, 2004). Implemented in 2
ARS - National Programme for Pain Management (North and LVT). National Oral Health Programme, specific area for this age group.

- Line of Senior Citizens, the Office of the Ombudsman (1999), which tells the elderly about their rights and benefits in health, social security and other; and
- The National Network of Healthy Cities or the Senior-Friendly Cities

For the NHP there is a set of continuous evaluation indicators and a dashboard:

- [http://www.dgs.pt/dashboard/?cpp=1](http://www.dgs.pt/dashboard/?cpp=1)

**Financing**

All residents in Portugal have access to health care provided by the National Health Service (NHS), financed mainly through taxation. The main source of funding of the NHS is general taxation (over 90%), including funding of direct care provision within the NHS. Financial resources directed towards health care have reached a high level relative to the country’s wealth.

Specifically, the Portuguese Health System is composed of three overlapping systems: the NHS, and two kinds of health subsystems comprising of public and private insurance schemes.

The NHS covers the whole population and is predominantly financed through general taxation. The NHS budget is settled annually by the Ministry of Finance, based on historical spending and the provisional planning of the Ministry of Health. Capital and current expenditure are separated and the Ministry of Health is responsible for the control of capital expenditure.

The public health subsystems cover between one-fifth and one-quarter of the population and are financed mainly through employee and employer contributions (including state contributions as an employer). Private co-payments may be contracted through the employer or on an individual basis. Private voluntary insurance covers about 20% of the population. 30% of total expenditure is private, mainly in the form of co-payments and direct payments by the patient, and premiums to private insurance schemes and mutual institutions (these are less expressive). (Barros P, Machado S, Simões J. Portugal: Health system review. Health Systems in Transition, 2011, 13(4):1–156.).

Capital investment in health promotion and primary prevention has traditionally been the responsibility of the Directorate-General of Health. Specifically, the NHP and the National Health Programs (e.g. Cardio-Cerebrovascular Diseases and Diabetes) have specific funding coming through financing funds from the lottery. The financing amount is determined annually by the government (by law).

The EU, through the European Regional Development Fund (ERDF) and the European Social Fund (ESF) have joint funding hospital and primary care networks for infrastructure investment and health professionals training. Recently another project funding scheme emerged through EEA Grants. EEA
Grants have now launched a call for project funding in health promotion and disease prevention in some priority areas.

Private organisms/NGOs such as the Gulbenkian Foundation and Aga Khan Foundation, give some support to these project areas. Other private sources (meceanas) also provide some sporadic contribution.

Municipalities fund and develop health promotion projects according to local plans. 29 cities are integrated in the Portuguese Healthy Cities Network and are direct or indirect participants in several health and wellbeing interventions.

Public funding for health research has shown a relatively small expression, and in a sporadic way.

Very recently, the Ministry of Health established a Fund for Health Research that will be regulated in a short period of time (Decree-law nr. 110/2014, 10th July). The Science and Technology Foundation and the Gulbenkian Foundation are traditional fund providers for science, including health.

Seven years ago, the High Commissioner for Health (now extinct), and presently the Directorate-General of Health, have some financial resources (from taxation on lottery) to give incentives for research and also for field intervention projects in areas with a link to the priorities in health policies, in accordance with the NHP and the NPHP.

**Identifying Good Practice and Existing Databases**

1) Since there are no good practice databases the explicit criteria are those of funding. Nevertheless, for several studies and evaluation procedures, it’s possible to identify specific criteria for the selection of “good-practices”

2) Like European Funds, other funding Institutions in Portugal have rules respecting the type of projects accepted to the different calls, and criteria are defined according to the specific funding rules. Some examples of criteria include:

   - Project area facing health strategies and objectives (NHP; NPP)
   - Quality of methods proposed
   - Expected situation improvement based on specific intervention with adequate methodology
   - Post-funding sustainability of the project
   - Potential for translation of the intervention or project
   - Participative methodology with involvement of several stakeholders and or target groups
   - Budget appropriateness in the face of expected work to be done and results

One example of funding criteria for projects: The Gulbenkian Foundation during this year (2014) has a permanent call for innovative projects in health in the areas of global health, models, services and
health systems, training and qualification of health professionals and citizens’ empowerment, humanization in health care. The criteria for submission consider that a project should identify an innovative idea or new ways and answers to specific needs, promote empowerment actions, promote knowledge, new attitudes and policies and have a clear view on its own potential impact and sustainability.

There are some project and networks which identify best practices. For instance:

- The National Network of Healthy Cities or the Senior-Friendly Cities
  (http://redecidadessaudaveis.com/files/publicacoes/Networked%20Health(English).pdf )
Promoting Health and Quality of Life in Cities is at the heart of the Healthy Cities Project. This project seeks to place health at the top of the decision-makers’ agenda, increasing local strategies related to health and sustainable development. This European Network works in 5-year phases, with specific action plans and priority action themes. Phase IV is currently coming to a close. Main themes such as Healthy Ageing, Healthy Urban Planning, Active Life/Physical Activity and Assessment of the Impact on Health have been discussed and Phase V is being planned.

Eighty-nine cities from a total of 30 countries are part of the European Healthy Cities Network. Portugal is currently represented in the network by Montijo, Seixal and Viana do Castelo municipalities (Portuguese Healthy Cities Network).

3) There are no dedicated databases on good practices for health promotion.

The information on projects and studies exist in libraries, university repositories, and technical and administrative services for health and other institutions. These “bases” are not exhaustive and the crossing of information is often difficult.

### Forecasting Studies

**Cardiovascular and Brain Diseases**

http://www.dgs.pt/programas-de-saude-prioritarios/paginas-de-sistema/saude-de-a-a-z/programa-nacional-para-as-doencas-cerebro-cardiovasculares.aspx

Study of national incidence of cardiovascular disease and brain disease.

**Goals:** Promote the surveillance and diagnosis.

**Diabetes**

Follow-up to the first diabetes prevalence study in Portugal

**Goals:** Update prevalence data; provide a study on diabetes development by following a sub-set of non-diabetic people from the original Prevadiab study; establish biobank for additional studies on biomarkers and genetic factors.

**PREVADIAB studies:**

- Sample - 5167 Individuals (1100 on the follow-up).
- Face to Face Collection of Data.
- Period of Data Collection - January 2008 to January 2009 (and 5 years follow-up).
- Weighting Sample - Population Census 2001 – Stratification by sex and age (20-79 years).
- Adjustment Results - Population 2011 – Stratification gender and age (20-79 years).
- Territorial Distribution of Sample - 93 Counties - 122 Health Units (73 Health Units on follow-up)

**DOCE (DGS, 2012)**

**Goals:** Promote the surveillance and diagnosis of the situation of diabetes and its complications; prepare a report on the Registration of Children and Adolescents with Type 1 Diabetes.

**CENTRAL REGISTRATION DATA RELATING TO DIAGNOSTICS DIABETES IN YOUTH AGE - NHS.**

Permanent collection of information, with implications of mandatory updates of the prevalence and incidence submitted annually.

**TOGETHER IS EASIER**

**Goals:** Support changes towards healthy lifestyles, namely nutrition and physical exercise, in people with type 2 diabetes.

Healthcare professionals from Health Centres are given specific training to act as deliverers of the program to people with type 2 diabetes. This education program for patients is structured in six sessions, throughout four months. Clinical and biometric parameters are evaluated at enrolment and six months after starting the program.

Until the end of 2012, training included more than 350 healthcare professionals, from more than 80 Health Centres. These professionals served as program educators to more than 1000 patients.
PHYSICAL ACTIVITY-FRIENDLY NEIGHBOURHOOD AMONG OLDER ADULTS FROM A MEDIUM SIZE URBAN SETTING IN SOUTHERN EUROPE.
Ana Isabel Ribeiro et al.


Objective: In this cross-sectional study, we examined the relationship between socio-environmental characteristics of neighborhood of residence and the frequency of leisure-time physical activity (LTPA) among older adults from Porto (Portugal).

Method: Data from EpiPorto – a prospective adult cohort study from Porto (Portugal) – were used. Only adults aged ≥ 65 at baseline (1999–2003) were included (n = 580). We used a Geographic Information System to objectively measure the neighborhood characteristics and Generalized Additive Models to estimate their effect on participation in LTPA (none vs. some reported) and frequency of LTPA (min/day).

Results: 62% of the participants reported no LTPA. Active elderly spent on average 38 (women) and 67 (men) minutes per day exercising. Neighbourhood characteristics were unrelated to whether older people exercised or not. However, among active individuals, distance to the nearest destination (β = −0.154, p = 0.016), in women, and distance to the nearest park, in men (−0.030, 0.050), were predictors of LTPA frequency.

Conclusion: There was almost no association between neighbourhood characteristics and whether older adults engaged in LTPA or not, but among those that did engage, neighbourhood characteristics were associated with increased frequency of LTPA. The promotion of well distributed destinations and parks might improve physical activity levels among the elderly.

Note: Outcomes taken into account in policies and programmes in Portugal - not known.

2012 - E_COR – PREVALENCE OF CARDIOVASCULAR RISK FACTORS IN THE PORTUGUESE POPULATION. Main aim is the determination of the prevalence of cardiovascular risk factors in an adult Portuguese population (18-79 years). The project started in 2012 and the data collection it is estimated to end in December 2014. The presentation of the final report is expected until the end of 2015 (INSA).


2012 - PHYSICAL ACTIVITY PREVENTS PROGRESSION FOR COGNITIVE IMPAIRMENT AND VASCULAR DEMENTIA: RESULTS FROM THE LADIS (LEUKOARAIOSIS AND DISABILITY) STUDY
Ana Verdelho et al.
Background and Purpose: we aimed to study if physical activity could interfere with progression for cognitive impairment and dementia in older people with white matter changes living independently.

Methods: The LADIS (Leukoaraiosis and Disability) prospective multinational European study evaluates the impact of white matter changes on the transition of independent elderly subjects into disability. Subjects were evaluated yearly during 3 years with a comprehensive clinical protocol and cognitive assessment with classification of cognitive impairment and dementia according to usual clinical criteria. Physical activity was recorded during the clinical interview. MRI was performed at entry and at the end of the study.

Results: Six hundred thirty-nine subjects were included (74.1±5 years old, 55% women, 9.6±3.8 years of schooling, 64% physically active). At the end of follow-up, 90 patients had dementia (vascular dementia, 54; Alzheimer disease with vascular component, 34; frontotemporal dementia, 2), and 147 had cognitive impairment not dementia. Using Cox regression analysis, physical activity reduced the risk of cognitive impairment (dementia and not dementia: β=−0.45, P=0.002; hazard ratio, 0.64; 95% CI, 0.48–0.85), dementia (β=−0.49, P=0.043; hazard ratio, 0.61; 95% CI, 0.38–0.98), and vascular dementia (β=−0.86, P=0.008; hazard ratio, 0.42; 95% CI, 0.22–0.80), independent of age, education, white matter change severity, medial temporal atrophy, previous and incident stroke, and diabetes.

Conclusions: Physical activity reduces the risk of cognitive impairment, mainly vascular dementia, in older people living independently.

EVALUATION OF PHYSICAL ACTIVITY PROGRAMMES FOR THE ELDERLY - EXPLORING THE LESSONS FROM OTHER SECTORS AND EXAMINING THE GENERAL CHARACTERISTICS OF THE PROGRAMMES

Ana I Marques, Pedro Soares, Luísa Soares-Miranda, Carla Moreira, António Oliveira-Tavares, Paula Clara-Santos, Susana Vale, Rute Santos and Joana Carvalho

http://www.biomedcentral.com/1756-0500/4/368


Abstract: In Portugal, there are several physical activity (PA) programmes for elderly people developed by the local government. The importance of these programmes has been increasing since the evidence has shown that this type of health promotion interventions may reduce the deleterious effects of the ageing process. However, no study has already identified the general characteristics of these programmes nor if they use any scheme to assess the quality of the service provided. A widely-used scheme is the EFQM Excellence Model, which will be in the core of our present work. Thus, the main aims of this preliminary study were 1) to identify the general characteristics of the PA
programmes developed by the Portuguese Local Public Administration 2) to determine the extent of implementation of quality initiatives in these programmes.

**Methods:** Data were collected by an on-line questionnaire sent to all Continental Municipalities (n = 278). Categorical data were expressed as absolute counts and percentages. Continuous data were expressed as the mean and SD. An open-ended question was analysed using qualitative content analysis with QSR NVivo software. Associations between categorical variables were tested by the use of contingency tables and the calculation of chi-square tests. Significance level was set at p ≤ 0.05.

**Results:** Results showed: i) a total of 125 PA programmes were identified in the 18 districts of the Portugal mainland; ii) the main goal of the majority (95.2%) was the participants’ health promotion; iii) different characteristics of the programmes were found according to different regions of the country; iv) certain characteristics of the programmes were associated to the existence of other features; v) only one PA programme developed quality initiatives.

**Conclusions:** In conclusion, although there are many PA programmes for elderly people spread throughout the country, aiming at improving the health of participants, the overwhelming majority does not adopt quality control initiatives. Considering that the quality of a service increases customer satisfaction, the continuous quality improvement of the PA programmes for elderly people should therefore be implemented since they can be useful and critical for elderly satisfaction and adherence.

**EFFECTS OF TRAINING AND DETRAINING ON PHYSICAL FITNESS, PHYSICAL ACTIVITY PATTERNS, CARDIOVASCULAR VARIABLES, AND HRQOL AFTER 3 HEALTH-PROMOTION INTERVENTIONS IN INSTITUTIONALIZED ELDERS.**

Alexandrina Lobo, Joana Carvalho, and Paula Santos


**Abstract:** The purpose of this study is to assess the effects of different strategies of health on the levels of physical activity (PA), physical fitness (PF), cardiovascular disease (CVD) risk factors and quality of life (QoL) of the institutionalized elderly. Concurrently studies were made of the effect of detraining on these same variables. In this investigation we carried out a prospective longitudinal study with an experimental design, with 1 year plus 3 months of a detraining period. Methodology. (a) A questionnaire with socio-demographic characteristics and a QoL scale (MOS SF-36); (b) Functional Fitness Test to assess PF; (c) An MTI Actigraph to evaluate the PA; (d) Biochemical analysis of blood, blood pressure and bio-impedance. The Main Results Indicated That: (i) ST significantly improved strength and body flexibility and AT the aerobic endurance, agility/dynamic balance and lower strength and flexibility; (ii) Implications of detraining were more evident on the PA groups in
the lower body flexibility, which is associated with agility/dynamic balance and lower strength in the AT group; (iii) Cardiovascular variables improved significantly especially blood pressure, cholesterol and glucose in the ST and HDL in the AT group; not having undergone significant changes with the detraining. The results of this thesis contribute positively to highlight the importance of PA in the promotion of health, prevention and reduction of CVD risk factors and the improvement of the PF and QoL. (n: 185 participants)

2013-2015 - INEQUALITIES IN CORONARY HEART DISEASE MANAGEMENT AND OUTCOMES IN PORTUGAL

Principal Researcher: Ana Azevedo


ISPUP

Objective: This project aims to study the variation in coronary heart disease management and outcomes, taking into account the role of cardiological health care organization and of patients individual features, particularly those related with socio-economic position and health literacy, in urban and rural settings in Portugal. The final purpose is to identify inequalities and opportunities for better prevention and rehabilitation, and their determinants, in order to promote a fair and more effective individualized strategy for diagnosis and treatment of coronary heart disease. This will involve two studies:

I) Estimation of burden of CHD in Portugal, using disability-adjusted life years (DALY) according to the WHO methodology;
II) Prospective cohort study of acute coronary syndrome survivors consecutively recruited at the cardiology departments of two big hospitals.

Since 1998- EPHF - PORTUGUESE FAMILIAL HYPERCHOLESTEROLEMIA STUDY


Objective: Main aim is the development of an epidemiological study for the determination of the prevalence of Familial Hypercholesterolemia (FH) in Portugal. The genetic diagnosis of FH was established within this project. The project started in 1998 and until now more than 2200 individuals have been studied and more than 700 have been proved by genetic test to have FH. This is an ongoing project that has no end date at the time being.

Cost-Effectiveness Studies

The National Health Plan and the national programmes (National Programme for Cardio-Cerebrovascular Diseases and National Programme for Diabetes) recommend the development of
studies of cost-effectiveness of strategies and initiatives to promote health and disease prevention. Despite the lack of research and knowledge in this area, we provide an example of an ongoing study:

**2013-2015 - EUROpean Treatment & Reduction of Acute Coronary Syndrome (EUROTRCS) Cost Analysis**
*Principal researcher: Ana Azevedo (ISPUP)*


Participating Institutions: PSMAR, HCC, DEASL, FMUP, HMGU, ESREFO, AEPMCV, ISS

**Objective:** The main objective consists of utility analysis (cost-effectiveness) in terms of cost per Quality-Adjusted Life Year (QALY) saved in two fields: 1) Three population interventions (and their combinations) designed to prevent coronary artery disease incidence aimed at reducing smoking, dyslipidaemia, and hypertension population prevalence, and 2) optimal use of coronary angiography and percutaneous intervention procedures in the management of patients with acute coronary syndrome (ACS) with special emphasis on the elderly (>64 years) to minimize the inequalities in this patient subgroup that has higher mortality than patients <65 years.

**Gaps and Needs**

*Leadership/Strategic vision*

In the areas of CVD, stroke and diabetes and chronic diseases in general there are clearly identifiable leaders relating to health promotion and primary prevention:

- The (named by law) coordinators of the national priority health programmes identified above and regional and local teams responsible for these programmes (primary care teams and hospital teams),
- Healthy cities network coordination and local leaders in municipalities - healthy ageing is a big issue, including friendly environment, healthy lifestyles
- NGO – e.g. Foundations and Patient Associations
- Academic institutions – e.g. ENSP; IMP; ISPUP Faculty of Human Kinetics (FMH), of the Technical University of Lisbon (UTL – Universidade Técnica de Lisboa); Faculty of Nutrition and Food Sciences of the University of Porto (FCNAUP); Higher Institute of Applied Psychology (Instituto Superior de Psicologia Aplicada - ISPA)

The programmes are designed in accordance with NHP strategies and they are monitored and periodically fully evaluated. Reports are published on a regular basis. Some of the programmes promote specific reviews and thematic studies which are also publicly presented and accessible. See [http://pns.dgs.pt/](http://pns.dgs.pt/) and [http://www.dgs.pt/programas-de-saude-prioritarios.aspx](http://www.dgs.pt/programas-de-saude-prioritarios.aspx).
Policy frameworks address inequalities in relation to regions, gender or specific vulnerabilities or age groups, like children, youth, women, adults, or settings (eg. workplaces, schools). But specific objectives concerning socio-economic groups or the reduction of inequalities are not included. The same is true for evaluation.

**Portuguese Diabetes Association (APDP)** – Besides being the oldest diabetes patient association in the world that has been committed since 1926 to a patient-centred strategy, the APDP leadership is based on work as a Healthcare Provider focused on chronic care, education, and advocacy. These actions are aligned with four pillars of excellence: Social: Fighting for the rights of people with diabetes; Clinical: Providing multi-specialized healthcare services to more than 40,000 people with diabetes; Education: Training courses aimed at healthcare professionals (physicians, nurses, dieticians), professionals of communitarian support institutions, and university students and patients and their families; Research: in basic and clinical science and epidemiology.

**Cross governmental action**

In all that concerns Health in All Policies (HiAP) and its implementation, it is within the purview of the NHP. There is a growing movement and a good basis to build a solid “structured” view and action by the health sector and in particular by the Ministry of Health. Several inter-ministerial commissions exist in areas like alcohol abuse, drug and game addiction, tobacco (these 3 coordinated by the Ministry of Health), radiation, environment, and education.

At local level, the Healthy Cities Network (29 municipalities; 25% of the Portuguese population) and the Social Network project (implemented in all the 308 municipalities) are currently established and very well placed to assume HiAP; these are very good fields for public health action and health promotion. Many municipalities are involved together with local primary health boards and particularly with public health units in the construction of Local Health Plans (LHPs). LHPs address local health problems and establish common intersectoral objectives in health programs’ design. Cardiovascular diseases, diabetes, their causes and “solutions” to face them are always present in LHPs. LHPs are established with the participation or consultation of the community, with diverse degrees of deepness given the specific place and the dynamics that are locally created.

Public health services cover the whole country. They have a well trained workforce in health planning and evaluation but there is some lack of capacity, interest and perhaps, experience and knowledge in health promotion and working with the community and with other sectors. Also, there is still a scarce number of public health professionals that engage in all these “new areas” since they have to give answers to many other activities.

In other sectors, the type of professionals, and their number and experience, are felt as insufficient to act in the NCD field (and other health issues), namely in health promotion. In Portugal we have evidence of this, for example, through the evaluation reports of the Health Promoting Schools Network (the project was stopped a few years ago by the Ministry of Education at the time) and of
the Project on Capacitating in Health Promotion that was directed to the empowerment of policy makers and staff of municipalities (PROCAPS, 2010).

Health promotion funding is very limited. Nevertheless recent evolutions have been observed through EEA Grants (2014), the Ministry of Health’s fund for health research (2014) and private initiatives (e.g. The Gulbenkian Foundation 2013, 2014).

**Data and programme monitoring**

The National Health Information System as a whole provides good data for the monitoring of the established priority programmes on cardiovascular disease, stroke and type 2 diabetes. In some programme areas there are specific registries to provide required quality data. For some indicators, stratification for education level, socioeconomic class, and occupational and other stratification are possible. This is also true for the modifiable health risks. The information is produced in a timely manner, but some of the data are collected through “heavy” instruments like the National Health Inquiry or similar methods (European instruments, special inquiries).

The Directorate General for Health has specific micro-sites for each of the programs that provide access to the specific documentation, indicators and analysis. Also, the NHP has a specific micro-site with all the main information. Data are provided by region, gender and age groups.

- [http://www.dgs.pt/dashboard/?cpp=1](http://www.dgs.pt/dashboard/?cpp=1)
- [http://www.dgs.pt/paginas-de-sistema/saude-de-a-a-z/revista-da-dgs.aspx?v=b5ef3dfe-6f5f-4ce3-8e86-fabad33830bf](http://www.dgs.pt/paginas-de-sistema/saude-de-a-a-z/revista-da-dgs.aspx?v=b5ef3dfe-6f5f-4ce3-8e86-fabad33830bf)

Portuguese health data are in accordance with EUROSTAT, EU-level surveys, WHO and OECD requirements.

**Implementation**

All policies in the concerned areas have been implemented in practice for many years and are also monitored and evaluated. Coordination exists at all levels of the NHS (national, regional and local). The NHS, NGO and private organisations that cooperate with the NHS have obligations through annual contracting terms that are applicable to all health providers within the NHS and the scope of the type and volume of care to be provided is outlined. There are specific indicators for many areas, e.g. timely access to health care, national screening programs (oncology; diabetes risk assessment), quality of care, efficiency and so on.

**Evaluation**

As mentioned above in this document, health promotion and primary prevention programmes are evaluated on a regular basis at the national and the regional level and the results are presented in
public reports. This evaluation is usually made to measure the attainment of pre-established goals by each of the programmes. Cost-effectiveness evaluation is currently not performed. The capacity to undertake cost-effectiveness evaluations exists, mainly at academic institutions, but financial resources for this issue are very limited. Recent funding from the Ministry of Health for health research pursues the support of projects in this field.

**Partnership and multidisciplinary work**

**APDP** - Recently, the Education and Research Centre (APDP-ERC) has been created in an effort to promote education and basic science in a clinical setting, and thus support the development of Translational Medicine. With the installed know-how derived from the different specialties available and the experience in integrated chronic care, APDP has collaborated with several scientific societies, universities, and research institutes, and developed the collaborations into international projects including IDF, Euradia, IMAGE, MANAGE-CARE, SWEET, EURODIAB, DIRECT and PRE-START. APDP is a partner in the TRISHCP - Translational and Clinical Research Infrastructures Specialization Platform, and leads a consortium on the Action Group B3 of the European Innovation Partnership for Active and Healthy Ageing.

**National Health Plan 2012-2016** - Advisory and Monitoring Council (Resolution nr. 728/2014) – consisting of representatives from civil society, namely public, private and interested social partners, appointed by the member responsible for health government on the proposal of the Director General Health. This council allows the planning and monitoring of community participation; ensures the inter-ministerial involvement and collaboration in the implementation of NHP; and also ensures the capacity of health impact assessment across the government.

**Knowledge development**

In regards to knowledge development on cardiovascular diseases, diabetes, and related health determinants, and in relation to health strategies in these domains, a public forum took place at INSA in October 2012. The aim was to establish the priority knowledge and research areas for each of the NPnP. The forum included a presentation of the NPnP by the respective National Health Coordinators, a workshop, and discussion for further consensus on priorities in this field.

The priorities were defined on the basis of specific identified needs to accomplish the NPnP’s goals.

The final document that was produced in April 2013: *Agenda de Investigação no âmbito do Plano Nacional de Saúde e Programas Nacionais de Saúde Prioritários* and got agreement from DGS and INSA: [http://repositorio.insa.pt/bitstream/10400.18/1794/3/INSA-IP_Agenda_I%26D_2013.pdf](http://repositorio.insa.pt/bitstream/10400.18/1794/3/INSA-IP_Agenda_I%26D_2013.pdf).

**Some highlights**

For diabetes, the main issues considered were related to collecting new data (e.g. on MODY - Maturity-Onset Diabetes of the Young, and including questions on diabetes in the National Health Inquiry), and mapping and centralizing information about diabetes research at the national level.
For cardiovascular and cerebrovascular diseases, research should be focused on collecting evidence about incidence and prevalence of modifiable and non-modifiable risk factors and performing a genetic study on the prevalence of ischemic heart disease and cerebrovascular disease.

For tobacco control, many areas were identified for research. Some examples include: effectiveness of health promotion programs in schools and the community including the analysis of best practices by gender, age, social class, region and development trends; analysis of the impact of the price of tobacco products for smoking cessation on gender, age, social class and region; study of the impact of smoking cessation on morbidity / mortality and the use of health services by gender, age, social class and region; and analysis of the variables that influence the impact of campaigns and strategies of social marketing on promoting smoke-free environments, by gender, age, social class and region.

For healthy food and nutrition, some of the main areas of knowledge to be developed in Portugal include for example: mapping of national interventions for prevention and control of obesity; and regular monitoring of food insecurity.

It is important to mention some research studies that are in the field in Portugal and that provide input for the improvement in the health programs under consideration here:

**E_COR – Prevalence of cardiovascular risk factors in the Portuguese population**

The main aim is the determination of the prevalence of cardiovascular risk factors in an adult Portuguese population (18-79 years). The project started in 2012 and the data collection is estimated to end in December 2014. The presentation of the final report is expected at the end of 2015. (INSA)


**EPHF - Portuguese Familial Hypercholesterolemia Study**

The main aim is the development of an epidemiological study for the determination of the prevalence of Familial Hypercholesterolemia (FH) in Portugal. The genetic diagnosis of FH was established within this project. The project started in 1998, and until now, more than 2200 individuals have been studied and more than 700 have been proven by genetic test to have FH. This is an ongoing project that has no end date at the time being.


**Prevadiab2 – Diabetes Prevalence Study Follow-up**

Besides the major objective of studying progression of diabetes development in a nationwide representative population (around 1100 individuals, 2008-2014), it has allowed further studies regarding innovative biomarkers and genetic factors. It represents collaboration between DGS - General Directorate of Health, SPD – Portuguese Society of Diabetologia, CEDOC – Centre for Chronic Diseases, Faculty of Medical Sciences of Lisboa, IGC – Instituto Gulbenkian de Ciência, and Ernesto Roma Foundation. It has been chosen as a European Good Practice.
Health promotion – other generic needs in Portugal

1) A database/repository of good practice health promotion projects, selected on the basis of a clear and transparent set of criteria according to the types of projects and their approaches: lifecycle, vulnerable groups, settings, behaviours, risk factors, protective factors. (Planning and evaluation documents, reports, and contact persons would be included).

2) Real investment in training/capacity building for more public health professionals and other actors in health promotion: participatory methods for assessment, planning, research, evaluation and communication.

3) A virtual platform for knowledge management and transfer in health promotion. It would contain:
   - Community(ies) of practices in the several domains for the sharing of knowledge and experiences;
   - A diversity of contents, as resources, for different professionals and stakeholders: professionals of public sectors like health, education, policymakers, local government, NGO professionals, academics, communities and citizens in general;
   - Training tools in health promotion issues, namely planning, action-research, evaluation etc.;
   - Materials for health literacy promotion in accessible formats for the general population and/or specific groups (plain language); and
   - Links of interest, including to the repository of good practice health promotion projects (referred above – point 1)

4) To create explicit funding and expressive financing for the development of projects that are focused on health promotion and primary prevention, selected on the basis of good practice criteria.

5) To open calls for the funding of participatory community-based and action-research health promotion projects on chronic diseases, namely CVD and type 2 diabetes.

6) To promote public recognition of good practices in health promotion.