

CARDIOVASCULAR HEALTH STRATEGY SPAIN'S NATIONAL HEALTH SYSTEM

Executive Summary

March 2022

Introduction

Since the epidemiological transition of the 1950s, cardiovascular diseases (CVDs) have become ever more significant in terms of their impact on the population's health, becoming the leading cause of death. Despite this, the mortality caused by this type of illness is steadily decreasing, so our focus must now be on improving cardiovascular health, while at the same time addressing other challenges, such as chronicity and disability.

The Cardiovascular Health (CVH) Strategy has been developed with the participation of patients, healthcare professionals —cardiologists, public health specialists, other specialists, primary care physicians, nurses...— managers, researchers, developers, and representatives of the Ministry of Health, other strategies and of Spain's Autonomous Communities and Autonomous Cities— to respond to these and other challenges.

This Strategy has been conceived as a continuation and extension of the Ischemic Heart Disease Strategy, approved at the National Health System's Interterritorial Council meeting of 22 October 2007. Stemming from its evaluation, and with the dialogue between all actors involved, this new Strategy responds to the need to incorporate new perspectives on cardiovascular health and address new challenges, such as chronicity, multimorbidity and the need to prevent and limit the consequences of cardiovascular diseases.

To this end it is essential to have a comprehensive perspective of health, a person-centered perspective that also considers all factors involved in cardiovascular health: from social determinants —including gender— to the education of citizens and patients about cardiovascular health and selfcare, the training of healthcare professionals, and tackles the need to improve early diagnosis, and the importance of prevention and rehabilitation.

The CVH Strategy has been organized into four transversal and seven longitudinal action lines, with three strategic axes. Given their importance and impact, four of the longitudinal action lines have been dedicated to specific CVDs: ischemic heart disease, heart failure, arrhythmia/sudden death and valvular heart disease. In total, 130 specific actions have been defined, aimed at improving the population's cardiovascular health.

Specific indicators have also been included to evaluate the Strategy and assess its reach in the coming years.

The Strategy has not ignored the impact of the Covid-19 pandemic in Spain, analysing the shortcomings detected during the pandemic that have resulted in a worsening of cardiovascular health and health conditions, especially among the most vulnerable individuals. It also includes opportunities that emerged from this crisis, such as the use of telemedicine.

This health crisis has taught us several lessons; one of them is the value of public health and public services and the importance of our National Health System. Therefore, our goal is to increase and improve the capabilities of the National Health System to tackle people's health-related challenges and to improve their lives. In this case, the aim of the Strategy is to facilitate everyone to enjoy a good cardiovascular health.

The Cardiovascular Health Strategy is organized into 7 chapters and one appendix:

Chapter 1. Towards a Cardiovascular Health Strategy

Cardiovascular disease (CVD) is the **leading cause of death** and the second cause of hospitalization in Spain. This results in high health costs and a huge burden for patients and their families, constituting one of the major challenges for the National Health System.

The **high prevalence** of cardiovascular diseases and their risk factors, with their social impact on population health levels, quality of life and economy, make them a major social and healthcare challenge.

Hence, the need for the National Health System to establish a CVH Strategy, with a main goal to **improve the Spanish population's cardiovascular health**, specifically by: promoting people's cardiovascular health by developing a comprehensive approach that facilitates the adoption of **healthy and sustainable lifestyles and environments**; reducing the **incidence** and **prevalence** of cardiovascular diseases in Spain through prevention, care improvement in the acute and chronic phases, health recovery and restoration, prevention of disability and improvement of the quality of life and well-being of patients and their families; facilitating the adoption of **measures** that have proven effectiveness and are safe, efficient and sustainable.

A Multidisciplinary Advisory Committee selected and prioritized a number of **action lines** within a defined strategic framework, i.e.: health promotion, disease prevention and early detection; citizen empowerment and participation; knowledge management, research and innovation; equity and gender; comprehensive care for people with acute and with chronic CVD.

The CVH Strategy follows and greatly expands on the Ischemic Heart Disease Strategy, approved by the National Health System's Interterritorial Council on October 22, 2007.

Since then, although the CVD mortality rate has been steadily decreasing, a growing proportion of the population is living with disability and chronic illness due to the **greater longevity and greater survival rates** of people with CVD. Paradoxically, both are the result of the progress made in society and in the healthcare system. This situation calls for **a new approach**, one with a broader perspective that does not focus solely on disease and patient care but on public health, encompassing not only care for CVD patients but also acting on **the healthy population** to prevent both the development of disease and predisposing factors.

Goal of the Cardiovascular Health Strategy

The main goal of the NHS's Cardiovascular Health Strategy is to improve the cardiovascular health of the Spanish population. This goal consists in:

- Promoting people's cardiovascular health by developing a comprehensive approach that facilitates the adoption of healthy and sustainable lifestyles and environments
- Reducing the incidence, prevalence and complications of cardiovascular diseases in Spain through the prevention, improvement of CV care in the acute and chronic phases, the restoration and recovery of health, the prevention of disability and the improvement of the quality of life and well-being of patients and their families
- Facilitating the adoption of measures that have proven to be effective, safe, efficient and sustainable

Scope and design of the CVH Strategy

Threaded within three central strategic axes covering **patient safety, continuity of care** and promotion of the use of **information systems**, a number of longitudinal and transversal lines were defined to build up the strategic framework of the CVH Strategy.

These included 6 **cross-cutting** perspectives or transversal lines

- a) Health promotion, disease prevention, and early disease detection
- b) Citizen empowerment and participation
- c) Knowledge management, research and innovation
- d) Equity
- e) Comprehensive care for the persons with acute CVD
- f) Comprehensive care for the persons with chronic CVD

These lines intersect with four specific CV syndromes selected by their epidemiological or societal impact:

- Coronary heart disease
- Heart failure
- Arrhythmia / Sudden death
- Valve heart disease

Each action line focuses on a different area of CV health, taking into account the perspectives of multiple agents, including CVD patients, caregivers, health and non-health professionals, administrators and the general public.

Each action line enables consideration of both a general approach to cardiovascular health and its application to specific conditions requiring **specific actions** within a matrix framework. The model used for developing the CVH Strategy, enables its replication or expansion upon other cardiovascular syndromes not considered in this edition or other health areas.

Chapter 2. Cardiovascular health in the Spanish population

The most prevalent risk factors that are most strongly linked to CVD among the Spanish population are: tobacco use, high blood pressure, high cholesterol levels, overweight/obesity, and diabetes mellitus. Risk factors related to **lifestyle** —such as unhealthy diet, physical inactivity, and tobacco and alcohol consumption— are preventable and it is, therefore, extremely important that health and education authorities promote healthy lifestyles through public policies, fostering that individuals themselves adopt better habits and be actively involved in taking care of their own health and, when needed, manage properly their disease.

Acknowledging the existence of a gender problem in cardiovascular health and care of CVD, it is a necessary initial step to implement specific strategies to achieve gender equity in this field.

We must not forget the impact of the **Covid-19 pandemic** in Spain, which has highlighted existing shortcomings in the NHS and disrupted the care of patients with acute or chronic CVD. This translated in an increase in the fatality rate of several CVDs, among inpatients and outpatients, and a shortfall in scheduled care for patients with chronic CVDs, which the NHS has attempted to mitigate with online solutions.

Along these same lines, the use of **digital health or e-health** technologies (online consultations, video consultations, etc.) —although not a substitute for the necessary in-person contact between health professionals and patients— does, however, represent an element of support for the action taken by the doctor, nurse or other clinical professional. Spain's Ministry of Health has been working on the National Health System's Digital Health Strategy as a framework of reference for undertaking the different initiatives and actions of public administrations with authority in the sphere of health, seeking to ensure that the Spanish NHS undertake its digital transformation in a standardized and coordinated manner, with a view to strengthening the public health

system through the transformative capacity of digital technologies aimed at individuals, health professionals, health service providers and other related agents.

Chapter 3. Specific cardiovascular diseases considered in the CVH

Strategy

The CVHS selected four clinical areas as preferential action fields within CVDs due to their impact on epidemiology or the society. A short number of actions were prioritized according to the analysis of current specific needs within the NHS for particular areas within each one of the four selected areas: coronary heart disease; heart failure; arrhythmia/sudden death; and valve heart disease.

Chapter 4. Critical points for improving the population's cardiovascular health

The critical points of action to be considered when implementing this Strategy on Cardiovascular Health are as follows:

Critical points by action line

1. Critical points associated with strengthening the central strategic axes
2. Critical points associated with health promotion, disease prevention and citizen empowerment in CV health
3. Critical points associated with knowledge management, research and innovation in CV health
4. Critical points associated with gender equity in CV health
5. Critical points associated with the comprehensive management of persons with acute and chronic ischemic heart disease
6. Critical points associated with the comprehensive management of persons with acute and chronic heart failure
7. Critical points associated with the comprehensive management of persons with acute and chronic arrhythmias / sudden death
8. Critical points associated with the comprehensive management of persons with valve heart disease

Chapter 5. Goals and actions

Having identified the critical points, the multidisciplinary groups addressed the proposed definition of goals and actions for approaching these critical points.

5.1. Goals and actions associated with strengthening the central strategic axes

- 5.1.1. Promotion and strengthening of care continuity as a key element of high quality, efficient and safe healthcare for patients with CVD
- 5.1.2. Promotion of safe practices in the care of patients with CVD
- 5.1.3. Improvement of the access to reliable information to identify comprehensively the status of cardiovascular health and CVD care in the Spanish population

5.2. Goals and actions associated with health promotion, disease prevention and citizen empowerment in CV health

- 5.2.1. Promotion of cardiovascular health and cardiovascular disease prevention among the population of Spain
- 5.2.2. Raise awareness about primary cardiovascular disease prevention, focusing on lifestyle: Tobacco use as a key target
- 5.2.3. Promotion of primary cardiovascular disease prevention through the monitoring of biological risk factors
- 5.2.4. Increase the ability of health professionals and other professionals to promote CV health and CVD prevention.
- 5.2.5. Public empowerment to adopt healthy lifestyles

5.3. Goals and actions associated with knowledge management, research and innovation in CV health

- 5.3.1. Focus the training of health professionals on research and innovation for the improvement of CV health outcomes as far as possible throughout their training cycle
- 5.3.2. Carry out initiatives to equip citizens with self-care skills in CV health
- 5.3.3. Include patient reported outcomes and experiences in institutional reports of patient outcomes
- 5.3.4. Identification of research and innovation areas in CV health based on the needs and challenges of the NHS considering health outcomes
- 5.3.5. Promote R&D&i projects that offer a response to existing CV health needs, fostering collaboration and facilitating the transfer to a care approach
- 5.3.6. Promote epidemiological studies on differences in the prevalence of CVD conditioned by gender or other inequities
- 5.3.7. Support initiatives regarding development models for virtual care and the improvement of outcomes in patients with CVD in the framework of the National Health System's Digital Health Strategy

5.4. Goals and actions associated with equity and gender in CV health

- 5.4.1. Promotion of knowledge and self-care related to CV health among women

- 5.4.2. Training all NHS professionals in the specific aspects of CVD (diagnosis and treatment) in women and gender inequality in CV care
- 5.4.3. Address social inequalities in CV health in the Strategy's actions using an interdisciplinary approach

5.5. Goals and actions associated with the comprehensive management of persons with acute and chronic ischemic heart disease

- 5.5.1. Development of cardiac rehabilitation and secondary prevention programs in hospitals and primary care settings according to the patients' risk level
- 5.5.2. Optimization of the performance of acute coronary syndrome networks

5.6. Goals and actions associated with the comprehensive management of persons with acute and chronic heart failure

- 5.6.1. Improving of the early detection and diagnosis of heart failure
- 5.6.2. Organization of the care for HF patients through multidisciplinary HF units/programs, coordinated with the participation of all professionals involved at all levels of care
- 5.6.3. Development of specific regional networks to optimise the management of patients with cardiogenic shock

5.7. Goals and actions associated with the comprehensive management of persons with acute and chronic valve heart disease

- 5.7.1. Promotion of the early diagnosis of prevalent valve heart diseases
- 5.7.2. Optimization of the choice of therapeutic options for patients with severe aortic stenosis through comprehensive multidisciplinary evaluation teams

5.8. Goals and actions associated with arrhythmia

- 5.8.1. Improve the effectiveness of the access to early cardiopulmonary resuscitation for patients with out-of-hospital cardiac arrest
- 5.8.2. Promotion of the early diagnosis of atrial fibrillation

Chapter 6. Indicators

The 61 indicators proposed for the CVH Strategy —organized by action line and critical point—seek to **evaluate** the interim and final outcomes pursued by this strategy. In this regard, and as part of its transformative nature, the CVH Strategy seeks to guarantee a **proper evaluation** of the level of cardiovascular health of the Spanish population and

the **degree of implementation** and **effectiveness** of the initiatives necessary to promote it:

- Indicators for central strategic axes (care continuity, patient safety, information systems on cardiovascular health)
- Indicators for health promotion, disease prevention and citizen empowerment in CV health
- Indicators for knowledge management, research and innovation in CV health
- Indicators for equity and gender in CV health
- Indicators for ischemic heart disease management
- Indicators for heart failure management
- Indicators for arrhythmia/sudden death management
- Indicators for valve heart disease management

Chapter 7. Strategic map of the Cardiovascular Health Strategy

The strategic map **encompasses, structures and synthesizes** the **goals** of the CVH Strategy and unifies and interconnects the proposed **action lines (AL)**, focusing them on its **strategic goals (SG)**:

SG 1. Improvement of outcomes in health, equity and the sustainability of the National Health System

- AL 1.1. Improvement of cardiovascular health outcomes and quality of life
- AL 1.2. Strengthening sustainability of the NHS

SG 2. Greater autonomy and capacity building of the agents involved

- AL 2.1. Raising awareness and empowerment of the general public in cardiovascular health
- AL 2.2. Activation of CVD patients, caregivers and relatives
- AL 2.3. Optimization of multidisciplinary, comprehensive and integrated approach to CV healthcare

SG 3. Improvement of social and professional processes regarding healthy lifestyles and caring for people with CVD

- AL 3.1. Promotion of healthy lifestyles and CVD prevention in the society
- AL 3.2. Implementation of care continuity and a multidisciplinary approach focusing comorbidities
- AL 3.3. Improvement of patient safety
- AL 3.4. Development of the gender perspective in cardiovascular health
- AL 3.5. Coordinated healthcare and social care

SG 4. Availability of knowledge, resources and management mechanisms

- AL 4.1. Capacity building and training of professionals involved
- AL 4.2. Availability of resources and infrastructure for CV care
- AL 4.3. Promotion of R&D&i
- AL 4.4. Adaptation of information systems
- AL 4.5. Roll-out of a standardized cardiovascular health information model

Appendix. Methodology for the development of the CVH Strategy

After the preliminary definition of the areas and lines of action, the sequence of actions for designing the CVH Strategy was as follows:

- I. **Identification, confirmation and prioritization of critical points for improving cardiovascular health**
- II. **Definition of the collaborative work model**
- III. **Determination of goals, actions, outcomes and indicators of the Strategy**
- IV. **Preparation of a strategic map providing an overview of the entire strategy**
- V. **Preparation of a scorecard to monitor implementation**

Summary of steps followed for the development of the CVH Strategy:

1. **Creation of the specific multidisciplinary working groups** (transversal and longitudinal lines), one for each of the Strategy's action lines, September 1, 2018.
2. First **face-to-face meeting** held at the Ministry of Health on October 10, 2018. Initial identification of critical points by scope area using Nominal Group Technique
3. **Prioritization of critical points**, carried out using an abbreviated version of the Hanlon Method (based on the magnitude and relevance of the problem, the effectiveness of the interventions proposed, and the feasibility of such interventions).
4. **Suggestions** of a list of **strategic goals and actions** to be proposed to the Institutional Committee.
5. **Creation of the Technical Committee** (formed by the relevant scientific societies, patient associations and selected individual experts) and of the **Institutional Committee** (formed by representatives of all Spanish Autonomous Communities and the different ministerial units). Creation of both committees, April 26, 2019.
6. **Presentation** of the CVH Strategy to the **Technical and Institutional** Committees for external review and initial approval: Analysis and discussion of all critical points. Ministry of Health, April 26, 2019.
7. **Compilation and review** of all the **contributions** received regarding the critical points and design of a preliminary version of the global strategic map and of the specific strategic maps by action line.

8. Initial **definition** of **actions** by each multidisciplinary group, focusing on improving cardiovascular health with interventions that have shown a significant impact on cardiovascular health outcomes.
9. Second presentation to the Institutional and Technical Committees (February 11, 2021, and February 25, 2021, respectively) for final comments/approval, and **setting of indicators**.
10. **Validation** of indicators by the Technical and Institutional Committees.
11. **Adjustment** of the **global strategic map** and the individual strategic maps by action lines on the basis of the suggestions and changes made.
12. **Validation** of the **final report** by the Technical and Institutional Committees.