Health Plan for Catalonia 2011-2015

Generalitat de Catalunya
Departament de Salut

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Introduction

In the context of the 21th century, the ultimate goal of government health policies should be to ensure that people live longer and that these years are spent in good health, regardless of the social or economic situation of the citizen.

In order to preserve the right to protect the health enjoyed by citizens, the Government offers a threefold response: firstly, to protect the health of individuals and groups, an objective driven by the Catalan Public Health Agency and the inter-ministerial policies; secondly, to provide medical and healthcare to the sick, a task which the Catalan Health Service oversees; and thirdly and finally, to carry out biomedical research, which is achieved through the Catalan Research and Innovation Plan.

Thus, the Government implements this three-tiered response to the right to health protection and healthcare by basing its public policies and actions on three pillars:

- The Health Plan for Catalonia 2011-2015.
- The Inter-ministerial Public Health Plan.
- The Biomedical Research Plan.

In addition, in the future, the Government will have to develop a specific plan in regard to clinical and healthcare leadership, as these three pillars are managed by health professionals, the main actors in charge of resolving the health problems of the population in the way most suited to their needs.

Here we present the Health Plan for Catalonia 2011-2015, which stems from a provision of the Public Health Law of Catalonia (LOSC) and is therefore not a plan created with the current difficult economic environment in mind, despite the fact that it will have to be implemented in this context. This Plan aims to rationalise and optimise the use of resources, but based on clinical efficiency in dealing with the medical and health care of citizens.

In Catalonia, as in developed countries in general, the life expectancy of the population has increased thanks to public health and healthcare policies and to the advancements made in research. This fact has significantly modified the pattern of the demand for healthcare. New elements of social demand have also been introduced, coinciding with other sociological changes in the population.

Therefore, the healthcare model must face the challenges of the new demand paradigms. Up till now, the medical and healthcare system has placed emphasis on organisational aspects, because this was what the times called for and what was necessary in order to guarantee services. At the present time, the system is reactive when facing demand and lacks proactivity in administering and managing the risk of becoming ill.

However, in different parts of Catalonia, experiences in the redirection and management of the balance between supply and demand are underway, touching

upon aspects such as chronic patient care, home healthcare and in-home hospitalisation, or initiatives such as *Pacient Expert Catalunya* (Expert Patient Catalonia), among others.

These experiences reinforce and prove what was already obvious and what is in fact the principle behind the Health Plan for Catalonia 2011-2015 and to which all its lines of action are subordinate: healthcare organisation must service to achieve the health objectives.

However, what is it that the Government wants the Health Plan for Catalonia 2011-2015 to offer to citizens? It wants them to have better access to services and to have more of their health problems resolved, and will therefore strengthen primary healthcare so that it is of the highest level. It wants to provide them with equity of access to specialised and highly specialised healthcare services and better quality of results. It wants to give priority, in this order, to providing quality medical and health care, to attending to patients as quickly as possible according to the seriousness of the illness or the risk of disease, and, finally, to being as close to the patient as possible. It intends to achieve this based on the resources available and through adequate healthcare management.

That is why this is a plan which takes the perspective of health and services into account. In addition, it is a strategic health plan that includes an action plan that deals with the execution of specific projects from an organisational and management perspective in terms of healthcare services. The development of the Health Plan includes an action plan for each health region, drawn up according to the reality of each one.

The present Health Plan for Catalonia 2011-2015 aims to respond to the message of the *World Health Report 2012* of the World Health Organization:

'All countries can do something, many of them a great deal, to improve the efficiency of their health systems, thereby releasing resources that could be used to increase the level of coverage.'

In order to draw up this Health Plan, the experiences of and the initiatives being carried out in Catalonia and Spain have been analysed; reforms in neighbouring countries have been assessed; and reports by international organisations and experts have been taken into account. Thanks to the excellent team of professionals from all areas of the Ministry of Health of the Government of Catalonia, the foundations have been laid for this Health Plan, which, opened to participation through the mechanisms established in the LOSC and other regulations created with this purpose in mind, has received contributions from over 1,200 individuals.

With this in mind, I would like to close by recognising, in particular, the efforts of all the people and organisations who contributed to drawing up this Health Plan, both those who contributed to its initial drafting and those whose proposals during the

discussion process served to improve the final document. To all of them, I would like to extend my most sincere thanks.

Boi Ruiz
Minister for Health
Government of Catalonia

Executive summary

For many years, our health system has been subject to a series of structural trends, of a social (ageing, chronicity, etc.), technological (new therapies, new medicines, etc.), and economic (increased pressure on public resources) nature, which threaten the survival of the system as we know it.

We at the Ministry of Health are working hard to respond to all these changes and to maintain the essence of the public health system sustainably in the medium term. Against this backdrop, we hope that the **Health Plan for Catalonia 2011-2015 will serve as a fundamental tool in answering future challenges.**

I. THE SITUATION AT THE POINT OF DEPARTURE: THE CHALLENGES FACING CATALONIA'S HEALTH SYSTEM

As a starting point, the results in terms of health for Catalonia are positive, but future trends will call for important changes to be made. The results for our health system make us a leader in European as a benchmark health system (in Catalonia, life expectancy is around 1.9 years longer than the EU-15 average), it is well regarded by users, and it is becoming a powerful driver of the Catalan economy.

In terms of the efficiency of the Catalan health system, the results speak for themselves, not only in regard to excellence, but also cost competitiveness. Hence, its differentiating elements must be assessed: (1) a decentralised network of facilities in proximity throughout Catalonia, and (2) the separation of functions between the government (accredits quality, plans, purchases and assesses) and a network of organisations owned by different institutions, which manages with professionalism the provision of services.

At the same time, future challenges are very demanding, and our health system has to change significantly in order to be able to face them more efficiently, never forgetting that our springboard is a differential model with the potential to provide answers that Catalonia must adopt. Some of the most noteworthy challenges are:

- A constantly growing demand, with an ageing population (between 2012 and 2020, there will be over two hundred thousand people aged 65 or older), and a worsening morbidity profile (between 2012 and 2020, the number of people who suffer from at least one chronic disease will double).
- Increasingly scarce resources, with more customised and more expensive treatments (in Catalonia, the cost of cytostatic treatments increased threefold in the last five years), and increasing use.
- A funding scheme put under pressure by increasing demand and the continuous rise in healthcare costs, which brings about chronic funding tensions. This situation is complicated further by the current atmosphere of economic hardship, which makes the debate on sustainability even more urgent.

- Waning professional satisfaction due to the pressures caused by the rapid growth of the needs and demands of the population and the loss of social value. Moreover, little patient participation in the decisions which affect them.

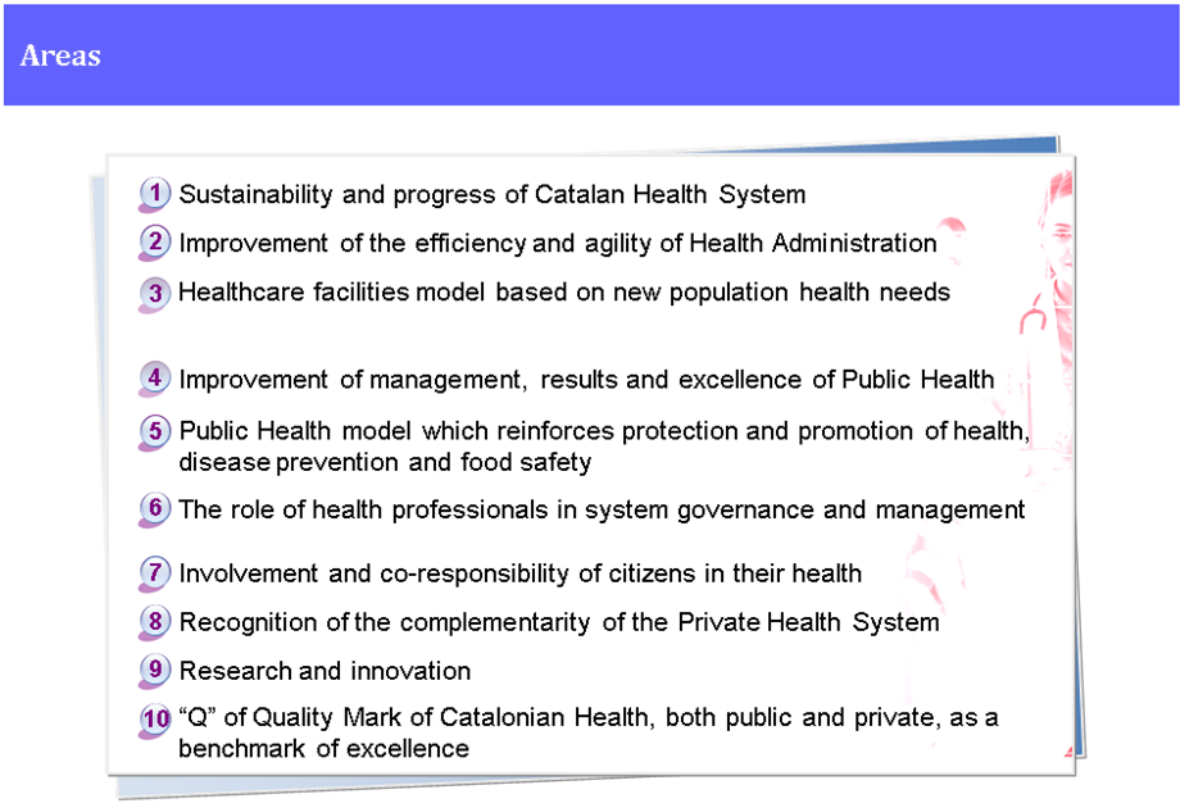
Neighbouring countries have started to make progress. These changes in context are similar in all developed countries, which, in similar cases, have launched important health system reforms: France, with the transformation of public hospitals in order to improve efficiency and quality; Germany, with greater emphasis on the treatment of the main chronic disorders; and Sweden, with the introduction of reforms aimed at giving citizens more power to choose and at improving access to the system.

- The World Health Organization (WHO) has also reiterated this need for transformation in its 2010 report (*Health Systems Financing: the path to universal coverage*). The WHO identified two types of key action that can be implemented in all countries: (1) fundraising for the health system through innovative actions (new taxes on hazardous substances, solidarity contributions for the use of specific technologies, etc.), and (2) boosting the efficiency of the resources available, since 20-40% of the resources earmarked for health are wasted (inadequate use of medicines, repetition of diagnostic tests, inadequate size of services or devices, errors or insufficient quality, etc.), thus improving the quality and quantity of resource benefits.

In Catalonia, the Health Plan should contribute to guiding the transformation of the health system. The Health Plan, according to the Public Health Law of Catalonia (LOSC, Title 5, Article 62), 'is the indicative instrument and the reference framework for all public action in matters of health under the authority of the Government of Catalonia'. As such, this Health Plan sets out the main lines of change and transformation for the Catalan health system over the coming years.

The global strategy of the Ministry of Health is covered in pillar 3, on Health, of the Government Plan 2011-2014, which establishes ten strategic areas. One of the key areas is the restructuring of the Catalan healthcare model, which, while maintaining the basic and differential values of the Catalan health system model, must allow new healthcare, economic, social, and technological paradigms to be faced.

The Health Plan for Catalonia 2011-2015 will address these needs, developing, for the most part, those aspects of the Government Plan most strongly related to transforming the healthcare model and the organisation of the public health system (item 3, 'Healthcare model adapted to the new healthcare needs of the population', and item 4, 'Improvement in the management, results and excellence of public health').



Source: Government Plan 2011-2014.

As a result, there are a series of elements that constitute part of the strategy and action plans of the Ministry of Health (research and innovation, role of the private health system, among others) which are being handled through the Government Plan and specific projects, and which will therefore not be developed in this Health Plan.[1] However, these elements will be aligned with the strategic lines of the present Health Plan.

The present Health Plan 2011-2015 differs from previous plans in three key aspects:

- **It is intended to provide a more exhaustive analysis** and to generate extensive debate on the elements of health as well as the services and organisation of our health system.
- **It is a living tool, open to all:** *open*, because its development will include all the agents of the sector and the different regions, and *living*, because an annual process for assessment, accountability, and revision will be

1 This will also be the case for programmes and actions involving maternal-infant health, dental health, and communicable diseases, such as diseases which can be prevented through vaccination, sexually transmitted infections, HIV and AIDS or tuberculosis, rare diseases, or the different areas for restructuring (paediatrics, allergology, etc.).

established, which will involve making adjustments of the Plan according to the degree of development and execution.

- **It is a plan that has been set up to make change happen.** In many cases, the Health Plan's measures stem from initiatives which are being implemented by the network. The most important new aspects are: (1) the Ministry's commitment to developing tools and facilitators that ensure a healthcare change to scale; and (2) the commitments made in executing the Plan, both in the long (until 2015) and short (objectives for 2012) term.

II. THE INSPIRING PRINCIPLES OF THE HEALTH PLAN

The Health Plan was drawn up based on a set of principles that identify the main elements for the transformation of the system up to 2015:

1. **The foundations and the differentiating elements of the Catalan health system established in the LOSC are the starting point, and their presence will be reinforced in this Health Plan:** universal accessibility, equity and efficiency, a decentralised network, separation of functions, and professionalised management.

2. **The citizens have a new role and they become the system's main priority.** The care given to citizens and the improvement of their health and quality of life are the ultimate goals. In order to achieve them, bilateral changes to the relationship between the health system and those covered by it will be proposed (new elements of the system-patient relationship, such as Sanitat Respon or the increase in information for citizens, have been introduced).

3. **Public health and its service portfolio will serve as one of the key instruments for improving results in terms of the health and quality of life of the population.** The consolidation of the Catalan Public Health Agency is a fundamental step in this process, which will help to promote and expand the differentiating elements of the Catalan health system.

4. **The healthcare provision model will increase its level of integration and will adapt to the new needs and opportunities, and said adaptation will take the characteristics of each region into consideration.** Work will be carried out in order to improve the continuity of the healthcare provided to patients and to ensure that all the resources (public health and primary, specialised, social health and mental healthcare) work in a coordinated manner to achieve the common objectives.

5. **CatSalut will take on the role of insuring public health.** Its management will be more in touch with patients and more adapted to the needs of the population, based on predictive models, and it will adopt a proactive stance in its relationship and communication with the citizens.

6. **The management of the system will be decidedly focused on health results.** Clinical results, understood as providing the population with better health and healthcare, will be the key concept on which the service planning and procurement model will be based, which will be managed

using a predictive approach (based on the evolution of the health needs of the population).

7. **The knowledge of clinical professionals is vital for the planning, management and improvement of the system.** Clinical knowledge should guide the transformation of the system and must be given priority in the planning process, through the setting up of clinical governance and participation schemes and the dissemination of (clinical) evaluation as a key decision-making tool.

8. **In effectively governing the health system, the values of good governance will be taken into account: transparency of information, assessment and accountability should be present at all levels.** In the coming years, a unified information and service network will be established for the health system, which will enable information and knowledge to be shared, lend greater transparency to the results from different agents, and aid in creating assessment and revision mechanisms to ensure that we are progressing in the right direction.

9. **The sustainability of the health system will be compatible with the latest results on the progress made and excellence offered in healthcare.** The ultimate goal of the Health Plan is to adapt the health system in order to respond to certain structural challenges for which it is not prepared at this point in time. The result of this change will be a more sustainable and durable system with a manageable cost, which will improve the quality of results as well as the care provided to citizens.

10. **The Health Plan will be an instrument of change with a call to leadership and focused on making change a reality**. The Plan is broader in scope and deals with both elements of health and of services and organisation. It is an *open* and *living* tool which involves all the agents of the sector, and it will be revised and adapted every year. Finally, it is a change-oriented plan, in which proposals translate into commitments, both in the short and long term.

III. POINT OF DEPARTURE: ANALYSIS AND PRIORITIES OF THE CATALAN HEALTH SYSTEM

The Health Plan has been drawn up based on an analysis that establishes the **priorities of the healthcare model until 2015**.

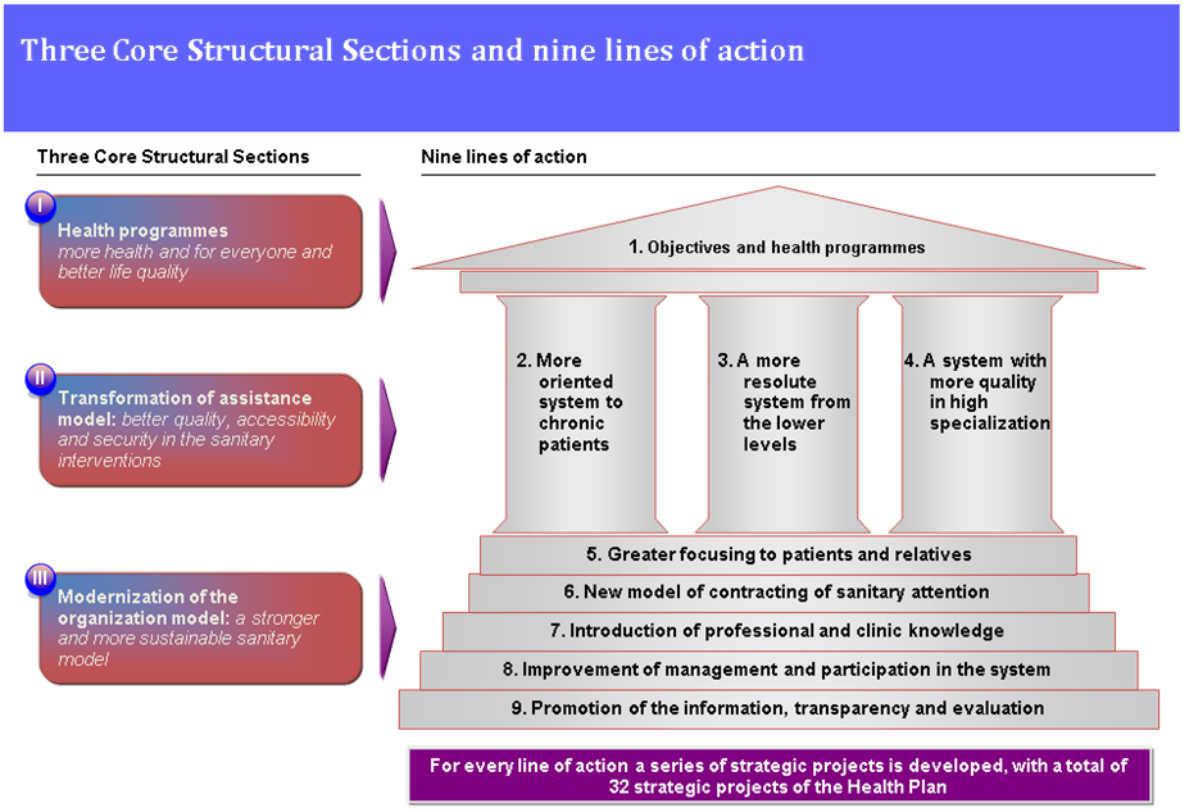
As a starting point, the situation in Catalonia, as far as health results are concerned, is good, with a life expectancy rate nearly 2 years above that of the European average and a positive evolution of the mortality rates for the main causes of death. However, there are three very significant challenges: (1) the continuously ageing population (the number of people over 65 years of age will increase by over 200,000 during the next 10 years); (2) worsening habits and lifestyles (one in every two Catalans is overweight); and (3) the increasing incidence of chronic diseases (in 2010, 34% of Catalans stated that they suffered from at least one chronic disorder).

For these reasons, **health programmes that promote better health and quality of life for all (transformation pillar I) will be implemented**.

- Health services in Catalonia are known for their accessibility, both geographically (98% of the population has a primary healthcare centre less than 10 kilometres away from their home) and the wide range of services offered. However, there is an element of saturation in comparison to other countries (made evident by the waiting lists) and system overuse is high, especially in regard to specialised care and emergency services. Integration between healthcare levels is limited (especially in areas where primary and specialised healthcare most frequently interrelate) and the healthcare models lack the innovation necessary to better adapt them to the needs of chronic patients, which makes it difficult to treat them optimally. Moreover, there are opportunities to improve the clinical quality of highly specialised procedures in which critical mass is a determining factor for expertise and, consequently, results (e.g. fifteen centres do not meet the yearly colorectal surgery minimum). With this in mind, we will promote a **transformation of the healthcare model that will improve quality and make the healthcare interventions more effective (transformation pillar II).**
- The fundamental and differential values of the Catalan health system should be reinforced in order to adapt to changes in the way the health programmes and healthcare model are implemented. In order to make this possible, **we will modernise the organisational model in order to attain a more solid and sustainable health system (transformation pillar III).**

IV. THE THREE STRUCTURAL PILLARS OF THE HEALTH PLAN

The Health Plan for Catalonia 2011-2015 is structured into 3 transformation pillars, 9 lines of action, and 32 strategic projects, which constitute the road map for the health system until 2015.



Source: Catalonian Health Plan 2011-2015.

This transformation process is not starting from scratch, but is based instead, and above all, on the work done up until now. **The three transformation pillars have been defined and developed based on numerous experiences presently being carried out in Catalonia**. A (non-exhaustive) selection of these experiences is detailed throughout the chapters of the Health Plan as just a few examples of current initiatives and a reference for actions.

IV.I. Better health and better quality of life

This Health Plan, in spite of if being broader in scope (as it considers structural changes to the healthcare and organisational model), does not renounce its ultimate goal of increasing a healthy life expectancy for everyone.

The Heath Plan establishes:

- A general health objective. From now until 2020, increase the proportion of life expectancy lived in good health for men and women by 5%.
- Objectives for health and to reduce risk in regard to priority problems (chronic and non-chronic). For example, from now until 2020, the mortality rate for cardiovascular diseases must be reduced by 20%, the global mortality rate for cancer by 10%, and the mortality rate for mental disorders by 10%.

In order to achieve these objectives, it should be kept in mind that both the public and the private sectors should be involved.

Line of action 1. Objectives and health programmes

In order to achieve these objectives, specific health programmes should be designed that cover:

- **Project 1.1. Development and implementation of the master plans** (for social health, the respiratory system, the circulatory system, mental health and addictions, oncology, rheumatic diseases and the musculoskeletal system), with a view to providing a response to the health problems which have the greatest impact.
- **Project 1.2. Drawing up and implementation of the Inter-ministerial Public Health Plan**, systematically developing projects aimed at resolving health problems which require interventions among and between sectors, such as occupational or nutritional health.
- **Project 1.3. Promotion of clinical safety and quality policies** in order to act on two main fronts: to increase the safety of patients at the centres in which they are being treated and to reduce the problems and incidents related to medicines; to promote the administrative authorisation and accreditation of centres, creating a third label to acknowledge good results (the "Q" distinction for healthcare quality).
- **Project 1.4. Assessment of the health objectives established by the Health Plan for Catalonia 2011-2015.** Health and risk reduction objectives will be subject to a yearly monitoring and assessment process in order to verify that progress is being made in the right direction.

IV.II. Transformation of the healthcare model: better quality, accessibility, and safety of healthcare interventions

Between 2011 and 2015, the Catalan health system will give priority to three lines of actions in regard to the healthcare model.

Line of action 2. A system that is more focused on chronic patients

Chronic pathologies currently account for 80% of deaths and consume more than 50% of the system's resources. Three out of ten Catalans admit that they suffer or have suffered from a chronic disease, and, as the population ages and if lifestyles do not improve, this figure will increase over the coming years.

This more chronic patient-focused system for Catalonia sets up six essential changes: (1) it promotes a vision of the population that enables patients and their needs to be better understood; (2) it offers a response that starts at the pre-clinical stage and carries through to all stages of the illness; (3) it encourage an active role on the part of citizens and patients (responsibility for one's own health and illness); (4) it sets the foundations for ensuring that comprehensive care, coordinated with primary care, is a central element of caring for chronic patients, developing new roles for professionals; (5) it makes use of the new technologies and communication systems in order to offer an innovative and accessible healthcare system; and (6) it adopts an inter-ministerial dimension, especially with regard to the relationship between the Ministries of Health and Social Welfare and Family.

This strategy materialises in six main projects:

- **Project 2.1. Implementation of integrated clinical processes for ten diseases: chronic obstructive pulmonary disease (COPD)/asthma, diabetes, congestive heart failure (CHF), cancer, dementia, severe and very severe mental illnesses, depression, nephropathy, chronic pain and musculoskeletal disorders,** which have been given priority due to their high level of incidence in and impact on the health of the population and the high cost they represent for the health system.
- **Project 2.2. Fostering of programmes for health protection and promotion and disease prevention**, promoting health and a reduction in the occurrence of chronic diseases through the implementation of interventions based on cost-effectiveness criteria aligned with health priorities.
- **Project 2.3. Fostering of self-responsibility of patients and caregivers in regard to their own health and the promotion of self-healing,** by extending the *Pacient Expert Catalunya* programme to the whole of Catalonia for five chronic pathologies (at least 5,000 patients covered) and making educational content available through the *Canal Salut* health channel, the Personal Health File and Sanitat Respon, as preferred information and counselling channels that are in synch with citizens' needs.
- **Project 2.4. Development of healthcare alternatives within the framework of a comprehensive system** that strengthen: (1) placing primary care at the centre of healthcare treatment for chronicity; (2) alternative healthcare models for hospitalisation (day hospitals for the management of chronic diseases and establishment of a framework for the regulation and procurement of sub-acute care beds); (3) restructuring of the long-term, social health and mental health hospitalisation model; (4) redirection of home healthcare with the participation of the Ministry of Social Welfare and Family; and (5) the new model of pharmaceutical supplies to nursing homes. The goal is to reduce conventional hospitalisation by 15% through models that are better adapted to chronic patient care.

- **Project 2.5. Deployment of regional programmes for complex chronic patient care**, focusing on 5% of the most critical chronic patients, with the goal of treating 25,000 patients under a proactive care model by 2015.
- **Project 2.6. Implementation of programmes for the rational use of medicines**, improving the plan for medicines (at all healthcare levels) and facilitating patients' access to and use of those medicines, to ensure that the appropriate pharmacological treatment for each illness is applied and to better coordinate it with other treatments.

Line of action 3. An integrated system able to resolve health problems at initial levels and throughout Catalonia

The pressure placed by demand and limitations to resources mean that our health system needs to be more efficient in resolving health issues, especially at the healthcare levels closest to the patient, while maximising the added value of more complex or specialised care. Thus, the new resolution model for Catalonia proposes to foster the following four elements: (1) providing treatment based on the most cost-effective interventions; (2) assigning functions and interventions at the most adequate care level in terms of quality and optimisation of professional skills; (3) guaranteeing a coordinated healthcare service which gives comprehensive treatment to patients; and (4) improving access times as a result of health issues being resolved more efficiently at initial levels of the system and better management of the clinical criteria for waiting lists.

In 2015, the health system in Catalonia will be focused on improving the resolution of health issues at initial healthcare levels through four projects:

- **Project 3.1. Improvement of resolution in areas in which primary and specialised healthcare most frequently interrelate** (ophthalmology, musculoskeletal system, mental health, dermatology, urology, and allergy care), with a view to extending the new model to the whole of Catalonia. As a result, the waiting time for medical specialist consultations and diagnostic testing is expected to be reduced by 10% in certain areas, while maintaining the healthcare quality and reducing regional variability. In order to achieve this goal, primary care's capacity to resolve low-complexity consultations must be increased and access to specialised care improved, through more rapid diagnoses, better-organised interventions and better-coordinated collaborations.
- **Project 3.2. Transformation of the emergency care model in order to provide a more adequate response to requests for immediate care**, with the goal of reducing the use of hospital emergency room services by 10%, by redirecting requests to more appropriate levels and reducing variability in use. Therefore, requests for immediate care services will be reorganised regionally (in terms of location and complexity levels), and a common selection process will be established in order to better adapt care to patients' needs.

- **Project 3.3. Regional organisation of the service portfolio, according to the level of complexity**, in six selected areas (for instance, paediatric surgery, severe trauma care or emerging mental pathologies). This restructuring will be based on common criteria dealing with complexity levels and centre requirements. These criteria will be established with the participation of professionals and organisations and through an analysis of the elements to be optimised in each region (for instance, duplicates or a low volume of activity).
- **Project 3.4. Integration of public and community health in the healthcare model** by making the most of the new approach to public health and the support provided by the community pharmacy in order to help the system better resolve health issues. This approach will have a bearing on the determinants of health and risk factors from the point of view of health protection, promotion, prevention, and monitoring.

Line of action 4. A higher-quality, more equitable system in terms of highly specialised care

Highly specialised procedures and treatments are elements which require a very specific focus, due to the high level of variability in the quality of the highly specialised procedures provided and the need to bring them in line with the prescription of very complex medications.

The new model for highly specialised procedures and highly complex treatments is based on a series of premises: (1) offering a quality service to citizens; (2) providing equitable healthcare; and (3) continuing to be a focal point of prestige and medical innovation.

Based on these needs, two important projects will be carried out:

- **Project 4.1. Restructuring of highly specialised procedures** through the analysis of the possibilities of each of these procedures for restructuring, according to a set of criteria focused on guaranteeing higher-quality healthcare. By 2015, the goal is to have reorganised seventeen procedures (including duty shifts and transplantations) and have implemented an assessment and monitoring system.
- **Project 4.2. Harmonisation of the prescription of highly complex pharmacological treatments,** bringing them in line with common procedures and criteria for cost-effectiveness in all health centres, with the goal of twenty-five unified protocols by 2015.

IV.III. Modernisation of the organisational model: a more solid and sustainable health system

Such an ambitious transformation of the health care model also requires that the Ministry of Health launch, simultaneously, a set of projects that act as facilitators of

change. Therefore, the Health Plan for Catalonia 2011-2015 has prioritised work in a series of crosscutting areas.

Line of action 5. Greater focus on patients and families

The new healthcare model must place the citizens it covers at the centre of the health system, reinforcing their relationship with the public health provider on the basis of the following principles: (1) increased proactivity on the part of the public health provider in furthering this relationship; (2) increased transparency in the commitments and services provided to the citizens by the public health provider; and (3) the promotion of citizens' responsibility for their own health.

To progress toward these goals, three priority projects will be implemented:

- **Project 5.1. Improvement to citizens' knowledge of the integrated public health system and the services covered by CatSalut as the public healthcare provider**, guaranteeing the appropriate transparency and information, ensuring an adequate segmentation of the different population groups and their needs (promoting positive discrimination practices, when necessary), and developing a system user's guide for the citizens it covers.
- **Project 5.2. Management of the risks to citizens covered by the health system,** which means (1) a better understanding of the population and its needs; (2) a strategy to educate 100% of citizens on their health and the use of the health system; and (3) an inter-ministerial strategy which ensures a global vision of the prevention and promotion of the health of those covered.
- **Project 5.3. Guarantee of service quality and patient satisfaction**, with an expected improvement in satisfaction of around 5%, through the implementation of a zero-tolerance system with regard to unfair treatment claims and the promotion of new, more open and proactive models of citizen participation.

Line of action 6. New, more results-focused healthcare procurement model

The procurement model will be adapted to the new needs of the healthcare model to make it more results-focused, with increased integration among healthcare levels and the continuous promotion of system efficiency.

The changes will affect the following key elements: (1) a results-oriented payment scheme will be established; (2) stronger incentive formulas, which are intended for all levels, will be introduced as a lever to facilitate the achievement of objectives; (3) highly specialised interventions will be purchased separately; and (4) the best formula with which to apply the new model will be identified for each region, as part of the general framework but adapted to specific peculiarities (for instance, the structure and the weight of healthcare levels).

The new procurement model with be launched through four strategic projects:

- **Project 6.1. Implementation of a new, more equitable and transparent population-based model for regional allocation**, whereby the appropriate

economic allocation for 100% of the regions is computed (with the exception of highly specialised or highly complex healthcare), on the basis of demographic, socioeconomic, and morbidity criteria, inter alia. The most innovative element of this model will be the inclusion of morbidity variables. This model will also include allocations to providers and will end in 2012, although a mid-term plan to rectify differences will be set up.

- **Project 6.2. Implementation of the new procurement model and incentives linked to results (healthcare to treat chronicity, enhancement of primary healthcare purchasing capacity, and a new accessibility model)**. Contracts with the agents will include significant incentives (a minimum of 5%) linked to results, in accordance with the strategic programmes of the Ministry (chronicity, resolution, and high specialisation). These incentives will be divided in two types: individual and collective throughout Catalonia.
- **Project 6.3. Implementation of the new procurement model for highly specialised procedures,** whereby a rate for each highly complex tertiary intervention will be assigned as their organisation and planning are revised, and the seventeen procedures, which will be revised until 2015, will be contracted separately, apart from the regional allocation.
- **Project 6.4. Incorporation of clinical results-based drug financing (shared risk agreements with the pharmaceutical industry)**, which will allow the risk to be shared with providers when introducing new medicines (especially the most costly); ten shared risk agreements should be executed by 2015.

Line of action 7. Systematic inclusion of professional and clinical knowledge

Professionals will be key part of the development and execution of the Health Plan. Their knowledge should guide the development of the different plans aimed at transforming the system.

This Health Plan will not address the totality of the relationship with health professionals (which is being handled in the Government Plan), but instead will focus on how to promote and enhance their contribution to and leadership of the change in the healthcare model.

The strategy to involve professional knowledge will be centred on the three following projects:

- **Project 7.1. Stimulation of the creation of clinical committees or working groups to enhance the systematic participation of professional knowledge in planning and evaluating the health system**, with a special focus on the healthcare model's elements of change, counting on the participation of scientific societies.
- **Project 7.2. Drawing up of a code of principles for the public health professionals of the Catalan health system**, so that health professionals can have, disseminate, and apply said code in carrying out their duties as part of the Catalan health system.

- **Project 7.3. Guarantee of the effective participation of professionals in CatSalut and the Ministry of Health**, identifying and defining the rules which govern professional participation and developing stable or ad hoc structures which guarantee or stabilise this participation.

Line of action 8. Improved governance of and participation in the system

Twenty years after the approval of the LOSC, the elements behind the governance of the system must be revised to ensure they are adapted to future needs. There are two key elements which must be revised in which opportunities for improvement have been identified in order to update, simplify, and make more effective governance and participation:

- **Project 8.1. Revision of the CatSalut management and participation model**, in order to recover the essence of and the management and participation model contained in the LOSC, which guarantees the effectiveness of the management and administration bodies and reinforces the idea of co-responsibility among all the agents. The nature of the functions and representativeness of the agents in the different management and participation bodies will be revised, and the management and participation committees for each of the health regions will be set up, reinforcing the effectiveness of local participation within the legal framework set forth in the LOSC.
- **Project 8.2. Strengthening of a contract- and assessment-based model for the relationship with the network of providers of the Integrated Public Health System of Catalonia (SISCAT)**. In order to achieve this, (1) the model for the separation of functions and the establishment of a homogenous relationship model for the network, regardless of the ownership of the institutions it comprises, will be dealt with in greater depth, reinforcing the contract and assessment as instruments on which the relationship with providers is based, and (2) a process to reorganise the public health sector as a health service provider will be implemented: Catalan Health Institute (ICS), public companies, and consortiums.

Line of action 9. Shared information, transparency, and assessment

The management of information, all along its lifecycle, starting with its compilation and ending with the generation and dissemination of knowledge, is a key element of the system. The information management model must consider the following premises: (1) information should be managed within the framework of the sector and, therefore, a unified governance model is necessary; (2) providers should be committed to sharing patient information online; and (3) the validity and security of the information must be ensured.

In accordance with the needs established, four important projects to enhance information, transparency, and assessment have been established:

- **Project 9.1. Transformation of shared clinical history into an information and service network that facilitates the integration of all providers**, dynamic

in terms of the information treated, updated online by all providers and interoperable with their systems.

- **Project 9.2. Implementation of a multichannel communication and citizens' care network** (Sanitat Respon, *Canal Salut* health channel, and the Personal Health File), thus converting *Canal Salut* into a virtual window for accessing sector information and consolidating the Personal Health File as an interactive tool that allows the citizens to share in caring for their own health and access personalised services online.
- **Project 9.3. Consolidation of the Catalan Health System Observatory as a basis for information transparency, promoting the Results Centre as an assessment tool**. The Observatory will have to function as a system news aggregator, truthful and accessible, providing transparency to all agents. To do so, by 2015, the system infrastructure must be consolidated and the service portfolio must be deployed.
- **Project 9.4. Promotion of systematic clinical assessment in technology-, quality-, and research-related areas**, through the consolidation of the Knowledge Bank.

v. ROAD MAP OF THE TRANSFORMATION

With the implementation of these 32 projects, which are grouped into nine lines of action, this Health Plan will bring with it **a structural change in the system of various dimensions:**

- **Citizens will have a better quality of life and a healthcare model that is better adapted** to their needs in terms of the care provided (case management, for example), more proactive, and with better clinical results. They will be better educated about their health and have a wider range of access options (e.g. multichannel healthcare platform).
- **Health professionals will be more involved** with regard to the decisions the system must make, with more active participation in the transformation, and they will become the main agents of change. Their daily routine will be modified in terms of the need to work in a more coordinated way with other healthcare centres and levels, as well as simplified, thanks to the new work tools available to them (for example, the unified Shared Clinical History of Catalonia (HCCC)) and the evolution of new professional roles (for example, nursing and pharmacy professionals, etc.).
- **In the area of health policy**, the Plan will promote change in the provision structure through incentive-based contracting and a governance model that treats all providers equally. In this sense, greater prevention will be achieve, more health issues will be resolved at the primary care level, there will be more alternatives to hospitalisation, and the care given through new technologies will increase. For the most part, these changes will be accompanied by a reduction in acute hospital care and the number of long-stay beds.

- **The system will be more sustainable**. The projects implemented will contribute to the sustainability of the health system as we know it today in two ways: (1) the growth of demand will slow down due to a greater focus on the management of the risk of citizens developing a disease and more adequate care, guaranteeing better and longer-lasting quality of life, and (2) system resources will be used more efficiently through the promotion of the integration, rationalisation, and organisation of activities and processes at different healthcare levels.

Road map for the approval of the Health Plan

This is the beginning of a journey towards change. The Health Plan for Catalonia 2011-2015 provides the framework, priorities, and aspirations defined by the Ministry of Health of the Government of Catalonia. From this point on, it will be necessary to start working with the different agents in drawing up and implementing projects for change.

The process to approve the Health Plan lasted until February 2012. In parallel, **regional health plans were implemented,** aimed at adapting the principles and strategies proposed to the specificities of each region and translating them into specific actions and objectives that each one could take on. These plans were approved in early February by the boards of directors and health of each region and, later on, as set forth in the LOSC, they were submitted to CatSalut so they could be included in the final version of the Health Plan.

During January and February 2012, the boards of health of the seven health regions held debate sessions, and the boards of directors of the respective regions approved the regional health plans. On 8 February 2012, at a session of the Catalan Board of Health, a period was opened during which amendment were received, and on 20 February, the Catalan Health Service Board of Directors approved the draft of the Health Plan.

The Executive Council of the Government of Catalonia approved the plan on 21 February, which started the implementation phase for the 32 projects of the Health Plan for Catalonia 2011-2015.

Assessment of the Health Plan and accountability

In 2012 the change must be visible. For this reason, the Ministry has defined a series of specific objectives to be achieved in the short term. Each of the projects will have action objectives for 2012. Thus, for example, in 2012 the risk of suffering chronic pathologies will be reduced and their appearance will be delayed thanks to specific prevention and promotion programmes (a minimum of one million citizens involved in renewed programmes for physical exercise and healthy diet); there will be a reduction in surgical waiting lists by 2%; complications due to multiple medications will be reduced through the revision of the treatments of at least 90% of multiply medicated patients; and unfair treatment claims will be cut by 10% and

while continuing to improve citizen satisfaction (a 1% increase in satisfaction in comparison to 2011).

The Health Plan is not a document of intent, but rather a **road map for change in the healthcare model of the Ministry of Health of the Government of Catalonia over the coming years**. The Ministry of Health will be responsible for the execution of the projects and the public and transparent assessment of objectives. In this sense, the Ministry commits itself to implement the projects designed, to monitor the performance indicators for the objectives on a yearly basis and, also on a yearly basis, to submit them to public evaluation within the framework of the Health Commission of the Parliament of Catalonia.

Finally, it must be stressed that this Health Plan is liable to be subjected to frequent revisions. It should be understood as an open and living work tool, susceptible to change and improvement during the course of the current planning period.

I. The situation at the point of departure: the challenges facing Catalonia's health system

In spite of the fact that the starting point is good in terms of health results and efficiency levels, the future challenges are structural and require a profound transformation of the system. Along these lines, many neighbouring countries have also started reforms. In our case, the Health Plan will be the instrument of change that will allow us to carry out this transformation.

The Catalan health system is off to a positive start

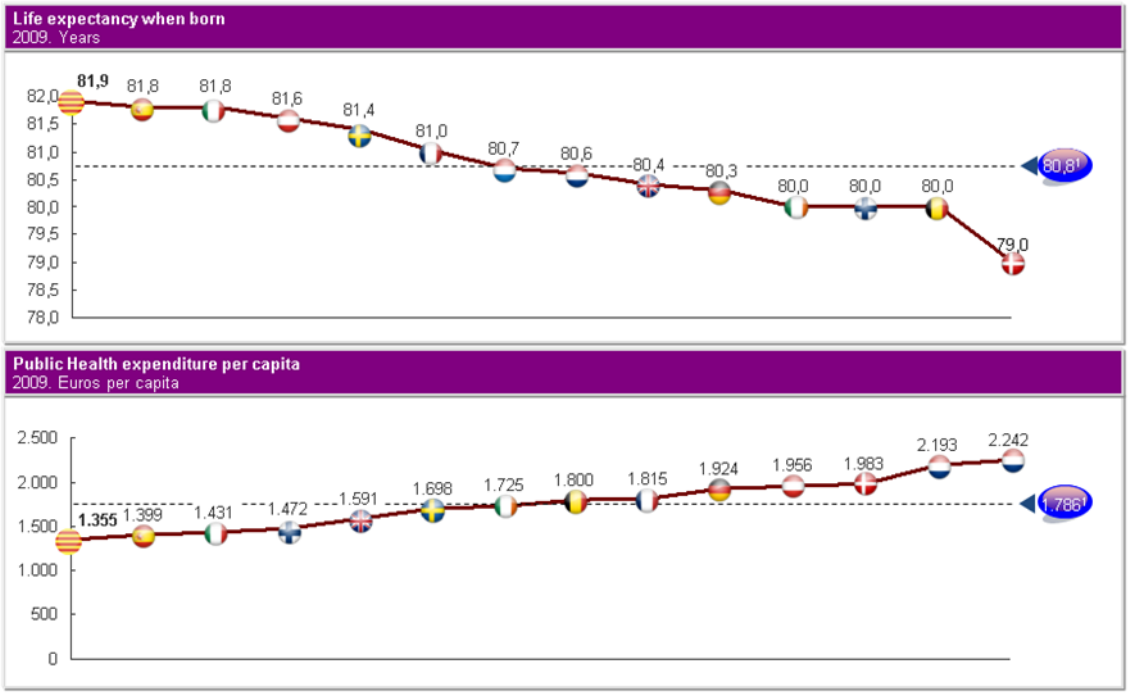
During 2010, CatSalut provided health coverage to a total of 7,646,944 citizens, with an estimated annual insurance premium of €1,295 per person covered.

As for resources for healthcare provision during 2010, the health system relied on 451 primary care centres, 831 local healthcare centres, 96 acute care hospitals, 96 social health centres, 158 mental health centres (for adults and children/teenagers), and 42 centres for inpatient mental health care.[1]

With this backdrop as a starting point, the **situation** of the Catalan health system is **positive** in terms of key variables:

- **Our health system makes it possible to achieve certain indicators related to excellent health results. Life expectancy at birth is high** (81.9 years of age), higher than the European average and the average for Spain. Life expectancy improved by 24 months between 2000 and 2009, mainly as a result of a reduction in mortality rates for the main chronic pathologies (for example, a 36.6% reduction in mortality due to acute coronary syndrome) and in the number of deaths caused by traffic accidents (a 45% reduction between 1999 and 2009).[2]
- These results are achieved through **efficiency levels in management which are higher than any other country in the EU**. Health expenditure per capita is at the tail-end for Europe and is 25% lower than the average for the EU-15 countries.
- The health system became a powerful **engine for the national economy**: 154,000[3] people worked directly or indirectly in the sector in 2006, which contributed, according to estimates, to 4.3% of the gross added value (GAV) generated in Catalonia in 2007.
- Catalans are **satisfied with the health system**. A satisfaction survey of people covered by CatSalut, public since 2004, reveals increasing satisfaction (in the last survey the average satisfaction was 8.2 out of 10), and the Health Barometer for Spain places Catalonia in the first quartile of Spain's autonomous governments.

Catalonia is at the head in life expectancy and is one of the countries with less public health expenditure per capita



1 For consistency, Catalonia has not been included in the calculation of the average.

Source: OCDE Health Data 2011, June 2011.

The challenges of the system are structural and require a profound transformation

The challenge of the sustainability of the health system is not a short-term financial problem, but rather a problem with an important structural component, which is affecting all the developed countries and which is based on a series of social, technological, and economic trends. Among others, the following should be highlighted:

- **The increase in demand**. It stems mainly from an increase in the ageing population (for example, it is estimated that, in ten years, nearly one in every five Catalans will be over 65 years, which represents a relative increase of nearly 20%) with an ever-worsening morbidity profile (in 2010, 34% of Catalans stated that they suffered from at least one chronic disease). In Catalonia, during the last eight years this fact has been accompanied by an increase in the population of more than eight-hundred thousand inhabitants, which implied an additional challenge for the system.

- **The increase in the cost of resources**. Medical treatments are becoming more and more personalised and costly (for example, during the last five years, the cost of cytostatic treatments has tripled in Catalonia) and resources are being used ever more frequently (primary care centres are visited 6.9 times per person, per year). Moreover, the advances in the field of molecular biology favour a new line of pharmaceuticals characterised by a high level of innovation in progressively more specific and complex therapies, such as advanced therapies, genomics, customised medicine, etc.
- **Chronic financial tensions**. The financing scheme is under pressure due to this increase in demand and continuously increasing health care costs in a system partially saturated in different areas. This situation is complicated further by the present context of economic hardships, which makes the debate on sustainability even more urgent.
- **Tensions in the professional sphere,** with dissatisfaction dating back several years, related to the loss of social value, in the dilemma surrounding professionalism and the introduction of employment contracts, and worsened by the rapidly growing needs and demands of the population.

These are the trends which make it necessary to enact reforms that go beyond the necessary short-term adjustments.

Many neighbouring countries have initiated profound changes in order to face these challenges.

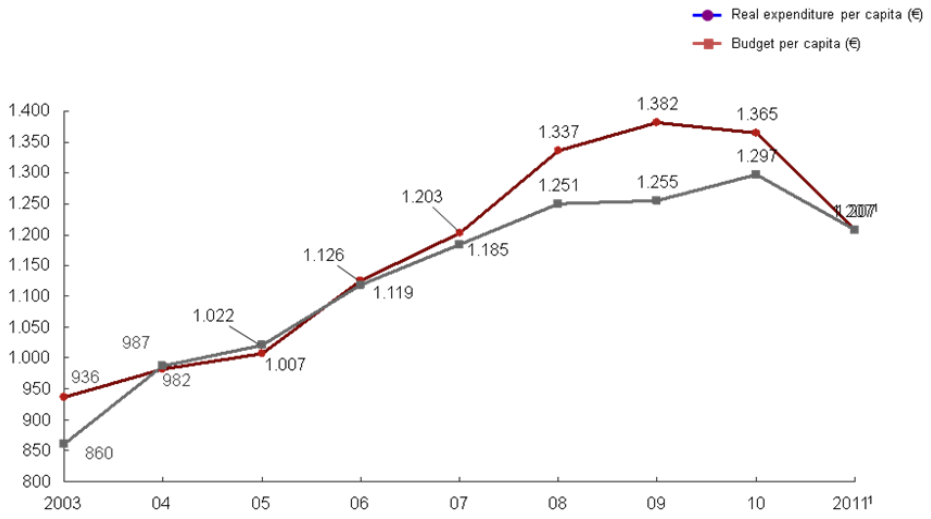
The long-term challenge of the sustainability of the health system affects the most developed countries in the world and has held a place of great importance on the political agenda of their leaders. In fact, many countries (many of them neighbouring) are implementing ambitious transformation programmes in order to address the health challenge, such as:

- **United Kingdom**. The launching of an integrated plan aimed at reducing annual expenditure of 20 billion pounds a year. Among other measures, a 45% cut in administrative spending and a 10-15% cut in pharmaceutical spending were implemented, and a new procurement mechanism for health services has been implemented.
- **France**. Transformation of 1,700 public hospitals in order to improve clinical quality (for example, 80% of patients waiting for treatment in the ER seen in less than 4 hours) and efficiency (a 2.5% cut in operating costs).
- **Germany**. Successive health reforms aimed at increasing competence, reducing demand (co-payment) and improving procurement mechanisms, diagnosis-related groups (DRG). Insurance companies focused on launching disease management programmes (DMP) for the comprehensive treatment of chronic diseases.

- **Sweden**. Introduction of the free-choice element for citizens and a radical change in the purchasing model, aimed at purchasing results for hospitals and health centres, instead of activity.

The World Health Organization (WHO) has also reiterated this need for transformation in its 2010 report (*Health Systems Financing: the path to universal coverage*). The WHO identified two types of key action that can be implemented in all countries: (1) fundraising for the health system through innovative actions (new taxes on hazardous substances, solidarity contributions for the use of specific technologies, etc.), and (2) boosting the efficiency of the resources available, since 20-40% of the resources earmarked for health are wasted (inadequate use of medicines, unnecessary or repeated procedures, etc.).

Public health expenditure has been situated over budget for the last years and accumulated significant annual deficits
Budget evolution and real health expenditure per capita 2003-2011



1 Expenditure and budget values as well as population of year 2011 are provisional.

Source: Memòria Catsalut; INE.

The present context has made adjustment measures inevitable

The social and health developments of the last years have been made possible by universal coverage and a nearly unlimited provision of services. However, said coverage has not always been accompanied by an additional increase in the allocated resources, nor has it been focused on improving the efficiency that would allow the system to face the growing expenditure. As a result, the imbalance in financing has increased steadily over recent years.

The present context of crisis and resource restrictions has made it necessary to launch programmes involving short-term adjustment measures. The focus of the measures implemented in 2011 by the Ministry of Health consisted in improving

the use of the resources available to us, while ensuring universality, accessibility, and quality of healthcare.

Along these lines, actions in the main four areas have been carried out in order to correct the financing imbalance: (1) pharmacy: advances in efficiency and rational use; (2) investment: reprogramming and review of the actions implemented; (3) actions involving health services; and (4) structuring of care to respond to urgent demand.

The present economic context has made it even more evident that the system is lacking in sustainability and the need to commence structural transformation.

The Health Plan 2011-2015 as a tool for changing the Catalan health system

The Health Plan for Catalonia stems from a provision of the Public Health Law of Catalonia of 1990, which stipulates that 'is the indicative instrument and the reference framework for all public action in matters of health under the authority of the Government of Catalonia' (LOSC, Title 5, Article 62). The Health Plan will allow, among other things, healthcare policies to be redirected from a perspective based on the quantity of activity and resources, to one based on the establishment of objectives for the health of the population and, with these as a foundation, the definition of the activities of healthcare services of the public health system in Catalonia. This is why it should serve as the instrument by which the change in the future of the Catalan health system is guided.

The global strategy of the Ministry of Health of the Government of Catalonia is contained in the pillars of the Government Health Plan, which establishes ten strategic areas. One of the key areas is the reformulation of the Catalan healthcare model, which, while maintaining the basic and differential values of the Catalan health system model, must enable the new healthcare, economic, social, and technological paradigms to be faced. We are convinced that it is possible to build a new healthcare model that makes the challenge of sustainability compatible with the progress of the health system in Catalonia, and at the same time becomes an innovative and quality model of reference in caring for people. The Health Plan for Catalonia 2011-2015 will address these needs, mainly developing the elements of the Government Plan most strongly related to the transformation of the healthcare model and the organisation of the public health system (item 3, 'Healthcare model adapted to the new healthcare needs of the population', and item 4, 'Improvement in the management, results and excellence of public health').

As we have stated earlier, the circumstances surrounding the drawing up of this Health Plan are very special, and therefore it only serves to reason that the approach of said Plan be equally unique:

- **In terms of scope**. The Health Plan for Catalonia 2011-2015, in addition to guiding the formulation of strategic health and service objectives, also deals in depth with the measures that could make them possible and the mechanisms to make them run more smoothly. Thus, great emphasis is placed on aspects such as contracting and purchasing, resolution, high specialisation, incentives or organisational innovation.
- **In terms of a living tool, open to all**. The Health Plan for Catalonia 2011-2015 is intended as an open and living work tool for determining direction, strategic priorities and objectives, but which is able to adapt to the new needs and advances of the health system over time. For this reason, it cannot be considered as an open-and-shut plan, rather one that must be revised annually in cooperation with the agents who will have contributed to its design, in order to measure achievements and make the necessary adjustments.
- **It is a plan that has been set up to make change happen**. In many cases, the Health Plan's measures stem from initiatives which are being implemented by the network. The most important new aspects are: (1) the Ministry's commitment to developing tools and facilitators that ensure a healthcare change to scale; and (2) the commitments made in executing the Plan, both in the long (until 2015) and short (objectives for 2012) term.

The Catalan Ministry of Health wants the Health Plan for Catalonia 2011-2015 to be a fundamental instrument for addressing the challenges we face and ensuring the sustainability of the public health system in the medium term.

II. The inspiring principles of the Health Plan

The inspiration for this Health Plan is based on a set of fundamental principles which act as a nucleus of both of the Catalan health system and of the very transformation proposed for the period 2011-2015. These principles will inspire the changes proposed throughout this Health Plan.

The fundamental objective of the Catalan health system as defined in the LOSC is to maintain and improve the population's level of health. In order to ensure this objective is met, the structure and functioning of the health system must be based on a series of fundamental principles which should inspire all the initiatives and actions of the different agents (managers, professionals, citizens, etc.). **The Health Plan was drawn up based on a set of principles** that identify the main elements for the transformation of the system up to 2015:

1. **The foundations and the differentiating elements of the Catalan health system established in the LOSC are the starting point, and their presence will be reinforced in this Health Plan**: universal accessibility, equity and efficiency, decentralised network, separation of functions, professionalised management.

   Since the first Health Plan was designed, **accessibility has been the ultimate and inalienable objective** of the health system, allowing universal and fair access for all citizens. In the last two decades, overcoming geographical barriers and the quest for regional balance have been a fundamental concern of the Catalan Ministry of Health. As a result, as of 2011, these barriers have been hurdled and the level of accessibility is good (98% of the population has a health centre within 10 kilometres) for all citizens. However, now the challenge is to ensure this balance and equity of accessibility in terms of time. Waiting lists have become a fundamental challenge for the health system, which becomes even more relevant in a context of scarce resources. In this sense, the new Health Plan must set up measures aimed at gaining ground in this area and ensuring a substantial improvement in access to those procedures that have the most impact on the health of the population.

   Equity is the second inalienable foundation on which the system is based. One of the Ministry of Health's main responsibilities is to ensure equity in terms of health results. Thus, the Health Plan for Catalonia 2011-2015 sets ambitious objectives in terms of said results, which will be monitored not only by average, but also in terms of variability, and it will support the implementation of measures aimed at offering everyone better health, regardless of individual circumstances (geography, for example). The organisation of highly complex procedures is a clear example of how the best possible results at this care level are to be sought.

   In the difficult economic situation in which we find ourselves and in anticipation of future trends in the system, **the optimal use of resources**, while maintaining the same clinical results, should be paramount. Therefore, the elements for change proposed for the healthcare model must contribute to guaranteeing the efficient use of resources under clinical cost-benefit analyses.

   Finally, the differential elements of the health system in Catalonia (decentralised network, participative governance among the different agents, separation of functions and professionalised management) have proven their worth and will be respected and strengthened in the framework of this Health

Plan, as they represent an element with great potential with which to transform the system.

2. **The citizens have a new role and they become the system's main priority.**

   The care given to citizens and the **improvement of their health and quality of life** are the ultimate goals of the health system and, therefore, are the responsibility of all the agents in the system.

   The LOSC states that the **humanisation of health services** is the reason behind the system**,** maintaining maximum respect for individual dignity and freedom (Art. 6.1) and designing a framework with which to guarantee these rights (Art. 6.2). The present Health Plan strives to bring these rights to the next level and, consequently, proposes a series of changes with regard to the health system-citizen relationship. This must be a two-way relationship.

   The Health Plan for Catalonia 2011-2015 will address the creation of **new relationship elements and healthcare alternatives** so that the citizens receive care that is better adapted to their needs at all times (e.g. through the consolidation of alternative healthcare channels, such as Sanitat Respon). The Health Plan will also include a commitment to **information for patients and citizens** in general, both in regard to the service portfolio to which they have access and the mediums available to them to 'surf' the health system. In the future, the system will focus on **knowing patients/citizens better** and will consider solutions more in-line with their needs, which will be seen, for instance, in the renewed focus on the treatment of chronic pathologies. Finally, the citizens will be at **the core of inter-ministerial policies** aimed at mitigating the main causes of disease by combining efforts with other ministries of the Catalan Government. Clear examples will be the social health plans (especially in treating chronicity) and the inter-ministerial public health plans encompassing areas such as the environment, education, etc.

   In order to guarantee this change, the **role of citizens** must also be different. Firstly, citizens will be more informed and will be able to play a more active part in the system, for example, by taking on more responsibility with regard to their health and treatment as well as their use of the health system. Thus, the system will better educate citizens and provide them with the necessary tools (through the development of programmes such as *Pacient Expert Catalunya*, among others). Moreover, citizen participation will also be more effective in the established areas of system governance, and their representation and responsibility in this area will be enhanced.

3. **Public health and its service portfolio will serve as one of the key instruments for improving the results in terms of the health and quality of life of the population.**

   Public health plays a key role in the health of the population and this role must be strengthened in the future. The **creation of the Catalan Public Health Agency is a fundamental step** in this process. The Agency will play the role of provider in the health system and will be responsible for the execution of the

public health service portfolio, which will be contracted through a contract-programme. The philosophy of public health will be adapted to the differentiating elements of the Catalan health system (separation of functions, decentralisation, etc.).

The protection and promotion of health and the prevention of diseases constitute a central part of the public health service portfolio. The launching of the Agency will boost the implementation of community promotion and prevention actions aimed at the main health determinants and risk factors for disease. Moreover, the work carried out in coordination with health services, mainly primary care (as well as community services such as pharmacies and the overall inter-ministerial action), will be elements which promote this strategy.

Finally, the Inter-ministerial Public Health Plan, which will be published in 2012, will help establish way of intervening in the determinants affecting the population's health that require a joint effort involving many social and government sectors, in order to achieve the goals of improving and protecting health in the most fair and efficient way possible.

4. **The healthcare provision model will increase its level of integration and will adapt to the new needs and opportunities, and said adaptation will take the characteristics of each region into consideration.**

The Catalan health system will have to face new challenges and opportunities in the future. The first of these will be the need to **adapt to the new needs arising from a different morbidity profile**, especially due to a greater incidence of chronic diseases. Among the secondary challenges and opportunities is the **appearance of new technologies, scientific evidence, and knowledge** that can radically improve the quality of healthcare and patients' quality of life.

The need to develop integration elements is nothing new, but it is becoming more urgent in the present context of change. Consequently, the Health Plan for Catalonia 2011-2015 will strive to **improve the healthcare continuum** for patients and to ensure that all the resources (public health, primary healthcare, specialised healthcare, social health, and mental health) act in a coordinated manner, with common objectives and in accordance with a clinical vision.

The Plan employs relatively innovative approaches to promoting greater healthcare integration (for example, through the development of new roles for professionals that help increase interaction between different healthcare levels, or shared incentives among providers of the same region) and reinforces other elements which have been in the development phase for some time, but which are vital to the Plan’s success (such as the creation of a unified information network among the providers of the public health system).

Finally, the Catalan healthcare model has always taken into account the specific features of each region, and this Health Plan is no exception.

Therefore, the details of the proposed changes to the healthcare model will expressed at the local level, within the framework of the **regional health plans,** which will be developed in the near future in order to guarantee the best use of resources and the best service possible for each region.

5. **CatSalut will take on the role of insuring public health.**

   As a public health insurer, CatSalut is the body in charge of guaranteeing quality, comprehensive healthcare for all citizens. The Health Plan will include specific measures that will further develop certain areas of CatSalut's role, taking them to the next level and giving it a more proactive management role, especially in priority areas involving the relationship with those covered.

   CatSalut will commit to **a management style that is better adapted and closer to** the needs of patients, in accordance with the predictive models it promotes. At the individual level, more segmented offers will be developed; at population level, the procurement model will focus on purchasing health results for the population of each region. Proactive policies for managing risks posed to those covered by the system will be established, placing greater emphasis on preventing the disease than treating it. Lastly, CatSalut will be more proactive in terms the information provided to those covered, both on health system coverage and on the correct use of the same.

6. **The management of the system will be decidedly focused on health results.**

   Clinical results, understood as keeping the population in the best of health and providing the best healthcare, will be the key concept on which the new service planning and procurement model will be based. This model implies the natural evolution of a system which initially functioned based on a budget framework to one that functions according to activity, in an endeavour to ensure greater efficiency and a better level of productivity.

   The very nature of the focus and objectives of the new Health Plan require that **clinical results serve as the axis around which the health system revolves**. Thus, a change in philosophy with regard to two of its fundamental activities is envisaged.

   On the one hand, **planning should be predictive instead of retrospective**. Predictability translates into having a vision of the population that is able to assess the status of the population's health (in terms of morbidity), identify its future needs, and react with the appropriate actions and plans. On the other hand, **procurement for the provision of healthcare should adapt** to this philosophy by including elements in regard to region (allocation according to the specific needs of the region) and stronger incentives (at the individual and regional level) which ensure that the system will function in alignment with these plans.

This new model is linked to the system ability to resolve the cases presented, especially at the first levels of healthcare. Therefore, the resolution capacity of public health and primary healthcare must be heightened, ensuring that health problems are resolved even before they appear, if possible.

7. **The knowledge of clinical professionals is vital for the planning, management, and improvement of the system.**

   Professionals are the key players in changing the health system, as they are the ones who possess clinical knowledge. This **clinical knowledge should guide the transformation** of the system in order to ensure that the decision-making process is in line with the improvement of healthcare and the quality of life of the population.

   These principles are widely known and acknowledged. However, the **capacity of the professionals to apply** this knowledge beyond clinical practice and to extend it to the **planning**, management, and improvement of the system must be enhanced. Therefore, the knowledge held by clinical professionals will lead the transformation of the healthcare model proposed by the Health Plan.

   In order to ensure that this use of clinical knowledge is effective, the new Health Plan has set up **various participation schemes**. Among other measures, clinical committees will be set up at different levels in order to help define the transformation projects. Also, clinical assessment will be promoted as a key decision-making tool, by strengthening the evaluative role of the Agency for Health Information, Assessment and Quality (AIAQS) in regard to processes, technologies, and medicines.

8. **In effectively governing the health system, the values of good governance will be taken into account: transparency of information, assessment and accountability should be present at all levels.**

   The Health Plan for Catalonia 2011-2015 aims to differ from previous plans in terms of how it uses information to achieve health objectives. This will be achieved through various channels.

   In the coming years, a **truly unified information and service network will be established for the health system**, which will enable information and knowledge to be shared, lend greater transparency to the results from different agents, and aid in creating assessment and revision mechanisms to ensure that we are progressing in the right direction.

   Transparency will convert information into a common asset for all the agents, and the Catalan Health System Observatory (OSSC) will be the tool which will make it possible. Citizens and patients will have access to better information with regard to system results and, therefore, they will be able to take more informed decisions. Professionals and providers will have their own performance visible and be able to compare it with other system agents.

A differential element of this Plan is the relevance given to **accountability**. The Catalan Ministry of Health has committed to monitor, on a yearly basis, the level to which the proposed objectives are being achieved, to reassess the validity of the different actions, and to respond publicly to both concepts. This process will not only be the responsibility of the Ministry, but of the regions that are carrying out the Plan's implementation as well.

9. **The sustainability of the health system will be compatible with the latest results on the progress made and excellence offered in healthcare.**

   The ultimate goal of the Health Plan is to adapt the health system in order to respond to certain **structural challenges** for which it is not prepared at this point in time. The changes which need to be made and which have inspired the present Health Plan are **independent of the present context of crisis**.

   The proposed goal of transforming the Catalan health model is not just about maintaining the viability of the system as we know it, but also improving the quality of the results and excellence in care. Therefore, **it is not a plan to merely adjust budgets; it seeks a change in the system's model of operation and organisation,** which will help achieve both of these objectives.

   The result of this change will be a more sustainable and durable system with a manageable cost, which will improve the quality of results as well as the care provided to citizens.

10. **The Health Plan will be an instrument of change with a call to leadership and focused on making change a reality.**

    The Health Plan for Catalonia 2011-2015, as in previous plans, complies with the objectives set forth in the LOSC, but it differs in three main aspects:

    Firstly, the Health Plan for Catalonia 2011-2015 aims **to be more exhaustive and to generate extensive debate** on the elements of health, services and system organisation. Secondly, it is a **living tool, open to all**: *open*, because its development will include all the agents in the sector and the different regions; and *living*, because an annual process for assessment, accountability and revision will be established, which will involve making adjustments to the Plan according to the degree of development and execution. Finally, it is a plan that has been **set up to make change happen.** In many cases, the Health Plan's measures stem from initiatives which are being implemented by the network. The most important new aspects are: (1) the Ministry's commitment to developing tools and facilitators that ensure a healthcare change to scale; and (2) the commitments made in executing the Plan, both in the long (until 2015) and short (objectives for 2012) term.

III. Point of departure: analysis and priorities of the Catalan health system

Despite fact that, as a starting point, the situation is good in terms of health results and efficiency levels, there are structural aspects which call for a profound change to be made if they are to be maintained, mainly:

- The increasing prevalence and incidence of chronic diseases, associated with the aging population and worsening lifestyles, as well as the need for innovation in offering solutions that are adapted to the needs of chronic patients.
- The level of saturation (especially in emergency care services) and the low level of integration between healthcare levels (especially between primary and specialised healthcare), which negatively affect the agility of the system.
- The high degree of variability in the provision of procedures, especially the highly specialised ones.

These elements will determine the future priorities of the system and the transformation pillars.

Assessment of the 2010 objectives of the Health Plan for Catalonia

With the end of the period in which the Health Plan for 2010 was applicable, an assessment must now be carried out in order to determine the degree to which the established objectives where achieved in terms of health and risk reduction.[4 5 6 7] The results should help to analyse the present situation, identify priorities, and guide the objectives and interventions of the Health Plan for Catalonia 2011-2015.

The total number of indicators used to assess the objectives was 200, and information has been obtained from 82% of them (as of February 2012). Up to now 73.8% of the objectives have been assessed:

- 62.8% have been achieved.
- 9.9% have been achieved in part.
- 27.3% have not been achieved.

Nearly two out of three objectives have been achieved, while around a quarter of them have not been achieved:

- The objectives which have been achieved are related to:
  - A reduction in the number of deaths due to chronic diseases: ischaemic heart disease, stroke, cancer and COPD, basically due to better control of such diseases or the risk factors (arterial hypertension (AHT), hypercholesterolemia, diabetes mellitus, vaccination against influenza) or to improvements in the application of diagnostic-therapeutic techniques (Code Stroke, Code Heart Attack, cancer screening, chemotherapy).
  - A reduction in the number of deaths caused by accidental injuries, except for cases involving the elderly and motor vehicle accidents among the entire population (except those associated with drunk driving).
  - A reduction in the number of outbreaks of food poisoning, both in the restaurant and catering trade and at summer camps and when the cause is *Salmonella*.
  - The number of men aged 15 years and over who smoke and the percentage of people who quit smoking.
- The objectives which have been not been achieved are related to:
  - Lifestyle: increase in sedentary lifestyles; decrease in fresh fruit consumption; stabilisation of mortality rates due to motor vehicle accidents associated with excessive alcohol consumption; and for specific sub-groups of population, such as smoking among women, HIV risk practices among risk groups, and pregnancy in women under 18.

- The five-year survival rate for all cancers has increased but the established objective has not been met.
- The incidence of cancer, especially the types related to tobacco use and colorectal cancer.
- Some transmissible diseases: pertussis, parotitis, measles, and sexually transmitted diseases; the number of cases have increased considerably due, among others factors, to the declaration of such diseases being made compulsory and an increase in the use of more sensitive diagnostic techniques.
- The high incidence of the birth of babies with a low birth weight and who are born prematurely or under the 33-week gestation period.

Results in terms of health

The health situation in Catalonia and the aspects which condition it are characterised by four key elements:

a) Low population growth and a continuously ageing population in coming years.

b) High life expectancy and decreasing mortality rates for cancer, cardiovascular diseases and accidents.

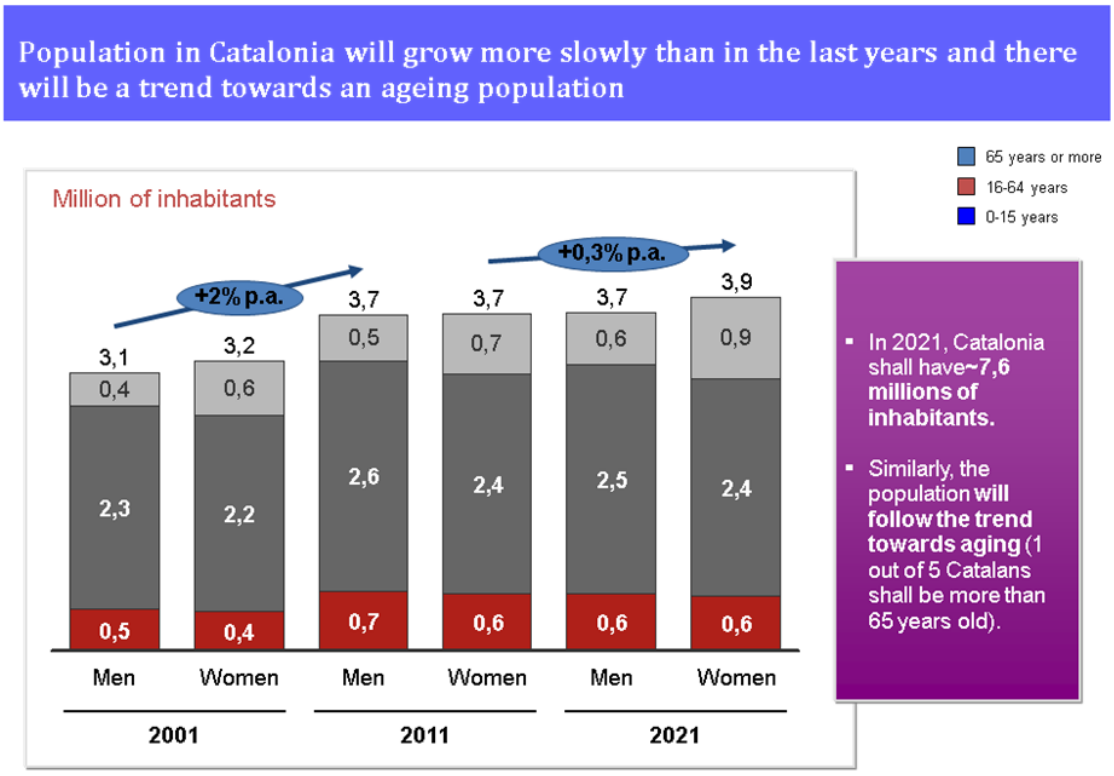
c) Few favourable indicators related to habits and lifestyles.

d) Significant morbidity load due to the high incidence and impact of chronic diseases.

a) Low population growth and a continuously ageing population in coming years

Catalonia has a population of 7.6 million inhabitants[8] and has undergone substantial population growth in the last decade (average yearly growth of 2% between 2000 and 2010). In the medium term, the population increase is expected to slow (average yearly growth of 0.3% between 2011 and 2021), and the Catalan population will continue aging.

- In the medium term, by 2021, Idescat estimates that Catalonia's population will amount to 8 million inhabitants. The demographic pyramid will widen not only at the bottom, but also at the top. Age distribution will change significantly in 2021, with the child population at a maximum (1.4 million children aged 0 to 15) and only a slight increase in the working-age population.
- With a steady increase in life expectancy, a significant increase in the population aged 65 and over (up to 1.5 million inhabitants) and 80 and over (up to 450,000 inhabitants) is expected.



Source: Idescat, Population projections 2021-2041 (base 2008), 2009.

Compared with neighbouring countries, the health status of the Catalan population is high. Indicators, such as mortality, are better than those for the EU as a whole and Spain, with lower crude death rates and standardised mortality ratios and a higher life expectancy at birth.[9]

- Self-assessment of one's own state of health is a good indicator of future mortality and morbidity. Along these lines, 79.3% of the Catalan population evaluates their state of health as positive (83.3% of men and 75.6% of women).[10]

b) High life expectancy and decreasing mortality rates for cancer, cardiovascular diseases and accidents

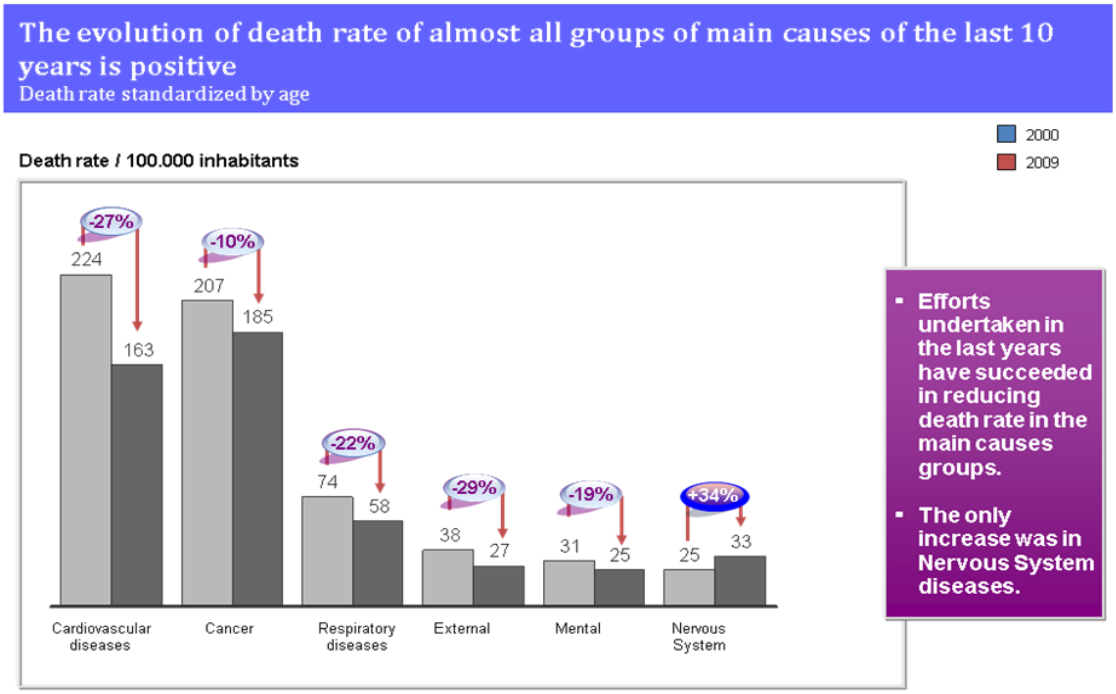
In 2009, **life expectancy (LE) at birth** in Catalonia was 81.9 years of age (78.9 for men and 84.8 for women). This lifespan is one of the highest, both in Spain and the whole of the European Union.

In 2005, **healthy life expectancy (HLE) at birth** in Catalonia was around 63.0 years of age for men and 60.6 for women. Based on these data, we can draw the conclusion that, even though they live longer than men, women live many years in poor health.

In recent years, **mortality rates** for cancer, cardiovascular diseases and accidents have evolved favourably, in spite of the increase in the incidence of disease in some cases, such as cancer. Again, good results have been achieved with regard to the control of specific risk factors and preventive practices, such as screening through mammograms for priority groups.[11]

The systematic analysis of mortality shows some areas in Catalonia in which mortality is higher than average.

The decrease in mortality has led to most deaths occurring in the more advanced stages of life, between 85 and 89 years of age for women and between 80 and 84 years of age for men.

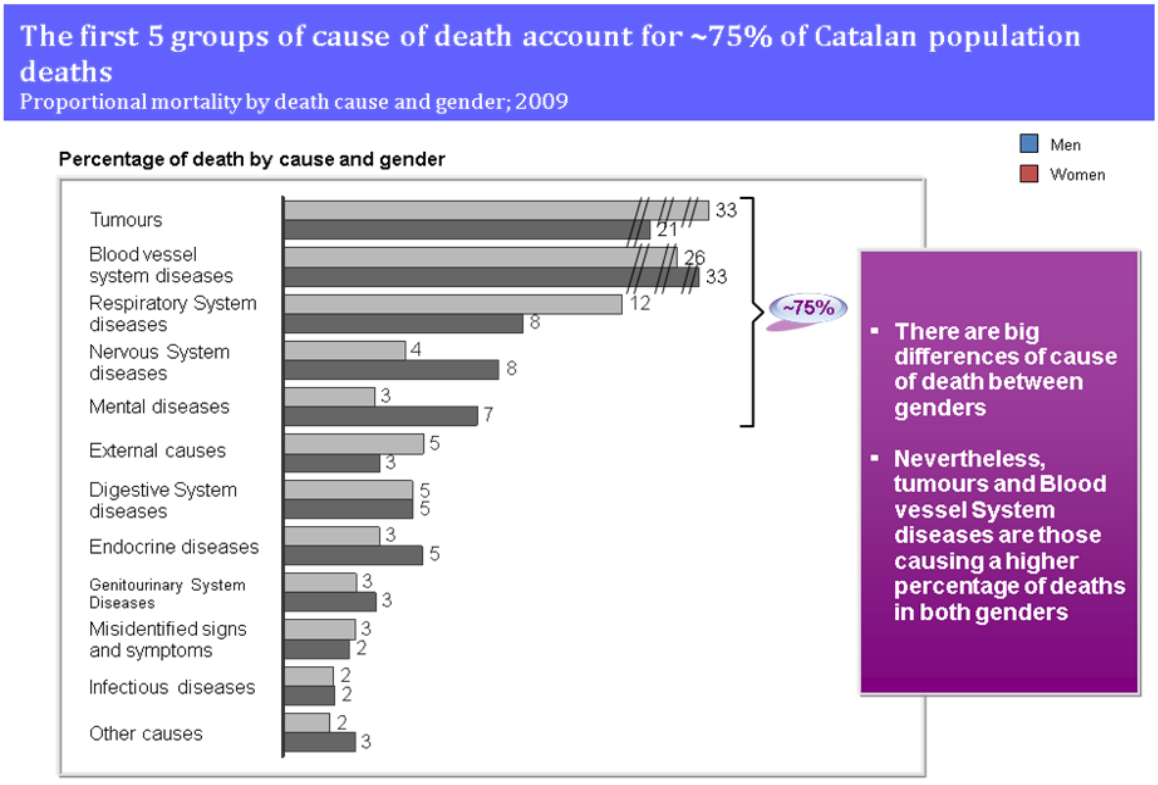


Source: Health Department, Mortality Register of Catalonia, 2009.

More than half of deaths are caused by diseases of the circulatory system and tumours. Among men, the most frequent cause of death is tumours (33.2%), and among women, circulatory system diseases (32.9%). According to gender and age, it should be pointed out that:

- Among men, tumours are the primary cause of death between age 35 and 84, and external causes are the first cause of death between age 5 and 34.

- Among women, tumours are the primary cause of death between age 5 and 14 and between age 35 and 74, and external causes are the primary cause of death between age 15 and 34.
- For both genders, tumours are the second cause of death in the 15-34 age group.
- Death due to circulatory system diseases is third among women aged 15 to 44 and men aged 35 to 44. They are the second cause of death between age 45 and 84 for men and until age 74 for women. After these ages, they constitute the primary cause of death for both genders.



Source: Health Department, Mortality Register of Catalonia, 2009.

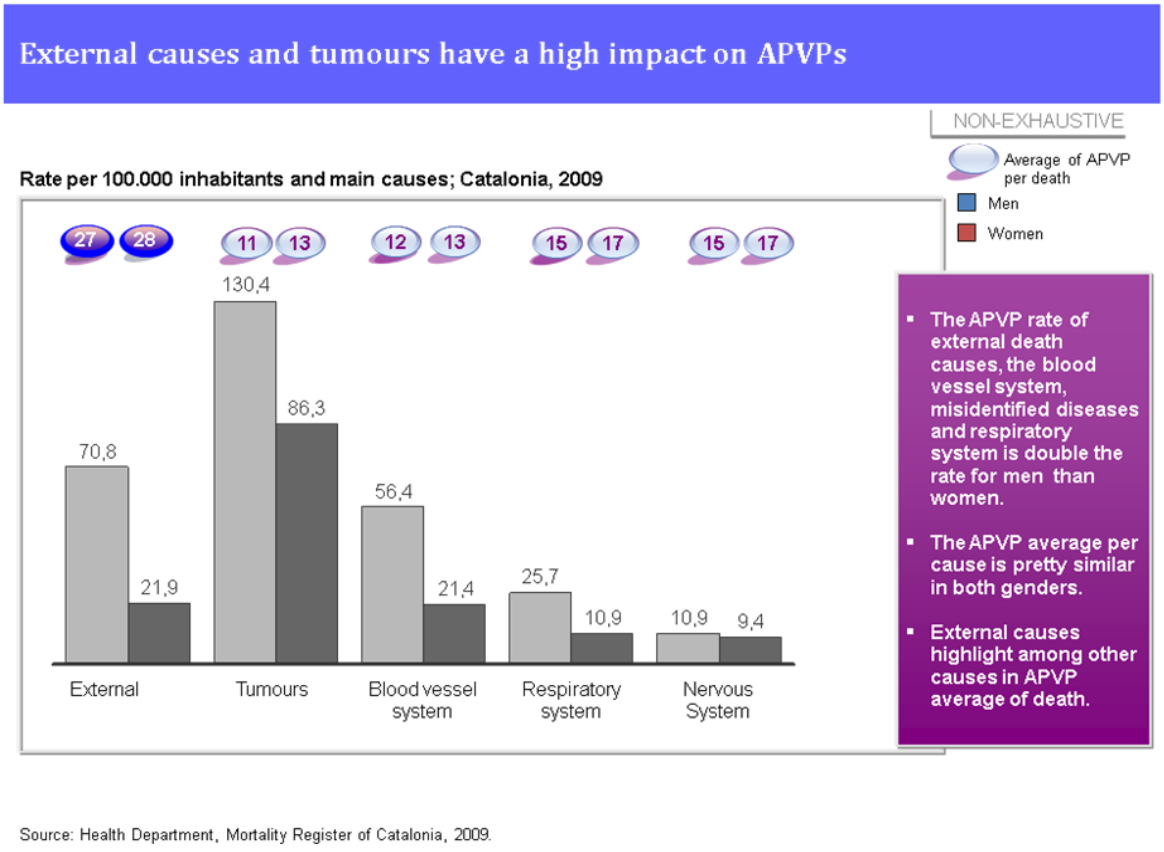
Since 1999, overall potentially avoidable mortality has decreased, although rates for causes treated by the intervention of healthcare services have shown a more marked decline (45% less) than for causes addressed through the intervention of the inter-sector health policies (20% less).

Along these lines, a third of all potentially avoidable deaths (33.9%) among women treated by healthcare services are caused by breast cancer. Conversely, among men, 45.5% of these potentially avoidable deaths are caused by

ischaemic heart disease. In regard to inter-sector policies, nearly 40% of potentially avoidable deaths are caused by lung cancer.

A measure which allows us to assess the magnitude of the impact of certain diseases on the Catalan population are years of potential life lost (YPLL), in other words, the years which are lost due to premature death. Tumours cause 47% of the YPLL due to premature death in women and 35% in men in Catalonia.

- If congenital diseases detected in the perinatal period are excluded, traffic accidents cause more YPLL for each death, both for men (33 YPLL) and women (31 YPLL).



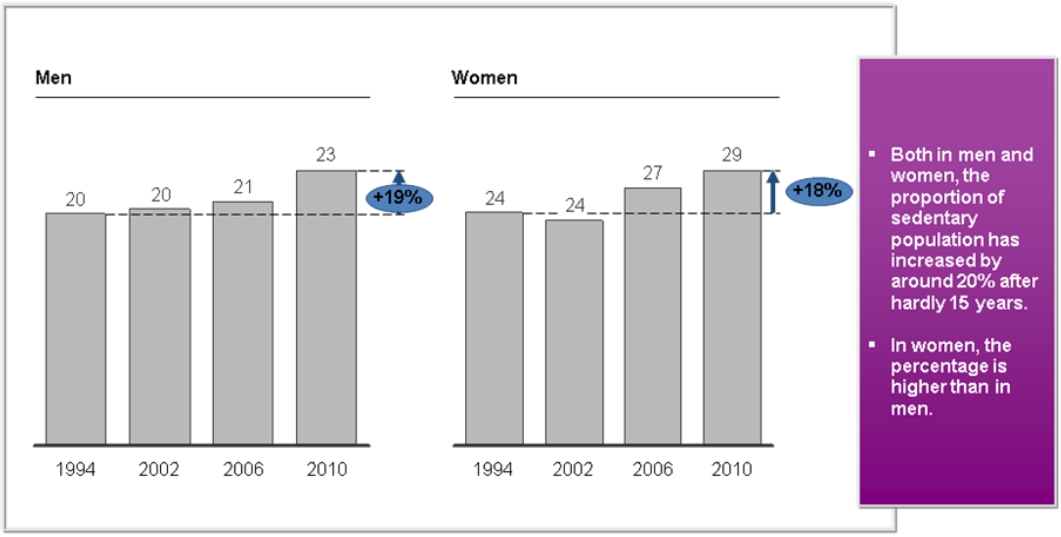
Source: Health Department, Mortality Register of Catalonia, 2009.

c) Few favourable indicators related to habits and lifestyles

The proportion of the population that is sedentary (according to the level of physical activity at work or at home) has steadily increased in recent years.

The proportion of sedentary population has raised in the last years, both in men and women

Proportion of sedentary population of 15 years or more by sex and year; percentage



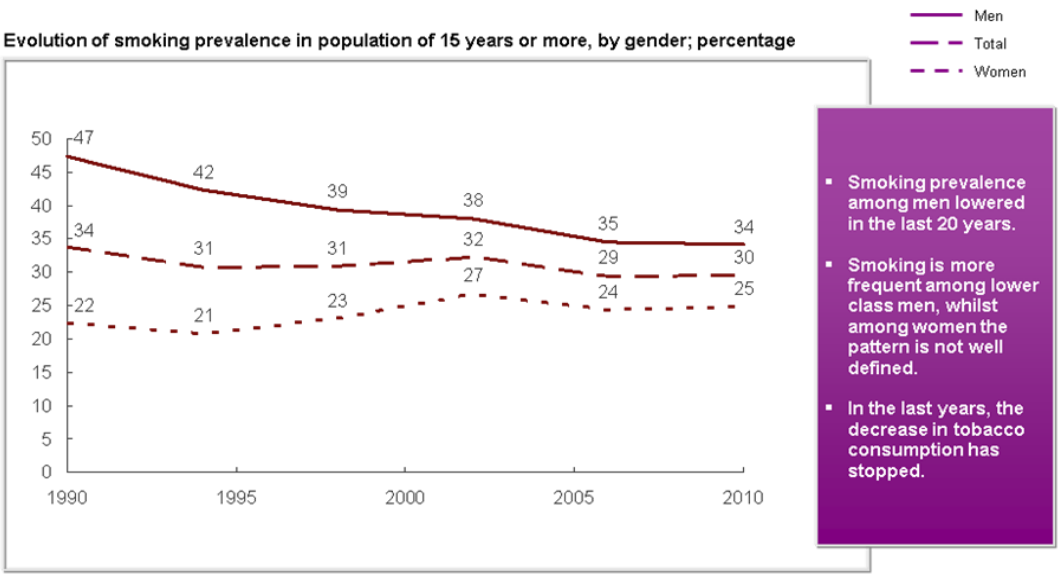
Source: ESCA 2010, 2006, 2002 i 1994.

In 2010, nearly half of the population aged 18 to 74 was overweight (35.3% were overweight and 12.0% were obese). While being overweight affects more men (43.4%) than women (27.2%), the percentages for obesity are similar for both genders (13.1% and 11.0%, respectively).

Regarding tobacco, during the period 1990-2010, the proportion of smokers has decreased, mainly thanks to the fact that many men have quit smoking. In recent years, a certain lull can be seen in the decrease in tobacco consumption that started in 2002.

The data on hazardous drinking[12] show a less favourable evolution. In Catalonia, the percentage of the population that are hazardous drinkers has increased from 6.4% (8.7% for men and 4.0% for women) to 8.5% (10.3% for men and 6.7% for women) between 1999 and 2005. For the population between the ages of 15 and 29, the percentage has increased from 7.5% (9.0% for men and 5.8% for women) to 12.6% (12.9% for men and 13.3% for women) during the same period.

In the period between 1990-2010, the proportion of smokers has lowered
Smoking prevalence in population of 15 years or more, by gender



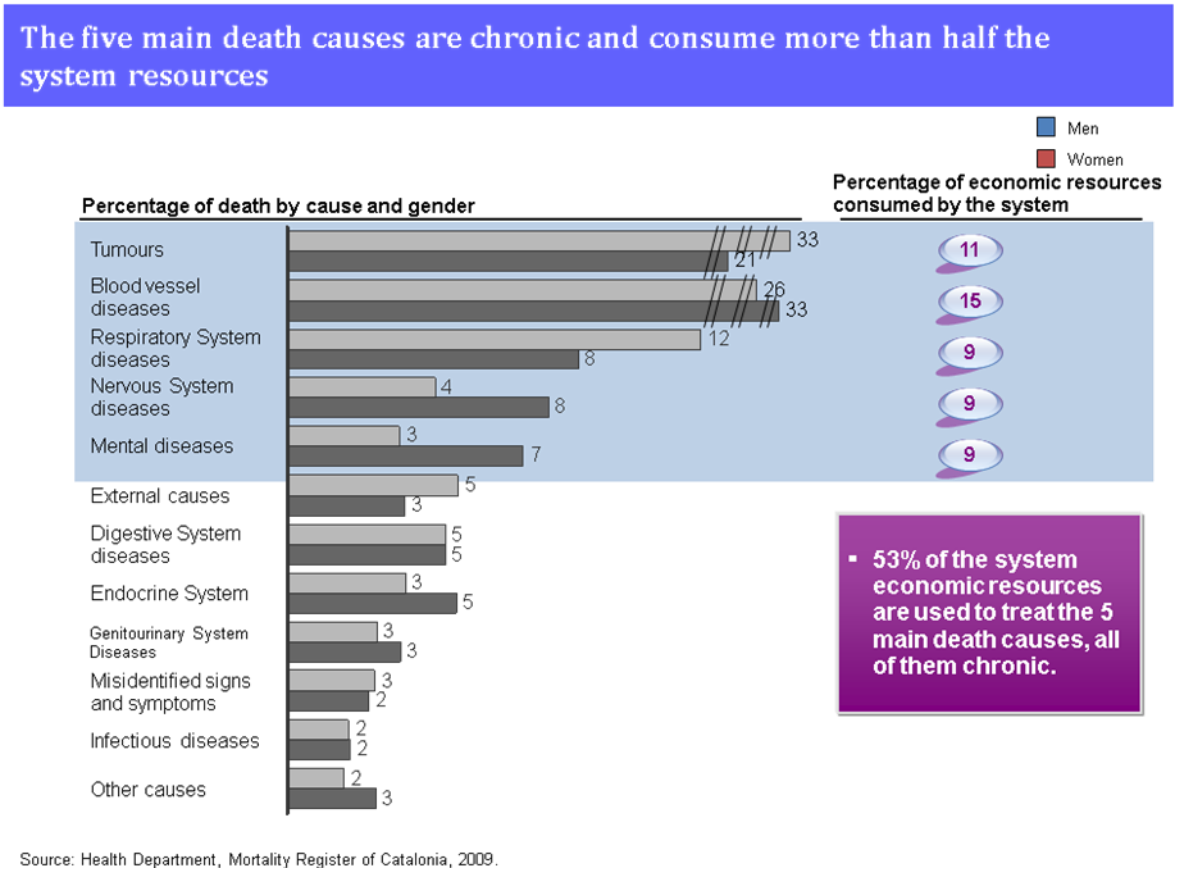
Source: Generalitat de Catalunya. Health Department. Prevention and control of tobacco consumption programme. Tobacco, alcohol and drugs consumption survey 1990,1998. Health survey of Catalonia 1994, 2002 i 2006 i 2010.

Finally, the consumption of medicines has increased in recent years. In 2010, 60.6% of the population stated that they have consumed some sort of medicine in the last two days (57.5% in 2006). Medicine consumption among the population aged 15 years and over is higher among women and increases with age. In the population aged 0 to 14 years, no differences between genders were observed.

d) Significant morbidity load due to the high incidence and impact of chronic diseases

A major morbidity load is brought about by the frequency and impact of chronic diseases, which represent an important load for the health system. This fact is especially relevant for four reasons:

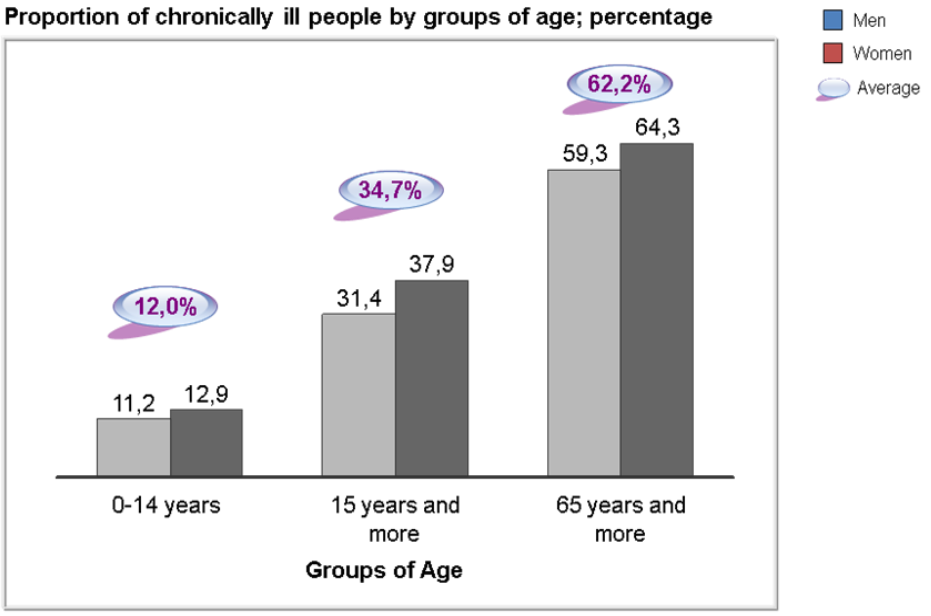
- **The five main chronic diseases with the greatest impact on mortality** (circulatory system, tumours, respiratory system, nervous system and mental illnesses) are the cause of 78% of deaths and consume 53% of the resources of the Catalan Ministry of Health.
- **Regarding morbidity,** diseases of the musculoskeletal system, high blood pressure and depression and/or anxiety represent the main chronic disorders cited by the adult population and are among the main reasons for seeking medical attention.



Source: Health Department, Mortality Register of Catalonia, 2009.

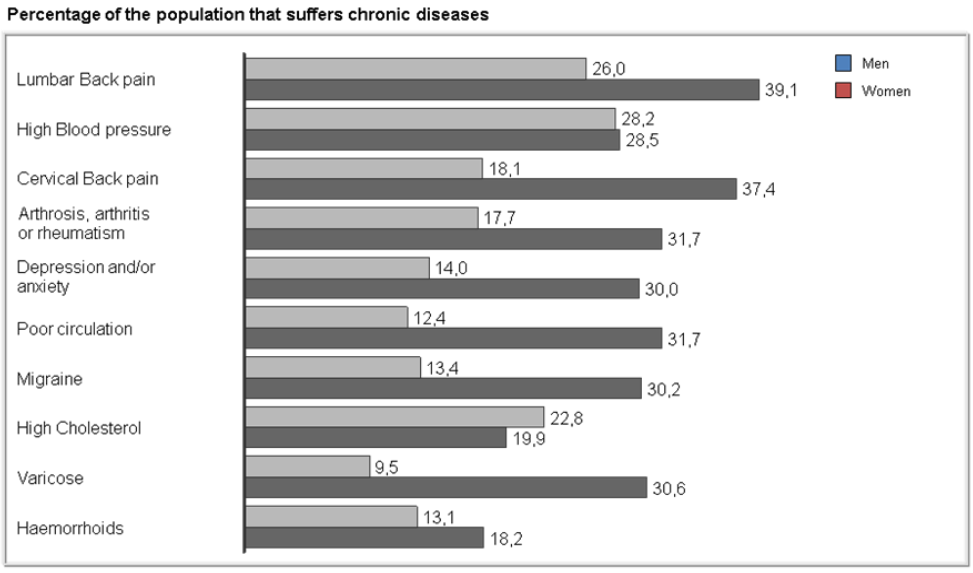
- **The incidence of chronic diseases is increasing gradually**.[13] The proportion of adults who claim to suffer from chronic disorders increases with age, and is at around 12% for people under 15 and 65.2% for people over 74. The increase is slightly less for women than for men. Among the disorders which have experienced a more significant increase are depression and/or anxiety, high cholesterol, and high blood pressure among men.
- **77.1% of the population aged 15 and over (71.7% for men and 82.3% for women) claim to suffer or have suffered from one or more chronic disorders** on a list of health problems selected for frequent occurrence and the health resources they consume. In 2010, the chronic disorders identified by the population aged 15 and over are the same as in 2006.

Proportion of chronically ill people increases significantly with age



Source: Health Department, Health Survey in Catalonia, 2010.

Main chronic diseases that the population of 15 years or older suffers or has suffered, by gender



Source: Health Department, Health Survey in Catalonia, 2010.

The state of the services

In analysing the state of the services, four highly relevant aspects must be highlighted:

- Accessibility
- Adaptation
- Efficiency
- Satisfaction

Accessibility

The accessibility of the services of the health system in Catalonia is characterised by four key elements:

a) Good geographical accessibility.

b) Access times conditioned by waiting lists for some surgical procedures, specialised healthcare visits and complementary tests.

c) Improvement in the accessibility of diagnostic processes for certain pathologies.

d) A very wide range of services covered by public health insurance.

a) Good geographical accessibility, both in terms of the number of centres and distance as well as travel times of the reference population.

98% of the population has a primary healthcare centre less than ten kilometres away and the necessary travel time, for more than 96.8% of the population, is under ten minutes. 98% of the population resides in an area located less than thirty kilometres away from a centre offering acute care. Lastly, 87% of the population in Catalonia lives less than thirty kilometres away from a specialised centre[14] (mental health, social health, etc.).

This high level of accessibility is the result of the regional distribution of healthcare centres. At the end of 2010, there were 417 primary healthcare centres and 831 local healthcare centres distributed throughout Catalonia. Acute care hospitalisation as part of the Network of Hospitals for Public Use (XHUP) was carried out in 69 centres.[2] Regarding social health care, there were 101 centres providing inpatient care and 70 day hospitals. For mental health and addictions, there were 87 adult mental health centres and 70 paediatric

2 They are a part of 65 hospitals (Hospital de la Vall d'Hebron has three centres; Hospital Clínic has two; and Hospital d'Althaia has two).

centres, 39 inpatient centres, 65 outpatient centres, 36 adult mental health day hospitals, and 29 paediatric mental health day hospitals.[15]

b) Access times conditioned by waiting lists for some surgical procedures, specialised care visits and complementary tests, despite the increase in activity

In 2010 there was an 11.26% increase in the rate of patients on waiting lists for surgical procedures per 10,000 inhabitants, despite the increase in activity in comparison to 2009, which was 2.52%, with a total of 161,931 surgical interventions. Waiting time increased by 1.48%, which, at the end of December 2010, was 4 months and 3 days. It is important to highlight that the contracting of procedures for surgical waiting lists has been adapted in order to respond within the maximum times guaranteed for procedures regulated by decree.

In contrast, in regard to waiting lists for diagnostic tests, as of 31 December 2010, data recorded a waiting list of 102,456 patients, which represented a 16.6% decrease in comparison to 2009 (the difference is due to changes in the information systems of some reporting centres, which involved delays in the filing of the information). The overall waiting time is 53 days, with a total of 553,507 tests recorded as being performed.[16] This monitoring is done for 13 tests (echocardiogram, abdominal ultrasound scan, gynaecological ultrasound scan, urological ultrasound scan, colonoscopy, esophagogastric endoscopy, computed tomography, mammogram, polysomnography, magnetic resonance, ergometry, electromyogram, and gammagraphy).

c) Improvement in the accessibility of diagnostic processes for certain pathologies

Since 2005, and in two phases, a rapid diagnosis circuit (RDC) for cancer has been in place in Catalonia. The Rapid Cancer Diagnosis Programme for cancer is aimed at reducing the time between the first visit to the hospital due to a suspicion of colorectal, breast, lung or bladder cancer and the beginning of the treatment to under 30 days.

- In 2009, 17,623 patients suspected of having colon, breast or lung cancer were included in the RDC, 6,588 of which have been treated. 60.4% of these patients began treatment within 30 days of their entry in the RDC (3,981 cases).
- In 2009, 2,001 patients suspected of having bladder cancer and 2,377 suspected of having prostate cancer were included in the appropriate RDC. The percentage of compliance with inclusion criteria was 89%. 41.9% of the cases of suspected prostate cancer and 46.9% of the cases of suspected bladder cancer were confirmed.

- The average time between entry in the RDC and the beginning of treatment was around 35 days for prostate cancer and 30 days for bladder cancer. The percentage of patients who started treatment within 30 days was around 66.7% for prostate cancer and 74.2% for bladder cancer.

d) A very wide range of services covered by public health insurance

In Catalonia, the catalogue of healthcare services is varied and universal. The Law of 21/2010, of 7 July 2010, on the access to public healthcare coverage through CatSalut, identifies the people who are eligible to receive healthcare services in Catalonia.

Royal Decree 1030/2006, of 15 September 2006, established the list of healthcare services to be provided. Recently, abortion was included in the general service portfolio, in accordance with the Organic Law 2/2010, of 3 March 2010, on sexual and reproductive health and the voluntary termination of pregnancy.

Apart from the general service portfolio of the National Health System, the following services have been added in Catalonia:

- Dental care for the child population.
- Podiatric care for people with diabetes who suffer from chronic vascular and neuropathic pathologies.
- Vaccine against the human papilloma virus.
- Natural assistance to normal childbirth.
- Prenatal Birth Defect Diagnosis Programme (first three months of pregnancy).
- Emergency Contraception Programme.
- Sex change surgery.
- Screening for Chagas disease in Latin American pregnant women.
- Screening and early diagnosis of hearing loss in newborns.

Criteria of cost-effectiveness should be included in the definition of the catalogue of services, which may help to prioritise the provision of services, both in Spain and Catalonia.

Adaptation of healthcare

In regard to the adaption of the healthcare provided to the health system in Catalonia, four relevant elements must be highlighted:

a) A high number of visits.

b) Opportunity to improve in some areas in resolving health issues.

c) Opportunity to reorganise certain services under the planning criteria.

d) Identification of highly specialised procedures which need to be concentrated.

a) A high number of visits at most healthcare levels, with different evolutions according to level

Primary healthcare in Catalonia provides the population with good coverage, with high visitation rates**.** The percentage of the population assigned to and attended to by primary healthcare (PHC) centres during 2010 was 73.4%. The number of visits to PHC centres (including visits to the clinic, nursing, obstetric-gynaecologic nursing, odontology and social work) in 2009 was around 6.9 visits per assigned person and 9.4 visits per population treated. The timeline presents stable values over the last few years, both in terms of coverage and number of visits.

Specialised outpatient care in Catalonia receives large number of visits and the number is growing steadily. In 2009, 3.7 million first visits to specialists outside the hospital and 9.4 million visits total (1,242 visits per 1,000 inhabitants) were recorded. The timeline for first visits shows an increase of 10.7% in 2006, 3.8% in 2007, 7.2% in 2008, and 10.6% in 2009.[17] The ratio of first visits/successive visits shows that there is a high level of variability between centres.

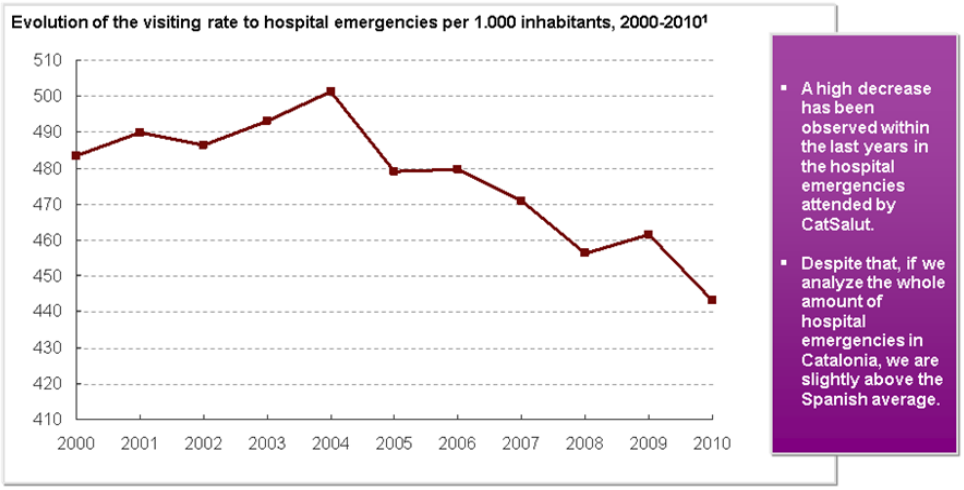
Diseases related to the **musculoskeletal system** affect more than 30% of the population and represent one of the main reasons for primary healthcare visits, and the specialties grouped under **traumatology and rheumatology** receive the highest number of referrals and total outpatient visits. **Ophthalmology** is the second most-used specialty, with 971,073 visits in 2010. In terms of other specialties, **dermatology** and **urology** also represent a high number of specialised healthcare visits.

Diseases related to **mental health** are attended to basically through primary healthcare, although treatment is also given in specific mental health facilities, with an overall volume of 213,000 patients treated and total of 634,000 visits in 2009.

The number of visits to the emergency rooms of SISCAT hospitals was 443 per 1,000 inhabitants in 2010, and a decrease has been recorded in recent years. Despite this decrease, if we analyse hospital emergency room cases on the

whole, both in the public and private systems, Catalonia is above the Spanish average (635 visits per 1,000 inhabitants in comparison to 586 visits per 1,000 on average in Spain).

High frequency of visits to hospital emergencies with a tendency to decrease



1 We considered the emergencies attended by CatSalut.

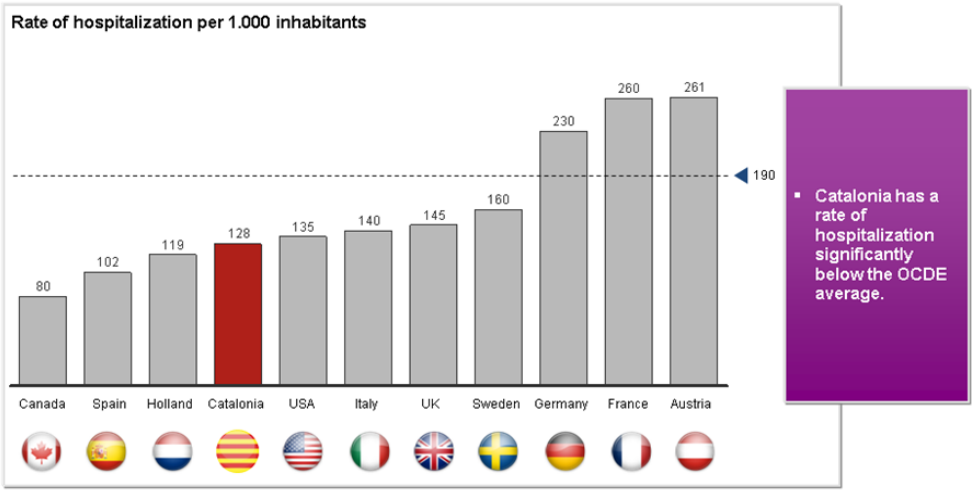
Source: CatSalut Memory, 2010.

Acute care patient hospitalisation rates are moderate and stable over time. The rate of hospitalisation in acute care centres is 128 patients per 1,000 inhabitants. The rate of hospitalisations funded by CatSalut is 97.4 patients per 1,000 inhabitants. The timeline indicates that the last six years have been stable. The rate is moderate in comparison to other neighbouring countries.

Hospitalisation episodes in social healthcare (long-stay, convalescence and palliative care) increased slightly during 2010. In 2009, they were 5.4 for every 1,000 inhabitants, up to 5.6 in 2010. The timeline indicates an overall increase of 40% over the last six years.

Lastly, the number of patients who received outpatient care at mental health facilities increased (by 18%), while the rate for hospitalisation remained stable. It is important to highlight that in 2010 they were 213,359 patients (28 for every 1,000 inhabitants), 22,480 (2.0 for every 1,000 inhabitants) of which were inpatients.

Catalonia has a moderate rate of acute hospitalization compared to most of the comparable developed countries

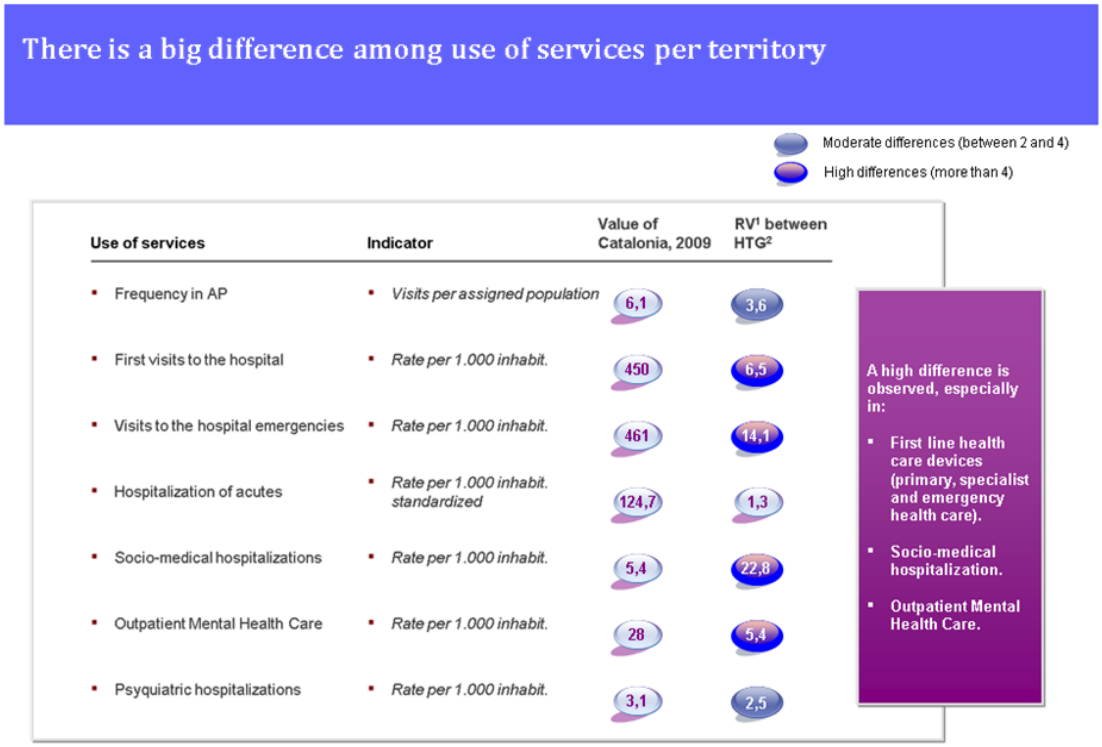


1 Catalonian Data includes conventional and CMA hospitalization.

Source: OCDE, 2009; 2010 CatSalut Memory.

b) Opportunity to improve in some areas in resolving health issues

There is a great variability in the use of the services by regions, especially in the case of first-line healthcare facilities (primary healthcare, specialised outpatient care and emergencies), in social health hospitalisations and in the provision of pharmaceuticals. This variability could be explained in part by the socio-demographic characteristics of the regions, and again by the differences in the services offered and the style of clinical practice.



1 Variation ratio (RV): quotient between the highest value and the lower value.
2 GTS: Health Territory Governments.

Source: Headquarter of Results; Demand in figures.

A lack of coordination between the different healthcare levels and professionals of the same level can be noted, but there are regional initiatives aimed at improving the continuity of healthcare. For example: access to the basic specialised services and the complementary tests for preferential care; urgent and continuing care with a regional perspective; paediatric care with regional teams or the implementation of the virtual visit and consultation, and telemedicine. Also, initiatives to facilitate specialist consultations at PHC level have been implemented, which, apart from increasing the satisfaction of the professionals, have reduced intermediate products and referrals to specialised care.[18] Programmes providing mental health specialist support to primary healthcare have brought about a 15% reduction in referral rates.

- The difficulty in organising and coordinating care facilities and service lines is a fact which is recognised by both professionals and citizens, but about which little information is available. This fact is due mainly to the diversity of providers, the difference in the payment-per-line-of-service system, the ignorance of the service portfolio for each facility, and the waiting lists of the different specialties. For example, in a recent survey of the professionals who work with pathologies of the musculoskeletal system, less than 40% of primary healthcare professionals recognised the

existence of some mechanism for coordination with specialised healthcare.

- The concern over these difficulties has given birth to different initiatives, such as a per capita purchasing system (with an overall per capita budget in a given region), integrated health organisations (which include different service lines in the same organisation), the proposal of creating regional teams or the establishment of regional functional units for processes.

Nearly 15% of acute care hospitalisations are avoidable. In 2009, 14.6% of hospitalisations were avoidable. The regional variability ranged between 9.3% and 17.9%. The timeline has remained stable in recent years.

Rehospitalisation for chronic diseases within 30 days of discharge are around **7-8%** for each hospital.

- Among the hospitals in the network, average rehospitalisation for COPD in less than 30 days was around 9.9% in 2009, 10.6% in 2008, and 7.2% in 2007. The average rehospitalisation due to congestive heart failure (CHF) within 30 days of discharge was around 8% in 2009, 7.3% in 2008, and 8% in 2007. The variability between hospitals in both cases is very high (a variation ration of 6.9% and 14%, respectively, in 2009).

Around 27% of the incidences of acute care hospitalisation among the population aged 65 and over would be candidates for post-acute care, which would represent savings of between 9% and 13% of the stays in acute care hospitals.

- Post-acute care[19] is the care which a patient must receive once his condition stabilises after an accident or acute episode, and its aim is to avoid spending acute resources on those who do not need them, thus increasing the autonomy of patients and reducing hospital readmissions. Candidate patients are grouped together by a series of diagnoses which form a target group, essentially comprising cardiac failure, knee and hip replacement surgery, COPD, cerebrovascular accidents (CVA), and femur fracture (80%).
- The impact of applying a post-acute care programme (to 100% of cases) within a certain timeframe (three to five days after acute care hospitalisation) would represent a saving of 9% to 13% of all acute care hospital stays (between 45% and 67% of the stays of the target group), with resulting increase in the availability of acute beds. The beds needed for the application of the programme could be obtained by reorganising those already existing.

The safety of patients is a key aspect of the healthcare framework and a priority of today's health systems. *Patient safety* is understood as the set of

best practices recommended to professionals and citizens and aimed at reducing the risk of the avoidable damage associated with healthcare to an acceptable minimum. Among these best practices, some examples of which are given below, it is important to highlight those practices which promote the good use of medicines in order to reduce the problems related to medication and its undesirable effects.

The following table shows the results for some of the performance indicators of projects aimed at improving patient safety in March 2010. The majority of the hospitals of the Network of Hospitals for Public Use (XHUP) have included patient safety objectives and indicators in their healthcare activities.

Results of improvement projects for patients safety
March 2010

Project	Participation	Indicator	Percentage	
Prevention of falls	78 medical centres: – 43 hospitals – 35 socio-medical centres	Percentage of falls risk assessment	Total: – Hospitals – Socio-medical centres	68,3% 58,8% 88,7%
Unequivocal identification of patients	55 medical centres: – 53 hospitals – 2 socio-medical centres	Percentage of attended patients with ID	Total:	90,5%
Hand hygiene	53 medical centres: – 49 hospitals – 4 socio-medical centres	Percentage of hospitals that carried out – basic training actions – formative actions on the five moments – percentage of trained professionals	 Total: Total: Total:	 50,0% 42,4% 12,9%
Bacteremia Zero	32 UCI[1] participants: 32/38 (84% of ICU of Catalonia)	Rate of bacteremia per 1.000 days of catheter: – Percentage of < 4‰ rates (objective) – Percentage of < 2‰ rates – Percentage of 0‰ rates	 Total: Total: Total:	 78,0% 50,0% 16,0%

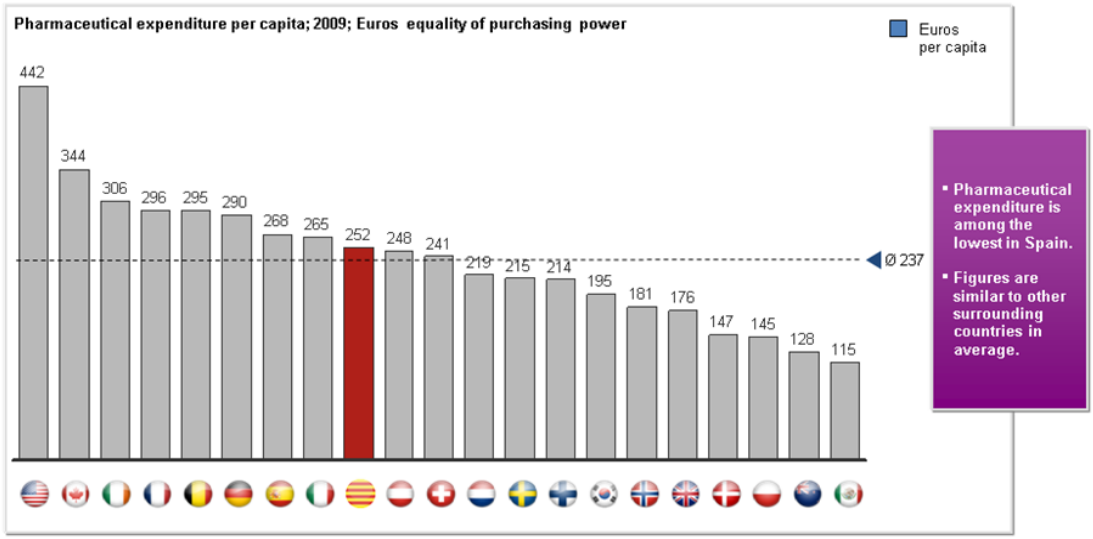
1 Intensive Care Unity.

Source: DGRPRS – Service of Promotion of Patients Safety.

In Catalonia, as well as in Spain, the level of medicine consumption is very high, despite the fact that pharmaceutical expenditure per capita in Catalonia is one of the lowest in the country. During 2009, the percentage of those covered by the health system to which at least one medicine or health product had been prescribed was around 70.72%. The number of prescriptions per inhabitant was around 18.91% (similar to the Spanish average of 20 prescriptions per inhabitant). The figures have been stable for the last four years, with a decrease in regional variability. Pharmaceutical expenditure per capita (€252.20 per person in 2009) is one of the lowest in Spain (which has an overall expenditure per capita of €267.54).[20] If we

compare this figure with neighbouring countries, expenditure is in line with the average.

Pharmaceutical expenditure is among the lowest in Spain and is similar to other surrounding countries average



Source: OCDE, 2011; Pharmaceutical expenditure in Spain report.

c) Opportunity to reorganise certain services under the planning criteria

The definition of the public coverage service portfolio in Catalonia should be accompanied by planning criteria in order to organise services by centre and region to improve equity of access and quality and efficiency results.

The present regional distribution of services does not always make it possible for the activities to be carried out in the most appropriate centre, neither in terms of the cases attended to (critical mass) nor in terms of capacity or healthcare level.

- An example that illustrates this fact is the distribution of paediatric surgical activity in Catalonia for 2008 and 2009 in the different health centres of the public health network.

There is the possibility to organize certain services by centres and territories to ensure the improvement of the equality of access, in quality and efficiency results

EXAMPLE
PAEDIATRIC SURGERY

Number of centres with paediatric surgery according to the ranges of the number of contacts and age. Years 2008-2009

Number of contacts	0 years		1 - 7 years		8 - 14 years		15 - 17 years	
	2008	2009	2008	2009	2008	2009	2008	2009
< 10	9	9	20	16	21	22	11	15
10-50	6	5	7	8	18	20	36	37
50-200	3	3	10	12	13	11	10	8
200-500	2	2	6	5	3	3	1	1
500-1.000	0	0	1	1	0	0	0	0
1.000-2.000	0	0	0	0	1	1	0	0
> 2.000	0	0	1	1	0	0	0	0
Total centres	20	19	45	43	56	57	58	61

- There is the possibility to reorganize certain services if planning criteria is followed properly.
- The ultimate aim is to improve the equality of access and quality and efficiency results.

Source: DGRPRS. Service Planning Office I Healthcare map.

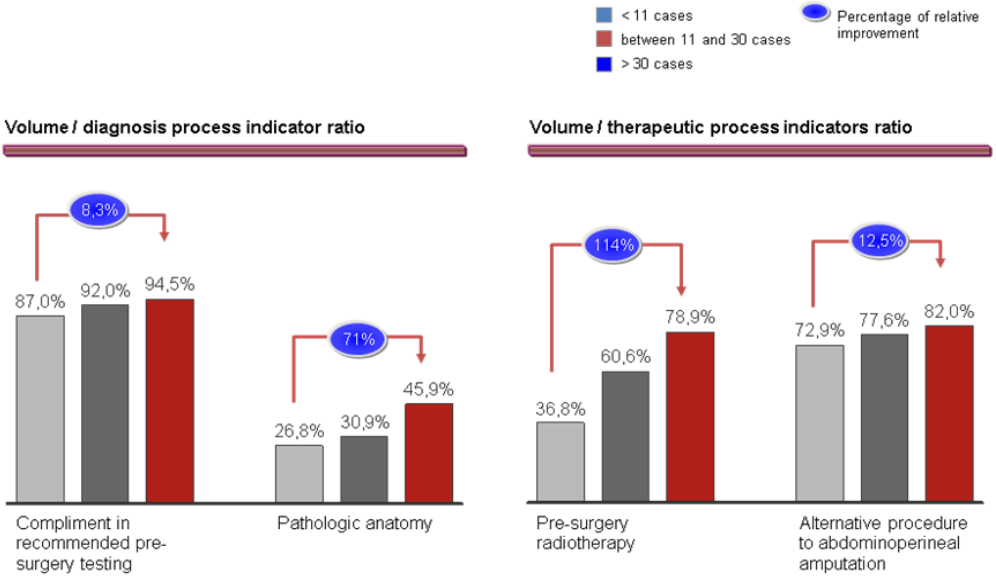
Another example, already in place, is the organisation of severe trauma patients, with hospitals classified according to the degree of complexity of the patients and work flow organisation.

Strategic plans for the organisation of services as well as master plans have provided, in their respective area of action, more detailed definitions of the necessary activities, and they have organised the different healthcare levels using a more integrated vision. In organising flows and identifying which centre should preferably carry out which type of activity, treatment or service in a region, a relationship of cooperation among teams must be included, to ensure that a service of the service portfolio is guaranteed to the whole population.

d) Identification of highly specialised procedures which need to be concentrated

In Catalonia, there are reports that associate the minimum critical volume or mass with quality in clinical practice. Recently, a study on colon cancer exhaustively analysed this relationship:

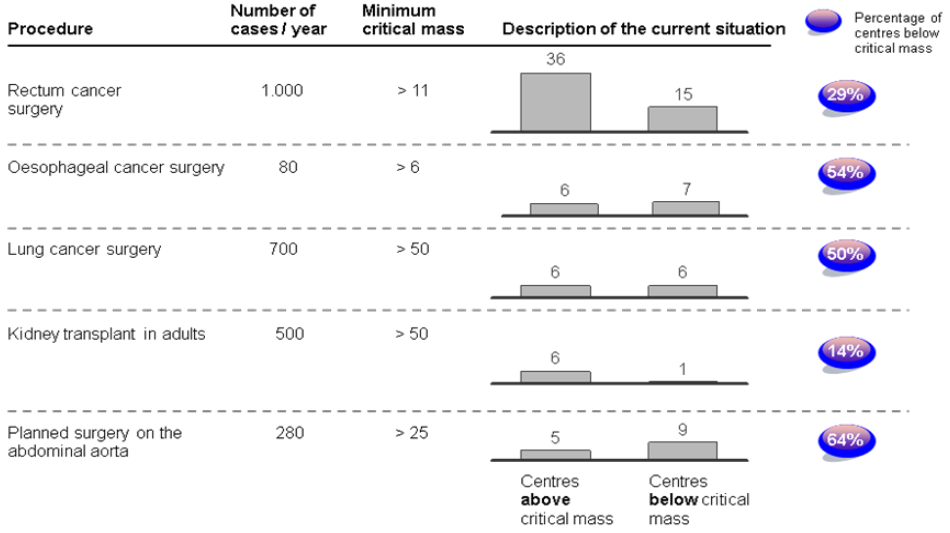
There is a clear relation between the clinic quality and the volume of cases
Example of colon cancer



Source: Evaluation of the healthcare process and the therapeutic results of colon cancer, Oncology leading Plan, 2010.

Nowadays, there is a significant set of centres which carry out some procedures without meeting the minimum critical mass with which to guarantee certain acceptable health results.

There is a high percentage of de centres that do not comply a minimum critical mass of cases
Catalonia. 2010



Source: High Specialization of Commission of Services (CSAE).

Overall, tertiary activity represents a considerable cost for the health system in comparison to other services. It is estimated that these services represent 2.4% of discharges and 11%[3] of the CatSalut healthcare budget.

Efficiency

In regard to the efficiency of the health system in Catalonia, four important elements must be highlighted:

a) Increase in primary care expenditure per capita.

b) Degree of variable use of services depending on healthcare level.

c) Sufficient human resources and available capacity and advancement in the accreditation process.

d) High impact of the provision of pharmaceuticals on healthcare spending.

a) Increase in primary care expenditure per capita

For all activities involved in primary care, average expenditure allocated per person has increased by 4.2% each year from 2005 to 2008 (going from €387.70 to €459.30 per inhabitant). Territorial variability exists between health regions, with differences of more than €100 per inhabitant between them, which held throughout the period studied. The most important items are pharmacy and primary care equipment, which represent 85% of spending.[21]

b) Degree of variable use of services depending on healthcare level

The average stay for acute care hospitalisation (conventional hospitalisation and major outpatient surgery) has decreased steadily in recent years. In 2007 it was 4.9 days (average: 3 days), in 2008 it was 4.8 days (average: 2 days), in 2009 it was 4.7 days (average: 2 days).[22]

In social healthcare, the average stay for closed cases in 2009 varied according to the type of resource used (from 10 days in palliative care, to 36 days in convalescence and 62 days for long-term stays), and the average has held in recent years. We note significant regional variability in the average hospitalisation period, with values which range from 16 to 412 days in the case of long-term stays; from 19 to 134 days in convalescence facilities; and from 3 to 23 days in palliative care facilities.

There is an increase in the number of incidents in acute care hospitals involving alternatives to conventional hospitalisation. With regard to major outpatient surgery (MOS), in 2008, there was an increase of 8.6% compared

[3] Currently, it is difficult to establish the real cost of tertiary services, since payments are made according to the same contractual model used for payment of the rest of hospital services. Therefore, the figure of 11% is probably lower than the real cost of tertiary services.

to 2007 and, in 2009, an increase of 4.1% compared to 2008. In day hospitals, the increase was around 10.8% in 2008, compared to 2007, and 1.0% in 2009, compared to 2008.

- The substitution index for major outpatient surgery has increased over the last five years. Thus, the percentage of MOS cases in comparison to the total number of cases, with some diagnosis-related surgery groups (DRG), has increased during the last five years and is higher in XHUP hospitals (43.2%) than in private hospitals (31.0%).
- It should be noted that there are no standardised alternatives for hospitalisation with regard to medical specialties, and the majority of centres with day hospital activity treat cancer patients and patients with immune disorders.
- In some places, other forms of patient-doctor relationship are being implemented, for example: telemedicine, aimed at avoiding hospital admissions as much as possible (250 patients were attended to through the Teleictus programme in 2010).

There are multiple emergency services with a low level of activity, both in primary care, with an average of less than one visit on average between 10 pm and daybreak, and in the hospital network for certain specialties and/or regions with little demand for emergency care.

c) Sufficient human resources and available capacity and advancement in the accreditation process

Healthcare facilities go through an accreditation process which has been consolidated in hospitals and is being extended to other lines of healthcare service. The Catalan accreditation model is based on the work done by health administration in carrying out its responsibilities, which establishes the level of quality required of a competent organisation and promotes the progressive improvement of the organisations. As part of this task, it sets standards inspired by the different accreditation models recognised and by the management model of the European Foundation for Quality Management (EFQM). These standards are established with the approval of the different agents of the sector, and the level of compliance is adapted to our environment. Accreditation is consolidated among acute care hospitals, and, recently, a process was launched to accredit social health, mental health and rehabilitation, and primary healthcare centres.

In general, the present available capacity, in accordance with the planning criteria of the healthcare map, is sufficient for all of Catalonia, with some regional imbalances and a few deficits in community mental health resources. However, infrastructures and equipment require continuous modernisation and that existing facilities be adapted structurally and functionally.

The human resources are sufficient, even though their distribution shows a higher number of specialists in comparison to other neighbouring countries. Mid-way into 2008, 50,126 full-time healthcare professionals had mid- to high-level studies (6.7 professionals per 1,000 inhabitants). 46% corresponded to group 1 (doctors and other high-level healthcare professionals) and 54% to group 2 (nursing staff and other medium-level healthcare professionals). The ratio for group-1 professionals was 3.1 per 1,000 inhabitants, and that for group 2, 3.6. The density of general practitioners was 0.8 per 1,000 inhabitants (full time) and that of specialists was 1.9 per 1,000 inhabitants. By region, there are few differences in the availability of equivalent professionals. The proportion of specialists is high in comparison to other countries of the OECD, and it is even higher if we take into account the fact that international data refer to the number of professionals.

SISCAT centres connected to the HCCC account for 82.9% of healthcare centres, 93.9% of primary care centres, 77.5% of specialised care centres, 13.6% of mental health centres, and 10.2% of social health centres. There are more than 22 million indexed clinical documents at the HCCC and 21,048 users with access to the Personal Health File.

Within the Medical Imaging Plan, 61.4% of SISCAT hospitals have been connected to the Anella TicSalut (and ICT health network), with a broadband connection for the exchange of information and medical images. 30% of SISCAT hospitals store non-radiological digital images at the Medical Imaging Central Repository (RCIM). There are two million explorations and 67.2 million images, with 34.7 terabytes stored at the RCIM. 2.9% of SISCAT hospitals publish and distribute their radiological images through the HCCC.

The implementation of e-prescribing came about due to a desire to promote the development and use of information and communications technologies (ICT) and online healthcare activity, in addition to saving paper and reducing in-person visits to the centres. Out of all the SISCAT centres, 5.7% of healthcare centres are connected to the e-prescribing system, 100% of the primary care centres, 2.5% of specialised centres, and 6.8% of mental health centres. 100% of the pharmacies in Catalonia (3,072) dispense medicines electronically, and 73% of the doctors in Catalonia write e-prescriptions.

Public health is undergoing a transformation process, the culmination of which will be the new Public Health Agency, which will group together organisations with areas of authority in the sector. The new Catalan Public Health Agency brings with it a model of governance that is shared between the local sphere and the ministries with competence in matters of agriculture, stockbreeding and fisheries, the environment, industrial relations, social welfare, consumption, health, and education. Its creation implies the integration of three up to now different organisations into one public institution and will enable a portfolio of integrated services in the area of

health protection, health promotion and disease prevention, health monitoring, food safety and occupational health to be offered.

d) High impact of the provision of pharmaceuticals on healthcare spending

The provision of pharmaceuticals, both by prescription and in-hospital and to inpatients and outpatients, accounts for 25.8% of the total healthcare budget.

Medicines constitute one of the main treatment resources of the healthcare process, since many of the preventative interventions and the majority of curative interventions include the use of medicines as an intermediate tool with which to achieve a specific health objective.

Every year, 82% of the population receives one or more drug prescriptions from the Catalan public health system. The majority of the medication prescribed (71%) is financed through public funds and participation on the part of users has been on a downward trend for the last 25 years (from approximately 19% in 1981 to less than 6% in 2010).

Furthermore, the continual appearance of new medicines—in such sensitive areas as oncology, AIDS, rheumatoid arthritis, viral hepatitis, diabetes or rare diseases—as well as earlier detection of diseases and the treatment of their risk factors—such as arterial hypertension, osteoporosis or cholesterol—make introducing programmes by which to access these new drugs necessary. They also make it necessary to define new provision and funding formulas in line with the principle of shared risk for clinical results as well as to design and implement new instruments that make it possible to make treatment decisions based on cost-effectiveness criteria and new technologies, such as e-prescriptions. Policies of co-responsibility and results-based assessment also need to be established, in order to transform expenditure into investment and make it sustainable for the health system and citizens.

Our country has managed to advance significantly in the development of a healthcare model in which medication plays a key role. In terms of expenditure related to pharmacological treatments, although in recent years it has undergone steady growth, this growth has been moderated. Therefore, in 2011, pharmaceutical expenditure decreased for the first time. Pricing and demand-management policies have contributed to this control.

Satisfaction of the agents with the system

Finally, in regard to the satisfaction of the agents, the following must be highlighted:

a) Patients and professionals are satisfied with the healthcare provided by the system.

b) Known elements of improvement.

a) Patients and professionals are satisfied with the healthcare provided by the system

The overall satisfaction rating of people who used the health services is high, 8.2 out of 10, and eight out of ten people surveyed (88%) stated that they would use the same services again should they need them (loyalty).[23]

The professionals feel that the quality of the healthcare provided by the Catalan health system is very good. The main reasons given for dissatisfaction are the contractual conditions (temporary nature of contracts and wages), the pressures on healthcare and the interference of health system demands in their tasks as professionals.

b) Known elements of improvement

The main areas for improvement in healthcare network services, **according to patients**, are: (1) increase in the fluidity of first visits; (2) improvements to the information received by professionals; (3) improvement of the accessibility of services (request for medical examination and punctuality, management of urgent problems, and perception of waiting list time for surgery); and (4) improvement of comprehensive care (especially in relation to coordination between healthcare levels).

In light of present needs, **health managers** think that change in the management model (healthcare and coordination levels) is called for, with users as the priority, as well as an adaptation of the system to the new needs and the future tendencies. **Professionals** think that they can improve skills and abilities related to user treatment, including training and greater personal dedication, in order to offer fair and friendly treatment that goes beyond medical efficiency. They consider that, in today's climate, users are important agents of demand, but they question the scope of the system's response to this demand (need to clarify the offer and its limitations).[24]

Key priorities for change

From this analysis arise the **three structural pillars of the Health Plan:**

1. **Health programmes: better health for all and better quality of life.** This Health Plan, although more exhaustive (addressing structural changes in the healthcare model and organisation), does not renounce the ultimate objective of the system, which is to increase the healthy life expectancy of men and women of all ages in order to maintain differential results.

2. **Transformation of the healthcare model: better quality, accessibility and safety of healthcare interventions.** Between 2011 and 2015, the Catalan health system will give priority to three line of actions for the healthcare model: (1) adaptation of the system in order to provide better care to chronic patients, who account for more than 80% of deaths and consume 70% of system resources; (2) increase in the resolution of health issues starting at the first care level and in the region, ensuring that a solution is provided to the problems related to the risk of saturation at different points of the system (waiting lists, emergencies), without sacrificing quality; and (3) better quality and equity in terms of highly specialised procedures, in order to guarantee optimal quality levels that are accessible to all citizens**.**

3. **Modernisation of the organisational model: a more solid and sustainable health system.** To carry out such an ambitious transformation of the healthcare model, the Ministry of Health must launch, simultaneously, a series of projects to act as facilitators of change. These projects aim to modernise public health coverage in two areas (relations with citizens and the procurement of health results), improve governance and participation, develop and improve instruments to facilitate healthcare integration (shared information network), and better guide the participation of the professionals.

IV. The three structural pillars of the Health Plan for Catalonia 2011-2015

The transforming elements of the Catalan health system translated into three pillars on which the system will built in the future:

- Better health for all and better quality of life.
- Transformation of the healthcare model: better quality, accessibility and safety of healthcare interventions.
- Modernisation of the organisational model: a more solid and sustainable health system.

These pillars will be constructed through of 9 lines of action and 32 strategic projects which will serve as the road map of the system for the next four years.

IV.I. Better health for all and better quality of life

Line of action 1. Objectives and health programmes

- **Even though this Health Plan is broader in scope** and addresses services and management, organisational, and participative aspects, it **in no way renounces its ultimate objective, which is to increase the number of years of life lived in good health and of quality**.
- Therefore, and as set forth in the LOSC, **the objectives and levels to be achieved** in accordance with the established priorities must be determined.
- This line of action defines the health objectives of the Plan and includes four strategic projects:
  - Development and implementation of master plans
  - Creation and implementation of the Inter-ministerial Public Health Plan
  - Promotion of clinical safety and quality policies
  - Assessment the health objectives established in the Plan

Health is one of the main factors contributing to wellbeing, the quality of life of the population and the development and wealth of a country[25]. **To achieve a better level of health and better quality of life and to maintain the sustainability of the health system is the goal of the strategies** set forth in this Health Plan.

In accordance with that established by the LOSC, based on an evaluation of the status of health and services, the Ministry of Health establishes priorities, formulates mid-term and long-term health and service objectives, determines the strategies and the projects to be carried out, and defines the criteria and indicators for their assessment and periodic monitoring.

Based on the priorities identified, the Health Plan for Catalonia 2011-2015 sets the **objectives for health and the reduction of overall risk and any other risk related to the strategic projects of this line of action**. According to the nature of the problem to be addressed, the objectives have a mid- or long-term target horizon of the 2015 or 2020, respectively.

In drawing up the objectives of the Health Plan for Catalonia 2011-2015, which will be described in the following pages, the directives of the Catalan Ministry of

Health[26] [27] [28] [29], guidelines from experts and the recommendations of the WHO for Europe and other international guidelines have been taken as a reference.

- **General health objective**
  - From now until 2020, increase the proportion of life expectancy lived in good health for men and women by 5%.
- **Health objectives with regard to prioritised health problems**

From now until 2020:

- Reduce the mortality rate due to cardiovascular diseases by 20%.
- Reduce the global mortality rate due to cancer by 10%.
- Increase the five-year survival rate for all cancers by 15%.
- Reduce the mortality rate due to respiratory diseases by 10%.
- Reduce the mortality rate due to mental disorders by 10%.
- Reduce the mortality rate due to ischemic heart disease by 15%.
- Reduce the mortality rate due to ictus by 15%.
- Reduce the mortality rate due to breast cancer by 10%.
- Reduce the mortality rate due to colorectal cancer by 5%.
- Keep the mortality due to suicide below the present level.
- Reduce the incidence of the femoral neck fracture in people aged 65 and over by 10%.
- Reduce amputations in people with diabetes aged 45 to 74 by 10%.

From now until 2015:

- Reduce the incidence of smoking to less than 28%.
- Reduce the incidence of sedentary lifestyles to a level below that of 2010.
- Increase the proportion of people who follow the recommendations for a healthy level of physical activity (at least 150 min./week of moderate physical activity or 75 min./week of intense activity or an equivalent combination for adults).
- Reduce the incidence of carrying excess weight (being overweight and obese) among the population to levels below those of 2010. Increase the proportion of hypertensive PHC patients with well-controlled arterial pressure values (AP < 140/90) by 15%.
- Increase the proportion of PHC patients aged 35 to 74 with a cholesterol level of over 200 mg/dl who are given a cardiovascular risk assessment by 15%.

- Reduce the proportion of diabetes patients who are readmitted within 30 days by 15%.
- Reduce the proportion COPD patients who are readmitted within 30 days by 15%.
- Reduce the proportion of CHF patients who are readmitted within 30 days by 15%.
- Reduce the average incidence rate of all hospital-acquired infections to less than 7%.
- Reduce the surgical infection rate for knee joint replacement to less than 3.5%
- Reduce the surgical infection rate for hip joint replacement to less than 3%.
- Reduce the surgical infection rate for colorectal surgery to less than 21%.
- Reduce the average incidence rate of ventilator-associated pneumonia to less than 12 episodes per 1,000 ventilation days.

Project 1.1. Development and implementation of the master plans

The master plans aim to provide a better response to the health problems causing the greatest impact.

Objective for 2015. Ensure the alignment, updating and assessment of the master plans.

Objectives for results in 2012. Ensure that current objectives are assessed and that future ones are aligned with the Health Plan for Catalonia, formally recorded in an internal document (calculated as a progress percentage).

The master plans (PD) have been elaborated in order to address the health problems with the greatest impact. Currently being implemented are the master plans for oncology, circulatory system diseases, respiratory system diseases, mental health and addictions, social health and rheumatic and musculoskeletal system diseases.[30] These plans, which encompass strategic, operative, and leadership elements, cover the majority of the range of chronic diseases. This project aims to ensure the implementation of MPs already designed, the objectives and commitments of which, are specified below, along with their timeline.

i. Examples of on-going initiatives

- All the master plans being implemented, except the one for rheumatic and musculoskeletal system diseases, are at an advanced stage. Along

these lines, several actions should be pointed out: rapid cancer diagnosis, the plan for quality spirometry, Code Stroke and Code Heart Attack, the healthcare model for depression and suicide prevention, or comprehensive care for people suffering from dementia.

ii. Objective for 2015

- Ensure the alignment, updating, and assessment of the master plans.

iii. Objectives for results in 2012

- Ensure that current objectives are assessed and that future ones are aligned with the Health Plan for Catalonia, formally recorded in an internal document (calculated as a progress percentage).

iv. Objectives for processes in 2012

- Assess the state of the updating process for the master plans.
- Assess the objectives of the process and the results of the master plans.
- Organise the content of the master plans and of the Health Plan (avoid duplicates).

Project 1.2. Drawing up and implementation of the Inter-ministerial Public Health Plan

The Inter-ministerial Public Health Plan aims to fulfil the proposals to improve and protect health in the most fair and efficient way possible.

Objective for 2015. Have three or more inter-ministerial actions in place (for example, food and healthy physical activity; basic training and education; road safety and urban mobility; healthy environments).

Objectives for results in 2012. Have carried out an action within the framework of the Inter-ministerial Public Health Plan (revamped programmes for healthy physical exercise and eating habits) and achieved the objectives it established.

The Inter-ministerial Public Health Plan (hereinafter called PISP) is the instrument set up by Law 18/2009, of 22 October 2009, on public health, to carry out interventions involving the determinants of the health of the population, in which many social and government sectors, both autonomous and local, must act in unison. It aims to fulfil the proposals to improve and protect health in the most fair and efficient way possible. It is, therefore, an instrument of governance and must serve as a strategic and operative decision-making tool for the Catalan Ministry of Health and other ministries of the Government of Catalonia that have responsibilities which directly or indirectly affect the health of the population. Very direct examples of health problems which require inter-sector interventions are injuries caused by traffic accidents, sexist violence or drug consumption. However, preventing cardiovascular disease is also an example, since the factors which cause hypertension or dyslipidaemias are collective in nature and are not easily modified without society-wide intervention. Even more general is the influence of factors such as the level of education of the population.

The PISP will contribute to the establishment of priorities and the creation of objectives which require both public health activities within the health system and activities in other environments having an impact on the health of people and populations.

The PISP will establish the criteria for the design and assessment of the interventions and policies with an impact on health and, especially, for the coordination of plans, programmes, and interventions that affect individual or collective health and are inter-ministerial in nature.

In summary, this Inter-ministerial Public Health Plan (PISP) has to address those priority health problems that require an approach that goes beyond the health sector.

I. Examples of on-going initiatives

- Among the inter-ministerial activities developed in recent years, emphasis should be placed on those carried out in areas such traffic accident prevention, sexist violence and public health programmes such as PAAS, PAFES or those related to the prevention and control of drug dependency.

ii. Objectives for 2015

- Have three or more inter-ministerial actions in place (for example, food and healthy physical activity; basic training and education; road safety and urban mobility; healthy environments).

iii. Objectives for results in 2012

- Have carried out an action within the framework of the Inter-ministerial Public Health Plan (revamped programmes for healthy physical exercise and eating habits) and achieved the objectives it established.

iii. Objectives for processes in 2012

- Identify the key interlocutors.
- Elaborate and submit an initial document to the Catalan Ministry of Health in order to facilitate the presentation of the Inter-ministerial Public Health Plan to the Government.
- Agree on official indicators with Idescat.
- Implement the proposed HIA (health impact assessment) regulations.
- Select and promote a programme of an inter-ministerial nature (e.g. revamped programmes for healthy physical exercise and eating habits).
- Disseminate the Plan, including the expected impact of the programmes which are being promoted.

Project 1.3. Promotion of clinical safety and quality policies

Clinical safety and quality reduce healthcare-related incidents.

Objective for 2015. Reduce hospital-acquired infections, reducing: the average incidence of global HAI to less than 7%, the average rate of surgical site infections (knee replacement surgery to less than 3.5%, hip replacement surgery to less than 3%, and colorectal surgery to less than 21%), and the average rate of ventilator-associated pneumonia to less than 12 episodes per 1,000 days of mechanical ventilation.

Objectives for results in 2012. Reduce the global rate of hospital-acquired infections to levels below those of 2010.

The safety and quality policies of the Catalan health system include in their definition the objectives contained in the **Strategic Patient Safety Plan**. The three tools also serve as three steps for progressive quality achievement, the backbone of which is clinical safety:

- Healthcare centre and service authorisation.
- Healthcare centre and service accreditation.
- The "Q" health brand.

Clinical safety and quality mainly take into account the safety of patients, understood as the reduction of the risk of unnecessary damages related to healthcare to an acceptable minimum.

Since 2005, the Ministry of Health has promoted the **Catalan Alliance for Patient Safety**[31]. As part of this framework, healthcare safety-oriented projects have been developed, mainly in acute care hospitals. In order to promote patient safety in all health departments (primary care, acute care hospitalisation, social health and mental healthcare), specific strategic plans for patient safety have been developed for each line of health service.

In order to advance in this direction, the Health Plan for Catalonia 2011-2015 focuses on two areas:

- **Prevention of medical incidents (MI),** including both the event and the circumstance which caused or might have caused unnecessary damage to a patient.

- **The Nosocomial Infections Surveillance Programme for Catalan Hospitals (VINCat)**[32]**.** This programme establishes a unified system for controlling hospital-

acquired infections in hospitals, and its mission is to contribute to reducing infection rates through active and continued epidemiological surveillance.

i. Examples of on-going initiatives

- There are many outstanding initiatives in this area, such as the Catalan Alliance for Patient Safety, the VINCat programme for nosocomial infection surveillance, and the surveillance and control systems for drug-related incidents.

ii. Objectives for 2015

- Reduce hospital-acquired infections, reducing: the average incidence of global HAI to less than 7%, the average rate of surgical site infections (knee replacement surgery to less than 3.5%, hip replacement surgery to less than 3%, and colorectal surgery to less than 21%), and the average rate of ventilator-associated pneumonia to less than 12 episodes per 1,000 days of mechanical ventilation.

iii. Objectives for results in 2012

- Reduce the global rate of hospital-acquired infections to levels below those of 2010.

iv. Objectives for processes in 2012

- Approve the decree on authorisations.
- Launch HC (15%) and PHC (10%) accreditations.
- Define the "Q" quality brand concept.
- Have the strategic plan implemented in PHC and defined for HC.
- Have 100% of projects in the planned development phase.
- Implement actions in order to improve knowledge on the morbidity/mortality attributable to health interventions.

Project 1.4. Assessment of the health objectives established by the Health Plan for Catalonia 2011-2015

The annual assessment of health objects lets us know that we are progressing in the right direction.

Objective for 2015. Carry out the annual monitoring, assessment and publication of the results obtained on the objectives established by the Health Plan for Catalonia 2011-2015.

Objectives for results in 2012. Monitor, assess and publish the results obtained on the objectives set for the year 2011.

This project aims to ensure that the health objectives established by the Health Plan for Catalonia 2011-2015 are monitored and assessed annually, and that this helps confirm that things are moving in the right direction.

i. Examples of on-going initiatives

- Since their start, the objectives of the Catalonia health plans have been assessed periodically and systematically, and the results obtained have been published. Apart from the assessments carried out for each plan, also of note are the 10-year evaluations, such as those of 2000 and 2010.[33]

  Furthermore, the Catalan Ministry of Health has developed and implemented the new Continuous Health Survey of Catalonia (ESCAc)[34.]

ii. Objectives for 2015

- Carry out the annual monitoring, assessment and publication of the results obtained on the objectives established by the Health Plan for Catalonia 2011-2015.

iii. Objectives for results in 2012

- Monitor, assess and publish the results obtained on the objectives set for the year 2011.

iv. Objectives for processes in 2012

- Finish defining and estimating indicators (this includes the definition of indicators, identification of sources of information, data collection, and computation).
- Complete the analysis and interpretation of results on all the health objectives of the Health Plan (this includes assessment based on

national and international comparison and socioeconomic, regional, and temporal data).

- Disseminate results internally and externally (through the *Canal Salut* health channel) and *Informe Salut* health report).

The monitoring and assessment process includes the following phases: the establishment of assessment indicators, the identification of the relevant information sources, the collection of data, the estimation of the indicator, the interpretation of results and the publication of the information. The interpretation and assessment of results will take into account the starting point of each objective and the context and the factors which may have influenced the results. Where appropriate, a national and international comparison will be carried out. Provided that the information sources so allow, health objective assessment indicators will be presented as a global overview of the whole of Catalonia and according to distribution by age, sex, social condition, region and timeline.

The table below sums up the objectives and assessment indicators as well as the main sources for obtaining information.

General health objective

Objective	Indicator	Source
From now until 2020:		
Increase the proportion of life expectancy lived in good health for men and women by 5%.	Quotient between healthy life expectancy and life expectancy by sex (%)	Mortality Register of Catalonia (RMC) ESCA

Health objectives with regard to prioritised chronic health problems

Objective	Indicator	Source
From now until 2020:		
Reduce the mortality rate due to cardiovascular diseases by 20%	Mortality rate for 100,000 inhabitants standardised by age for circulatory system diseases	Mortality Register of Catalonia (RMC)
Reduce the global mortality rate due to cancer by 10%	Mortality rate for 100,000 inhabitants standardised by age for cancer	Mortality Register of Catalonia (RMC)
Increase the five-year survival rate for all cancers by 15%	Relative five-year survival rate for cancer (%)	Cancer Register
Reduce the mortality rate due to respiratory diseases by 10%	Mortality rate for 100,000 inhabitants standardised by age for respiratory system diseases	Mortality Register of Catalonia (RMC)

Objective	Indicator	Source
Reduce the mortality rate due to mental disorders by 10%	Mortality rate for 100,000 inhabitants standardised by age for mental disorders	Mortality Register of Catalonia (RMC)
Reduce the mortality rate due to ischaemic heart disease by 15%	Mortality rate for 100,000 inhabitants standardised by age for ischaemic heart diseases	Mortality Register of Catalonia (RMC)
Reduce the mortality rate due to ictus by 15%	Mortality rate for 100,000 inhabitants standardised by age for cerebrovascular diseases	Mortality Register of Catalonia (RMC)
Reduce the mortality rate due to breast cancer by 10%	Mortality rate for 100,000 inhabitants standardised by age for malignant breast tumours	Mortality Register of Catalonia (RMC)
Reduce the mortality rate due to colorectal cancer by 5%	Mortality rate for 100,000 inhabitants standardised by age for malignant colorectal tumours	Mortality Register of Catalonia (RMC)
Keep the mortality rate due to suicide below the current rate	Mortality rate for 100,000 inhabitants standardised by age for suicides and self-induced injuries	Mortality Register of Catalonia (RMC)
Reduce the incidence of femoral neck fracture in people aged 65 and over by 10%	Hospital admission rate per 10,000 inhabitants, standardised by age, for femoral neck fractures in the population aged 65 to 84	Record of the minimum basic data set–hospital discharges (CMBD-AH)
Reduce amputations carried out on people with diabetes aged 45 to 74 by 10%	Amputation rate per 10,000 inhabitants in people with diabetes aged 45 to 74	Record of the minimum basic data set–hospital discharges (CMBD-AH)
	From now until 2015:	
Reduce the incidence of smoking to less than 28%	Incidence of tobacco consumption in the population aged 15 and over (%)	ESCAc
Keep the incidence of sedentary lifestyles below the level for 2010	Incidence of sedentary lifestyles in the population aged 18 to 74 (%)	ESCAc
Increase by 10% the proportion of adults who follow the recommendations on weekly healthy physical activity (at least 150 min. of moderate physical activity or 75 min. of intense physical activity or some equivalent combination)	Prevalence of healthy physical activity among the population aged 18 to 65 (%)	ESCAc

Objective	Indicator	Source
Reduce the incidence of carrying excess weight (being overweight and obese) in the population to levels below those of 2010	Incidence of excess weight recorded in the population aged 19 to 74 (%)	ESCAc/Health examination
Increase the proportion of PHC hypertensive patients with an AP of under 140/90 mmHg by 15%	Percentage of hypertensive patients seen by primary healthcare with an AP of under <140/90 (%)	Primary healthcare records
Increase the proportion of PHC patients aged 35 to 74 with a cholesterol level of over 200 mg/dl who are given a cardiovascular risk assessment by 15%	Percentage of the proportion of PHC patients aged 35 to 74 with a cholesterol level of over 200 mg/dl who are given a cardiovascular risk assessment	Primary healthcare records
Reduce the proportion of diabetic patients readmitted within 30 days by 15%	Percentage of diabetic patients readmitted within 30 days (%)	Record of the minimum basic data set–hospital discharges (CMBD-AH)
Reduce the proportion of COPD patients readmitted within 30 days by 15%	Percentage of COPD patients readmitted within 30 days (%)	Record of the minimum basic data set–hospital discharges (CMBD-AH)
Reduce the proportion of CHF patients readmitted after 30 days by 15%	Percentage of congestive heart failure patients readmitted within 30 days (%)	Record of the minimum basic data set–hospital discharges (CMBD-AH)
Reduce the average incidence rate of all nosocomial infections to under 7%	Incidence of global nosocomial infection (%)	VINCat
Reduce knee replacement surgery infection rate to under 3.5%	Global rate of SSI* in planned knee replacement surgery (%)	VINCat
Reduce hip replacement surgery infection rate to under 3%	Global rate of SSI* in planned hip replacement surgery (%)	VINCat
Reduce colorectal surgery infection rate in to under 21%	Global rate of SSI* in planned colorectal surgery (%)	VINCat
Reduce the average incidence rate of ventilator-associated pneumonia to less than 12 episodes per 1,000 ventilation days	Density of the incidence of pneumonia associated with mechanical ventilation	VINCat/ENVIN-HELICS

*Surgical site infection

This Health Plan specifies the priorities of the health system for the period 2011-2015. However, there are other areas which, although not prioritised for this period, continue to be considered as important intervention areas, regulated by the corresponding plans and programmes. Into this category fall maternal-infant health, affective healthcare, sexual and reproductive healthcare, dental care, diseases preventable with vaccines, sexually transmitted diseases (STDs), infections due to the human immunodeficiency virus and AIDS, tuberculosis, rare diseases and services to be restructured, such as paediatric or allergology services, among others.[35] [36]

IV.II. Transformation of the healthcare model: better quality, accessibility and safety of healthcare interventions

Line of action 2. A system that is more focused on chronic patients

- In order to face the structural challenge posed by chronicity, it is imperative that an integrated change strategy be applied to the healthcare model.
- The model proposed is based on six major principles:
  - Population-based approach, focused on all people. From the healthy patient with or without risk factors, to those that have a disease in any stage of progression.
  - Citizens' role in being responsible for their own health.
  - Strengthening of professional initiative.
  - Comprehensive healthcare model.
  - Use of new technologies.
  - Inter-ministerial collaboration.
- This strategy is carried out in six major projects:
  - Implementation of integrated clinical processes for 10 diseases.
  - Fostering of health protection and promotion programmes and disease prevention.
  - Fostering of self-responsibility of patients and caregivers in regard to their own health and the promotion of self-healing.
  - Development of healthcare alternatives within the framework of a comprehensive system.
  - Deployment of regional programmes for complex chronic patient care.
  - Implementation of programmes for the **rational use of medicines.**
- It is imperative that the contracting model, professional training the shared information systems be adapted if the strategy is to be successful.

The World Health Organisation defines *chronic diseases* as **diseases of long duration and generally slow progression**. Moreover, according to the European Commission, *chronic diseases* are diseases of long duration which always involve a disability or complications which may affect the autonomy and the quality of life of the people who suffer from it.

Chronic diseases present a series of differential aspects:

- The impact they have on morbidity/mortality as a whole increases gradually and dealing with them requires effort over decades.
- They are of long duration and often cause permanent lesions or effects and structural, sensory, and communication anomalies.
- Once diagnosed, they are rarely cured, even though they may be controlled in some cases.
- They have important adverse effects on the quality of life of the patients affected and on their families, as well as an important socioeconomic impact.
- Treating them involves population-based intervention which usually goes beyond mere healthcare, and individual intervention, more strongly linked to healthcare and social health care services.
- The underlying causes share risk factors which can be modified and influenced by comprehensive interventions.
- Evidence shows that there are cost-effective measures to prevent, detect and treat them.

The steady increase of the life expectancy of the population, due to socioeconomic and healthcare improvements, has brought with it a change in the needs of the populations of neighbouring countries in terms of health. This change is governed by the increase in chronic patients and the socioeconomic impact they represent for the health systems.

In the face of this situation, it is necessary to consider how to offer a healthcare model that is more effective in preventing and treating chronic diseases.

a) The pressure put on healthcare in regard to chronic diseases is very high and growing steadily.

The prevalence and incidence of chronic diseases in present-day society is very high. In Catalonia, the majority of morbidity/mortality cases are due to chronic health problems. In 2009, circulatory system diseases, tumours, respiratory system diseases, nervous system diseases and mental disorders accounted for 78% of deaths. A significant portion corresponded to chronic diseases.

Moreover, **the impact of chronic diseases is also very high in terms of the health system resources it consumes**. It is estimated that more than 50% of

resources are allocated to the treatment of chronic diseases or acute care episodes associated with them.

Their impact will be even more significant in the future, and preparations must be made. The steady increase in life expectancy, and the resulting ageing population, the relationship between age and the presence of chronic diseases, and the worsening of lifestyle habits clearly justify taking action.

- Structurally, the trend is that of an **aging population**, and thus the projections for 2021 establish a significant increase in the population aged 65 and over (amounting to 1.5 million inhabitants) and 80 and over (amounting to 450,000 inhabitants).
- **The percentage of the population with some type of chronic disease increases as the persons grow older**, going from 12% in people aged 15 and under to 65.2% in people over 74. As to the number of disorders, 36.5% (26.9% of men and 45.9% of women) of the adult population state that they suffer from four chronic disorders or more.
- The **worsening of health-related behaviour** increases the impact of the risk factors for suffering from a chronic disease. The evidence available shows the existence of a relationship between risk factors, such as tobacco, sedentary lifestyle, excess weight, arterial hypertension, and hypercholesterolemia and chronic health problems. Among the data available on the prevalence of these factors, of particular note is the lull in the recorded decrease in tobacco consumption in recent years, an increase in the percentage of sedentary population, and an increase in those carrying excess weight, especially men.

b) It is necessary to make changes to the healthcare model in order to better respond to chronicity.

Although chronic patients are of great importance, our **healthcare services are mainly directed at attending to patients suffering acute care episodes.** Therefore, our healthcare system is predominated reactionary, focusing on the resolution of episodes, with a high level of fragmentation and lack of coordination between health and social levels and services.

Consequently, the **healthcare model must be approached from a new perspective,** aimed at adapted it to the challenge which chronicity poses to the health system. In fact, for some time now, many actions have been carried out in order to offer better services to chronic patients, in particular those aimed at improving the management of chronicity in the most advanced stages of the disease (palliative care units; important evolution of social health care, programmes such as *Vida als anys* (Life through the years), the promotion of the home healthcare concept, etc.).

However, **these actions have been carried out in a compartmentalised fashion, and chronicity has not been approached as a global and structural challenge** which needs to be addressed, nor have synergies between the different initiatives and a global and sustained programme been promoted.

In order to deal with **chronicity, a healthcare model that establishes preventive, healthcare, rehabilitation complexity management and end-of-life measures is necessary**. The interventions that are prioritised must be organised in such a way as to avoid the appearance of risk factors and chronic diseases or to minimise their progression to more advanced stages.

Principles and model

The strategy to be developed in order to address the challenge of chronicity in Catalonia gets its inspiration from a set of guiding principles:

- Adopt a **population-based and risk-based focus**, and to be proactive, focusing actions on people and their needs, from the pre-clinical stage to the final stages of the illness.
- **Provide citizens with adequate information** on their responsibilities in terms of heath and its management and the idea of co-responsibility in the health system.
- **Boost the activity and the initiative of health professionals** in order to include their expert knowledge as a vehicle for improvement, and give support and visibility to their initiatives and projects.
- Create an integrated **health system** which will increase the degree of coordination among the different healthcare levels (public health, primary care, specialised care, social healthcare, etc.).
- Make use of **new technologies** and communication systems in order to create an innovative and accessible care system for chronic patients.
- Acquire **an inter-ministerial vision** which includes the Catalan Ministry of Health and other ministries (Education, Social Welfare and Family, Territory and Sustainability, and so on) and also other institutions (associations of chronic patients, etc.).

With the prioritisation of managing chronicity in the framework of the new Health Plan, the Catalan Ministry of Health intends to achieve the following objectives:

- Maintain and improve health, quality of life, and the satisfaction perceived by patients, families, and carers.
- Adapt the services in order to provide a comprehensive care to chronic patients.

- Make citizens aware of their shared responsibility in the management of their health and chronicity.
- Guarantee correct care for each health situation throughout a person's life, in the appropriate place, with good health results and with the maximum possible efficiency.
- Improve the flow between different healthcare areas of the health and social system.

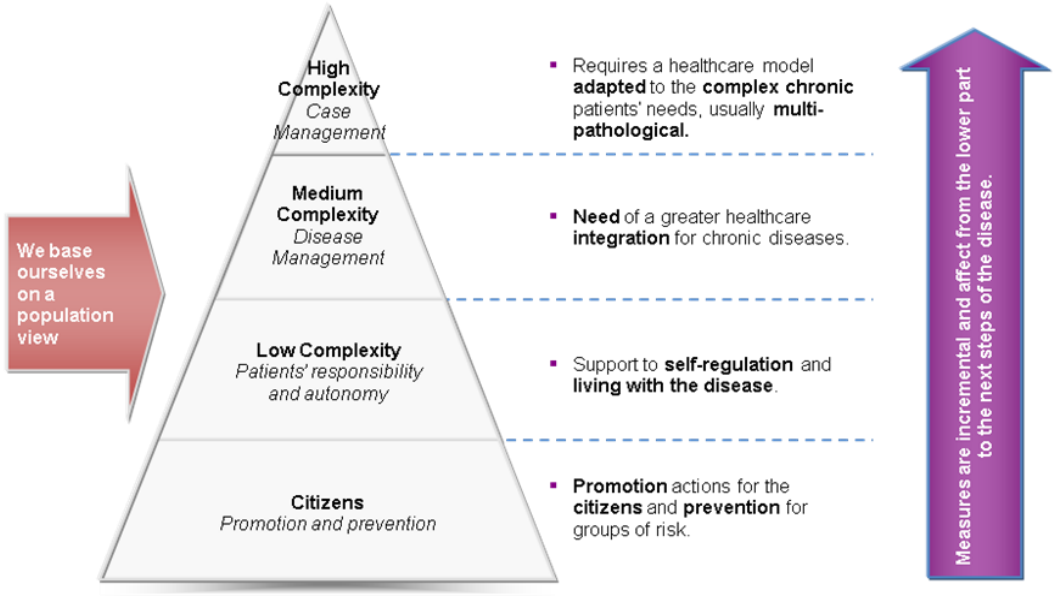
There are a great deal of internationally recognised models of reference in chronicity care which reflect the need to focus health policies in this direction and provide conceptual frameworks by which to define interventions and the organisation of the services, based on population stratification and a proactive, integrated approach.[37]

The Catalan Ministry of Health and the Ministry of Social Welfare and Family have created the Chronicity Prevention and Care Programme (PPAC), which should enable health and social sectors to work together in managing chronicity.

Chronicity is an evolutionary process linked to the natural course of diseases, with certain initial stages that may be asymptomatic and a progression that can bring about acute care episodes, complications, and co-morbidity until the end of the person's life. **The different stages of the illness' progression, from the point of view of population, create different groups within the populace with different needs** and risks. Therefore, different objectives and approaches are necessary.

The causes of many of these problems may be addressed through public health actions. Therefore, **health protection and promotion, as well as disease prevention**, have a key role in decreasing their prevalence.

The challenge of chronic diseases requires to focus population



As we can observe, the **healthcare solutions have to be adapted to the different strata**, for which we can set up a preferential approach and objectives adapted to the characteristics of each group.

Every group of population has its own characteristics and needs

	Characteristics	Objectives	
Complex Chronic Patients	▪ Patients with multiple chronic diseases or a severe main chronic disease and co-morbidity, usually with disability, and with frequent flare-ups and imbalances with loss of functional capacity	▪ Symptom control ▪ Unbalance prevention ▪ Decrease of use of hospital and emergency resources ▪ Autonomy maintenance ▪ Delay in institutionalization ▪ Improvement of welfare and life quality, and patient and caregiver satisfaction	**Case Management**
People with chronic diseases in risk or fragile situations	▪ People with an advanced chronic disease in risk situation for complications but maintaining the capacity of self-healing. In advanced stages they can move towards an upper level own situation (complex chronic patient)	▪ Optimal control of the disease to encourage the progression and control of related symptoms, reducing flare-ups, hospitalizations and visits to emergency services. Maintenance of the autonomy.	**Disease management**
People with risk factors or low complexity chronic diseases	▪ People with risk factors for chronic diseases or little evolved chronic diseases	▪ Maintenance of health, clinical stability of underlying pathologies and prevention of the appearance or progression of severe diseases and/or disabilities	**Support for self-healing**
General population	▪ Population without risk factors nor underlying chronic pathology.	▪ Risk management of health, promotion of healthy life styles and preventive primary care activities	**Protection and promotion of health and disease prevention**

To undertake the actions necessary to meet the objectives underlined at each level, there must be different degrees of implication from the various healthcare services involved, with various combinations among and between these services, and therefore different types of coordination and leadership are required.

- At ground level, the actions to protect and promote health and to prevent disease concentrate on the areas of public health and primary care, encouraging healthy lifestyles and preventative actions in the community environment.
- At the second level, support must be given to the patients, allowing them to become the main actors in the management of their risk factor or illness, and the health service as a centre of reference, with GPs, nursing staff, and specialists acting as consultants, must be promoted.
- At the third level, primary care is still responsible for basic care, but specialised care and the varied and punctual use of resources are ever more present, so that the management of the disease through a comprehensive system becomes fundamental.
- Finally, at the last level, the combination of different resources becomes much more dominant, requiring the implementation of organised programmes to help all the implicated agents identify patients, organise relationships within the case management model, provide 24-hour care and give regional leadership to facilitate relations among all the services.

Although tackling chronicity involves a **broader vision than that of a specific chronic illness**, we must also bear in mind that the clinical management of each one of them has its own specificities, healthcare incidents and risk of complications. Therefore, we must not lose sight of the appropriate clinical process for each illness, according to which the activities of the different agents, patients and even their caregivers may be organised.

The model must facilitate comprehensive care for chronic illness, fostering a shared and cooperative care model among health and social organisations, bringing about an improvement in healthcare continuity and care in general.

The **model must be developed at a regional level, in touch with the reality of the relations between patient and health and social service**. Therefore, to this combination of perspectives based on population, service and disease must be added that of region, in order to adapt its implementation to each area.

Finally, it should be highlighted that **new technologies and the deployment of telemedicine** are elements that ease the adaptation of services to the needs of chronic patients. They offer opportunities to improve patients' quality of life through accessible and immediate systems which enable improved self-

management of illness in a safe environment, and, when necessary, professional support and advice. The application of new technologies offers a new way for patients and professionals to interrelate, which will probably bring about a reduction in in-person visits, but an increase in contacts with different resources. They also make it easier to coordinate services and share information among professionals.

Strategic projects

In keeping with the model's aims and characteristics, **six projects have been identified which serve as the heart of the transformation** of the health system and which take into account the chronicity phenomenon. These projects must be synchronized in order to offer a comprehensive solution to the needs of chronic patients throughout the progression of their illness.

Project 2.1. Implementation of integrated clinical processes for ten diseases

To adopt a disease-management approach through the implementation of clinical processes for: CHF, COPD/asthma, diabetes, severe and profound mental disorders, depression, dementias, cancer, nephropathy, chronic pain and musculoskeletal system diseases.

Objective for 2015. Implement clinical practice guidelines and treatment routes in the ten processes throughout the region, and to integrate them into the HCCC registers.

Objectives for results in 2012. Introduce the guidelines and treatment routes defined for COPD, depression and CHF for 30% of the population, and to define the guidelines for diabetes.

Dealing with chronicity requires a very broad focus that integrates solutions to the general needs of chronic patients, regardless of their specific condition. There is, however, **a group of diseases of greater prevalence, seriousness, difficulty in clinical management and/or complexity** due to their interdependence with other diseases and incapacitating processes for which it is favourable **to design processes focused on their specific management.**

This project is especially relevant to the **intermediate levels of progression of a disease,** after it has been diagnosed and before the patient reaches a situation of advanced complexity due to its multi-pathological or multi-morbid character.

This line of work is from a **clinical perspective, and at all times it must be able to identify at each stage of a chronic disease which is the most appropriate**

intervention (preventive, therapeutic and monitoring) and the most adequate services for carrying it out and how professional roles must be adapted. This process definition is based on the clinical management of the diseases and the patients, including pharmacological management.

The design of these clinical processes must be based on recognised best practices. **Clinical committees must be created** (comprising healthcare experts and professionals) to adapt the processes to local needs. Furthermore, a consensus must be reached prior to implementation.

In designing these processes, **the advantages offered by new technologies** in service provision and as **facilitators of self-healing** and contact with the health system will be evaluated.

Furthermore, the process design must consider **the coordination of the facilities involved as a fundamental aspect,** together with optimum management of flows and transfers between and among healthcare levels and providers.

The revision and design of processes based on prioritised diseases **must also be the reference for the execution of actions through other related projects,** such as the *Pacient Expert Catalunya* programme or the deployment of telehealth tools, which are only highly effective if applied at the right time and adequately fit into a global vision of interventions for each health problem.

The chronic diseases upon which the clinical processes will be based are the ones with a higher rate of incidence and mortality, such as those of the circulatory system, the respiratory system and cancer. Mental illnesses are also included, bearing in mind their seriousness and risk of becoming chronic, affecting the adult, juvenile and infant population, and according to their particular characteristics, which are sometimes related to stigmatisation phenomena or with complexity deriving from behaviour disorders. Another group of diseases of special interest in terms of chronicity is that of neurological diseases accompanied by disability. Finally, due to their impact on disabled patients, their negative effect on quality of life, the risk of enhanced morbidity, and the use of resources, diseases of the musculoskeletal system should also be included.

Specifically, the diseases to be prioritised in the development of this project are the following:

- Heart failure
- COPD/asthma
- Diabetes mellitus
- Serious and very serious mental disorders
- Depression
- Dementia

- Cancer
- Nephropathy
- Chronic pain
- Diseases of the musculoskeletal system

The impacts associated with this project mainly involve delaying the progression of the disease, improving patients' quality of life, decreasing the number of complications and co-morbidity and increasing the efficiency of clinical management.

i. Examples of on-going initiatives

Although the development of unified guidelines has not been dealt with, there are indeed successful cases in certain areas, such as:

- The establishment of shared clinical guidelines agreed by consensus for the treatment of neoplasms, known as the *Oncoguies,* or oncology guidelines, which help to coordinate the different centres and care levels (developed by the Catalan Institute of Oncology) and which have increased efficiency by 25%.
- Several master plans (for circulatory system, respiratory system, rheumatic and musculoskeletal system diseases; mental health and addictions, diabetes, etc.) have made progress in defining and agreeing on clinical processes and the most appropriate interventions for the management of these diseases.
- The ICS (Catalan Health Institute) has developed clinical primary care guidelines for these pathologies, and has carried out tests on integrating them into the e-CAP platform.

ii. Objective for 2015

- Implement clinical practice guidelines and treatment routes in the ten processes throughout the region, and to integrate them into the HCCC registers.

iii. Objectives for results in 2012

- Introduce the guidelines and treatment routes defined for COPD, depression and CHF for 30% of the population, and to define the guidelines for diabetes.

iv. Objectives for processes in 2012

- Initiate the implementation of treatment routes for COPD, CHF and depression.

- Define and agree on the clinical practice guidelines for diabetes.
- Complete the creation of treatment routes in all regions.

v. Actions after 2012

- Define the clinical processes for the remaining pathologies. 2013-2014.
- Implement the remaining clinical processes. 2013-2015.

Project 2.2. Fostering of programmes for health protection and promotion and disease prevention

The objective is to keep the disease from developing and place emphasis on the main risk factors.

Objective for 2015. Implement 5 priority programmes for health promotion and disease prevention (healthy eating and physical activity, smoking, alcohol consumption, vaccination and infant or prenatal stages).

Objectives for results in 2012. Define and initiate the implementation of public health regional community programmes in the areas of healthy eating and physical activity, smoking, alcohol consumption, vaccination and infant and prenatal stages.

A large portion of chronic diseases and their risk factors can be avoided or controlled, by acting upon the determinants of health, especially through the promotion of health and preventive activities.

The protection and promotion of health and prevention constitute the nucleus of the public health service portfolio. The establishment of the Public Health Agency will foster the undertaking of community promotion and prevention actions aimed at the determinants of health and main risks factors for chronic diseases. Furthermore, the work carried out in coordination with health services, mainly primary care (but also community facilities such as pharmacies and global inter-ministerial action), will be elements that will boost this strategy.

i. Examples of on-going initiatives

- Population programmes such as the Physical Activity, Sport and Health Plan (PAFES), the Mediterranean Diet Promotion Programme (AMED), or the Integrated Plan for the Promotion of Physical Activity and a Healthy Diet (PAAS).

ii. Objective for 2015

- Implement 5 priority programmes for health promotion and disease prevention (healthy eating and physical activity, smoking, alcohol consumption, vaccination and infant or prenatal stages).

ii. Objectives for results in 2012

- Define and initiate the implementation of public health regional community programmes in the areas of healthy eating and physical activity, smoking, alcohol consumption, vaccination and infant and prenatal stages.

iv. Objectives for processes in 2012

- Implement the PAFES programme in all the basic healthcare areas (ABS).
- Implement regional community programmes for the prevention of smoking in priority areas.
- Implement regional community programmes for the prevention of hazardous drinking in priority areas.
- Increase coverage of the 3-virus vaccine to 80% of medical professionals.
- Extend prenatal screening to 100% of centres.

Project 2.3. Fostering of self-responsibility of patients and caregivers in regard to their own health and the promotion of self-healing

The aim is to educate patients and their environment on the disease so that they can take an active part in actions to improve their state of health.

Objective for 2015. Extend the *Pacient Expert Catalunya* programme to cover five chronic diseases throughout Catalonia, with a figure of 5,000 patients incorporated into the different disease groups; enhance the Personal Health File with learning material; and further Sanitat Respon and the *Canal Salut* health channel as sources of information and health advice.

Objectives for results in 2012. Reach 2,000 patients included in the *Pacient Expert Catalunya* programme and identify the training aids to be included in the *Canal Salut*/Personal Health File/Sanitat Respon.

Knowledge and understanding of a disease and how it develops, as well as the instructions and information given to patients by the medical team, are essential factors in treatment, the evolution of the disease, and patients' ability to play an

active part. In the case of chronic diseases, it is vital to make sure that patients follow the treatment and to monitor the results of medication and therapies.

The aim of this project is to **train patients in the self-management of their disease**, so that they become familiar with it and can take action when required to improve their health and avoid deterioration and complications.

Chronic diseases often generate a need for support and that physical and emotional capabilities are looked after. The training of patients and citizens must also include these aspects.

At all levels of healthcare, but **especially in primary healthcare,** measures to train and make patients and caregivers aware must be applied, taking into account opportunities for the self-healing offered according to the clinical design of the care process for each illness.

Several experiences regarding the exchange of information among patients have been successful as a means of amplifying the self-management of illness, as is the case with the programme *Pacient Expert Catalunya*. Therefore, a central theme in the framework of this project will be to extend this programme, specific for each priority disease, and in accordance with the clinical process design.

Sanitat Respon, in its role as a receiver and provider of information regarding direct questions from the general public about their needs, could potentially be a source of support for the self-healing and guidance of the people that come into contact with the health service.

The impacts associated with this project basically involve people's ability to manage the course of their own disease, avoiding unnecessary dependence on health services, especially during phases that require low-level use of healthcare resources.

i. Examples of on-going initiatives

- Successful results in several local demo experiences managed by the Catalan Health Institute (a 12.7% improvement in knowledge and a 30% improvement in terms of lifestyle habits twelve months after applying the programme, with a 50% decrease in visits to general practitioners).
- During the last decade, self-management has been extended among diabetic patients, through the use of simple devices that use reactive strips to read sugar levels. This system gives patients greater self-responsibility, regulates the direct demand for primary care and ensures the correct monitoring of the disease.
- The Personal Health File gives more than 88,000 citizens access to their medical records.

- There is a telephone hotline, Sanitat Respon, which has established initiatives to help with self-management (6,000 daily calls).

ii. Objective for 2015

- Extend the *Pacient Expert Catalunya* programme to cover five chronic diseases throughout Catalonia, with a figure of 5,000 patients incorporated into the different disease groups; enhance the Personal Health File with learning material; and further Sanitat Respon and the *Canal Salut* health channel as sources of information and health advice.

iii. Objectives for results in 2012

- Reach 2,000 patients included in the *Pacient Expert Catalunya* programme and identify the training aids to be included in the *Canal Salut*/Personal Health File/Sanitat Respon.

iv. Objective for processes in 2012

- Extend the *Pacient Expert Catalunya* programme to the whole of Catalonia for CHF, oral anticoagulants therapy, COPD, diabetes mellitus 2 (DM2) and fibromyalgia (FM), and to add 2,000 patients to the programme. Draw up new guidelines and learning materials for *Pacient Expert Catalunya* on obesity and training expert caregivers.
- Define the information, the documentation and the learning material to be included in the *Canal Salut*/Personal Health File/Sanitat Respon channels and to further educate patients and caregivers on health.

v. Actions after 2012

- Incorporate advice guidelines for chronic diseases with defined clinical processes into the Sanitat Respon healthcare protocols. 2012-2014.

Project 2.4. Development of healthcare alternatives within the framework of a comprehensive system

Adequate healthcare alternatives are being developed to care for chronic patients, as a backup to primary care. In addition, alternative types of hospital admissions are being consolidated, home healthcare is being reorganised and alternative channels such as Sanitat Respon are being taken advantage of.

Objective for 2015. Reduce the number of emergency hospital admissions and readmissions within thirty days for complex chronic patients at acute care hospitals by 15%.

Objectives for results in 2012. Define and implement essential healthcare alternatives for chronic patients and create a sub-acute care facility for each health region.

Caring for chronicity, especially in the stages requiring more intensive care (those corresponding to groups of patients with a serious chronic disease and fragility and complex chronic patients), involves **multiple contacts with the health system**. There are healthcare alternatives and innovative experiences that improve the health results, comfort and quality of life of the patients and their caregivers, and which allow better use of available resources. Therefore, it is a **priority and the responsibility of the system as a whole to develop possible care alternatives in order to adapt the care given** to match that of an integrated model, to avoid the deployment of new additional resources that could dilute the existing service portfolio or substitute its services with less adequate ones.

The lines of action that comprise this project are the following:

- To boost **primary care** as a main healthcare nucleus for treating chronicity; to make it easier to response to the demand for repeated acute medical attention and compensate for imbalances; to develop nursing skills for chronic patient care; to carry out remote communication; and to promote approaches adapted to chronic patients (for example group education) and leadership in the integration of the drug plan, among others.
- To consolidate admission-free care modes such as **day hospitals, both for acute care and mental and social health,** to avoid hospitalisation and visits to the ER.
- To redesign **hospital admission procedures and the continuity of relationships**: development of an admission procedure for sub-acute and post-acute patients, revision of admission procedures for non-acute mental patients, intensification of the dynamics relationship with between acute, sub-acute and post-acute hospitalisation and convalescence.
- To reorganize **long-term admissions** and to cooperate with care facilities in collaboration with the Ministry of Social Welfare and Family: balance the healthcare component and caring for dependency, both in social and mental health; define healthcare support relationships regarding dependency; and establish agile transfer mechanisms among networks.
- To reorganise **home healthcare**: revision of the home healthcare model, promoting a proactive approach to caring for fragility, multidisciplinary work and the adaptation of professional health roles to health and providing coordination mechanisms between medical and social care, such as ICT tools.
- To reorganise the **healthcare and prescription model in nursing homes**, linking the pharmaceutical care and service to the healthcare facilities, using

a comprehensive approach focused on the actual patient (provision of medication included in the healthcare package).

- To take advantage of **Sanitat Respon** as a healthcare resource; source of service advice, education and therapy; case monitor and activator of resources.

The impacts associated with this project mainly include the improvement of both the quality of the results and patient satisfaction and increased efficiency thanks to the adequate use of healthcare network resources.

i. Examples of on-going initiatives

- A support team in nursing homes with nursing and primary care staff deployed in Barcelona (healthcare support programme in nursing homes), caring for 3,800 nursing home patients, with a 24% reduction in admissions, 37% in emergencies, and estimated savings of 7.4% on drugs per patient. Similar activity carried out by the El Maresme and La Selva Health Corporation, with a 42% drop in ER visits, and a 9% reduction in drug spending.
- Creation of a day hospital unit for chronic patients staffed by interns and nurses in El Maresme Central (Mataró).
- Trial experiences with sub-acute units are taking place; of particular interest are those carried out at the Pere Virgili Health Park (23 beds and a positive evaluation), in Reus and in Granollers.
- Change in the hospital model and redefinition of the healthcare nucleus, as in the case of Palamós and Blanes.
- Improvement in pharmaceutical provision for those admitted to nursing homes.

ii. Objective for 2015

- Reduce the number of emergency hospital admissions and readmissions within thirty days for complex chronic patients at acute care hospitals by 15%.

iii. Objectives for results in 2012

- Define and implement essential healthcare alternatives for chronic patients and create a sub-acute care facility for each health region.

iv. Objectives for processes in 2012

- Define the home healthcare and continuous care model for chronic patients, implementing it in the seven regions, and carry out a trial experience involving the provision of medicines at nursing homes.

- Define the social healthcare model, implementing it in the regions, with contracted sub-acute facilities in each one of the seven regions.
- Define the acute patient hospitalisation model for chronic patients and initiate its implementation in the seven regions.
- Revise the healthcare model for mental health and initiate its implementation in the seven regions.

v. Actions after 2012

- Apply priority healthcare initiatives for the treatment of repeat acute care cases and to address imbalances in primary healthcare centres or regional functional units with 40% coverage in Catalonia. 2013.
- Increase home healthcare coverage for the dependent population or those with a chronic illness, in at-risk or fragility situations, by 50%. 2013.
- Consolidate the day hospital for the treatment of chronic patients in all hospitals with an index of thirty to forty sessions per one hundred non-surgical admissions. 2013.
- Include the provision of pharmaceuticals in the healthcare service package at social care homes, covering 70% of the institutionalised population. 2015.

Project 2.5. Deployment of regional programmes for complex chronic patient care

Complex chronic patients require a high degree of healthcare continuity and need to receive medical attention moments of crisis. Therefore, coordination between the different professionals must be increased and proactive and case-based management be adopted.

Objective for 2015. Have a case management model for complex chronic patients in all regions and defined treatment routes, covering 25,000 complex chronic patients.

Objectives for results in 2012. Define the case management model for complex chronic patients, initiate its implementation in all regions and provide coverage for 2,000 complex chronic patients.

The needs of complex chronic patients exceed the fragmented care that different healthcare areas may offer. Caring for complex chronic patients brings patients into contact with the healthcare service with intense frequency.

Thus, **coordination between the different professionals and services is fundamental if correct healthcare continuity and appropriate medical attention** at specific moments is to be guaranteed. This approach calls for the creation of regionally based programmes, with key clinical leadership that must unify and enhance the lines of action in order to adapt the services that must be provided to give the correct response to different situations at all times.

The key elements comprising the implementation of the project in Catalonia are:

- Redirection of the healthcare focus towards **proactive care** for the population identified as complex chronic patients, especially at the primary care level.
- Organisation of services with a **case management and comprehensive care model** (professionals of reference, 24x7 coverage, coordination of healthcare and social health teams, agility of circuits, development of new professional roles—especially that of nursing in case management—and optimization of competences).

The implementation of the regional programmes for complex chronic patient care entails the following main actions:

- Nominally identifying the people who meet the criteria to be considered complex chronic patients.
- Proactively acting to monitor these patients at the primary healthcare level.
- Establishing systems for information sharing so that these patients may be identified each time they come into contact with the health system and that the main healthcare physician also receives any new information.
- Assigning responsibilities for case management.
- Establishing protocols and treatment routes with defined functions and case-resolution capabilities at each healthcare centre.
- Defining the healthcare circuits to give 24×7 coverage.
- Agreeing on the leadership of the programme and providing premises for coordination and monitoring.

The main impacts associated with this project involve an improvement in the quality of life of patients and caregivers and a reduction in the use of internal and emergency services.

i. Examples of on-going initiatives

- Case management based on the identification of the population according to risk and proactive medical care implemented in El Baix Empordà.

- Case management model implemented in the region of El Baix Llobregat Nord for a target population of 339 patients, with interconnecting nursing teams, the aim of which is to achieve a 25% reduction in visits during the first year of application.
- Treatment routes implemented for the management of fragile chronic patients at Hospital de Viladecans, with a study carried out on a target population of 81 patients and a reduction of more than 50% in hospital admissions.

ii. Objective for 2015

- Have a case management model for complex chronic patients in all regions and defined treatment routes, covering 25,000 complex chronic patients.

iii. Objective for results in 2012

- Define the case management model for complex chronic patients, initiate its implementation in all regions and provide coverage for 2,000 complex chronic patients.

iv. Objectives for processes in 2012

- Implement the complex chronic patient (CCP) identification model in all regions.
- Have 2,000 patients included in the CCP programme. Each health region will have a minimum of one to three CCP projects, with the implementation of specific treatment routes.
- Introduce three experiments with palliative care for advanced chronic disease, covering a minimum of 7,000 people.
- Draw up and agree on a collaborative healthcare and social health model.

v. Actions after 2012

- Extend the implementation of specific treatment routes for the management of complex chronic patients to all regions. 2012-2013.
- Identify the target population for 100% of the basic healthcare area (ABS). 2013.

Project 2.6. Implementation of programmes for the rational use of medicines

The rational use of medicines aims to guarantee a safe and efficient medication plan that meets the needs of each chronic patient.

Objective for 2015. Revise and reconcile 100% of pharmacological treatments, including all the healthcare areas and guaranteeing quality, facilitating access and improving treatment adherence.

Objective for results in 2012. Have the necessary methodology and support tools available to implement and assess the revision and reconciliation of the medication plans and their application in the CCP care programmes.

Patients with chronic diseases are the main consumers of medicines and, often, are patients in need of multiple treatments. The aim of this project is to undertake and redirect action, from the perspective of pharmaceutical care, in order to satisfy the needs of present and potential chronic patients, in relation to their pharmacological treatment and to the safe use of medicines, and guarantee the sustainability of the system.

The established objectives must guarantee an efficient use of medicines, the quality of the prescription and the optimisation of the resources that the healthcare system allocates to the provision of pharmaceuticals. It must also be made easier to use automated tools and procedures that contribute to a safer use of medicines.

The electronic prescription becomes, in this context, the backbone of a comprehensive and integrated pharmaceutical service, increasing the quality and safety of pharmacological treatments and representing a system of healthcare cohesion among various areas and health professionals.

i. Examples of on-going initiatives

- E-prescription with the implementation of a prescription and dispensation filter system.
- Information on the cost of the treatment in the medication plan.

ii. Objective for 2015

- Revise and reconcile 100% of pharmacological treatments, including all the healthcare areas and guaranteeing quality, facilitating access and improving treatment adherence.

iii. Objectives for results in 2012

- Have the necessary methodology and support tools available to implement and assess the revision and reconciliation of the medication plans and their application in the CCP care programmes.

iv. Objectives for processes in 2012

- Draw up a process to revise the medicines included in the medication plan.
- Introduce into the process all those risk management elements that could improve safety and implement the revision process in CCP treatment.
- Define and introduce preventive and exploratory filters into the e-prescription.
- Offer help tools to citizens regarding the **appropriate and responsible use of medicines**.

v. Actions after 2012

- Promote the medicine reconciliation processes, in order to favour continuous care and reduce treatment duplicates and pharmacological interactions and to improve the accuracy of treatments. 2013.
- Carry out a centralised monitoring of therapy adherence and patients' adherence to treatments. 2013.
- Incorporate automated warning systems for potential drug interactions. 2013.
- Consolidate a collaborative framework with the pharmacy centres of the region, with the aim of implementing specific chronicity care programmes, creating synergies among health professionals and promoting the communication system and messenger service. 2013.
- Improve information on the medication plan (information on medicines and their use) and integration of the prescriptions of different areas. 2014.

The strategy of chronic diseases materializes in six big projects

✓ Highly affecting the level of care

✓ Slightly affecting the level of care

Main focus

Secondary focus

	Target population	Level of assistance: Public Health	Community Level	Primary Care	Specialized Care	Mental Health	Socio-medical
Implementation of integrated clinic processes of the most significant pathologies		✓	✓	✓	✓	✓	✓
Promotion and protection of health and disease prevention		✓	✓	✓		✓	
Self-responsibility of patients and caregivers and support to self-healing		✓	✓	✓	✓		
Alternative care options in an integrated system frame				✓	✓	✓	✓
Territorial programmes of complex chronic patients healthcare				✓	✓	✓	✓
Rational use of drugs strategy			✓	✓	✓	✓	✓

Source: Working team.

Line of action 3. An integrated system able to resolve health problems at initial levels and throughout Catalonia

- There are opportunities for improving the response of the system in terms of quality and efficiency.
- The model proposed is based on four main principles:
  - Treatment based on the most cost-effective interventions.
  - Assignation of the functions and interventions to the most appropriate healthcare level.
  - Guarantee of a coordinated healthcare model.
  - Improvement in the time needed to access care as a result of improved case resolution and the incorporation of clinical criteria in planning waiting lists.
- Four important projects to improve the system's ability to resolve health issues have been identified and will be developed into regional operating plans:
  - Improvement in resolving cases in the areas that most frequently call for interaction between primary care and specialised care.
  - Transformation of the emergency care model to give the best response to demands for immediate medical attention.
  - Regional organisation of the service portfolio into areas according to complexity levels.
  - Integration of public and community health into the healthcare model.

The strategy for increased resolution has two perspectives: for illnesses or conditions and for healthcare.

The prioritised diseases or conditions, bearing in mind their impact on morbidity and cost, include some of the chronic diseases and are tackled in the chapter on chronicity in the projects to implement integrated clinical processes for the most significant chronic diseases.

In terms of **healthcare**, in accordance with the diagnosis of the situation, **four projects have been prioritised, bearing in mind the potential for improved quality and efficiency**; thus, as they are projects which affect the relationship between

different healthcare resources, they offer important improvement possibilities in terms of resolution entire system:

- Improvement in resolving cases in the areas that most frequently call for interaction between primary care and specialised care.
- Consolidation of the transformation of the emergency care model.
- Organisation of the service portfolio by level of complexity.
- Integration of public and community health into the healthcare model.

Principles and model

The principles of the resolution strategy common to the prioritised areas are the following:

- Treatment based on the most cost-effective interventions.
- Assignation of the functions and interventions to the most appropriate healthcare level in terms of quality and the optimisation of professional skills.
- Guarantee of a coordinated healthcare model that offers comprehensive care to patients.
- Improvement in the time needed to access care as a result of improved case resolution and the incorporation of clinical criteria in planning waiting lists.

Regarding the execution of the different projects on the resolution of health issues, all cases will entail interaction between the various services and providers in the area. The **regional resolution plans** will be the channel for organising and agreeing on collaboration endeavours to carry out the restructuring measures, which will list the shared objectives as well as the agreements on functions, organisation and responsibilities and the interaction channels for all the agents implicated. The influence of the regional resolution plans must be seen in service procurement and the assignment of population-based resources between CatSalut and the providers for each area.

Strategic projects

Project 3.1. Improvement of resolution in areas in which primary and specialised healthcare most frequently interrelate

The aim is to increase the primary care's ability to resolve low-complexity health issues and to improve access to specialised healthcare, speeding up diagnosis, organising interventions and coordinating collaboration.

Objectives for 2015. Reduce the number of visits to specialised healthcare for ophthalmology, musculoskeletal system diseases, mental health, dermatology and urology by 10-15%, depending on the specialty, without it affecting the healthcare quality, and reducing variability among regions.

Objectives for results in 2012. Implement the new model for the musculoskeletal system, mental health and ophthalmology, covering a minimum of 30% of the population in each health region and having the e-prescription in place in 50% of the XHUP.

The analysis of the current status of health and services carried out shows **the existence of areas in which primary healthcare (PHC) and specialised healthcare (SHC) frequently interact, and there is great potential for improvement**. Of particular note are those areas that have a greater volume of contacts and where effective resolution by the system requires a strong complementary relationship. Specifically, the project centres on processes related to the **musculoskeletal system, ophthalmology, dermatology, urology, and mental health**. In addition, an **allergology** healthcare model will be implemented that centres on collaboration between primary healthcare and specialised healthcare, in accordance with protocols and referral criteria drawn up jointly and the definition of a portfolio of services by level of complexity, to care for the population affected by allergies.

There are various **initiatives already in place for improving resolution by the specialties related to ophthalmology and the musculoskeletal system**, which have set up actions aimed at reducing visits to specialised healthcare, decreasing the regional variability detected, advancing in the use of ICTs, optimising the skills of the different professionals, incorporating new professional profiles, etc. All of these initiatives have been drafted with the participation of representatives of professionals in both primary and specialised healthcare, scientific societies and of public health system service providers.

In the area of **mental health**, there is already a progressive implementation process underway for a portfolio of primary healthcare and specialised healthcare support services which rely on consultancy and collaboration in patient care.

In general, for the various areas selected, process restructuring attempts to attain the following strategic objectives:

- **Increase in the resolution capacity of primary healthcare** in relation to prevalent, low-complexity diseases.
- **Improvement to the accessibility and efficiency of specialised healthcare**: attending to the more complex illnesses and speeding up diagnosis and treatment with organised intervention by the different professionals.
- **Guarantee of healthcare continuity**.

The strategy for change also defines, with the participation of institutions and professionals, the following elements, which serve as the foundation of the regional resolution plans:

- Use of integrated information and communication systems, based on new technologies, between primary and specialised healthcare (making the healthcare compartments more permeable).
- Systems of collaboration and coordination among healthcare areas.
- Shared elements of regional management: healthcare objectives, process management and regional cooperation.
- Action in the area of primary healthcare:
  - Access to primary healthcare by other professionals (for example, physiotherapists and optometrists, integrated into specialised healthcare teams, with protocols and under the supervision of the appropriate medical specialists).
  - Access, with protocol, to diagnostic tests, depending on the complexity of the pathology and on the portfolio of services previously defined.
  - Preferential access to specialised healthcare according to referral criteria.
  - Bringing specialised healthcare closer to primary healthcare, through consulting and assessment.
  - Assessment and dissemination of results for improved continuity.
- Actions in the area of specialised healthcare:
  - Accessibility agreed by ordinary and preferential referral.
  - Protocol system based on scientific evidence.
  - Integration of different professional profiles into specialist services.
  - Service portfolio agreed among the different professionals who intervene in the process.

- Collaboration with primary healthcare for the establishment of a shared therapeutic and pharmacological plan.
- Assessment and dissemination of results for improved continuity.

- The **implementation of the electronic prescription for specialised attention** entails benefits for the patients and must promote the improved use of medication, an effect already visible in primary healthcare. On the other hand, it is also a springboard for change to improve transitions and flows among the different healthcare areas and to contribute to healthcare continuity.
- Another important aspect of improving the ability to resolve health issues at the primary healthcare level is in regard to temporary incapacity (TI) management, which is strongly linked to some of the prioritised areas, such as diseases of the musculoskeletal system. The Catalan Institute of Medical and Health Evaluations (ICAMS) can contribute by giving specialised support to primary healthcare. In addition, the sharing of information is vital to the clinical guidance and management of TI, and it could reduce variability and administrative tasks.

i. Examples of on-going initiatives

- Healthcare model for the musculoskeletal system in place in various regions within the context of the Master Plan for Musculoskeletal System Diseases.
- Programmes for specialist support to primary healthcare for mental health, with a reduction in referrals of around 15%.
- E-prescription trials in specialised healthcare and development of tools to facilitate coordination among professionals in different areas (messenger system, traceability and single integrated treatment plan).
- Trial experience in Cambrils which involved increasing primary healthcare resolution capacities by improving coordination with specialised healthcare.

ii. Objective for 2015

- Reduce the number of visits to specialised care for ophthalmology, musculoskeletal system diseases, mental health, dermatology and urology by 10-15%, depending on the specialty, without it affecting the healthcare quality, and reducing variability among regions.
- Reduce the waiting time to visit a specialist and for diagnostic tests by 10%.

iii. Objectives for results in 2012

- Implement the new model for the musculoskeletal system, mental health and ophthalmology, covering a minimum of 30% of the population in each health region and having the e-prescription in place in 50% of the XHUP.

iv. Objectives for processes in 2012

- Draw up and implement regional resolution plans for the musculoskeletal system, mental health and ophthalmology, in accordance with the defined models, with primary and specialised healthcare areas covering a minimum of 30% of the population of each health region.
- Define the dermatology and urology healthcare model.
- Define the referral service portfolio of the allergology healthcare model for Catalonia.
- Implement the e-prescription in specialised healthcare sections in 50% of the XHUP centres.

v. Actions after 2012

- Complete the implementation of the regional resolution plans for the musculoskeletal system, mental health and ophthalmology.
- Incorporate the healthcare models for dermatology and urology in the regional resolution plans in all health regions.

Project 3.2. Transformation of the emergency care model in order to provide a more adequate response to requests for immediate care

Healthcare service will be reorganised regionally to deal with demands for immediate care (location and level of complexity) and a common triage system will be established to best fit care to patient need.

Objective for 2015. Reduce the number of visits to hospital emergency services by approximately 10%, directing requests for care to the most appropriate level and decreasing variability of use. Increase the number cases seen at the emergency room that are previously attended to over the telephone, by a low-complexity mechanism or who were instructed by the SEM (Medical Emergency System) to 75%.

Objectives for results in 2012. Reduce the number of cases seen at hospital emergency rooms by 2%.

Requests for immediate care involve situations of differing complexity (from life-threatening emergencies to consultations on non-urgent problems or which do not require immediate attention), and occur with varying intensity at different moments. This **diversification of situations also requires a variety of responses**, so that **it is necessary to design mechanisms to classify** demand and establish circuits that allow requests to be directed to a resource better suited to the healthcare needs of the affected person.

Even if the rate of use of **hospital emergency services** has decreased, there are still an **important number of low-complexity emergencies, often for reasons far from serious**, which could be attended to by more appropriate healthcare areas, reserving hospitals for cases of emergency that require a higher level of specialisation and/or technology.

Regarding the **regional distribution** of resources for treating emergencies, due to high degree of dispersal of primary healthcare centres and the decentralisation of hospital care in Catalonia, there are a **high number of medical attention points,** which in turn produces a very low volume of activity in certain places.

Furthermore, **endeavours to classify requests for immediate healthcare** and to coordinate organisation among the mechanisms in each region **have been successful and have given a fast, high-quality response** to demand, using the most appropriate mechanism and better applying available resources (as is the case in Osona). In certain places, with a sufficient volume of activity, **emergency mechanisms linked to primary care with an improved resolution capacity** (with access to emergency diagnostic testing and the possibility of having patients under observation) have been created. They have taken on cases with a level of complexity that until now has been reserved for hospitals and have assumed a good part of the demand with ease, also receiving transfers from SEM, as in the case of the Manso CUAP (Primary Healthcare Emergency Centre).

The **experience of using codes** for certain critical situations (heart attack, stroke, serious trauma) and the structuring of preferential flows have greatly advanced the emergency response time and appropriateness, with proven improvement results. However, these innovations entail the adaptation of hospital emergency services and bring the entire hospital organisation into play, as well as the evolution of the SEM as a first-class healthcare device in close collaboration with the rest of the system.

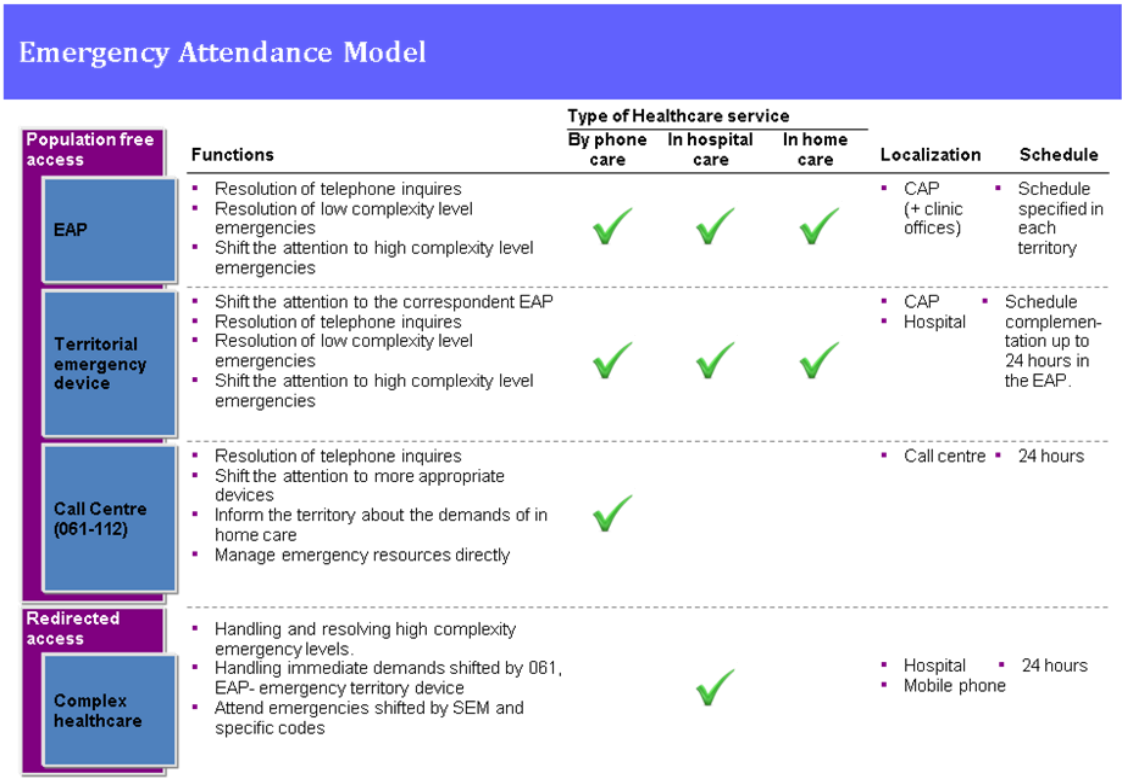
For all these reasons, **the consolidation of the process to transform emergency healthcare, already initiated in Catalonia, is considered to be a priority project**, which affects both primary healthcare and hospitals, and it must improve resolution throughout the entire system. The strategic objectives of the project are the following:

- Improve the adaptation of emergency healthcare.

- Achieve suitable coordination among the different services involved.
- Adapt the response time.
- Foster the continuity and length of the healthcare provided to individuals.

The Ministry of Health, together with CatSalut and with the collaboration of a working group comprising professionals from various institutions and scientific societies, has defined the emergency healthcare model, the key elements of which are the following:

- **Channelling of requests for immediate care** to the most appropriate resources according to the complexity of the emergency.
- **Management of the request,** by channelling the initial request, promoting telephone contact and using protocols to deal with inappropriate requests.
- **Direct access for the population to primary healthcare and to low-complexity emergency facilities,** in person or via the call centre. With qualified referrals to complex care resources when necessary, with preferential access.
- **Portfolio of different services** according to resources, corresponding to the triage levels of the Andorran triage model.
- Treatment for **low-complexity emergencies by means of primary healthcare clinical practice**, whether it be through resources located in primary healthcare centres, specific emergency centres or hospitals.
- The model may be **adapted to the characteristics of each area** as long as it respects the defining elements of the model on access, the service portfolio and channelling.
- Each area must define a **regional functional structuring plan for immediate healthcare**, with the agreement of all the intervening services and seeking the best possible balance between accessibility, quality and optimisation of available resources.



Source: Emergency attention model: proper responses to the immediate attention demands

i. Examples of on-going initiatives

- Application of models for the selection and redirection of emergency care in the Eixample Esquerra district, resulting in a 35% reduction of visits to hospital emergency centres.
- Reorganisation of emergency care in the region of Osona.
- Introduction of Code Heart Attack and Code Stroke.

ii. Objectives for 2015

- Reduce the number of visits to hospital emergency services by approximately 10%, directing requests for care to the most appropriate level and decreasing variability of use.
- Increase the number of cases seen at the emergency room previously attended to over the telephone, by a low-complexity mechanism or who were instructed by the SEM (Medical Emergency System) to 75%.

iii. Objectives for results in 2012

- Reduce cases seen at hospital emergency rooms by 2%.

iv. Objectives for processing in 2012

- Draw up and implement the regional emergency care plans.

- Implement a homogenous triage model at every hospital centre.
- Foster call centre healthcare services.
- Draw up a communications plan.
- Design a follow-up system for emergency care services.

v. Actions after 2012

- Assess the implementation and results in all the health regions. 2013-2015.

Project 3.3. Regional organisation of the service portfolio, according to the level of complexity

This will be based on common criteria that must be determined through the participation of professionals and organisations and an analysis of the optimisation factors in each region.

Objective for 2015. Implement the organisation of the service portfolio for the six selected fields and achieve a degree of concordance of 75% among the defined complexity levels.

Objectives for results in 2012. Start of the reorganisation of paediatric surgery in all the regions and complete the implementation of multi-trauma training.

The **service portfolio by region,** understood as all the services provided by the healthcare facilities of that region, must be defined according to **criteria of accessibility, quality and efficiency.**

There are services that are in-touch with patients by nature, such as primary healthcare, or that have a high volume of activity and do not need of sophisticated technologies. There are **other services which need to address the population on a larger scale in order to guarantee quality** and/or benefit from important **economies of scale.**

Although the services in the first group must be common to most regions, those of the second group must be organised taking into account criteria regarding the volume and distribution of demand, the level of complexity and optimisation of healthcare teams as well as the available capacity required to provide a good level of quality.

In any case, **equity of access and results must be ensured for all citizens,** regardless of their place of residence or their characteristics.

The project focuses on the services involving specialties relevant to referral hospitals and for which there is an opportunity to improve quality and efficiency if good organisational dynamics are implemented, starting with the definition of the service portfolio which CatSalut purchases for all the facilities in each reference region. An example of these services are those which are related to the **more specific surgery specialties** (non-core), such as paediatric surgery, vascular surgery, thoracic surgery, neurosurgery, or the new lines of intervention such as the bariatric surgery. Likewise, healthcare units for **emerging pathologies in mental health** (such as borderline personality disorders, eating disorder, etc.) or some specific **diagnostic and/or intervention tests** may benefit from this regional approach to organising emergency surgery care**.**

In Catalonia, work has begun to **define the criteria and elements to organise paediatric surgery, with collaboration from professionals** appointed by the providers and the scientific societies involved. Levels to classify care for **severe trauma patients** based on severity have been established, and the requirements for each level to provide correct care have been defined. These lines of work are to be extended to other specialties or care services for specific conditions.

The project is structured according to the following items:

- **Selection of the specialties subject to reorganisation**. Based on an analysis of volume, the variability among centres and degree of structural dependence, the organisational determinants and the expertise which each clinical practice has in each case.
- **Classification of the service portfolio by level of complexity.** Based on complexity classification factors of the expert criterion of the clinical practice carried out by the groups of professionals, according to agreed methodologies.
- **Definition of requirements regarding centre characteristics, professional teams and healthcare capacity.** According to the classification by level of complexity, the characteristics that healthcare centres and professional teams must have in order to properly carry out all of the procedures at each level are defined.
- **Establishment of the degree of regional coverage and managing of referral flows between regions and centres.** Estimating the volume of cases expected by regional unit and level will allow us to assess coverage, verifying the critical mass necessary to guarantee healthcare quality and maintain professional skills. Consequently, the regional distribution must be reviewed to find the best balance between accessibility and efficiency, taking into account the healthcare capacity of the different centres.
- **Cooperation among centres and professional teams.** The organisational model proposed is based on the distribution of the service portfolio according to complexity level, set up as a network. This configuration must ensure that

quality care is provided using the most appropriate resource according to the complexity and expertise required. It facilitates referral flows, if applicable, and hands-on monitoring. It also helps to keep professional skills up to date at all the network centres and promotes the sharing of information and knowledge to ensure excellence in healthcare, education and research.

i. Examples of on-going initiatives

- Organisation of severe trauma patient care.
- Alliances within paediatric surgery.
- Shared healthcare teams in the region of El Baix Llobregat (vascular surgery, oncology).

ii. Objective for 2015

- Implement the organisation of the service portfolio for the six selected fields and achieve a degree of concordance of 75% among the defined complexity levels.

iii. Objectives for results in 2012

- Start of the reorganisation of paediatric surgery in all the regions and complete the implementation of multi-trauma training.

iv. Objectives for processes in 2012

- Implement the healthcare model for severe trauma patients and organise paediatric surgery, covering 100% of Catalonia.
- Establish the service portfolio by level of complexity in the four other selected specialties.

v. Actions after 2012

- Progressively implement the regional organisation of the service portfolio for the four selected specialties. 2013-2015.

Project 3.4. Integration of public and community health in the healthcare model

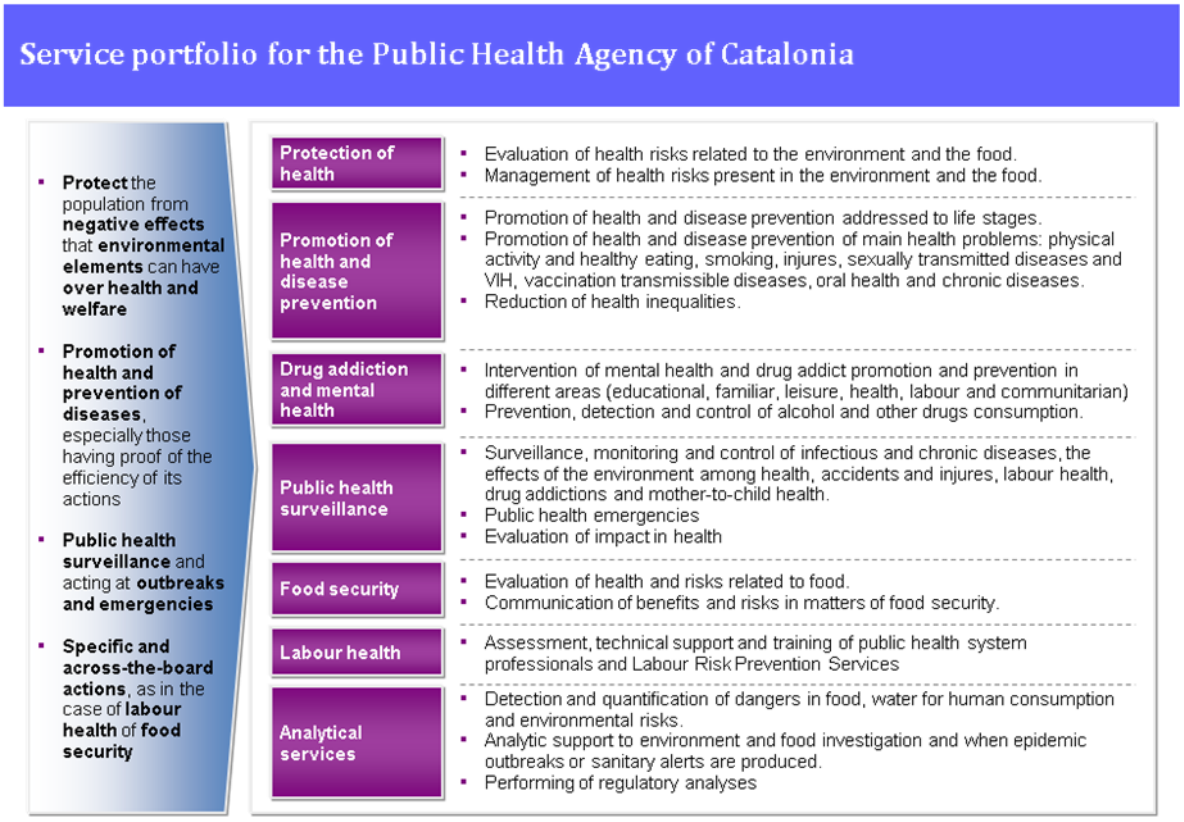
The new approach to public health and the role the community pharmacy must play will be used to improve the system's ability to resolve health issues.

Objective for 2015. Fully implement the ASPCAT service portfolio and the contracting thereof by CatSalut and have a healthcare service portfolio for pharmacies.

Objective for results in 2012. Finish the launch of the ASPCAT and the definition of the service portfolio for pharmacies.

Both the launch of the Catalan Public Health Agency and the definition of the service portfolio that will be a part of the standardised healthcare provision of the health system give way to innovative perspectives that should have an impact on the progression of diseases and their determinants, both from the point of view of incidence and prevalence and that of morbidity/mortality, particularly that which is premature and avoidable.

The actions of the service portfolio focus on activities which have an influence on the determinants, causes and health risks of the most prevalent health problems. They work towards the protection and promotion of health, disease prevention and health monitoring.



Source: Health Department.

The consolidation and reinforcement of this action in public and community health, together with coordinated interaction with the rest of the healthcare areas, will result in the improved adaptation of intervention levels in terms of cost-effective added value, in turn enhancing the resolution of the whole system.

In the area of community, there is an opportunity to involve agents and mechanisms that can efficiently perform specific tasks related to health promotion, prevention, monitoring and guiding the population. Here the role of pharmacies and their community perspective must be highlighted. The system must progress towards new ways of promoting the professional services of community pharmacists, which include the provision of healthcare services that can contribute to the correct clinical monitoring of patients.

Finally, inter-ministerial action is one of the driving forces that will make it possible to harness the potential of public health services.

i. Examples of on-going initiatives

- Physical Activity, Sport and Health Plan (PAFES).
- Mediterranean Diet Promotion Programme (AMED).
- Programmes for the promotion of the health and the prevention of drug use in the educational community and leisure areas.
- Participation of the pharmacies in screening for colon cancer.
- Programme to determine the risk of HIV infection through a rapid test.
- Programme to care for drug-dependent patients through treatment with opiate agonists at pharmacies.

ii. Objective for 2015

- Fully implement the ASPCAT service portfolio and the contracting thereof by CatSalut.
- Have a healthcare service portfolio for pharmacies.

iii. Objectives for results in 2012

- Finish the launch of the ASPCAT and the definition of the service portfolio for pharmacies.

iv. Objectives for processes in 2012

- Deploy the Public Health Agency in the lines of service and in the regions and sectors.
- Publish the public health service portfolio.
- Sign the contract-programme with the Ministry of Health/CatSalut.
- Identify the strategy to involve pharmacies as community health agents.

v. Actions after 2012

- Extend the service portfolio of the community pharmacy. 2013-2015.

Line of action 4. A higher-quality, more equitable system in terms of highly specialised care

- **Highly specialised procedures and treatments** are elements that require a very specific focus.
  - The variability of the quality of tertiary service provision is very high.
  - The prescription of high-complexity drugs must be harmonised.
- **There are five important principles** that serve as the foundation of the new model of highly complex tertiary procedures and treatments:
  - Offer citizens a **quality service**.
  - Provide an **equitable service**.
  - Continue to be a **hub of medical prestige and innovation**.
  - **Take advantage of the resources** allocated to this type of service.
  - Ensure that management is **dynamic**.
- Based on these need, **two important projects** have be defined**:**
  - **Reorganise highly specialised** procedures.
  - **Harmonise high-complexity drug treatments**.

Tertiary services are **a series of the highly specialised services that require a great deal of technology and professional expertise, usually at a high cost,** and which, given their low prevalence and high complexity, are better concentrated into a small number of providers. Due to this, unlike other public services, tertiary services must be planned within a national, and not regional, framework. Furthermore, the characteristics of the highly complex treatments associated with tertiary procedures also make it necessary to manage them in a particular way.

The differential characteristics of the tertiary procedures and high-complexity treatments can be summarised as follows:

- The low frequency of procedures that effects their management.
- The need for professional expertise and multidisciplinary teams (organisational complexity).
- Increased need for technology (use of sophisticated, very costly equipment).
- Generally high costs.
- Highly complex interventions accompanied by high risk.
- A high level of specificity (low prevalence and very specific procedures).

- New, innovative drugs: pharmacological therapies for rare diseases, advanced therapy, gene therapy, etc., with little available evidence when authorising their use and a high cost.
- Difficulty in measuring the health results in standard clinical practice conditions, both for healthcare interventions in general and medicines in particular.

Given the characteristics of tertiary procedures and the high complexity of the treatments associated with them, there two priority aspects:

a) It is important to reorganise the structure of tertiary services in Catalonia.

b) Prescription of high-complexity treatments must be harmonised.

a) It is important to reorganise the structure of tertiary services in Catalonia

Clinical variability in the provision of tertiary services is very high. This variability is **linked to the caseload of each centre** (results in terms of health are better in centres with a very high caseload).

There are proven international studies that provide evidence of the relationship between caseload and health results. By way of example, the table below shows the results of a study of different procedures:[38]

Procedure	Average mortality rate (%)	Average difference between mortality rates at low- and high-volume centres (%)
Coronary angioplasty	1.9	0.2
Paediatric heart surgery	7.3	11
Surgery without ruptured aortic aneurysm	7.5	3.3
Surgery with ruptured aortic aneurysm	49.8	7.9
Surgery for pancreatic tumours	9.7	13
Surgery for oesophageal tumours	13.9	12
Surgery for lung tumours	5.5	1.9
Surgery of stomach tumours	10.9	6.5

Studies carried out in Catalonia also show an association between volume and quality as well as a general tendency to carry out tertiary procedures in a large number of centres, in many cases, below the recommendable critical mass.

Moreover, in comparison to other services, **tertiary services represent a huge cost for the health system**.

These arguments justify **the need to concentrate certain tertiary procedures into centres or units of reference**. This concentration will produce certifiable benefits in two areas: higher quality (linked to caseload) and greater efficiency.

In addition, also being debated is **the type of regional distribution these services should have**. Currently, Barcelona city and its metropolitan area are a magnet for tertiary services; it must be pondered, objectively, if this situation of regional asymmetry indeed implies a benefit, or whether in some specific cases this distribution might be corrected. Overall caseload, the availability of the offer, and the assessment of the accessibility level of each procedure must be used to define the most reasonable balance.

Lastly, the importance of carrying out tertiary service planning must be emphasised, not only in regard to the structuring of the provision and regional planning, but also in terms of **planning the catalogue for procedures and highly specialist pathologies and monitoring tertiary activity and how it will develop in the future**.

b) The prescription of high-complexity drugs must be harmonised

The pharmaceutical offer for high-complexity treatments is characterised by a high level of innovation, which means new medicines appear constantly. In this context it is imperative that the selection and use of medicines be harmonised, in accordance with a framework of actions and a decision-making processes that ensure:

- Equity of access to medicines and treatments.
- Improvement of efficiency and effectiveness levels, maximising the utility of the therapy.
- Resource effectiveness and sustainability.

In regard to medicines in the hospital sphere, in recent years the number of new drugs has increased considerably as well as the approval of new indications for active ingredients already on the market, and it is expected that this process will continue in the future, due to the current development of pre-clinical and clinical research.

Currently it is **the committees of each hospital that are in charge of determining which medicines will be included** in their pharmacotherapy protocols, based on criteria of scientific evidence. Thus, each centre carries out the scientific selection and evaluation of medicines and use, and draws up pharmacotherapy protocols on the use of these medicines.

Despite the fact that in-hospital decision making has its advantages, it may give rise to differences or discrepancies between hospitals. This can generate an unjustified variability in the use of medicines.

Principles and model

The principles governing the management of highly specialised services must constitute a base that brings these services closer to the objectives of the Catalan health system (improving citizens' health without jeopardising the sustainability of the health system).

- Offer a quality service to citizens**.** In many cases, highly specialised services call for very complex interventions, and high-quality standards must be guaranteed. In the case of medicines, high-complexity drugs are used for the different clinical processes and cost-effective results are not always guaranteed.
- **Provide citizens with an equitable service that minimises clinical variability.** Unlike other services, for tertiary services, in many cases, it is impossible to guarantee the proximity of the service and maintain quality at the same time. Therefore, in the case of these services, the equity of health results is prioritised over proximity. This makes it necessary to analyse in detail which is the optimal structure in terms of centralisation/decentralisation for each one of these procedures or pathologies and, in the case of medicines, reduce the clinical variability of use, by harmonising their protocols for the entire CatSalut system.
- **Promote tertiary services as a hub of medical prestige and innovation in Catalonia.** To do so, the development of professionals must continue to be guaranteed in order to improve the quality of the interventions and maintain Catalonia's standing as a benchmark in terms of highly complex case resolution and research, teaching and innovation in clinical practice, all the while facilitating the inclusion of medical, surgical and pharmacological innovations, among others.
- **Assess and direct management towards the achievement of results.** To base the planning of tertiary services on the results obtained, a sufficient volume of cases must be guaranteed in order to be able to use health result assessment and measurement mechanisms. Patients' records and the monitoring of pharmacological treatments are fundamental initiatives which have to be promoted.
- **Ensure that the management of tertiary services is dynamic.** A service may be considered tertiary and, due to changes in clinical technologies/practices or the extension of a specific pathology, may later be general in nature. However, as the medical science and technology advance, new practices must be included that will initially be considered as tertiary.

Strategic projects

Based on the principles defined, two main projects are proposed:

Project 4.1. Restructuring of highly specialised procedures

Restructuring possibilities will be analysed for each of these procedures, based on a series of criteria focused on guaranteeing better-quality healthcare.

Objective for 2015. For 18% of the procedures being restructured, guarantee that 100% of the population is being cared for by centres which comply with the defined criteria.

Objectives for results in 2012. Guarantee that the critical mass criteria to ensure high-quality healthcare provision are complied with for the eight procedures.

The restructuring of tertiary procedures is based on a series of criteria defined on the basis of their principles. The **provision of the different tertiary procedures in Catalonia will be structured on the basis of these principles**. For each one of these tertiary services, an analysis must be made based on the following criteria:

- Minimum volume or a sufficient critical mass of cases. This need is especially evident in the case of infrequent processes or very costly resources. The point is to minimise the risks of these practices and ensure the necessary abilities and skills through accumulated experience. There is evidence that centres which offer highly specialised procedures but do not meet the minimum volume have difficulty in providing a service with the required service quality guarantees.
- An appropriate environment in which to carry out the service. It is necessary to be able to guarantee the interrelation with other processes or between the different professionals from the perspective of a multidisciplinary approach. This makes it possible for a centre in which highly specialised services are provided to be able to maintain teams of leading professionals who work using a multidisciplinary approach.
- Appropriate technologies and infrastructure. In executing certain procedures, there is a degree of complexity which not only calls for special teams of professionals, but also state-of-the-art technological equipment that represents a substantial investment and whose degree of use should be maximised. Thus, support services that meet the complexity level must be made available in hospitals.

- Internal culture of the centre. This point refers to the hospital model which the centre providing services of a tertiary nature must adopt. These centres often focus on technological and healthcare development and become involved in other key areas, such as teaching and research or innovation.
- Regional distribution and collaborative functional units. Despite the fact that tertiary services call for concentration, when deciding how to reorganise these services, the desired regional distribution should be considered. The fact that efforts must be made to concentrate tertiary services in centres of reference does not always imply their location in one set place, and criteria such as proximity or accessibility and population volumes according to procedures and pathologies must also be considered. Therefore, the restructuring of tertiary services brings with it the opportunity to create collaborative functional networks or units that increase the interrelation between the centres in order to offer a model of both clinical excellence and proximity.

Analysing the situation based on these criteria, it is necessary to restructure and reorganise certain high specialisation services.

- The Committee for Highly Specialised Services **(CSAE) is the executive body which ensures** the correct development and organisation of tertiary services in Catalonia**. The main functions of this committee consist in analysing, prioritising, and proposing actions related to the organisation of the provision of services and of highly specialised services within CatSalut, as well as formulating the necessary strategy to develop and implement them.**
- **For each of the interventions established in the 2011-2015 framework, and based on the criteria previously defined, organisation solutions can be proposed for the following areas:**

  - **Reinforce** certain **centres as centres of excellence** to which request for tertiary care should be referred.
  - **Concentrate the activity in a specific centre** and stop it at other facilities which do not comply with the established requirements, especially at those centres that do not reach the minimum critical mass of activity.
  - **Create alliances between centres** (collaborative functional units) as part of a network model in order to increase the volume of activity. These functional units are the result of strategic agreements between entities and help to create multicentre services with which to provide quality service with the best results and maintain a healthcare model that is in touch with patients.
  - **Promote the role of the SEM (Medical Emergency System)**, as its function is vital to the management of the processes in which response time is a deciding factor, such as Code Heart Attack, Code Stoke or Code Multi-trauma; as well as in cases where inter-centre transportation is vital to case

prognosis: premature births, critical newborns, etc. The coordination function of the SEM guarantees the selection of the correct circuit to follow according to the patients' profile and the timely intervention of the centres of the healthcare chain receiving emergency and urgent cases.

The implementation model for the restructuring of tertiary services revolves around the work done by the CSAE. Said committee is in charge of analysing the situation in collaboration with boards of trustees, the hospital network, and scientific societies. This analysis must include solutions based mainly on the abovementioned areas.

When implementing restructuring, two **mechanisms can be adopted**, depending on the complexity:

- For less complex cases, **the identification and communication,** through the network, of the centres of reference for a specific process (by means of an ordinary notification).
- When the complexity of the structuring calls for the regulation of centres of references, regions, and other criteria that affect the management of healthcare and the relationship between centres, CatSalut will use more formal **regulatory elements** (such as instructions).

i. Examples of on-going initiatives

- The Committee for Highly Specialised Services (CSAE) has been set up and is reviewing the tertiary procedures related to congenital heart diseases, pulmonary arterial hypertension, cochlear transplants, and tertiary multi-traumas. Furthermore, the restructuring carried out through the implementation of Code Heart Attack in angioplasty procedures has been successfully executed.

ii. Objective for 2015

- For 18% of the procedures being restructured, guarantee that 100% of the population is being cared for by centres which comply with the defined criteria.

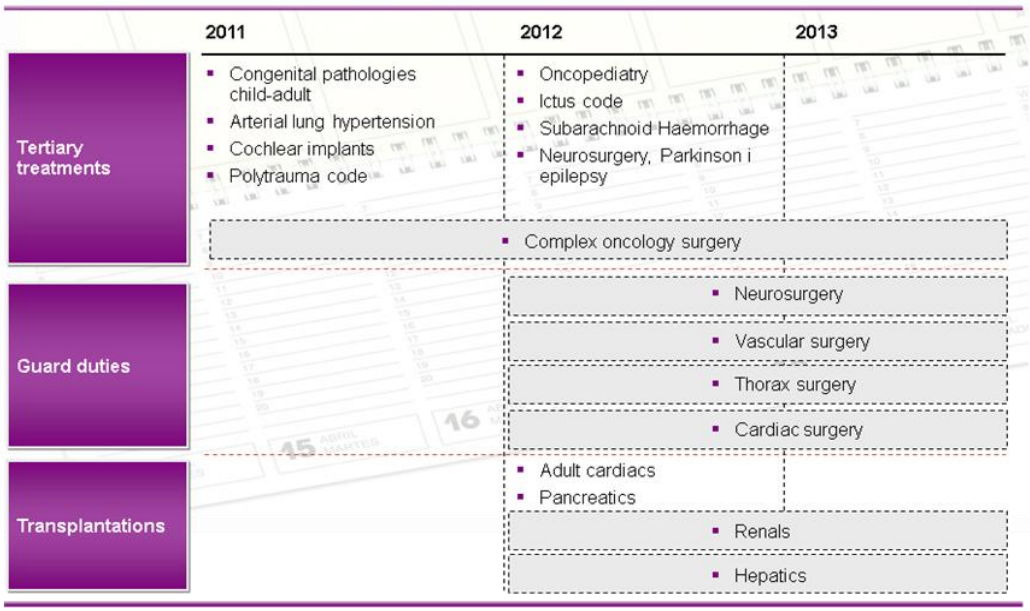
Within the scope of this Health Plan for Catalonia 2011-2015, the objective is **to propose the right framework for the restructuring of highly specialised services,** which matches the established principles.

Moreover, decisions must be make on which **tertiary services are to be prioritised and restructured in this period**. These interventions have been selected based on both their relevance in terms of the impact on the health of citizens and the cost which they represent for the system, as well as potential room for improvement for both concepts. It must be kept in mind that, as the period is long-term and due to the dynamic nature of tertiary services, this list of services may grow over the next few years. The restructuring of these

services will be carried out on the basis of the principles and criteria previously defined.

There, the timeline for restructuring has been outlined as shown in the following table:

Planning of the reorganization of tertiary procedures 2011-2015



Source: High Specialization of Commission of Services (CSAE).

This restructuring of tertiary activities also brings with it the need to evaluate which regional structure that is to be given these services. Logically, the need to concentrate centres will lead to a more centralised model, although in specific cases it may be necessary to evaluate the transfer of functions on a proximity basis. In any case, the main criterion for tertiary services should be the **guarantee of equity in results** more than proximity.

iii. Objectives for results in 2012

- Guarantee that the critical mass criteria to ensure high-quality healthcare provision are complied with for the eight procedures.

iv. Objectives for processes in 2012

- Complete restructuring for the eight highly specialised procedures.
- Define the general criteria for the restructuring of 10 additional procedures.

Project 4.2. Harmonise the prescription of highly complex pharmacological treatments

The provision of pharmaceuticals will be harmonised, based on common procedures and cost-effective criteria at all healthcare centres.

Objective for 2015. Harmonise a total of 25 protocols each year.

Objective for results in 2012. Increase the number of harmonised protocols for at least 20 treatments.

To **harmonisation highly complex treatments, two programmes are being implemented**: The CatSalut Programme for Assessment, Monitoring, and Funding of Highly Complex Pharmacological Treatments (**PASFTAC**) and the Programme for Pharmacotherapy Harmonisation of Outpatient-dispensed Hospital Medication (**PHFMHDA**), with the following functions:

- **Harmonisation of the pharmacotherapy protocols for highly complex treatments** in which hospital medication is dispensed to outpatients under the CatSalut system. Harmonisation will include recommendations on the place for standard clinical practice, the relevance of the treatment (type of patients), conditions of use and dispensation of medication, as well as criteria for monitoring and response to therapy, clinical discharge, and the efficiency of these treatments.
- Identification, **proposal and promotion of measures for the optimal implementation of these pharmacotherapy protocols** for highly complex treatments. In order to implement the harmonised protocols, it is necessary to first identify the mechanisms that take into account the peculiarities of the health system in Catalonia and which enable implementation within the framework of CatSalut and the different providers.
- **Reinforcement of the filing of clinical and administrative data.** Monitoring of the epidemiological and health results of the patients treated for diseases for which highly complex pharmacological treatments are authorised and quantification of their cost and cost-effectiveness.
- **Creation of the Advisory Council for High-Complexity Pharmacological Treatments** to:
  - Advise CatSalut on all aspects related to high-complexity pharmacological treatments.
  - Evaluate the applications for authorisation, renovation, suspension or cessation of highly complex pharmacological treatments and issue the relevant reports.

i. Examples of on-going initiatives

Currently, the initiatives underway in the area of harmonisation and high-complexity pharmacological treatments are:

- PASFTAC (eighteen drugs with available reports) and PHFMHDA (three drugs with available reports) programmes on 1 November 2011.
- Patient register in the last phases of design.

ii. Objective for 2015

In the context of the rational use of medicines, define and implement a global policy of pharmaceutical provision in terms of access to drugs which includes the clinical and economic facet, and, above all, measures clinical results. Namely:

- Harmonise a total of 25 protocols each year.

iii. Objectives for results in 2012

- Increase the number of harmonised protocols for at least 20 treatments.

iv. Objectives for processes in 2012

- Extend the PASFTAC and PHFMHDA programmes in order to increase the number of harmonised protocols per year.
- Introduce the clinical data register and guarantee the registration of at least 35 selected medicines.

The two projects proposed—the restructuring of highly specialised services and the harmonisation of highly complex treatments—are closely intertwined, conditioned by the objective to guarantee a restructuring scheme based on healthcare continuity and unity at centres.

It is imperative that a series of crosscutting instruments or facilitators be developed to give support to one or more of the projects for changing the care model contained in the Health Plan. These instruments highlight the need to develop a model to stratify risk among the population, adapt the outsourcing model, develop shared information tools (unified clinical history, deployment of e-prescribing on all healthcare levels) and design and implement rigorous evaluation and accountability processes that assess the results of the actions executed. All these elements are part of the organisational model of the system, which has slowly evolved over the last few years. **The modernisation of the organisation (which is dealt with in the following chapter) is one of the keys to ensuring the success of this Health Plan.**

IV.III. Modernisation of the organisational model: a more solid and sustainable health system

Line of action 5. Greater focus on patients and families

- The Catalan Health Service must progress toward a **model of public healthcare provider**.
- The proposed model, with a greater focus on citizens, is based on the following **principles**:
  - Greater proactivity on the part of the healthcare provider in this relationship.
  - Increased transparency with citizens regarding the commitments and the services of the healthcare provider.
  - Strengthening of the co-responsibility of citizens.
- **Three key projects for change** are proposed, and for each one a goal for 2015 is defined:
  - Improve citizens' knowledge of the health system and the services covered by the public healthcare provider.
  - Manage risk to those covered by the system.
  - Guarantee the quality of the service provided and patient satisfaction.
  - Encourage the participation of those covered through direct mechanisms, such as the Rare Diseases Advisory Committee or the Catalan Patient Council.

CatSalut is making progress in taking on the role of public healthcare provider and, within the framework of this progress, we have prioritised:

- Promotion of a model which establishes a proactive relationship with those covered by the system.
- Definition of CatSalut's commitments to those it covers, in order to achieve a relationship that is maintained based on trust and self-demandingness.
- Establishment of a model of public health insurance that backs self-healing by and the responsibility of patients, on two levels: tasks of a more administrative nature and those to improve and care for their own health.

- Promotion of sector-based and stratified actions in accordance with sector-based analyses of risk, which implement actions aimed at preventing disease and promoting health.

Principles and model

We propose a model based on the following three principles:

- Greater proactivity on the part of the public healthcare provider in this relationship.
- Increased transparency with citizens regarding the commitments and the services of the public healthcare provider.
- Strengthening of the co-responsibility of citizens.

According to these principles, we will base the model on the following four core concepts:

- **Guarantee that the citizens are familiar with the system and the services**. High degree of proactivity in the relationship with those covered and greater transparency in the commitments to the insured and the functioning of the system. Role of insurance must be clearly differentiated from service provision.
- **Manage risks to those the system covers**. A deep knowledge of the risks posed to the covered population, promotion of a greater autonomy among the insured in managing health, both in the resolution of contacts of an administrative nature and the self-healing their own pathologies.
- **Ensure the quality of the service provision**. Emphasis on accreditation and insurance procedure criteria by defining the service portfolio and the level of coverage for the different insured groups.
- For their implementation, these three core concepts will have the support of a fourth concept, which consists in an **integrated system of communication with those covered by the system**, developed in line of action 9 in this Health Plan.

Strategic projects

In accordance with these principles and core concepts, **we propose three strategic projects, with objectives up to 2015, and clear commitments**.

Project 5.1. Improvement to citizens' knowledge of the integrated public health system and the services covered by CatSalut as the public healthcare provider

This will be carried out through four main actions: (1) transparency in the service catalogue; (2) manual to incorporate users in the system; (3) continuity and safety of healthcare in the territory; and (4) proactive segmentation.

Objective for 2015. Make sure that 90% of the population is aware of who provides them with health coverage and what services are offered.

Objective for results in 2012. Make sure that 50% of the population is aware of who provides them with health coverage and what services are offered.

Through this project, we aim to emphasise the value of the Catalan Health Service card held by those it covers. In order to achieve this, we believe that at least four differentiated actions should be carried out. These are listed below:

- **Transparency in the catalogue of services**. Define the service catalogue, disseminate it and make sure it is applied. Relationship tools and a model explicitly for access to services in accordance with population characteristics and network structure must be implemented. A public insurance policy must also be defined in collaboration with the Catalan Ministry of Health, which will be effective by means of the individual health card (TSI).
- **Manual to incorporate users in the system**. Elaborate an explicative manual for citizens in order to show them how they should move through the system (coverage, better practices in the most common situations, etc.). The idea is to establish a framework of co-responsibility and citizen participation that promotes the sustainability of the public health system. Information on what it costs to insure citizens must be improved.

  We propose to complete this action by providing specific information on the individualised cost of access to health services (raising awareness and co-responsibility). This will involve defining not only the user's guide for the insured, but also an information model for professionals.
- **Healthcare continuity and safety in the territory**. Visualise the concept of the insured person and his right to certain types of coverage, both in Catalonia and beyond, such as in the rest of Spain (Integrated Information System of the Healthcare Cohesion Fund, SIFCO), through the implementation of a model that is based on guaranteeing healthcare continuity.
- **Proactive segmentation**. Launch processes through which the system tends to certain population groups according to positive discrimination

characteristics. Some examples are the individual health card (TSI) in Braille and the *Cuida'm* (Take care of me) card for very fragile groups and their caregivers.

i. Examples of on-going initiatives

- Access to the certificate of inclusion in the waiting list register.
- *Cuida'm* card.

ii. Objectives for 2015

- Make sure that 90% of the population is aware of who provides them with health coverage and what services are offered.

iii. Objectives for results in 2012

- Make sure that 50% of the population is aware of who provides them with health coverage and what services are offered

iv. Objectives for processes in 2012

- Dispose of the catalogue of benefits and services.
- Launch the individual health card Braille and ensure that 90% of applicants receive the card.
- Undergo the pilot test and evaluation of the *Cuida'm* individual health card.
- Edit and distribute the guide on using the system (in collaboration with the Ministry of Health's Communications Office).
- Start defining the charter of rights and obligations.

Project 5.2. Management of the risks to citizens covered by the health system

This will be carried out through population stratification and the promotion of programmes to educate citizens on the health system and self-healing and inter-ministerial programmes (especially related to education and welfare and family).

Objective for 2015. Ensure that the entire population of Catalonia (100% of those with some kind of contact with public health) has their risk profile identified and up to date and their progress over the two previous years recorded.

Objective for results in 2012. Stratify 100% of the population according to risk based on a predictive model and design at least three specific

interventions for 2013, such as the identification of 100% of frequently readmitted patients with the defined profile.

This is the second project being promoted that involves the relationship with the insured/citizens. Its ultimate goal is to enhance the risk management which we carry out for those covered by the health system. Thus, internally, we have to make sure that we know the risks of our insured population base and take action accordingly.

Knowing the risks present among the insured population will increase the number of prevention and health promotion actions by improving the response capacity of the public healthcare provider and making it more efficient. Those covered by the system must understand that the risk assessment is part of the responsibility they share for their own health, and it favours the introduction of health as a multilateral concept thanks to policies based on education for health.

The possibility of incorporating the health objectives prioritised in the Health Plan into the healthcare policy of private insurers must be assessed as an element favouring health promotion.

Better knowledge of population risk will facilitate the implementation of specific actions for groups which are especially vulnerable and which are relevant in the framework of the specific actions defined in line of action 2 ('A system that is more focused on chronic patients').

The activities to be carried out are the following:

- **Population stratification**. Define population groups with standardised risks to facilitate the development of preventive and health promotion actions. In order to improve the management of the health risks of the different population groups, a model to divide the population into sectors using the Central Registry of Insured Persons (RCA) as a basic tool must be implemented.

  Population groups with homogeneous characteristics in terms of place, age, pathology or habit in the use of resources should be established in order to design specific portfolios adapted to the profiles chosen for those covered.

  It is, therefore, important to solidify the concept of knowing the risks among those covered by the system in order to offer them personalised treatment and services by which to resolve their health issues. A model for managing demand cannot be understood without a deep understanding of population risk knowledge models.

- **Educational and self-healing programmes**. Patients' knowledge of their pathology should be promoted and their actions should be made more cost-effective, both for the good of their health and of the system in general. This is why professional practices should incorporate and integrate the experience

of the patients, according to the identification and evaluation of their needs and expectations.

This is the context in which we should focus on *Pacient Expert Catalunya*. We should take into account the role that entities such as the Catalan Patient Forum and other patients' associations should play, as their expertise and transfer abilities make them powerful interaction channels.

- **Multi-ministerial programmes**. In addition to involving citizens in risk and accident management in relation to their own health, we must also be open to other specific relationships. Interactions with education and work have special relevance in matters of health, and shared, integrated and continuous management models should be established in conjunction with social services and those providing aid to dependent persons.

i. Examples of on-going initiatives

- Promote the use of technologies which facilitate the remote involvement of the citizens: Virtual Procedures Office, registrations in the RCA with personal notifications.

ii. Objective for 2015

- Ensure that the entire population of Catalonia (100% of those with some kind of contact with public health) has their risk profile identified and up to date and their progress over the two previous years recorded.

iii. Objectives for results in 2012

- Stratify 100% of the population according to risk based on a predictive model and design at least three specific interventions for 2013, such as the identification of 100% of frequently readmitted patients with the defined profile.

iv. Objectives for processes in 2012

- Implement the classification of the population into clinical risk groups (CRG) based on the minimum basic data set and pharmacy data.
- Identify the people who fit into profile of frequently readmitted patients associated with the clinical conditions prioritised in the Health Plan.
- Implement primary emergency healthcare minimum basic data sets.

Project 5.3. Guarantee of service quality and patient satisfaction

This will be carried out through extensive monitoring of user satisfaction and a review of the complaint and claim management model.

Objective for 2015. Improve citizens' satisfaction with the health services received by 5% in comparison to 2011.

Objectives for results in 2012. Cut claims for unfair treatment by 10% and attain a 1% increase in satisfaction in comparison to 2011.

The good quality of the service must be guaranteed through the prioritisation of patient satisfaction with the service. The concept of evaluating the healthcare provider network's performance as a whole and not just that of the individual entities must be introduced. Against this backdrop, we think that there are three elements which we must continue to promote:

- **Satisfaction Survey Plan (PLAENSA) for those covered by CatSalut**. More in-depth knowledge on the qualitative perception that citizens have of the benefits and services of the public health system is needed. This is why proven, valid, and trustworthy methodological tools must be used, to allow processes for the continued improvement of healthcare quality to be implemented.
- **PLAENSA is a clear example of actions aimed at fostering and improving knowledge on citizens' perception of health system services.** Its research channels must be redefined and its use as a fundamental tool promoted in order to improve the management of the provision of services. Its results should be used to benchmark and as a way to help develop policies on the transparency of information for those covered by the system. This action has to be backed by the implementation of mechanisms which facilitate the communication of the results on the satisfaction and expectations of the insured population.
- **Processes for proactive commitment**. In the face of certain demands for preferential actions for specific groups, the public healthcare provider must respond with active and effective commitments of compliance through the methodological tools established. This response by the healthcare provider should be correct both in timing and results and must be made known to the interested parties.

  We are talking about processes and activities agreed upon by groups of citizens with identified risks who make specific demands which, once taken on by the healthcare provider, must be resolved and assessed transparently (e.g. rapid cancer diagnosis, rare diseases, continuous care during periods of intense medical assistance, etc.).

- **Management of claims and complaints**. The claims and complaints of those covered by the system are, in terms of management, an element which helps to know about and improvement the quality of the services. The proposal is to evolve towards an integrated model for the management of claims and complaints that enables the main reasons for citizen dissatisfaction to be identified and standardised and, at the same time, the most adequate elements for improvement to be suggested.

  A good model of claims management must allow the implementation of sector-based policies for improvement and the definition of benchmarking elements among providers. The use of new technologies in the management of claims should be promoted in order to facilitate a more efficient management of the resources used in their processing and resolution. Therefore, specific knowledge on annual claims must be transformed into proactive improvement policies on service provision.

  Other measures and methods to access citizens' opinion, such as the use of social networks, should be used.

i. Examples of on-going initiatives

- PLAENSA in place since 2003 (each year, different healthcare levels), present satisfaction levels are very high (8.2/10).

ii. Objective for 2015

- Improve citizens' satisfaction with the health services received by 5% in comparison to 2011.

iii. Objectives for results in 2012

- Cut claims for unfair treatment by 10%.
- Attain a 1% increase in satisfaction in comparison to 2011.

iv. Objectives for processes in 2012

- Carry out and communicate the results of the PLAENSA© 2012 planned studies (PHC, HC and AMHC).
- Elaborate a model to respond to unfair treatment claims and the pilot test in the Barcelona region (apply the improvements in the filing of these claims to the whole region).
- Elaborate a more transparent and interactive accessibility model for health services.
- Create of a model of citizen participation for all those areas of the health and management boards which are not participative (line of action 8).

ICTs should be used as tools to facilitate this management process, a crosscutting element of the policies aimed at improving the system's relationship with those it covers. Therefore, we have developed a specific project for a multichannel communication and citizens' care network (see line of action 9, project 9.2).

It is very important to guarantee the accessibility of these tools and evaluate the improvement results obtained with them. In regard to the relationship between the system and those it covers, we should consider the following:

- Promoting the use of the Internet as an element to bring government, providers, and citizens closer together (use of the possibilities of the ICTs as an element of cooperation between the two parties).
- Introducing the use of ICTs to those covered at the different levels of interaction with the healthcare provider (self-management of services, self-healing, accessibility, knowledge of the coverage, etc.).
- In regard to measures planned as part of this line of action, in many cases, they can be linked with other projects of the Health Plan.

The citizens should consider ICTs as tools that improve the services provided by the system. The use of these tools should enable professionals and the healthcare provider to improve professional performance while making the system more sustainable. They solve problems for all the actors of the system and, therefore, enhance its effectiveness and resolution capacity.

Line of action 6. New, more results-focused healthcare procurement model

The procurement model will be adapted to the new needs of the healthcare model, making it more focused on results, achieving a greater integration among healthcare levels and continuing to promote system efficiency. The changes will involve the following key elements:

- Implementation of results-oriented payment (health, accessibility, integration, satisfaction, etc.).
- Introduction of incentive formulas as a lever to facilitate the achievement of the objectives.
- Purchasing of highly complex and tertiary procedures separately.
- Agreements on shared risk with the pharmaceutical industry, linked to health results.
- Adaptation of the solution to particularities of each region, respecting the established principles.

There are four strategic projects to implement the new **procurement model**:

- Implementation of a new, more equitable and transparent population-based model for regional allocation.
- Implementation of the new procurement model and incentives linked to results (healthcare to treat chronicity, enhancement of primary healthcare purchasing capacity, and a new accessibility model).
- Implementation of the new procurement model for highly specialised procedures.
- Incorporation of clinical results-based drug financing (shared risk agreements with the pharmaceutical industry)

Modifications and adaptations must be made to the compensation instruments in order to align the incentives with the objectives established in the transformation block of the healthcare model, prioritising and promoting:

- The provision of healthcare better at resolving health issues, which allows patients to be seen at the most appropriate level.
- The promotion of in-network collaboration among different providers, introducing changes to the healthcare model, especially in cases of chronicity and high complexity.
- The design of a system of incentives that is not as conditioned by the existing structure, but rather by the needs of individuals, in order to contribute to the goal of promoting patient-focused healthcare.

The foundations for this process have already been put in place. In 2002, an experiment involving a population-based payment model was launched in five demo areas, with the ultimate goal of solving the problems generated by fractioned purchasing by lines of service and evolving towards integrated health service procurement by allocating a per-capita budget to the providers working in a specific geographical area with differentiated offers.

The assessment of this demo experience has pointed out two positive aspects:

- It is useful in generating changes in the organisation of the providers.
- It is oriented towards a more integrated model.

At the same time it showed that, **in order to go on improving the model, it would be necessary to:**

- Improve the allocation mechanism by introducing new factors for better risk adjustment.
- Generate incentives which boost crosscutting actions in order to promote prevention, care, treatment, and rehabilitation at the most efficient level.
- Provide a stable framework in the long term for the providers, in order to facilitate the structural changes they need to carry out to better adapt to the new service model.
- Ensure that the demo experiences are sufficiently long enough and that they compile learning experiences that help expand the model rapidly.

Principles and model

The procurement model proposed has a clear overall objective: to structure the system around the needs of citizens by improving the efficiency of health centres, services and facilities; to promote the in-network collaboration of providers; to facilitate synergies; and to guarantee healthcare quality and the equitable distribution of resources. **This objective is expected to be achieved through the regional allocation of resources based on the needs of the population.**

The proposal is based on the following five basic principles:

- Implementation of results-oriented payment (health, accessibility, integration, satisfaction, etc.).
- Introduction of incentive formulas as a lever to facilitate the achievement of the objectives.
- Contracting of highly complex and tertiary procedures separately.
- Agreements on shared risk with the pharmaceutical industry, linked to health results.

- Adaptation of the solution to particularities of each region, respecting the established principles.

Strategic projects

This model will be developed through **four key** projects.

Project 6.1. Implementation of a new, more equitable and transparent population-based model for regional allocation

The most innovative element of this model is that it includes morbidity rates, which will allow resources to be adapted to the state of the population's health in the future and promote better management of the associated risks.

Objective for 2015. Implement the new model for regional allocation in 100% of the regions of Catalonia and ensure its monitoring and assessment.

Objectives for results in 2012. Have the new regional allocation and provider model ready to be implemented in 2013.

This project consists in defining a **model which allows an allocation of resources to each region** that is adapted to the health needs of the population.

The construction of this model will be based on two types of variables: (1) socio-demographic variables that characterise the structure of the population (distribution by age and sex, dispersion of the population, level of income, etc.), and (2) variables that measure the morbidity treated (through case mix groups, such as clinical risk groups) in order to adapt the resources to the health status of the population and promote better management of the associated risks. The introduction of these variables is the most innovative element of this project, which will use information systems as a key facilitating factor.

Tertiary and highly complex procedures will be left out of the model, as well as special interest programmes of the Catalan Ministry of Health (PEIDS), since they require special consideration, as they are not activities which are related exclusively to a set region.

A basic aspect of the project is the **definition of criteria and the identification of the regional units in which the model can be applied**. In defining the regions, some basic criteria must be taken into account, such as the percentage of institutionalised population or the availability of the health resources needed to provide the basic service portfolio common to all of Catalonia. 150,000 inhabitants is the minimum value needed to meet both criteria.

This model will be completed in 2012, although a medium-term plan will be established to handle differences between the theoretical regional allocation and the allocation resulting from the present procurement model.

i. Examples of on-going initiatives

- Execution of demo experiences and the evaluation of a population-based service procurement model, which has shown to be beneficial to the system, as well as the need to include the measures for treated morbidity in the process of resource allocation.

ii. Objective for 2015

- Implement the new model for regional allocation in 100% of the regions of Catalonia and ensure its monitoring and assessment.

iii. Objectives for results in 2012

- Have the new regional allocation and provider model ready to be implemented in 2013.

iv. Objectives for processes in 2012

- Have the allocation model defined and ready to be implemented (2Q2012).
- Have a clear procurement model for providers in the region, one which reduces the regional allocation to each provider (2Q2012).

Project 6.2. Implementation of the new procurement model and incentives linked to results

Both individual and municipal association incentives will be promoted in the regions to achieve better Integration among providers.

Objective for 2015. Incorporate a minimum of 5% of the incentives in the new contracts.

Objectives for results in 2012. Have the new model of incentives for chronicity care and resolution designed, approved, and prepared to be implemented throughout Catalonia by 2013.

Regional allocation of resources should be applied to the contracts with the specific providers for each region, which should include incentives linked to the

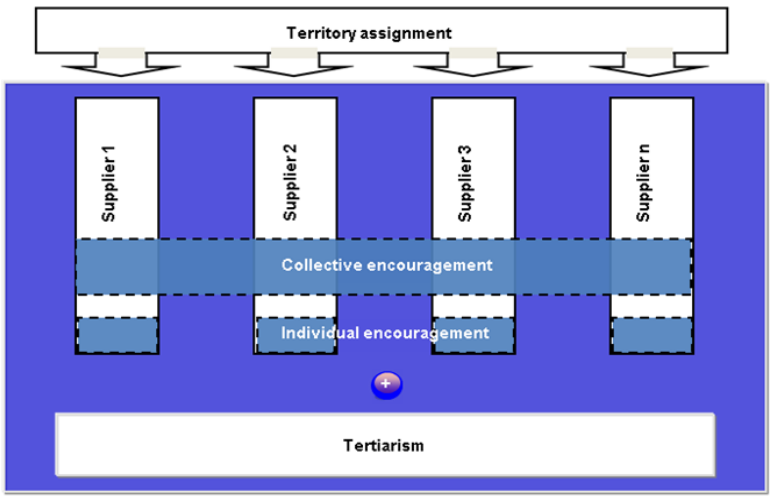
achievement of both of the objectives set for each provider and those set for the region.

Regional objectives must be crosscutting and dynamic, and should be related mainly to results regarding health, resolution, integration and satisfaction, the achievement of which depends on the participation and cooperation of different providers and healthcare levels.

In order to organise this, we will promote **a regional agreement through which we will determine, firstly, the collective objectives for the regional providers and, secondly, individual contracts** for each provider. We will delimit the contribution of each provider to the achievement of collective objectives, in order to attribute corresponding compensations through individual contracts, the payment of which will be conditioned by the achievement of the objective in the regional framework. It is important to highlight that the incentives must be transmitted from the main public healthcare provider to the individual providers, and from these to the professionals.

In order to make sure the objectives established **transform the healthcare model as indicated**, it is imperative that: (1) the incentives have enough weight to encourage the providers to make those changes (at least 5%); (2) the objectives set out are not static and vary over time; (3) the variable part is paid on account (deserved) and is regulated in retrospect.

Conceptual scheme of the proposed model



Source: Catalonian Health Plan 2011-2015.

Lastly, **in order to encourage cooperation processes with the providing entities and units** in Catalonia and to guarantee the significance and impact of assessment processes, the following activities must be carried out:

- Regional definition of objectives for results, in accordance with the instructions contained in the Health Plan and established based on the health needs and expectations of the population.
- Establishment, at regional level, of work mechanisms and dynamics so that decisions made be made in a coordinated way among the entities providing services in a specific region (key role of ICTs).
- Commitment, on the part of providers, to provide resources (structural, human and technological) and agreement on the organisational elements to be adopted for service provision.
- General and regional compatibility of the information necessary to establish the status of and risks to the health of the population and the existence of a common assessment system for all of Catalonia (closely linked to the role of the Catalan Health System Observatory and to systematic clinical assessment, developed in projects 9.3 and 9.4).

In order to ensure the success of the project, **we will promote the continuous evaluation of the mode**l during its implementation in order to define areas for improvement and to apply it throughout Catalonia in the most efficient way possible.

This project includes three sub-projects:

- **Introduction of incentives to promote better and more coordinated healthcare for chronic patients** in the health services contract**.**

  We propose linking the incentives to elements such as the nominal identification of complex chronic patients in the regional framework, the implementation of actions aimed at the adequate use of the health resources, the decrease in emergency admissions and consultations, and the adequate use of medicines.

- **Promotion of the purchasing capacity of primary healthcare**. One of the priority lines of the transformation of the healthcare model is the increase in the resolution capacity of primary healthcare. Different actions, such as access to diagnostic testing or other professionals, or the establishment of relationship protocols with specialised healthcare, could contribute to achieving this goal.

  This project consists in incorporating a procedure into primary healthcare service contracts which gives them increasing power over the purchase of certain intermediate services (such as scheduled transport, referrals to

specialised care, and so on). Its goal is to gradually provide primary healthcare with more and more resolution capacity.

This project will be launched in a limited number of primary healthcare teams (EAP) and selected services, and it will be gradually extended, both in terms of teams and services.

In carrying out the project, there are two alternatives: (1) through direct purchase by a region's EAP, and (2) with the MAC (maximum allowable cost) model, which allocates maximum expenditure by EAP. However, possible side effects of the latter measure should be monitored, namely that EAPs undergo an increase in the transaction costs, which at present are minimal.

- **Implement a new accessibility model.** The project consists in including in the contracts the elements needed to move from the present model, based on the volume of patients on the waiting list and centred on the purchase of the activities on that list, to a model based on the recognition of the clinical priority of some patients over others.

i. Objective for 2015

- Incorporate a minimum of 5% of the incentives in the new contracts.

ii. Objectives for results in 2012

- Have the new model of incentives for chronicity care and resolution designed, approved, and prepared to be implemented throughout Catalonia by 2013.

iii. Objectives for processes in 2012

- Have an incentive model, with defined indicators that have been negotiated with the agents.
- Have at least two demo experiences with the collective incentives.

Project 6.3. Implementation of the new procurement model for highly specialised procedures

A price will be assigned to each highly complex tertiary procedure as organisation is revised.

Objective for 2015. Separately purchase the eighteen highly specialised procedures that are to be reviewed until 2015.

Objectives for results in 2012. Be able to purchase separately the highly complex procedures that will be restructured during 2012.

Currently, the procurement of highly complex tertiary procedures is done along with the rest of the services. Due to their singularity, **these activities will not be included in the regional allocation model,** as they are carried out in centres with referrals of a broader spectrum, beyond the specific region in which they are located.

This project plans to gradually implement the separate purchase of this kind of activity in the contracts of the centres that are to carry them out, in accordance with the restructuring defined by the Committee for Highly Specialised Services, establishing adequate economic compensation per procurements and a marginal correction for activity surpassing the contracted volume, which is defined on the basis of predictive models.

Therefore, this requires the identification of actions which are considered tertiary and highly complex and their restructuring in Catalonia, the definition of referral centres and flows, where appropriate, the allocation of an adequate price for each activity, and their inclusion in the contracts of the centres defined as referral centres.

i. Examples of on-going initiatives

- There is already a specific purchasing model for tertiary techniques (such as cardiac surgery and neuroangiography). This procurement formula includes elements which allow purchases to be guided based on clinical results.

ii. Objective for 2015

- Separately purchase the eighteen highly specialised procedures that are to be reviewed until 2015.

iii. Objectives for results in 2012

- Be able to purchase separately the highly complex procedures that will be restructured during 2012.

iv. Objectives for processes in 2012

- Define a specific price for all the procedures that are to be organised in 2012.
- Carry out the monitoring and assessment (from a procurement point of view) of the restructured procedures.

Project 6.4. Incorporation of clinical results-based drug financing (shared risk agreements with the pharmaceutical industry)

This will allow the risk to be shared with providers when introducing new medicines (especially those most costly).

Objectives for 2015. Generalise the model of shared risk agreements and sign ten agreements by 2015.

Objectives for results in 2012. Sign three new shared risk agreements and have revised the SRA process and model.

The pharmaceutical policy should be oriented towards the evaluation of health results. Thus, progress must be made in knowing the real profile of a medicine's effectiveness and safety in the context of standard clinical practice.

In this context, and with the aim of aligning objectives with the rest of the agents of the health system, we are promoting **a new relationship model with the pharmaceutical industry and the start of shared risk agreements,** in which the funding of some drugs can be linked to the results obtained in terms of patient health in conditions of standard clinical practice. It is an innovative model in Europe and the world, with some countries of reference such as the United Kingdom and Italy.

In 2011, CatSalut decided on the guided and gradual introduction of this model, in order to acquire practical experience in shared risk agreements through the implementation of some demo experiences.

The idea is to advance towards a model of clinical results-based payment for medicines, especially those with uncertain results and a high cost, without forgetting that fluid interaction with the pharmaceutical industry must be maintained at all times.

i. Examples of on-going initiatives

- **Signing of the first agreement** between CatSalut-ICO-AstraZeneca regarding a cytostatic drug for treating lung cancer.
- **Creation of the Provision and Funding Committee (CPF)** of CatSalut to draw up and propose new frameworks for action in drug purchasing and provision.
- **Pharmaceutical Industry Administration Committee (CAIF) for sustainability and innovation**, to help reach agreements on measures to make the efficiency, quality, and safety of the pharmaceutical service compatible with the revival of the productive economy, research, and innovation. The agreements will constitute a key initiative.

- **CatSalut Bio_Workshops**: theoretical and practical workshops and sessions providing training on this type of agreement, information on experiences currently underway in other countries and an assessment of the conditions for their eventual implementation in our environment.

ii. Objective for 2015

- Generalise the model of shared risk agreements and sign ten agreements by 2015.

iii. Objectives for results in 2012

- Sign three new shared risk agreements and have revised the SRA process and model.

iv. Objectives for processes in 2012

- Have a model of shared risk agreements (SRA), with defined indicators that have been negotiated with the agents.
- Have three new shared risk agreements signed with the pharmaceutical industry.

Line of action 7. Systematic inclusion of professional and clinical knowledge

Health professionals are a fundamental pillar and the backbone of the health system in Catalonia.

- **Three key projects** are proposed in the scope of this Health Plan:
  - Stimulation of the creation of clinical committees or working groups to enhance with systematic participation of professional knowledge in planning and evaluating the health system.
  - Drawing up of a code of principles for the public health professionals of the Catalan health system.
  - Guarantee of the effective participation of professionals in CatSalut and the Ministry of Health.
- There are **additional elements that are subject to government action** and related to health professionals, but these do not fall into the scope of the Health Plan:
  - Planning for health professionals who are fundamental to the health system.
  - Degree-level and specialised training and lifelong learning.

The participation of health professionals in the development, application, assessment, and improvement of this Health Plan is an essential and basic part of its success. A basic foundation of this line of action is the **participation and systematic incorporation of professional knowledge**, which should be divided into aims (information, consultation, decision, assessment), areas (healthcare process, centre management and governance bodies, shared regulation of the profession, health policies), levels (individual, collective), and forms (formal, informal). The concept of responsibility and accountability should also be included.

The Health Plan is the government's tool to bring about a change in the healthcare model and the way it is organised. However, and as it has been mentioned in the introduction to this document, **there are other aspects which fall to the government and which are mentioned in the Government Plan,** and which will not be developed in the Health Plan. However, it was deemed appropriate to list them and briefly explain the direction of the changes that the Government of Catalonia is contemplating in the following three areas:

- **Planning**. The Catalan Ministry of Health intends to have the best health professionals through suitable planning of the training offer and the demand of professionals, in order to avoid imbalances and, at the same time,

guarantee rigorous and demanding systems of professional acknowledgement.

- **Training**. The students of the Health Sciences and health professionals demand a health system that guarantees and provides them with the training and skills needed to exercise their profession and correctly fit into the health system in order to maintain, improve, and develop all the skills acquired during their training. The Catalan Ministry of Health assumes **direct and undeniable responsibility for the area of professional development**, which it will fulfil by involving system agents and, particularly, health professionals, both at the individual and group level.

- **Accreditation**. The recognition, maintenance, and improvement of professional competence and continuous personal development are a need and a requirement for the improvement of the safety, quality, and efficiency of healthcare. Mechanisms should be developed for the accreditation of the acquisition, maintenance, and improvement of competence in terms of knowledge, skills and attitude, from university stage to professional practice and beyond. These mechanisms, which should be based on public and transparent criteria and processes, should be led, developed, and applied by professionals (professional associations and scientific societies).

The specific line of action developed within the framework of this Health Plan focuses on the participation of the professionals through the systematic incorporation of clinical knowledge in decision making and the assessment of the health system.

This is one of the keys to good management and the achievement of the best possible results in terms of health (quality, safety, and efficiency).

- In the present context, health professionals have been, and still are, the first to make important efforts with a view to guarantee the quality and the sustainability of our health system.

- The professionals of the health system are the backbone and the engine of the health system.

The health system has not been able to clarify the participation objectives and instruments, nor has it established the dialogue channels with the professionals in the different areas in which action should be taken in order to systematically incorporate professional knowledge.

The health system normally incorporates professional knowledge, but it does not do so in a systematic way and does not have well-established and standardised participation instruments.

This participation has to take place when decisions related to health policies, the health model, health organisation, assessment, management of work time, the healthcare relationship and clinical practice are being made, using different

mechanisms and instruments. This participation involves identifying the rules which govern it, knowing the specific objective, ensuring adequate feedback and using flexible and transparent communication channels and mechanisms.

The participation and systematic incorporation of professional knowledge into decision making requires stable structures, but it also requires the leadership and involvement of the professionals, and a clear and transparent relationship framework which generates trust and facilitates the exchange of opinions and knowledge that safeguard the common objective of all the agents of the health sphere: to benefit from a safe efficient health system of quality. In order to make this participation effective, we must have tools which help resolve professional selection biases according to geographical location or number, in the case of highly specialised services.

Principles and model

Having analysed the situation, the proposed strategic priority consists in clarifying and reorganising participation elements and instruments by incorporating professional knowledge in decision making and the assessment of the health system in Catalonia.

Communication with health professionals should be improved through the identification of the appropriate interlocutors, boosting professional knowledge's participation in the decision-making process and incorporating this professional knowledge in order to prioritise, organise, and assess healthcare activity according to clinical efficiency criteria (costs and results in terms of health).

We want to advance towards **clinical governance**, a concept in which professionals play a key role. In the ministerial area we need to agree upon a series of system principles and values, which must be transferred to the providers (agency) and applied by health professionals (agent).

Strategic projects

Three key projects have been identified.

Project 7.1. Stimulation of the creation of clinical committees or working groups to enhance the systematic participation of professional knowledge in planning and evaluating the health system

Objective for 2015. Have a professional participation assessment model that is shared and known among professionals.

Objectives for results in 2012. Complete the participation process of the three pilot studies.

This project was designed to foster professional participation in nearly all the activities of the Health Plan. However, the influence that this participation should have in each project differs. Therefore, their participation should be very high in all areas related to health knowledge and clinical practice and lower in those areas more related to organisational elements (e.g. procurement mechanisms).

In order to ensure this participation, the project will define a dynamic which will serve as a model for facilitating professional participation from now on. This model will consist in (1) proposing subject matter (*call for topics*) open to discussion; (2) defining the criteria for the selection of participants; and (3) defining the interaction dynamics.

Therefore, the project works on four major points:

- Definition and dissemination of the model.
- Selection of the topics to be dealt with the first round of participation.
- Testing the model in at least three topics.
- Evaluation of the experience.

Considering that the Health Plan is fairly exhaustive in the projects aimed at changing the healthcare model, we think that professional participation is needed in at least the following areas:

- **Professional participation in the creation of clinical committees or working groups for the transformation of the healthcare model in terms of chronicity** (line of action 2). The Health Plan stresses the need to create clinical committees to develop healthcare protocols and clinical processes for the chronic diseases prioritised in the section on chronicity. The work in this line of action has a clinical focus, and it must aid in identifying, at each stage of a chronic disease's progression, the most adequate preventive, therapeutic, and monitoring interventions and the most adequate services to be implemented, as well as how the role of the health professionals should be adapted. This definition of processes is based on the best, safest, and most efficient clinical management of patients, including the specific drug treatments. Active participation is also involved in defining and assessing the results obtained.
- **The participation of the health professionals in improving case resolution in the areas in which primary and specialised healthcare most frequently interrelate** (project 3.1). There are various initiatives underway aimed at improving the ability of certain specialties to resolve health issues, which involve actions aimed at reducing the frequency of use of specialised care, reducing the regional variability detected, optimising the professional skills, and incorporating new professional profiles. All these initiatives have been carried

out with the participation of representatives of primary and specialised healthcare professionals, from scientific societies and of the service providers of the public health system. Active participation is included in defining and assessing the results obtained.

- **The participation of professionals in the regional organisation of the service portfolio by level of complexity** (project 3.3). In Catalonia, work is being carried out to define the criteria and organisational elements for paediatric surgery, with the collaboration of health professionals appointed by the provider organisations and the scientific societies involved. The Health Plan proposes to extend these lines of work to other areas of specialisation or care in certain conditions. Active participation is included in defining and assessing the results obtained.

- **The participation of the professionals in the organisation of high specialisation** (project 4.1). Based on the factors for the classification of complexity and the expert judgment of the clinical practice carried out by professional teams, and using consensus methodologies, a classification system must be designed to restructure tertiary services. This activity must be promoted, understood as a source of medical prestige and innovation in Catalonia. In this sense, the development of professionals must be guaranteed in order to improve the quality of the interventions and maintain Catalonia's position as a benchmark in terms of resolving of high-complexity cases and research, teaching and innovation in clinical practice. Active participation is included in defining and assessing the results obtained.

i. Examples of on-going initiatives

- The present document describes, in the corresponding sections, various specific experiences related to professional participation in improving the capacity of primary and specialised healthcare to work together to resolve health issues, in reorganising the regions of Catalonia and in defining and restructuring tertiary services.

ii. Objective for 2015

- Have a professional participation assessment model that is shared and known among professionals.

iii. Objectives for results in 2012

- Complete the participation process of the three pilot studies.

iv. Objectives for processes in 2012

- Write the document to define the model.
- Identify the three priority topics.

- Finish testing the tools in the three topics.

Project 7.2. Drawing up of a code of principles for the public health professionals of the Catalan health system

Objective for 2015. Have a code of principles for health professionals related to the organisations where they carry out their healthcare activities.
Objectives for results in 2012. Have of a code of principles for health professionals in relation to the organisations where they carry out their healthcare activities.

Today, professionals do not only interact with the patients; their relationship with the companies they work for is also starting to gain momentum. In regard to the first relationship, there are deontological codes in place, which indicate the general code of behaviour for professionals in dealing with patients and which are not part of the present project.

It is in regard to the second relationship that project 7.2 is being promoted. This project is aimed at creating a code of principles that will provide a framework for professionals' relationship with the provider, as part of the public service they provide. The relationship between professionals and companies can be analysed on two levels: on an employment level and a strictly professional level. Labour relations already have their mechanisms and dynamics. Project 7.2 will deal with the second level: the professional relationship.

The focus of this project will be on the following points:

- Organisation of a workshop with professionals in the sector and experts in order to determine the specific dimensions that should guide these principles (e.g. draw the line between loyalty to the company and loyalty to the patient).
- Compilation of the specific opinions of professionals on the principles identified during the workshop (widespread collaboration).
- Draft, publication, and communication of the code.

Emphasis must be placed on the fact work has already been done in this area. There are precedents, such as the Nolan Committee report in the United Kingdom (Committee on Standards in Public Life), designed to guide the conduct of the civil servants, which can be applied in other areas and which offer a basic set of principles that can be applied to health professionals as they exercise their functions in the public health system. These principles are: (1) selflessness; (2) integrity; (3) objectivity; (4) accountability; (5) openness; (6) honesty, and (7) leadership.

i. Objectives until 2015

- Have a code of principles for health professionals related to the organisations where they carry out their healthcare activities and disseminate and apply it.

ii. Objectives for results in 2012

- Have of a code of principles for health professionals in relation to the organisations where they carry out their healthcare activities.

iii. Objectives for processes in 2012

- Organise a workshop in order to draft the principles.
- Discuss the draft among workshop participants and experts and prepare it for publication.

Project 7.3. Guarantee of the effective participation of professionals in CatSalut and the Ministry of Health

The rules guiding professional participation in the transformation of the system and decision making will be defined.

Objective for 2015. Consolidate stable consulting and participative mechanisms for professionals in their relationship with the Ministry and CatSalut.

Objectives for results in 2012. Test and assess the model.

The project is aimed at finding the most suitable and straightforward mechanisms for making the active participation of health professionals possible, making use of knowledge and expertise in the planning, management, evaluation, and governance of the Catalan health model, especially in terms of healthcare.

This project focuses on three specific points:

- Define **the model of participation** (compatible with participation committees).
- Identify the **specific themes** to be dealt with and the criteria for the selection of new ones.
- Identify **opinion leaders**.
- Carry out the **monitoring and evaluation** of participation.

For the first point (definition of the model), it is important to highlight the desire to count on the true participation of the professionals, open and dynamic. Our aim is to support a model in which there are groups of professionals ready to give their opinion on a regular basis on matters proposed by the Ministry of Health and CatSalut, and vice-versa, mainly through new technologies (for example, online surveys). The model will take these groups of professionals and create circles of participants in different areas (for example, primary healthcare, professionals from outside the Barcelona Health Region, etc.), who will give their opinion on a regular basis (e.g. quarterly and ad hoc, as necessary).

i. Examples of on-going initiatives

- Framework documents of the Medical Council of Catalonia and the Nursing Council of Catalonia: participation of medical and nursing professionals in bodies of government and the management of health centres.

ii. Objectives for 2015

- Consolidate stable consulting and participative mechanisms for professionals in their relationship with the Ministry and CatSalut.

iii. Objectives for results in 2012

- Test and assess the model.

iv. Objectives for processes in 2012

- Finish designing the model.
- Identify themes and areas.
- Carry out two pilot tests.
- Assess the two pilot tests.

Line of action 8. Improved governance of and participation in the system

Twenty years after the passing of the Public Health Law of Catalonia (LOSC) in 1990, the time has come to check whether the government and participation models of the system, which aimed to reinforce the differential traits of the Catalan healthcare model and guarantee them through results of efficiency and excellence, are still strong, or if they have become diluted.

In this section we will deal in depth with the elements to improve the governance of the CatSalut management and participation model and study the relationship model for the SISCAT provider network.

In regard to the first area (CatSalut management and participation model), it is important to bear in mind that one of the agreed terms of the LOSC was that it promoted a model of decentralised management (CatSalut, health regions and health sectors) and participation (with representatives of all the agents within the system). The management boards and participation committees of the health regions only meet ordinarily to approve the budget and the activity report, and those of the health sectors have not been set up yet. In parallel, regional health authorities (GTS) have been established, as a model of shared governance with the local sphere, a complex network of boards and executive committees and participation committees. On the other hand, neither CatSalut nor the agents on the boards and committees have been able to give them any real value, both in terms of content and as channels for participation and team spirit to be communicated to the different agents.

In regard to the second area (relationship model with the SISCAT provider network), we find a governance model ever more affected by the legal character of the entities comprising the network (ICS, public companies and consortia, and subsidised centres in which the Government of Catalonia is not a shareholder), which is far from the desired model, with its separation of funding and service provision functions and network of centres fostering professional and business service management, governed by the Catalan Ministry of Health through health policies and strategies run by CatSalut with contracts and assessment. Meanwhile, through planning instruments and others, the government has focused on the 'how' rather than the 'what' and the 'with what results' the services should be rendered.

Principles and model

Based on a brief analysis, there are two important areas in need of change and a series of principles for each one of them:

a) CatSalut management and participation model

Firstly, it is important to recover the essential value of the rights and duties of the managing and participation bodies of any government agency, whether on the autonomous or local level. In general, the following are of particular importance:

- **The management bodies** usually carry out two main functions: (1) sharing in the responsibility of defining the strategic lines and communicating them to the organization; and (2) setting goals, continuously assessing results and proposing corrective measures. Throughout this process, the objectivity of the members comprising the bodies must be ensured, to keep them from looking out for their own interests and to ensure that they assume their part of the responsibility in the decision-making processes (in this particular case, ensuring the sustainability and progress of public health within Catalonia).
- **The participation bodies** also have two main functions: (1) receiving relevant information from the agents involved; and (2) making recommendations which help incorporate an outsider perspective and a guide for specific issues in the long term. In this process, the proximity to the agents is a key factor.

Finally, to successfully develop the functions of the management and participation bodies, it is recommended, on the one hand, to create strong government bodies which are able to understand the real situation with its key metrics and, on the other hand, to trickle down information on proposals and the agreements to the respective representatives and to do so successively.

In general, based on this description of the rights and duties of the management and participation bodies, and considering the challenges we are facing, the main strategic lines for the changes we propose are:

- Recovering the essence of the management and participation model described in the LOSC and to reinforce it, but while updating it and seeking a model to match the current situation of the Catalan healthcare model, taking into account new trends in neighbouring countries.
- Simplifying and guaranteeing the effectiveness of central and regional management and participation bodies.
- Incorporating the vision of a comprehensive health system for citizens (public health, healthcare, care for those with dependencies), to strengthen the value of the healthcare continuum.

- Reinforcing the co-responsibility and active participation of all the agents.

b) SISCAT provider network relationship model

The key elements of the Catalan healthcare model are: (1) the model for CatSalut's relationship with the centres that are a part of the healthcare network for public coverage, and (2) the strengthening of the instrumental organization of the model (system of accreditation, planning, procurement, assessment and incentives and accountability). **Sure of the differential value of this healthcare model and its contribution to the sustainability and progress of the health system,** the strategic lines of action are the following:

- Making the network of providers less of an administrative body and ensuring that the legal character of the entities does not force us to uphold governance models and limitations to management tools that segment the network and create confusion about the CatSalut-provider relationship.
- Reviewing and updating the governance tools (accreditation, regional planning of the services, procurement, assessment and incentives, and accountability) and reinforcing the contract as a tool which aligns agents with the objectives of the healthcare policies and the healthcare resolution model.
- Promoting the ICT network as a main SISCAT tool which serves a healthcare model based on the continuity of provision.
- Promoting accountability and the transparency of results as an element that promotes improved clinical and economic efficiency at centres and in the system as a whole.
- Promoting synergies within the network which optimise human, physical and service resources and also improve efficiency.

Strategic projects

To develop this new model of governance and participation, new projects are proposed, as well as the promotion of those currently taking place. The resulting two important projects are described below.

Project 8.1. Revision of the CatSalut management and participation model

This project seeks to guarantee the effectiveness of management and participation bodies and to strengthen the co-responsibility of all agents.

Objective for 2015. Develop a management and participation model for CatSalut, the health regions and the health sectors.

Objectives for results in 2012. Effectively implement the management boards of the health sectors, approving new rules of operation and dashboards and restructuring the participation model.

The main strategic lines of the project are:

- Review the representation of the agents within the different management and participation bodies, reinforcing the contributions of professional knowledge and from citizens and patients.
- Revise the regional delimitation of health sectors in order to adapt it to the natural scope of CatSalut resource allocation, implementing management boards of the health sectors and rethinking the participation model. The regional health authorities (GTS) should also be rethought.
- Strengthen, according to the LOSC, the governance role of the health regions and sectors in the areas of planning, procurement and assessment in the framework of the objectives of the Health Plan for Catalonia.
- Acknowledge the flexibility and adaptability of regions to the implementation of regional committees in the health regions and/or sectors.
- Revise the rules of operation of the boards and strengthen and systematise information and communication tools that help members of the boards to carry out governance, monitoring and participation.
- Draw up a code of ethics for governance and participation and of the rights and duties of the representatives on the different boards (highlighting, for instance, the mandatory creation of a dashboard and chain of information for notifying representative agents).

We would like to underline four key elements for the implementation of this project:

- **The draft law on administrative performance and restructuring** (in the framework of the so-called omnibus laws) promotes professional (professional health associations) and citizen (consumers, users and/or patients' associations) representation on the CatSalut management and participation bodies, as well as that of the local sphere on the management boards and participation committees of the health sectors (no less than 40%).

At the same time, it acknowledges the possibility of creating specific working commissions, of a temporary or permanent nature, at the regional or functional level.

- With regard to the **effective implementation of management boards and participation committees in the health sectors,** it is imperative that their regional definition correspond to the **planning, regional allocation of resources and results assessment** of CatSalut. With this criterion, the current delimitation of the health sectors must be reviewed.
- **The functions granted by the LOSC to the management and participation bodies of the health sectors that are not yet being carried out are of great value to CatSalut policies** because they are a part of its governance and participation structure. Consequently, both to add value to the effectiveness of these bodies and to simplify and rationalise the bodies of government and participation in terms of health, once the boards of the sectors are properly in place, the existence of the regional health authorities (GTS) will be placed under consideration.
- **The rules of operation of the CatSalut management boards and participation committees must be revised** in order to move towards a systemised model that shares information and responsibility in making decisions.

i. Objective for 2015

- Develop management and participation bodies for CatSalut, the health regions and the health sectors, each one with its own proximity model.

ii. Objectives for results in 2012

- Effectively **implement** the management boards of the health sectors, once the regional delimitation has been reviewed and the CatSalut participation model reworked.
- Approve new rules of operation and dashboards/monitoring systems for the **management boards**.

Project 8.2. Strengthening of a contract- and assessment-based model for the relationship with the network of providers of the Integrated Public Health System of Catalonia (SISCAT)

It aims, on the one hand, to deal more in depth with the model of separation of function and establish a homogenous contract- and assessment-based relationship model with the network, and, on the other hand, to implement a process by with to renovate the public sector as a health service provider.

Objective for 2015. Promote a single model for the relationship with the provider, which guarantees equal treatment and recognises the value of system management capabilities.

Objectives for results in 2012. Roll out the restructuring of the ICS and the public healthcare sector and reinforce the procurement and result-assessment model.

The main strategic lines of this project are:

- Roll out a process to restructure the ICS in order to standardise its effective integration with SISCAT in the areas of productive units, management tools and the CatSalut relationship model (subsidies).
- Start a process to reorganise the public health sector (public companies and consortiums), which, while preserving governance of the heritage corresponding to the government, gives management back to the provision structures, promoting autonomy of government, flexible management and, at the same time, direct accountability for results.
- Strengthen the governance tools of CatSalut with SISCAT (developed in detail in lines of action numbers 6 and 9).
- Promote the Results Centre and the Catalan Health System Observatory (OSSC) as tools that serve the improvement policies of the SISCAT centres and professionals.
- Value and promote strategic synergies and alliances among providers to improve the individual and collective efficiency of the network.

In the implementation of this second project, four key elements should be highlighted:

- **Within the scope of the ICS, it is important that the centres have their own legal character within the framework of the ICS itself**, that the CatSalut enters into contracts or subsidies using the same requirements and conditions as for the rest of the network providers, and that the ICS

has the same management tools so it can take an active role in the restructuring processes carried out by SISCAT.

- **Regarding the public healthcare sector**, i.e. the public companies and consortiums managing the provision of healthcare services, progress must be made in a process of unique and specific transformation that, while preserving public heritage, gives management back to the entities, with the accompanying accountability for results.
- **A new CatSalut procurement and resource allocation system**, consistent with healthcare model, which this Health Plan describes and which places planning, procurement and assessment as the pillars to govern the system (see line of action 6).
- **The SISCAT information systems, the instruments of the public healthcare provider and the information systems shared with the sector and professionals** (for instance, the Results Centre and the Catalan Health System Observatory) as tools for decision making, quality improvement and accountability (see line of action 9).

i. Objectives for 2015

- Promote a single model for the relationship with the provider, which guarantees equal treatment and recognises the value of system management capabilities.

ii. Objectives for results in 2012

- **Roll out the restructuring of the ICS** and the public healthcare sector.
- **Reinforce the procurement and result-assessment model,** not only as a tool for CatSalut's relationship with SISCAT, but also as a tool for the change and transformation of the healthcare model.

Line of action 9. Shared information, transparency and assessment

- Information management is a key element of the system, both in terms of promoting **better integration between providers** and citizens and making the **system more transparent and endowing it with assessment systems**.
- The principles that must guide information management are:
  - Unified model of governance.
  - Providers must share information online.
  - Information must be managed for the whole sector.
  - Values of objectivity, rigour and transparency must be upheld.
  - Information must be validated, audited and assessed.
  - Clinical knowledge must be included in assessment and accountability.
- This section covers four main projects:
  - Transformation of shared clinical history into an information and service network that facilitates the integration of all providers.
  - Implementation of a multichannel communication and citizens' care network (Sanitat Respon, *Canal Salut* health channel and the Personal Health File).
  - Consolidation of the Catalan Health System Observatory as a basis for information transparency, promoting the Results Centre as an assessment tool.
  - Promotion of systematic clinical assessment in technology-, quality- and research-related areas.

Information management is a basic component of ensuring the integration, transparency and assessment of the health system of Catalonia, and it is essential if a **comprehensive healthcare service is to be offered** through a shared information network, along with **transparency and access to assessment and accountability mechanisms.**

New technologies make it possible to establish models of cooperation among professionals, government agencies and citizens which:

- Make it easy to provide healthcare services.
- Increase the continuity of healthcare services, fostering integration among providers and the sharing of healthcare services or processes.

- They ensure the complete lifecycle of information, from generation to dissemination and the awareness of the health system.
- They become a key instrument with which to assess and improve of healthcare results.

To achieve these models **important organisational transformations**, both in the management of technologies, clearly governed by the Catalan Ministry of Health, and the entities that use them, must take place, so that the entire health system in Catalonia can work in collaboration.

The Health Plan for Catalonia 2011-2015 establishes three essential areas for managing the complete lifecycle of information as well as the management of knowledge and the assessment of the health system in Catalonia:

Anella TicSalut: health information and service network in Catalonia

In light of the present context, mainly the need to provide chronic patients with service, there is a need to offer **a healthcare model with a greater degree of integration**. In order to accomplish this, the shared management **of information is an indispensable requirement** that has an essential role.

Consolidating a network of information, infrastructures and shared services poses a huge challenge for Catalonia. The Catalan health model is characterised by a high diversity of providers. This diversity means that each one of the providers is free to develop their own information management system, and even to invest in creating local networks to share information. This planning on the local level or by each provider and the lack of a clear governance model for the sector has generated a heterogeneous structure within which creating common protocols presents a great challenge.

However, in recent years, advancements have been made on different fronts:

- Basic powers for the governance of the information network of the Catalan health system have been given to the **TicSalut Services Centre** of the **Agency for Health Information, Assessment and Quality (AIAQS)**.
- **Under the umbrella of Anella TicSalut**, many **initiatives** have been launched in order to guarantee the **flow of information among providers.**
  - **The e-prescription** is fully in place in primary healthcare and allows online management of nearly all pharmaceutical services, with more than thirty providers prescribing and all the pharmacies connected.
  - **The HCCC and the Medical Imaging Digitisation Plan** already allow the exchange of clinical reports, diagnoses, medical documents (advanced directives, etc.) and images among nearly all the agents of the healthcare network. The publication of the different types of digital medical images has allowed the elimination, in many cases, of printed of x-rays, and there

is easy and integrated access to the results of the tests for the different providers in Catalonia thanks to the HCCC. However, the **rate of use of the HCCC by providers is still limited,** and there are no definite policies that ensure necessary rules of use in order to dispose of an online system.

- In regard to the introduction of ICTs in the relationship between the health system and citizens, all Internet interactions will be channelled through the ***Canal Salut*,** and the implementation of the **Personal Health File** has already started, which will give more than 88,000 people access to the information in their HCCC and active prescribing.
- Periodic but pioneering initiatives have been developed **in telemedicine, and these need to be extended**, such as the **Teleictus Network**, which provides the basic technology for a possible reorganisation of the on-call services related to Code Stroke.

- **Anella TicSalut** also offers technological communication, safety, interoperability, and data processing services, which guarantee the normal and efficient functioning of the service.

In spite of all these results, we need to go farther in order to face the challenges inherent to the sustainability of the health system itself and the continuous improvement of healthcare quality. This not only requires that we **guarantee the sharing of clinical results, but also that we ensure the continuity of the clinical process** among the different providers in order to obtain effective, safe, and efficient healthcare in all areas.

Catalan Health System Observatory

In a complex management environment such as that of the health system, access to **systematic information, oriented at evaluating the milestones achieved, which uses objective, valid, sensible, specific, and shared indicators, represents a very important intangible asset.**

Regardless, the best structural and technological improvements in terms of management and the use of health information have not been approached with determination. The present organisation, integration, and diffusion of health system information in Catalonia are a reflection of its fragmentation: they are in the bubble of the activity of each organisation, they are organised in hermetically sealed departments and they have evolved independently, without a systemic global vision. Other aspects, such as the challenges associated with privacy and confidentiality, have given way to tools for the development of information, communication and small-scale knowledge which are very specific and not integrated.

The efforts made in recent years to improve information systems in the Catalan health sector have been more than commendable, especially from the

perspective of the public healthcare provider. In particular, advancements in the design and application of the ICT strategies have made more and better information available, but **efforts must be made to integrate this information** in order to be able to treat it in an efficient and productive way. This is a key element in the current debate on the sustainability of the health system and the promotion of the transparency of information and accountability with regard to citizens.

The challenge now is **to guarantee that we go on advancing towards better interoperability among the key actors of the system**. Backing this integration implies overcoming many difficulties, be they technical, legal or organisational, resistance to change or the development of the skills of the different professionals of the health system.

Against this backdrop, the **Catalan Health System Observatory (OSSC)** has been created, part of the Agency for Health Information, Assessment and Quality (AIAQS). The Observatory has to be a **body which integrates the necessary information available and offers it in a accessible way to internal and external agents of the health sector.**

The Catalan Health System Observatory and, particularly, one of its products, the Results Centre, must help disseminate the results attained in healthcare by the different agents of the public health system.

Assessment, transfer, and impact

Assessment is a key element in the decision-making process at different levels. The objective of the health system and, thus, clinical practice is to achieve the maximum value possible with the resources available. In order to guarantee that this value continues to grow or at least stays the same, information based on the knowledge of the health system must be provided.

This assessment of health system results must be done from two different, but complementary, perspectives: assessment for decision making and assessment for accountability.

- **For decision making.** Be able to issue recommendations on how to improve the system on the basis of the analysis, study, and evaluation of the effectiveness, safety, cost, efficiency and consequences of introducing technologies, resources, research and/or organisational improvements (innovation). The following assessments must be carried out:
  - **Assessment from the perspective of clinical safety.** The assessment of clinical safety is important in terms quality (we cannot talk about quality with unsafe healthcare mechanisms in place) and the perception that the citizens have of said service quality (the human being is more sensitive to loss than to profit).

- **Assessment of complex systems.** In the case of healthcare facilities, complexity originates from the intervention of numerous professionals which, in many cases, belong to different organisations. The evaluation of complex systems is especially important within the framework of organisational innovations.
- **Assessment of effectiveness.** Often we assume that the effectiveness identified in the clinical tests will be achieved automatically in the everyday practice, but the characteristics of the health system, of organisations, and of the clinical practice of professionals are factors which condition the results. Thus, the assessment of effectiveness is essential (compared effectiveness research or pragmatic trials).

- **For accountability.** The assessment of the results achieved in terms of quality and the improvement of the health of and healthcare for citizens provides a foundation. Citizens, in their relationship with government agencies in general, require information, explanation and participation. Within the framework of the health system, citizens also want:
  - Information which enables them to **make (shared) decisions that may directly affect their health** (which response they may expect from a treatment, which alternatives are available and/or which centre achieves better results).
  - **Access to assessment reports that contain a breakdown of actions carried out and the results obtained at the clinical, health or management level.**

It is imperative that this entire process is transparent. In order to achieve this, two elements are needed: thorough assessment and dissemination. Thus, the creation of the Knowledge Bank will integrate the assessments of the health system in Catalonia on the areas of health technologies, the quality of healthcare and AIAQS research.

Principles and model

The principles that must govern the management of the knowledge of the Catalan health system are:

- Unified and participative governance **model** that enables **health strategies and services to be aligned with the strategies** for information management.
- Management of the information from the **whole sector, since the owners of the information,** and, by extension, the health sector as a whole, **are the citizens**.
- **Online sharing** of the information **among providers**.

- Guaranteeing the **values of objectivity, rigour and transparency in the information management processes**.
- **Information of quality, audited, assessed, and integrated** in order to guarantee that decision making is accurate and relevant.
- Incorporation of **clinical knowledge into accountability**.

The model for the management of health system knowledge in Catalonia should start with a unified **governance model that is coordinated with the strategies of the Catalan Ministry of Health**. Therefore, it is necessary that any development, project or area of action have a clear strategic purpose and be associated directly to some health priority or service.

In order to promote better integration among the different healthcare levels (priority of the Health Plan for Catalonia), **we should extend and improve the services and content of the Anella TicSalut**, and guarantee the participation of all the agents with the needed ICT capacities and at a reasonable price.

The governance of the Anella TicSalut should be carried out by the AIAQS, as all the agents of the health system take part in the management of this Agency, and because its Articles of Association list this as one of its missions.

The AIAQS should, therefore, **design, develop, and provide the providers with those ICT services that make the continuity of information** in the entire health system of Catalonia possible. The goal is, among other things, to facilitate the use of semantic standards in the whole sector and make use of the economies of scale in the provision of services, the purchase of licenses, and the configuration of solutions for the clinical stations.

At the same time, the AIAQS **should take on the responsibility of acting as a point of reference in the knowledge management and should be** an authentic facilitator for the introduction of these technologies, both in the application and use of information technologies in the health sector and in technological, methodological, and operational support in managing information and assessing health results.

Lastly, the best experts in the field should take part in the assessment, especially in the design of the intervention and in the interpretation of clinical results.

Strategic projects

On the basis of the management model defined and the priorities established, four strategic projects, which should be prioritised during the period 2011-2015, have been designed.

Project 9.1. Transformation of shared clinical history into an information and service network that facilitates the integration of all providers

The shared clinical history must evolve if it is to function dynamically and be able to include the clinical progression of patients and the management of clinical processes for the eight chronic diseases prioritised.

Objective for 2015. Use of the Shared Clinical History of Catalonia (HCCC) online, updated by all the providers and interoperable with their workstations and including all the functions identified.

Objective for results in 2012. Have a shared information network used and updated in more than 65% of hospital, emergency, and primary healthcare interventions and more than 25% of specialised healthcare interventions.

In order to favour the healthcare integration, it is necessary to extend the use of a common and shared clinical history to all the providers. Thus, this project prioritises the establishment of the HCCC through defined policies which all providers should comply with; the enrichment of its function; and its evolution into a tool which enables the shared management of clinical processes.

Therefore, four important sub-projects have been defined, with specific milestones:

- **Consolidate the implementation of the HCCC** in accordance with the standards set out by the Agency for Health Information, Assessment and Quality regarding what information should be shared and the criteria for sharing it, including medical imaging and e-prescribing.
- **Align the HCCC with the clinical history of the providers.** Integrate the functionalities available and authorise interoperability between **network systems in order to have** a common reference system.
- **Offer the whole provider network common services for the management of primary, hospital, social health, and mental healthcare.** The providers will have access, in the form of services, to quality information systems that are interoperable with the shared systems (HCCC, e-prescribing, RCA, etc.).
- **Provide support tools for clinical process management.** Implement a system that will facilitate the management of the clinical and healthcare processes among the different agents, as a tool to support the new types of healthcare.

i. Examples of on-going initiatives

- The HCCC is established as a repository for final reports with the majority of providers connected.

- The e-prescription is a clear reference, both in terms of the degree of implementation and use.

ii. Objective for 2015

- Use of the Shared Clinical History of Catalonia (HCCC) online, updated by all the providers and interoperable with their workstations and including all the functions identified.

iii. Objectives for results in 2012

- Have a shared information network used and updated in more than 65% of hospital, emergency, and primary healthcare interventions and more than 25% of specialised healthcare interventions.

iv. Objectives for processes in 2012

- Complete the development of the new HCCC model.
- Establish the updating of the shared information network (HCCC and medical imaging) as a clause in the service contract.
- Align the development of the HCCC with the development of the clinical records of the main providers, including the functions available and defining the plan to guarantee interoperability between systems and the availability of information.
- Offer the service for identifying complex chronic patients and include the registration of variables in order to be able to monitor clinical processes.
- Make the e-CAP platform available to the whole primary healthcare network.

Project 9.2. Implementation of a multichannel communication and citizens' care network (Sanitat Respon, *Canal Salut* health channel and the Personal Health File)

The communication network with citizens has two main purposes: (1) to facilitate communication between citizens and the system covering them so they can have access to their personal health information; (2) to promote providing healthcare to citizens through new, more efficient channels, which improve the case resolution capabilities of the system.

Objective for 2015. Develop new functions of the *Canal Salut* health channel and the Personal Health File to enhance co-responsibility, and extend access to the Personal Health File so that any citizen can check their medical information.

Objectives for results in 2012. Increase the use of *Canal Salut* and consolidate the implementation of the Personal Health File.

The use of call centres and the website and other Internet resources must be promoted in order to facilitate and improve access and healthcare for citizens, and the role of the government in the social networks must be strengthened.

Therefore, Sanitat Respon (healthcare hotline) and *Canal Salut* (online support window and interactive services) must provide the maximum amount of interactive services to citizens, with equity, quality, and safety, involving citizens and having them share in the responsibility for their use.

In regard to *Canal Salut*, the Personal Health File gives safe online access to the personal medical information. It is logical that the development of the file depends on the status of the HCCC's consolidation, but additional advances are also being considered in order to provide it with more functions, according to the needs of each citizen and the strategic priorities. For instance, in the case of chronic patients who require frequent monitoring, telemedicine actions that allow citizens to contact the healthcare system through the Personal Health File could be very useful.

i. Examples of on-going initiatives

- Sanitat Respon already attends to more than 6,000 queries per day.
- *Canal Salut* operates with different thematic channels.
- The Personal Health File currently gives access to clinical data on 88,000 people.

ii. Objective for 2015

- Develop new functions of the *Canal Salut* health channel and the Personal Health File to enhance co-responsibility, and extend access to the Personal Health File so that any citizen can check their medical information.

iii. Objectives for results in 2012

- Increase the use of *Canal Salut* and consolidate the implementation of the Personal Health File.

iv. Objectives for processes in 2012

- Start the technological evolution of the platform in order to offer new functions (dynamic filters) and define the support model for chronic patients through *Canal Salut*.

- Include additional content, such as thematic channels (drugs, bioethics, Observatory, and TicSalut), on *Canal Salut*.
- Extend access to the Personal Health File to all the citizens (including access to the treatment plan and available medical information).

Project 9.3. Consolidation of the Catalan Health System Observatory as a basis for information transparency, promoting the Results Centre as an assessment tool

The Observatory must group together system information, with integrity and accessibility, and provide it to agents in a transparent way.

Objective for 2015. Give the information of the Catalan health system accessibility and structure through the OSSC.

Objectives for results in 2012. Have the *Canal Observatori* (Observatory Channel) up and running and the 2012 service portfolio in place.

The key elements that should govern the Catalan Health System Observatory should be those that enable access to quality information which in turn facilitates subsequent assessment for decision making and accountability.

The creation of the Catalan Health System Observatory consists of two main aspects:

- Consolidation of system infrastructure, defining catalogues of data sources and variables, clarifying and standardising information management processes, guaranteeing criteria for standards and safety, and identifying new information needs. The following actions are expected:
  - Design, implementation, and completion of the system structure.
  - Creation of a catalogue of current products generated in the different units.
  - Design of a data map (identification and definition of indicators, variables, information sources, people in charge, periodicity).
  - Clarification and standardisation of the information management processes.
  - Identification of common system variables and interrelations.
  - Identification of new information needs.
  - Proposal of automating calculations currently performed in a routine and manual way.

- Role of provider of information services, defining a service portfolio that makes quality information on the health system available to politicians, technicians, researchers, and citizens, favouring comparison, benchmarking and assessment for decision making, while facilitating transparency and accountability.
  - Creation of *InfoSalut*, a web environment within *Canal Salut*, which will serve as a unique window to access the different products involving information and sources and as an instrument for the accountability of the health system.
  - Consolidation of the Results Centres as a star product of the Observatory.
  - Consolidation of the Health Management Innovation Observatory.
  - Identification and promotion of the creation of information.
  - Development of comparison systems (benchmarking and time series).

i. Examples of on-going initiatives

- The Results Centre, which is currently preparing its third report, is being consolidated as an instrument for the analysis of the effectiveness, quality and efficiency of the health system; as an instrument for healthcare planning; and as an instrument for accountability. Moreover, work is being done to analyse provider indicators as a way of promoting benchmarking and the improvement of healthcare quality.
- The Integrated Health Information System (SIIS) is the repository integrating the existing information systems, and it allows the analysis of the indicators previously defined through the use of validated information.

ii. Objective for 2015

- Give the information of the Catalan health system accessibility and structure through the OSSC.

iii. Objectives for results in 2012

- Have the *Canal Observatori* (Observatory Channel) up and running and the 2012 service portfolio in place.

iv. Objectives for processes in 2012

- Develop the *Canal Observatori* as a gateway to health system information.
- Implement the service portfolio of the *Canal Observatori*, including dynamic reports on the basis of the SIIS/Results Centre and the Health Report.

- Begin the activity of the Health Management Innovation Observatory of Catalonia (OIGSC).
- Create an office to give personalised answers to queries.
- Make 600 indicators available through the SIIS/Results Centre.

Project 9.4. Promotion of systematic clinical assessment in technology-, quality-, and research-related areas

Assessment is a key part of accountability, the identification and promotion of best practices, analysis for decision making and resource allocation.

Objective for 2015. Consolidate systematic assessment through the Knowledge Bank, which means having a stable mini-HTA network, recognising the Clinical Practice Guide Office as a reference for the health system, implementing chronicity assessments and holding the public call for research proposals with the necessary changes to the Scientific Committee.

Objectives for results in 2012. Draw up and publish a call for research proposals as a response to the proposals of the Health Plan, having completed assessing current experiences with chronicity care and launching the Clinical Practice Guide Office.

Systematic clinical assessment in the areas of technologies, quality, and research will become a reality through the consolidation of the Knowledge Bank. This will be developed by the assessment department of the AIAQS.

Assessment in the field of health can be approached from various points of view or be based on certain motives:

- **Accountability.** The assessment is for the benefit of citizens in order to be accountable to them.
- **Promotion of best practices**. Directed at patients or the professionals who need to make decisions related to health.
- **Analysis.** Assessment of decision-making results in order to learn and improve.
- **Allocation**. Assessment focused on the allocation and distribution of resources.

Each of these approaches takes on a different form depending on whether it is directed at clinical professionals and decision makers or to citizens, patients and their family members. The Knowledge Bank should be fed with projects in different assessment areas which provide solutions that facilitate the transformation of the

health system, through the promotion of excellence and sustainability by avoiding duplicates and fragmentations and reducing variability.

- **Health technology assessment.** It aims to provide relevant information based on scientific knowledge in order to make a decision (clinical, coverage of services, management, and planning) on the safety, effectiveness and efficiency of any health technology. The following lines of activity have been defined:
  - Critically assess the health technologies (HT) at the different stages of their evolution, namely, innovation/introduction, expansion, generalised use, and obsolescence.
  - Introduce ex-ante assessment for complex technologies, such as ICTs (interaction of multiple actors and stages of development) in order to measure their impact in the context of clinical practice.
  - Design strategies for national and international cooperation in relation to the HT assessment projects.
  - Generate and transfer knowledge on medicines used in clinical practice through the design, elaboration, and maintenance of support tools for: a) decision making for clinical practice (clinical practice guides); b) conciliation and revision of the medication; c) effective use of the medicines; d) assessment of the health results linked to the pharmacological therapy; (e) increase of the self-healing capacity of the chronic patients in the Personal Health File.
  - Assess the medicines in primary healthcare (PHC) in Catalonia within the framework of the New Medicines Assessment Committee (CANM).
- **Healthcare quality.** It is aimed at contributing to the improvement of the quality of healthcare by assessing the results of health interventions and promoting optimum clinical practices. The following strategic lines of activity have been defined:
  - Elaborate and adapt indicators, instruments and techniques to measure results in healthcare.
  - Design strategies to monitor the quality of the healthcare services provided through studies on the variability, effectiveness, safety and efficiency of clinical practice.
  - Develop improvement strategies through decision-making instruments and interventions in the different areas (patients/users, clinical practice, management and healthcare policy) that promote and guarantee equity and preferential access and use of health services.

- Be a point of reference in the elaboration, dissemination, and implementation of clinical practice guides and other related products based on evidence in Catalonia.
- Assess the effectiveness of experiences related to chronicity care carried out in Catalonia.
- Carry out integrated analytical approaches to the assessment of the healthcare process for pathologies that are a priority for the health system through the creation of cohorts by combining the different information sources available.

- **Research.** Promote research where there is a lack of information, according to the priorities, the lines of actions, and the strategic projects contained in the Health Plan, or where indicated by the citizens themselves. Along these lines, we must:
  - Promote and assess extramural research in order to respond to the lack of knowledge among decision makers and patients/citizens.
    - Public calls for clinical research proposals (compared effectiveness) and health services oriented towards the needs of the Health Plan.
    - Assessment and impact of other public calls for research proposals promoted by citizens.
    - Development of an information system for research in the health sciences.
  - Promote the transfer of research in and its impact on the health system and the health of the population: configuration of a regional network of research and collaboration groups in the area of health service assessment and research.
  - Design an ex-post assessment system for research institutes and centres.
  - It should be taken into account that the majority of assessment activities are **crosscutting** in nature, and therefore they have direct implications on the majority of the objectives of the Health Plan.

i. Objective for 2015

- Consolidate systematic assessment through the Knowledge Bank, which means having a stable mini-HTA network, recognising the Clinical Practice Guide Office as a reference for the health system and implementing chronicity assessments.
- Hold the public call for research proposals with the necessary changes to the Scientific Committee.

ii. Objectives for results in 2012

- Draw up and publish a call for research proposals as a response to the proposals of the Health Plan, having completed assessing current experiences with chronicity care and launching the Clinical Practice Guide Office.

iii. Objectives for processes in 2012

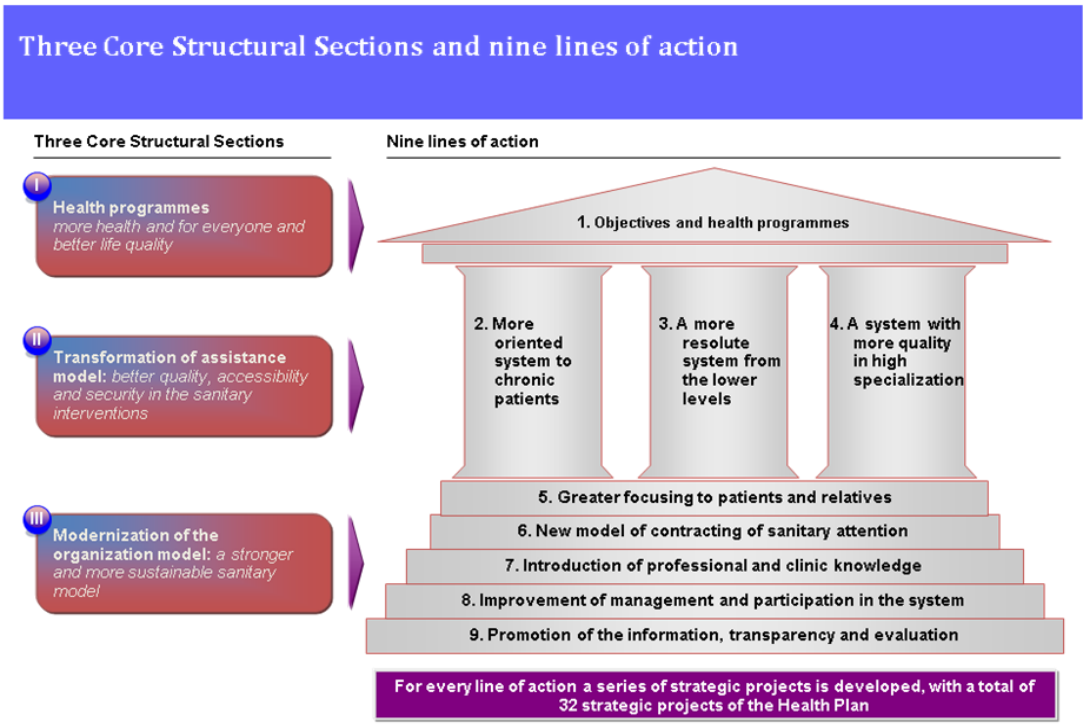
- Carry out and publish a public call for research proposals in order to respond to the proposals of the Health Plan.
- Assess the effectiveness of the present experiences with chronicity care.
- Promote health technology assessment in health centres and create a network in order to transfer and share knowledge and information.
- Define and launch the clinical practice guide office (at least three clinical practice guides in 2012).

V. Road map of the transformation

The Health Plan for Catalonia 2011-2015 is the beginning of a process to change the structure of the system. The principles and strategies contained in the Plan have been adapted to each region through the regional health plans. Now it is necessary to start working with the different agents in finalising and implementing the projects for change.

Assessment and accountability play an essential role in the execution of this Plan and should serve as a mechanism for the improvement and adaptation of the different lines of action.

This Plan has been developed around 3 transformation pillars aimed at providing an answer to a set of structural trends which pose a challenge to our system. These pillars take the form of 9 lines of action and 32 projects which, all together, will provide a better focus on health, a healthcare model of a better quality, accessibility and safety, and an organisational model better adapted to guaranteeing the sustainability and solidity of the health system.



Source: Catalonian Health Plan 2011-2015.

Therefore, the execution of this Health Plan will imply **a structural change in the system at different levels**:

- **Citizens will have a better quality of life and a healthcare model that is better adapted** to their needs in terms of the care provided (case management, for example), more proactive, and with better clinical results. They will be better educated about their health and have a wider range of access options (e.g. multichannel healthcare platform).
- **Health professionals will be more involved** with regard to the decisions the system must make, with more active participation in the transformation, and they will become the main agents of change. Their daily routine will be modified in terms of the need to work in a more coordinated way with other healthcare centres and levels, as well as simplified, thanks to the new work tools available to them (for example, the unified Shared Clinical History of Catalonia (HCCC)) and the evolution of new professional roles (for example, nursing and pharmacy professionals, etc.).
- **In the area of health policy**, the Plan will promote change in the provision structure through incentive-based contracting and a governance model that treats all providers equally. In this sense, greater prevention will be achieve,

more health issues will be resolved at the primary care level, there will be more alternatives to hospitalisation, and the care given through new technologies will increase. For the most part, these changes will be accompanied by a reduction in acute hospital care and the number of long-stay beds.

- **The system will be more sustainable**. The projects implemented will contribute to the sustainability of the health system as we know it today in two ways: (1) the growth of demand will slow down due to a greater focus on the management of the risk of citizens developing a disease and more adequate care, guaranteeing better and longer-lasting quality of life, and (2) system resources will be used more efficiently through the promotion of the integration, rationalisation, and organisation of activities and processes at different healthcare levels.

Road map for the approval of the Health Plan

This is the beginning of a journey towards change. The Health Plan for Catalonia 2011-2015 provides the framework, priorities, and aspirations defined by the Ministry of Health of the Government of Catalonia. From this point on, it will be necessary to start working with the different agents in drawing up and implementing projects for change.

The process to approve the Health Plan lasted until February 2012. In parallel, **regional health plans were implemented,** aimed at adapting the principles and strategies proposed to the specificities of each region and translating them into specific actions and objectives that each one could take on. These plans were approved in early February by the boards of directors and health of each region and, later on, as set forth in the LOSC, they were submitted to CatSalut so they could be included in the final version of the Health Plan.

During January and February 2012, the boards of health of the seven health regions held debate sessions, and the boards of directors of the respective regions approved the regional health plans. On 8 February 2012, at a session of the Catalan Board of Health, a period was opened during which amendment were received, and on 20 February, the Catalan Health Service Board of Directors approved the draft of the Health Plan.

The Executive Council of the Government of Catalonia approved the plan on 21 February, which started the implementation phase for the 32 projects of the Health Plan for Catalonia 2011-2015.

Assessment of the Health Plan and accountability

In 2012 the change must be visible. For this reason, the Ministry has defined a series of specific objectives to be achieved in the short term. Each of the projects will have action objectives for 2012. Thus, for example, in 2012 the risk of suffering chronic pathologies will be reduced and their appearance will be delayed thanks to specific prevention and promotion programmes (a minimum of one million citizens

involved in renewed programmes for physical exercise and healthy diet); there will be a reduction in surgical waiting lists by 2%; complications due to multiple medications will be reduced through the revision of the treatments of at least 90% of multiply medicated patients; and unfair treatment claims will be cut by 10% and while continuing to improve citizen satisfaction (a 1% increase in satisfaction in comparison to 2011).

The Health Plan is not a document of intent, but rather a **road map for change in the healthcare model of the Ministry of Health of the Government of Catalonia over the coming years**. The Ministry of Health will be responsible for the execution of the projects and the public and transparent assessment of objectives. In this sense, the Ministry commits itself to implement the projects designed, to monitor the performance indicators for the objectives on a yearly basis and, also on a yearly basis, to submit them to public evaluation within the framework of the Health Commission of the Parliament of Catalonia.

Catalan Ministry of Health **is responsible for the execution of the projects and objectives** set out in the Health Plan. Three key activities will be carried out:

- **Monitoring.** Health indicators will be defined and compliance with the objectives of each project monitored each year. Provided that the information sources so permit, the indicators of the assessment of the health objectives will be presented globally for the whole of Catalonia and according to distribution by age, sex, social condition, region and timeline. The assessment of the health objectives of the Plan will be part of the annual health report. The Ministry of Health, through the Health Plan office, will be responsible for the annual monitoring and assessment of the Health Plan.
- **Assessment.** The present Health Plan may be subject to frequent revisions. It should be understood as an **open and living tool**, which could undergo changes and improvements during the current planning period.
- **Communication.** Finally, publically and yearly, we commit to carrying out a transparent assessment of results and accountability for the Health Commission.

Epilogue

According to LOSC, the Health Plan is 'the indicative instrument and the reference framework for all public action in such matters [of health] under the authority of the Government of Catalonia'. Articles 62, 63, and 64 of the LOSC determine the nature of the Plan, its content and the drafting and approval procedure, respectively.

The present epilogue indicates which sections of the present document deal with the five aspects which, in accordance with Article 63 of the LOSC, the Health Plan must cover:

a) An **assessment of the initial situation**, including the analysis of the human, material and economic resources allocated; the state of health; the programmes and health services provided; and the existing sanitary and legal-administrative organisation. This first point is dealt with in sections I ('Situation at the point of departure: the challenges facing Catalonia's health system') and III ('Point of departure: analysis and priorities of the Catalan health system').

b) The **objectives and levels to be achieved** in terms of:

   - Health and disease indicators.
   - Health promotion, disease prevention, healthcare, social healthcare, and rehabilitation.
   - Homogenization and equilibrium between health regions.
   - Availability and equipping of centres, services, and facilities.
   - Staff, administrative organisation, information and statistics.
   - Efficiency, quality, user satisfaction and cost.

   The second point is dealt with in section IV.I ('Better health and better quality of life') and an exhaustive breakdown is given in the regional health plans.

c) The **series of services, programmes and actions**, general and by health region, which should be put in place. The third point is exhaustively explained in sections IV.II ('Transformation of the healthcare model: better quality, accessibility and safety of healthcare interventions') and IV.III ('Modernisation of the organisational model: a more solid and sustainable health system') and the point of view of the health regions is incorporated in the regional health plans.

d) The **economic and funding forecasts**, general and by health region. The fourth point is dealt with in more depth in the Catalan Ministry of Health budget for 2012.

e) The **mechanisms to assess the application and monitoring** of the Plan. This last point is developed in section V ('Road map of the transformation').

Acronyms

ABS	basic healthcare areas
AE	adverse effects
AHT	arterial hypertension
AIAQS	Agency for Health Information, Assessment and Quality
AMED	Mediterranean Diet Promotion Programme
AMI	acute myocardial infarction
AP	arterial pressure
ASPCAT	Catalan Public Health Agency
CAIF	Pharmaceutical Industry Administration Committee
CANM	New Medicines Assessment Committee
CAP	primary healthcare centre
CH	clinical history
CHF	congestive heart failure
CMBD-AH	minimum basic data set – hospital care
CPF	Provision and Funding Committee
CPG	clinical practice guide
COPD	chronic obstructive pulmonary disease
CPS	Personal Health File
CRG	clinical risk group
CSAE	Committee for Highly Specialised Services
CUAP	Primary Healthcare Emergency Centre
CVA	cerebral vascular accident
DGRPRS	Directorate-General for Regulation, Planning and Health Resources
DM2	diabetes mellitus type 2
DMP	disease management programmes
DRG	diagnosis-related group

DRI	drug-related incident
DRP	drug-related problems
EAP	primary healthcare team
EFQM	European Foundation for Quality Management
ENT	Otolaryngology (ear, nose and throat)
ESCA	Health Survey of Catalonia
EU	European Union
FM	fibromyalgia
GAV	gross added value
GTS	regional health authorities
HC	hospital care
HCCC	Shared Clinical History of Catalonia
HIV	human immunodeficiency virus
HLE	healthy life expectancy
HT	health technologies
ICAMS	Catalan Institute of Medical and Health Evaluations
ICO	Catalan Institute of Oncology
ICS	Catalan Health Institute
ICT	information and communications technologies
LC	local clinic
LE	life expectancy
LOSC	Public Health Law of Catalonia
MAC	maximum allowable cost
MAT	Andorran triage model
MHDA	outpatient-dispensed hospital medication
mini-HTA	mini health technology assessment
MOS	major outpatient surgery

OAT	oral anticoagulants therapy
OECD	Organisation for Economic Co-operation and Development
OGPC	Clinical Practice Guide Office
OIGSC	Health Management Innovation Observatory of Catalonia
OSSC	Catalan Health System Observatory
PAAS	Integrated Plan for the Promotion of Physical Activity and a Healthy Diet
PAFES	Physical Activity, Sport and Health Plan
PASFTAC	Programme for Assessment, Monitoring, and Funding of Highly Complex Pharmacological Treatments
PC	primary care
PD	master plan
PEIDS	special interest programmes of the Catalan Ministry of Health
PHC	primary healthcare
PHFMHDA	Programme for Pharmacotherapy Harmonisation of Outpatient-dispensed Hospital Medication
PISP	Inter-ministerial Public Health Plan
PLAENSA	Satisfaction Survey Plan for those covered by CatSalut
PPAC	Chronicity Prevention and Care Programme
PS	Health Plan
RCA	Central Registry of Insured Persons
RCIM	Medical Imaging Central Repository
RDC	rapid diagnosis circuit
RMC	Mortality Register of Catalonia
SEM	Medical Emergency System
SHC	specialised healthcare
SIFCO	Integrated Information System of the Healthcare Cohesion Fund
SIIS	Integrated Health Information System

SISCAT	Integrated Public Health System of Catalonia
SRA	shared risk agreement
STD	sexually transmitted disease
TI	temporary incapacity
TSI	individual health card
VINCat	Nosocomial Infections Surveillance Programme for Catalan Hospitals
VR	variation rate
WHO	World Health Organisation
XHUP	Network of Hospitals for Public Use
YPLL	years of potential life lost

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