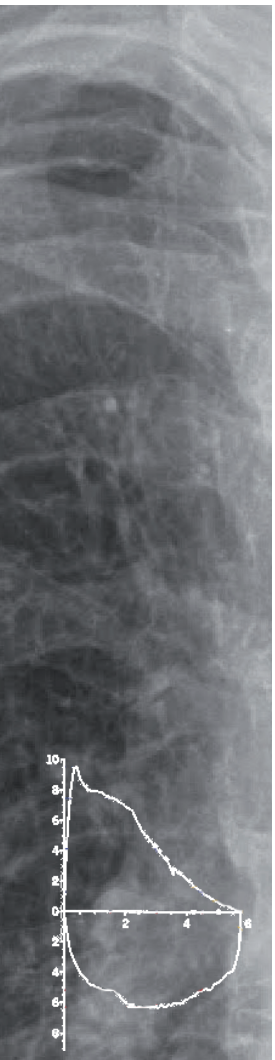
(PD)

Planning and Assessment
Master plan of diseases of the respiratory system



Master plan for diseases of the respiratory system

40

Generalitat de Catalunya
Departament de Salut

(PD)

Planning and assessment
Master plan for diseases od the respiratory system

Master plan for diseases of the respiratory system

Generalitat de Catalunya
Departament de Salut

Ministry of Health
Trav. de les Corts, 131-159
Edifici Ave Maria
08028 Barcelona
www.gencat.cat/salut
http://canalsalut.gencat.cat

Edition:
Ministry of Health
Directorate-General for Planning and Assessment

Editorial coordination:
Directorate-General for Planning and Assessment

Linguistic assessment and correction:
Linguistic Planning Section of the Ministry of Health
Layout: Trivium Serveis Publicitaris, s.l.u.

First edition in Catalan: Barcelona, November 2010
Translated into English: Barcelona, November 2011

Contents

The Minister's Presentation 7

1. Executive Summary 10

2. Introduction 15

3. Purpose
   - 3.1. Mission 18
   - 3.2. Principles and Values 18
   - 3.3. Objectives of the Health Plan 18
   - 3.4. Objectives for 2011-2012 20

4. Organisation
   - 4.1. Organisational Chart 23
   - 4.2. Management of the Master Plan for Diseases of the Respiratory System 23
   - 4.3. Advisory Council 23
   - 4.4. Permanent Commission 24
   - 4.5. Work Groups 24

5. Situation Analysis
   - 5.1. Morbidity of Diseases of the Respiratory System: Hospitalisations 27
   - 5.2. Mortality of Diseases of the Respiratory System 31
     - 5.2.1. Territorial Analysis of Mortality 33
   - 5.3. Perception of the Health Status of the Population in the Sphere of Respiratory Diseases 35
   - 5.4. Analysis of the Data on Smoking in Catalonia 36
   - 5.5. Indicators Related to Primary Care Mechanisms 38
   - 5.6. Diagnostic Tests and Waiting Lists 41
     - 5.6.1. Spirometry 41
     - 5.6.2. Sleep Studies 43
     - 5.6.3. Quick Diagnosis Circuit for Lung Cancer 45
   - 5.7. Home Respiratory Therapy 46
   - 5.8. Economic Impact and Healthcare Costs related to Diseases of the Respiratory System 46

6. Strategic Lines
   - 6.1. Preventive Treatment of Diseases of the Respiratory System 49
   - 6.2. Accessibility and Quality of Diagnostic Tests, Especially Spirometry 50
   - 6.3. Care for Patients with Acute Exacerbation of COPD 51
   - 6.4. Sleep Disorder Care 51
   - 6.5. Care for Asthmatic Patients 52
   - 6.6. Care for Patients with Diseases that Require Special and Specific Treatment 53

7. Care Model and Planning Criteria 55
8. Objectives and Evaluation 59
9. Bibliography 66
10. Participating Professionals 72
11. Annexes 81

The Minister's Presentation

The Minister's Presentation

Health planning is one of the fundamental pillars of the government's policies. Thanks to the quality and efficacy of its health system, Catalonia's citizens are amongst the healthiest in the world. Within this framework, the objective of the Ministry of Health is to establish strategic directives to continue to make progress in improving health, reducing inequalities and enhancing the efficacy of health services. Special emphasis should be placed on enabling the health services to continue contributing to improving the health and quality of life of citizens with the incorporation of new scientific evidence and the vision of professionals and citizens.

The Catalan Health Plan is the tool the government uses to set priorities in health matters. The Government of Catalonia reinforces the executive status of the plan by creating master plans to implement its policies.

These master plans, which are adapted to the situation of Catalonia and its economic and healthcare context, define the activities and the organisation of the services required to implement the proposed policies, with an integrated vision of the situation covering everything from health promotion and prevention to rehabilitation, with diagnostic and treatment actions. The plans establish a healthcare services and organisational model that is based on reality and enables progress to continue to be made in terms of efficacy and quality. Based on an analysis of the health, healthcare services and socioeconomic context of Catalonia, the master plans established as priorities for 2005 to 2007 by the ministry were mental health and addictions, oncology, vascular diseases, social health problems, immigration, and healthcare science research. For 2008 to 2011, one of the new plans to be implemented is the Master Plan for Diseases of the Respiratory System (PDMAR, by its Catalan acronym).

The need to prepare a master plan for diseases of the respiratory system derives from the proven fact that these diseases are the third most prevalent cause of death in Catalonia and they have a very serious impact on disability and on the reduction of the quality of life of sufferers, especially chronic obstructive pulmonary disease. Chronic respiratory diseases affect the healthcare system as a whole, both from the economic perspective (numerous hospital admissions, drugs and home respiratory therapy) and from the organisational perspective, given the evident need to minimise underdiagnosis and to improve the continuity of care.

This plan has been created to respond to all these challenges in today's society, setting healthcare objectives for the population and the actions required to reach them. The mission of the master plan is to improve prevention and healthcare for respiratory diseases throughout Catalonia by means of the reorganisation of resources, the implementation of health promotion actions, disease prevention, early diagnosis, suitable treatment and rehabilitation, in accordance with the principles of sustainability and equality in terms of territory, social condition and gender. The proposed improvement interventions, which include clinical and organisational aspects, will strengthen the fundamental role of primary care in our health system and merge with the recommendations of the primary care and community health innovation plan. Accordingly, the master plan will work closely with all the professionals involved in the integrated management of respiratory diseases from a sustainable perspective with the focus on patients and on participation. It will also advocate the promotion and dissemination of training for healthcare professionals and for patients and their families. As a work tool, the master plan will be accompanied by the development of preventive and healthcare processes and of the circuits required to implement strategies in the various regions and territorial health bodies in Catalonia, in

addition to assessing these strategies and communicating the results.

I would like to take this opportunity to thank everyone involved in the preparation of this document for their dedication and effort. I hope that this plan is of use to all the professionals who work in the healthcare system and that it contributes to improving the health and the quality of life of the citizens of 21st-century Catalonia.

Marina Geli i Fàbrega
Minister for Health

1. Executive Summary

1. Executive Summary

Reducing the incidence and mortality of respiratory diseases is one of the main health challenges society needs to address. Accordingly, the Ministry of Health has prepared the Master Plan for Diseases of the Respiratory System, which is the result of the application of one of the objectives set for the Catalan Health Plan for 2010. The master plan prioritises transversal actions and covers causes beyond the traditional healthcare sphere, by means of an integrated model that ranges from promotion and prevention to rehabilitation, taking into account the principle of equity in terms of territorial, gender and other inequalities, and contributes to the objectives of the Catalan Health Plan. The implementation of this integrated model requires the involvement and collaboration of professionals from various spheres and disciplines. The aim is to guarantee that all patients in Catalonia have access to quality preventive and diagnostic measures in addition to comprehensive care for diseases of the respiratory system.

Collaboration and coordination are two of the strategic pillars within the master plan's working framework. Accordingly, there will be close collaboration with other national strategies (COPD strategy of the National Health System) and particularly with regional strategies, collaborating with programmes and professionals of the Ministry of Health, such as the Directorate-General for Public Health (DGSP), in order to implement preventive and health promotion aspects in the sphere of respiratory diseases. There will also be collaboration with other plans and programmes, such as the master plan for oncology and the programme for the prevention and control of tuberculosis.

Given that primary care is the citizens' gateway to the health system, the master plan will also take advantage of any synergies there may be with the work undertaken by the primary care and community health innovation plan and the social health master plan in order to reinforce this integrated implementation, continuity of care and the management of patients who are fragile, dependent or require home care.

Situation Analysis

Diseases of the respiratory system, after tumours and diseases of the circulatory system, are the third cause of mortality in Catalonia, with 6,105 deaths in 2008 (10.2% of the total causes of death). The proportion of men who die due to respiratory diseases is 60%.

The relationship between smoking and pulmonary deterioration is evident. Stopping smoking slows down the progression of chronic obstructive pulmonary disease and reduces the number and seriousness of exacerbations. Currently, the prevalence of smoking in Catalonia is estimated to be 29.4% in the population aged 15 and over; 34% are men and 24% are women.

In Catalonia, the number of deaths due to causes attributable to smoking is 8,673 (6,984 men and 1,689 women). This corresponds to 15.5% of the total deaths in people aged 35 or over. In the period from 1990 to 2006, the ratio of smokers decreased and this reduction was more marked in men than in women.

In 2008, 10.1% (97,887) of hospital contacts were due to respiratory diseases. The total rate of hospitalisation in Catalonia in 2007 was 122.5 patients per 1,000 inhabitants, 13 patients per 1,000 inhabitants due to respiratory diseases and 2.5 patients per 1,000 due to COPD.

With respect to the economic impact of respiratory system diseases, it should be

stated that in 2008 they accounted for 9.3% of CatSalut's budget, 24% of which was for pharmaceutical spending.

COPD is a chronic inflammatory complaint that makes it difficult for air to pass through the bronchial tubes. It affects the lungs and appears slowly and progressively due to the effects of smoking. It is calculated that 9.1% of the population between 40 and 80 are sufferers. One of every five hospital contacts in relation to respiratory problems in Catalonia is due to COPD and it should be highlighted that, in contrast to other chronic processes, a decrease in mortality has not been registered in COPD.

Asthma is a chronic disease that has increased with regard to the number of sufferers. Currently, however, there is effective medication to reduce its mortality and improve quality of life. It is estimated that 4.9% of the population between 40 and 69 have been diagnosed with asthma and that the percentage of children affected by it is 9.4% (2002). Occupational asthma is the primary cause in the declarations of the voluntary record of occupational respiratory diseases (ORD) and it is estimated that each year there are between 250 and 300 new cases of occupational asthma per million inhabitants.

Sleep disorders, which include insomnia, narcolepsy, epilepsy and certain parasomnias, affect 4-6% of the adult population. Even though it is a disease that seriously affects the quality of life of the sufferer, it is treatable with numerous therapeutic methods. The diagnostic test for sleep disorders is polysomnography. In 2009, there were reductions in the waiting lists and times in some regions of Catalonia. Even so, a more detailed study is required to detect possible improvements in the referral process for these patients.

The Approach for Diseases of the Respiratory System

The master plan for diseases of the respiratory system must contribute to achieving the health objectives formulated in the Catalan Health Plan. It is the tool that must enable these objectives to be achieved from a territorial perspective. The plan aims to integrate the visions of the various healthcare professionals who treat patients with respiratory diseases, promote teamwork, guarantee the continuity of care between the various areas and foster organisational changes, based on the reorganisation and rationalisation of the use of existing resources.

The specific objectives of the master plan for diseases of the respiratory system have been defined based on the evidence in the proposals of the Advisory Council and the data of the analysis of the situation obtained from preliminary studies:

a) Study on the pulmonary function. Spirometry is the basic diagnostic tool for diseases of the respiratory system. Spirometry devices are readily available throughout the territory. However, surveys on the study of the pulmonary function show that their use is highly variable and that efforts are required to improve the training of the professionals who perform this test.

b) Based on the data of the minimum basic data set (MBDS), it has been observed that diseases of the respiratory system represent 10.1% of all hospital contacts. 20% of hospital contacts for respiratory diseases are due to patients with COPD. There is significant variability in the average hospital stay of patients with COPD, with 15% of cases resulting in the readmission of patients in fewer than thirty days after being discharged.

c) The study of home respiratory therapy reveals that every week more than 100 patients start treatment with continuous positive airway pressure (CPAP) for sleep disorders. Now, it is calculated that more than 50,000 patients in Catalonia use this treatment. Redefining the monitoring circuit is one of the priorities of the master plan in this strategic line.

In accordance with the Advisory Council, for the 2011-2012 period, based on this information, the following objectives are proposed:

1. Develop preventive activities for patients with respiratory diseases. The master plan for diseases of the respiratory system must promote the preventive activities with the most impact on respiratory diseases, such as smoking cessation and physical activity.

   In addition to support for the smoking cessation campaigns led by the DGSP, the master plan for diseases of the respiratory system aims to promote, in coordination and collaboration with the DGSP, specific projects to promote smoking cessation taking advantage of the serious decompensation of COPD, with special emphasis at the time of diagnosis.

   The training of professionals to improve expertise in smoking cessation strategies is another priority.

   In relation to physical exercise, the aim is to promote the incorporation of patients with COPD into the physical activity, sport and health plan (PAFES).

2. Obtain quality spirometers. Access to quality spirometers is the key to improving the diagnosis and monitoring of patients with respiratory diseases and, accordingly, there will be a focus on:
   - The design of a standardised training programme.
   - The deployment of a training plan for trainers to guarantee the application of the training plans in each territory.
   - The standardisation of spirometry data to guarantee reproducibility and storage.
   - The creation of territorial networks to control the quality of the spirometry tests performed in hospitals and in primary care.

   The ultimate objective is for clinics to have access to quality spirometers, regardless of their operational sphere.

3. Improve the diagnostic process and the monitoring of asthmatic patients in order to improve their health. Multidisciplinary work groups will be created to improve the diagnostic and referral process for patients with asthma. A key element is the dissemination of tools to support decision-making and the promotion of training for professionals and education of patients.

4. Improve care for patients with acute exacerbation of COPD. Care for patients with COPD is very complex and requires interventions on various levels. From the operational perspective, the first objective is to improve care for patients who are admitted for acute exacerbation of COPD. This objective is justified by the impact on patients (10% mortality during acute exacerbation) and on the health system (use of beds and emergency care resources and a readmission rate of 15%).

5. Redefine and establish a specific care model for sleep disorders. Disorders as prevalent as sleep disorders are currently mainly treated in hospitals. It is crucial to define the role of the various spheres of care for these patients (both with regard to diagnosis and the start of treatment and long-term monitoring).

In parallel with the five main sphere of action, the master plan for diseases of the respiratory system will have to respond to objectives that affect few patients but that have a major impact on personnel and on care, such as care for patients with minority diseases (such as pulmonary hypertension and interstitial diseases).

The second phase of the master plan for diseases of the respiratory system should consider the development of the aforementioned objectives, especially with regard to respiratory rehabilitation and the treatment of respiratory disease from the perspective of social health care.

2. Introduction

2. Introduction

Diseases of the respiratory system are among the leading causes of death and are one of the main health challenges to be addressed in our society. The Catalan Health Plan treats them as a significant health problem and establishes that to make progress transversal work is required, taking into account causes beyond the traditional healthcare sphere. Moreover, in contrast to other chronic processes, a decrease in mortality has not been observed for COPD, which is also the case of cardiovascular diseases. In Catalonia, diseases of the respiratory system are the third cause of death, after cancer and cardiovascular diseases. Almost 30% of the population are smokers and, although it appears that the growth trend has been stymied with regard to the percentage of women smokers, smoking continues to be a major health problem.

COPD is a chronic inflammatory disease that is produced in people who are genetically susceptible in response to the inhalation of tobacco smoke. The prevalence of COPD in the population aged 40 to 80 in Catalonia has been estimated to be 9.1%. Acute exacerbation of COPD is a significant health problem because there is a high risk of mortality and a high percentage of readmissions: 38% of patients are readmitted after one year and the average time between being discharged and readmitted is five months.

Underdiagnosis is another serious problem in relation to respiratory diseases. In Spain, the identification of patients with COPD in primary care is far from the 9% of the population aged 40 to 80 who suffer it. Moreover, only 24% of diagnoses include the results of spirometry tests in the primary care medical history. Furthermore, 23% of patients admitted due to acute exacerbation of COPD state that they had never been treated by a doctor specifically for respiratory disease.

Asthma is a chronic respiratory disease that is showing an increase in the number of people suffering it. Currently, there is effective medication available that has enabled a significant reduction in mortality and allowed the vast majority of people suffering this disease to lead a normal life. Notwithstanding, the results show that control of the disease is not optimal in the majority of cases and there is still room for improvement with respect to the current level of patient compliance with therapy.

In recent years, the mortality rate due to asthma has considerably reduced in all age groups. Currently, diseases of the respiratory system represent 10.2% of the total number of deaths in Catalonia and asthma's presence in this figure is negligible (in 2008 nine deaths were registered due to asthma). With regard to hospital contacts, in 2008, diseases of the respiratory system represented 10.1% of the total hospital contacts in Catalonia, whereas asthma was responsible for 5% of the 98,000 hospital contacts with respiratory causes.

Occupational asthma is the primary cause in the declarations of the voluntary record of occupational respiratory diseases (ORD). According to epidemiological studies conducted by the Environmental Epidemiology Research Centre (CREAL), each year there are 250 to 300 new cases of occupational asthma per million inhabitants.

From the organisational perspective and that of the provision of healthcare services, in Catalonia every week 100 new patients start to use devices that generate continuous positive airway pressure (CPAP) to treat sleep apnoea.

Therefore, based on local data and general references, it seems reasonable to specifically tackle respiratory diseases within the framework of a master plan.

The purpose of the master plan for diseases of the respiratory system is to achieve global treatment for the diseases in this group, covering the whole spectrum, from promotion and prevention to rehabilitation, taking into account the principle of equity with regard to territorial, gender and other inequalities, and contributing to meeting the objectives of the Catalan Health Plan. The aim is to improve preventive and diagnostic measures and care for diseases of the respiratory system for all citizens in Catalonia, guaranteeing them access and quality.

The appearance of new diagnostic and therapeutic tools means that every day more emphasis is placed on technological resources and, therefore, the plan must contribute to the establishment of criteria in terms of the need, distribution and use of these technologies and the analysis of opportunity and viability in the field of care for these diseases.

There is evidence of a relationship between smoking and the deterioration of the pulmonary function. Stopping smoking slows down COPD and reduces the number and the seriousness of acute exacerbations. Other less frequent risk factors are: work exposure, environmental contamination, previous bronchial hyperresponsiveness and repeated respiratory diseases in children.

Early detection of chronic respiratory disease by means of forced spirometry is important in terms of cost effectiveness. Accordingly, in the case of COPD, suitable outpatient management of the disease includes: the establishment of guidelines for smoking cessation, spirometry in primary care, treating acute exacerbations in primary care, and fostering home hospitalisation programmes and early discharges for patients with acute exacerbation of COPD. This must result in a significant reduction in costs, as hospitalisation is the greatest healthcare cost arising from acute exacerbations of COPD. Home oxygen therapy and smoking cessation are the only two interventions that change the natural course of COPD.

3. Purpose

3. Purpose

3.1 Mission

Improve the treatment of diseases of the respiratory system by means of the reorganisation of resources and the development of actions to promote healthcare, disease prevention, early diagnosis, suitable treatment and rehabilitation, in accordance with the principles of sustainability and equality in terms of territory, social condition and gender, in order to reduce their impact on the population's health.

3.2 Principles and Values

The principles of this master plan are those of the Catalan Health Plan, which focus on the health priorities of the population following the principles of equality, access, equity, effectiveness, efficiency, coordination and quality of the services, community participation and user satisfaction. The citizens are the centre of a comprehensive care model, both from the perspective of the natural history of the disease and from a multidisciplinary perspective.

The master plan will ensure a more rational distribution of resources, the achievement of the objectives and it will satisfy the aforementioned principles. Efforts to improve the competence of professionals and to provide them with additional resources are central elements of the master plan.

3.3 Objectives of the Health Plan

The master plan for diseases of the respiratory system has been established with the aim of contributing to meeting the objectives in terms of health and the reduction of risks that the Catalan Health Plan formulated in 2010. Accordingly, it has come into being as the result of the application of one of the objectives set by the Catalan Health Plan for 2010. In this sense, the objectives of the master plan are:

- Reduce mortality caused by influenza, respiratory system acute infectious disease and pneumonia by 10% among the population aged 60 and over.
- Reduce mortality due to chronic obstructive pulmonary disease among the population aged 40 and over by 10%.
- Reduce the prevalence of smoking among the population aged 15 and over to 28%.
- Reduce the prevalence of smoking among young people aged 15 to 24 to 32%.
- Reduce the prevalence of smoking among women aged 15 and over to 22%.
- Reduce the prevalence of smoking among men aged 15 and over to 34%.
- Increase the proportion of people aged 15 and over stopping smoking to 35%.
- Reduce the prevalence of people between 18 and 74 with a completely sedentary lifestyle to lower than 16%.
- Reduce the prevalence of people between 18 and 74 with an insufficient level of physical activity in their free time by 10%.
- Increase the prevalence of people between 18 and 74 who walk more than 30 minutes a day by 20%.
- Increase the prevalence of people from 18 to 74 who carry out moderate physical activity five or more times per week or an equivalent quantity to above 14%.

Since 2000, the evolution of the level of achievement of the objectives in terms of health and risk reduction proposed for 2010 in relation to respiratory diseases is very positive. The mortality rates due to respiratory diseases observed in 2004 are lower than the objectives marked for 2010. Mortality due to influenza, acute infectious disease and pneumonia in people aged 60 and over reduced by 27.6% between 2000 and 2004, as did mortality due to COPD in the population aged 40 and over (14.6% reduction). The

results of the indicators established to measure the achievement of these objectives are shown below. It is worth mentioning that the publication of the official results in reference to mortality (Ministry of Health mortality register) is undertaken with a delay of two years, so the most recent data in this document pertains to 2008.

Table 1. Assessment of the level of achievement of the health and risk reduction objectives for 2010 in relation to respiratory diseases

OBJECTIVE INDICATOR	2000	2004	2010*	Assessment
1. Reduce mortality caused by influenza, respiratory system acute infectious disease and pneumonia by 10% among the population aged 60 and over. *Mortality rate standardised by age per 100,000 inhabitants for influenza, respiratory system acute infectious disease and pneumonia in the population aged 60 and over .*	57,4	41,5	51,7	++
2. Reduce mortality due to chronic obstructive pulmonary disease among the population aged 40 and over by 10%. *Mortality rate standardised by age per 100,000 inhabitants for COPD in the population aged 40 and over.*	204,5	174,6	184,0	++

Source: the Health Plan based on the data of the Register of Mortality in Catalonia, 2004. Ministry of Health. Rates standardised by age according to the population of Catalonia in 1991.
**Estimation of the value expected for 2010 in the event of achieving the proposed objectives.*

With the aim of improving the health of people suffering from respiratory diseases, the Catalan Health Plan defines a number of strategic proposals, which the master plan for diseases of the respiratory system assumes as its own:

- Foster healthy lifestyles, especially among patients with COPD, smoking cessation and physical activity.
- Develop primary care actions for the detection and treatment of smoking addiction, for influenza vaccinations and pneumococcal vaccinations in risk groups.
- Detect and treat COPD and asthma early at all healthcare levels.
- Promote clear and responsive circuits for the indication and monitoring of home oxygen therapy.
- Establish measures for coordination between hospitals and primary care centres for the monitoring and control of COPD in order to provide an integrated response to the needs of patients.
- Reduce the variability of clinical practice in acute exacerbations of COPD.
- Foster home hospitalisation programmes and early discharges for sufferers of acute exacerbation of COPD.

As the objectives set for 2010 were aimed more at infectious diseases and influenza, the master plan for diseases of the respiratory system will extend the spectrum of intervention with a more global perspective.

Collaboration of the master plan with other programmes, services and units of the Ministry of Health

Given the complexity that comprehensive care of patients with chronic diseases requires, which is the case of many respiratory diseases, the master plan will work closely with other programmes, strategies and plans of the Ministry of Health. Collaboration and coordination are two of the strategic pillars of the work framework of the master plan. Accordingly, there will be close collaboration with the Directorate-General for Public Health with a view to covering preventive and health promotion aspects in the scope of respiratory diseases. It will also collaborate with the master plan for oncology and the master plan for immigration and the programme for the prevention and control of tuberculosis of the Ministry of Health when it is necessary to make a recommendation or for coverage of lung cancer or tuberculosis, respectively.

Primary care is the citizens' gateway to the health system. The multidisciplinary and transversal nature of the primary care professional favours comprehensive treatment of diseases and, moreover, is especially relevant in diseases that become chronic and those in which continuity of care and the management of patients who are fragile, dependent or require home care are crucial. In this sense, the master plan will also take advantage of any synergies there may be with the work undertaken by the plan for innovation in primary care and community health and the social health master plan.

3.4 Objectives for 2011-2012

3.4.1. Develop **preventive activities** in patients with respiratory diseases.

- 3.4.1.1. Extend interventions to help respiratory patients stop smoking.
- 3.4.1.2. Promote interventions to increase physical activity in respiratory patients.
- 3.4.1.3. Promote vaccination in respiratory patients in accordance with the recommendations of the Ministry of Health vaccinations programme.

3.4.2. Obtain **quality spirometers**. Underdiagnosis is one of the most serious problems in the clinical and healthcare environment of respiratory diseases, especially in the case of COPD. To tackle this problem, the master plan for diseases of the respiratory system proposes the following objectives:

- 3.4.2.1. Determine the situation of the practice of spirometry at the various healthcare levels (hospital and primary care).
- 3.4.2.2. Create territorial networks between hospitals and primary care centres for the effective control of the quality of spirometry.
- 3.4.2.3. Guarantee the training of professionals who have to perform spirometry tests.
- 3.4.2.4. Generalise the availability of quality spirometry for all clinics and guarantee access for all patients.

3.4.3. Improve care for patients with **acute exacerbation of COPD**. Acute exacerbation of COPD has an immediate impact on patients (risk of death) and a mid-term impact (reduction of the quality of life). Moreover, it has a great impact on the health system. The objectives proposed to face acute exacerbation of COPD are as follows:

3.4.3.1. Identify the factors that can improve care for the acute exacerbation of COPD in the sphere of primary care.
3.4.3.2. Frame these actions in an integrated care model for COPD to guarantee continuity of care in the case of exacerbation.
3.4.3.3. Foster healthy lifestyles in patients with COPD, placing special emphasis on the in-depth development of helping people to stop smoking in all types of respiratory disease.
3.4.3.4. Foster home hospitalisation programmes and early discharges for patients with exacerbated COPD.

3.4.4. Redefine and establish a specific care model for **sleep disorders**. Sleep disorders have a significant impact on the health system: it is calculated that in Catalonia at least 100 new patients start treatment every week. Moreover, currently all monitoring is centred in hospitals. For these reasons, the master plan for diseases of the respiratory system believes that it is necessary to focus efforts on the following objectives:

3.4.4.1. Define the specific diagnostic model for sleep disorders.
3.4.4.2. Establish criteria to identify serious cases.
3.4.4.3. Describe a new care model based on community measures.

3.4.5. Establish recommendations to improve **care for asthmatic patients** in Catalonia:

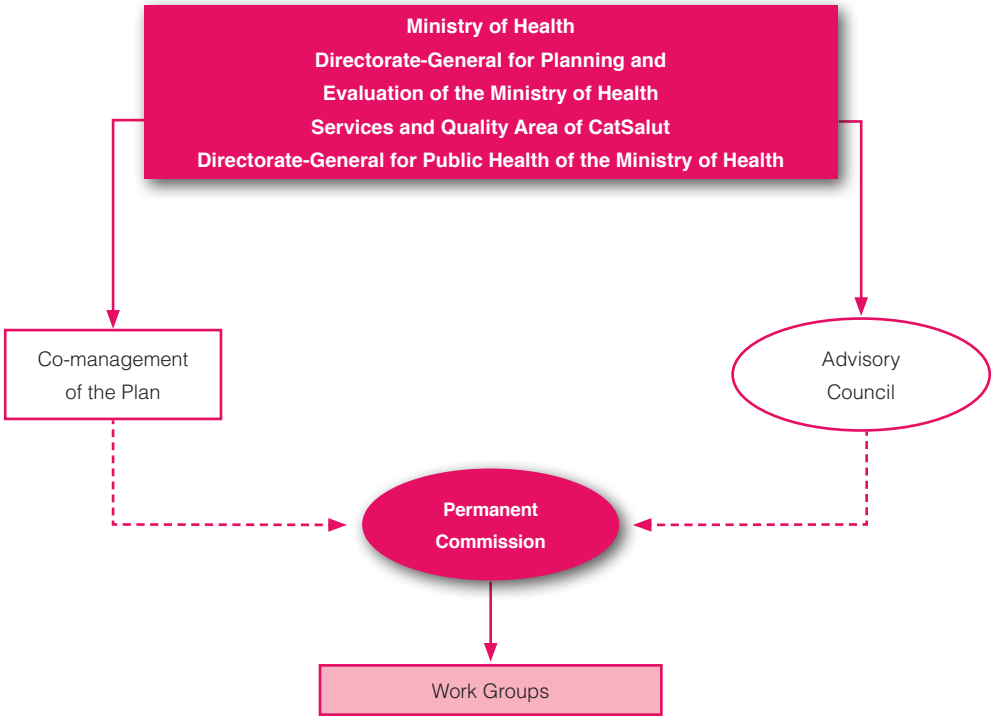
3.4.5.1. Create an asthma work group.
3.4.5.2. Prepare specific proposals to improve diagnosis and the referral process in relation to asthma in adults and in children.
3.4.5.3. Improve health education for patients and training for professionals.

3.4.6. Prepare **specific recommendations** for specific areas of activity. There is a considerable number of patients with respiratory problems that are not of the magnitude of those described in the previous objectives, but that can also benefit from specific recommendations. In this context, the PDMAR remains open to other master plans and programmes of the Ministry of Health to collaborate in aspects such as: establishing a care model for patients with pulmonary hypertension, analysing the results from the quick diagnosis circuit programme for lung cancer, improving care for patients with cystic fibrosis and those affected by neuromuscular diseases with respiratory problems, in addition to establishing the criteria so that some patients can benefit from home respiratory therapy with responsive diagnosis and monitoring circuits. The master plan will also work on the preparation of recommendations for a model to manage patients with allergies in Catalonia.

4. Organisation

4. Organisation

4.1 Organisational Chart



4.2 Management of the Master Plan for Diseases of the Respiratory System

The director of the master plan is responsible for:

- Fostering, directing and coordinating the technical work of the Advisory Council in the process to prepare the plan, setting general and specific objectives and priorities, the programming of actions and execution schedules.
- Formulating the proposal of the master plan in each one of the fields of action and submitting it to the Directorate-General for Planning and Evaluation for proposal to the Minister for Health.
- Defining and specifying the actions to be executed in accordance with the objectives and proposing them to the competent bodies, in addition to evaluating the process to apply the plan.
- Proposing the criteria for the coordination of the main aspects of the master plan preparation process.
- Fostering and monitoring the implementation of the plan in the various healthcare regions of Catalonia.

To develop these functions, each one of the directors will have the technical and administrative support of the Ministry of Health and the assessment of the Advisory Council.

4.3 Advisory Council

Formed by representatives of relevant organisations of Catalan society that have an interest in respiratory diseases (scientific societies, professional associations and patient associations, unions, industry and administrations).

4.4 Permanent Commission

The master plan for diseases of the respiratory system has a Permanent Commission formed by people designated by the Directorate-General for Planning and Evaluation and by the coordinators of the various work groups created in the master plan, who are considered to be suitable due to their expertise in the various fields of diseases of the respiratory system.

The function of the Permanent Commission is to study and prepare the actions and the proposals. The director of the plan reserves the power to consult reliable sources with the approval of the Directorate-General for Planning and Evaluation and to organise the specific work groups considered necessary to develop specific tasks.

4.5 Work Groups

Work groups will be established in the Advisory Council that the chair of the council, at the suggestion of the director of the plan, his own initiative or that of any of the members, considers to be necessary to better develop the functions of this body.

The work groups are made up of external experts in the specific scope in question. At the head of each work group there will be a leader, who will be a member of the Permanent Commission, with the functions of directing and coordinating the group, establishing the work plan and activity proposals, which must be in accordance with the content and the work schedule determined in a plenary session of the commission. The proposals that each work group prepares must be compiled in a technical report submitted to a plenary session of the commission for approval.

4.5.1. Main Work Groups for the Development of the Master Plan for Diseases of the Respiratory System for 2011

The main lines to be covered by the master plan for diseases of the respiratory system in each one of the work groups that will be progressively created until 2011 are briefly described below. Notwithstanding, the master plan will also employ a short, more intensive strategy to cover other respiratory disorders with profiles and demographic characteristics and treatment requirements that necessitate specific treatment (see section five of this document).

Accordingly, the main work groups apart from the activities that are developed in collaboration with the Directorate-General for Public Health, which are of major importance from the preventive point of view (smoking, physical activity and vaccination) and health promotion, are presented, in addition to those that, given their specificity and peculiarity, require highly specific and specialist work groups and individual tasks (pulmonary hypertension, cystic fibrosis and home respiratory therapy).

4.5.1.1. Forced Spirometry. Group created to define quality criteria in the performance of forced spirometry tests in hospitals and in primary care in Catalonia.

- 4.5.1.1.1. Subgroup of the survey addressed to the XHUP (Public Hospital Network) of Catalonia.
- 4.5.1.1.2. Subgroup of the survey addressed to primary care in Catalonia.
- 4.5.1.1.3. Subgroup for the training of professionals who carry out forced spirometry tests.

4.5.1.2. Asthma. Group created to prepare structured diagnostic proposals and referral criteria and additional examinations for diagnosis and monitoring of

adults and children with asthma. This group will also cover, specifically, and if necessary with the collaboration of other Ministry of Health plans, needs in the sphere of allergic asthma.

4.5.1.2.1. Subgroup of the structured diagnosis of asthma in adults.

4.5.1.2.2. Subgroup of the structured diagnosis of asthma in children.

4.5.1.2.3. Subgroup for the monitoring of patients with asthma.

4.5.1.3. COPD. Group that will pay special attention to acute exacerbation of COPD and the review of the care model.

4.5.1.4. Obstructive Sleep Apnoea (OSA). Group created with the main objective of designing a model for the diagnosis and monitoring of patients with sleep apnoea.

5. Situation Analysis

5. Situation Analysis

The data shown below is from the analysis of the current situation of the main diagnoses that form the broad group of diseases of the respiratory system from the perspectives of health and services and the main risk factors related to these diseases.

The results that are presented make reference to general data or to a specific analysis carried out exclusively for this document, so the data refers to the period with information available up to the time of the analysis.

5.1 Morbidity of Diseases of the Respiratory System: Hospitalisations

Respiratory diseases in general and chronic ones in particular, especially chronic obstructive pulmonary disease (COPD), present high levels of morbidity and mortality and high healthcare and social costs.

Diseases of the respiratory system caused, in 2007, 98,803 hospital contacts (10.4% of the total number of contacts), 12% more compared to the 88,228 hospital contacts registered in 2006 (hospital contacts represented 9.7% of the total contacts). Of these 98,803 contacts, 18.8% (18,522 contacts) were due to COPD. From 2003 to 2008, respiratory diseases represented a very stable percentage of the total number of contacts, around 10% (table 2). In 2007, the gross rate of hospitalisation per 1,000 inhabitants in Catalonia was 122.5 contacts, whereas the hospitalisation rate for respiratory diseases was 13 patients per 1,000 inhabitants. In the case of COPD, the gross rate of hospitalisation was 2.5 contacts per 1,000 inhabitants (table 3).

Table 2. Evolution of hospital contacts due to diseases of the respiratory system. Catalonia, 2003-2008

Year	Contacts	%
2003	86,913	10.1
2004	84,020	9.6
2005	93,331	10.5
2006	88,228	9.7
2007	98,803	10.4
2008	97,887	10.1

Source: Catalan Health Service. Minimum basic data set for hospital admission (MBDS HA), 2008.

Table 3. Gross rates of hospitalisation and respiratory diseases. Catalonia, 2007

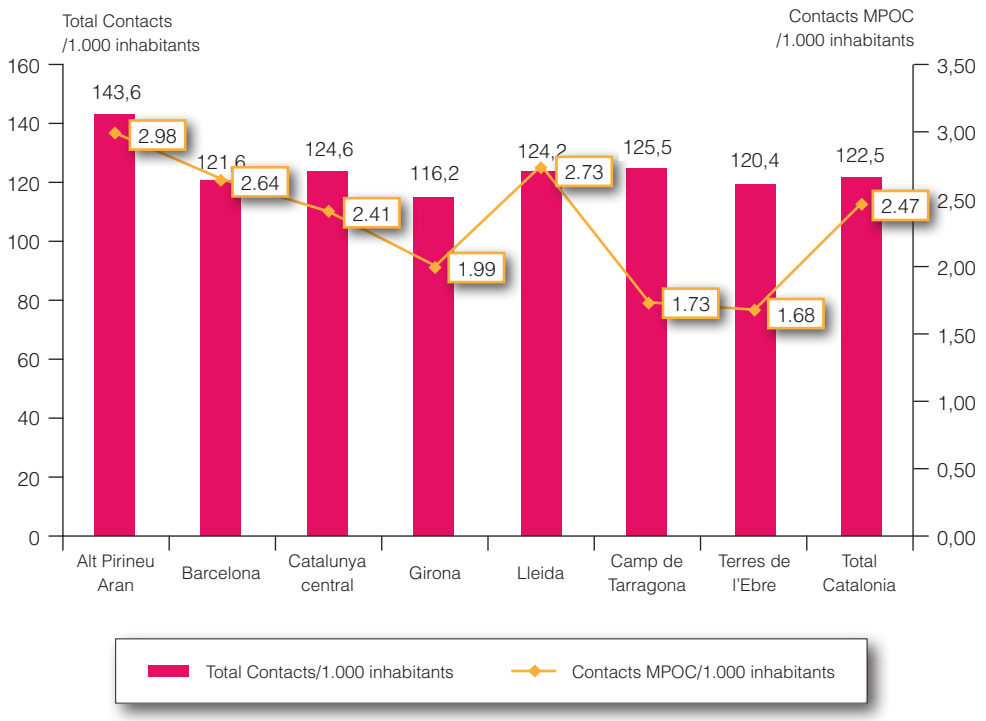
Gross rate of hospitalisation per 1,000 inhabitants		
Total gross rate	**due to diseases of the respiratory system**	**due to COPD**
122.5	13.2	2.47

Source: Catalan Health Service. Minimum basic data set for hospital admission (MBDS HA), 2007.

With regard to the distribution of hospital contacts by healthcare region, it is observed that the number of contacts per 1,000 inhabitants ranges from 116.2 in Girona to 143.6 in Alt Pirineu i Aran. A similar pattern is observed in the case of COPD contacts, although

the lowest rate in this case is Camp de Tarragona. However, the difference between the maximum value and the minimum value is 1.73 for the total of hospital contacts and 1.72 in the case of COPD (graph 1).

Graph 1. Total hospital contacts and COPD contacts. Catalonia, 2007



Source: Catalan Health Service. Minimum basic data set for hospital admission (MBDS HA), 2007.

Selection criteria: Main diagnosis: codes "491.2, 492.8, 493.2, 494 and 496" and main diagnosis codes "518.81 and 518.84" with first secondary diagnosis codes "491.2, 492.8, 493.2, 494 and 496" of the International Classification of Diseases; ninth revision; clinical modification: ICD-9-CM.

The average hospital stay due to diseases of the respiratory system in hospitals in Catalonia in 2007 was almost 6 days, with a median of 4 days. The profile of the admitted patient is mainly men (in 59.5% of cases) with an average age of 55.6. Of the contacts due to diseases of the respiratory system 5% (4,481 contacts) result in intrahospital death. COPD has an average stay of 7 days and the average age of the admitted patient is 74. 15.5% of patients admitted for COPD were readmitted 30 days after being discharged and 30.6% were readmitted after 60 days (30 days after the first readmission).

The study of the territorial distribution and the flows of patients with COPD in the healthcare regions shows a high level of coverage for each one of the regions. In all cases, more than 90% of patients with COPD are attended in their own healthcare region.

Table 4. COPD. Percentage distribution and number of conventional hospitalisation contacts of the residents in each healthcare region depending on the healthcare region of the hospital. Catalonia, 2007.

Healthcare area of the hospital	Residential healthcare area						Other areas					
	Lleida	Camp de Tarragona	Terres de l'Ebre	Girona	Catalunya Central	Alt Pirineu i Aran	Barcelona	Catalonia (not specified)	Spain	Abroad	Unknown	Total
Lleida	9	0,3	0,3	0,0	0,1	1,5	0,0	2,3	29,8	0,0	2,1	5,3
	903	3	1	0	1	3	4	2	56	0	2	975
Camp de Tattagona	0,3	93,2	3,2	0,2	0,4	0,5	0,3	4,6	7,4	11,9	14,7	5,2
	3	863	10	4	5	1	36	4	14	5	14	959
Terres de l'ebre	0,0	0,2	90,2	0,0	0,0	0,0	0,0	0,0	5,9	4,8	14,7	1,7
		2	286				3	0	11	2	14	318
Girona	0,1	0,1	0,0	93,9	0,2	0,5	0,6	0,0	10,1	59,5	1,1	8,8
	1	1		1.514	2	1	73		19	25	1	1.637
Catalunya Central	0,8	0,2	0,0	0,2	94,7	2,0	0,3	0,0	3,2	4,8	1,1	6,4
	8	2		3	1.122	4	42	0	6	2	1	1.190
Alt Pirineu iAran	0,1	0,2	0,0	0,0	0,1	91,0	0,0	0,0	4,8	0,0	0,0	1,1
	1	2			1	183	5		9	0	0	200
Barcelona	2,9	5,7	6,3	5,6	4,6	4,5	98,7	93,1	38,8	19,0	66,3	71,5
	27	53	20	91	54	9	12.784	91	73	8	63	13.243
Total	100	100	100	100	100	100	100	100	100	100	100	100
	943	926	317	1.612	1.185	200	12.917	87	188	42	95	18.522

Residents in Catalonia	18.197	98,2%
Residents in Spain	188	1,0%
Residents abroad	42	0,2%
Unknown residence	95	0,5%
Total contacts	18.522	100,0%

Source: Catalan Health Service. Minimum basic data set for hospital admission (MBDS HA), 2007.

Selection criteria: main diagnosis codes "491.2, 492.8, 493.2, 494 and 496" and main diagnosis codes "518.81 and 518.84" with first secondary diagnosis codes "491.2, 492.8, 493.2, 494 and 496" of the International Classification of Diseases; ninth revision; clinical modification: ICD-9-CM.

In the case of COPD, the study of the profile of the population admitted with this disease in Catalonia shows a very common and transversal characteristic in relation to the analysis of the behaviour of an indicator around the territory: variability. On average, a patient who is admitted for the first time in a hospital in Catalonia due to COPD or acute exacerbation of COPD is 74 years old and in 77% of the cases the patient is a man. The average stay for Catalonia as a whole for a patient admitted for COPD is 7 days (with a minimum of 6 days in Terres de l'Ebre, and a maximum of almost 9 days in Lleida). The gross rate of hospitalisation in Catalonia for COPD is 24.7 contacts per 10,000 inhabitants, with territories that show much higher figures (such as Alt Pirineu i Aran, with a gross rate of

hospitalisation per residential region of almost 30 contacts per 10,000 inhabitants, and a minimum of 17 contacts per 10,000 inhabitants in Terres de l'Ebre). In total, in 2007 there were 18,522 hospital contacts due to COPD (table 5).

Table 5. Characteristics of acute hospitalisation due to COPD. Catalonia, 2007

Healthcare area	Average age	Average stay (days)	Gross rate of hospitalisation*	Hospital contacts (number, %)
Alt Pirineu i Aran	74.1	6.2	2.98	200 (1%)
Barcelona	74.4	6.9	2.64	13,273 (72%)
Catalunya Central	75.5	7.7	2.41	1,190 (6%)
Girona	74.3	7.3	1.99	1,637 (9%)
Lleida	73.8	8.7	2.73	975 (5%)
Camp de Tarragona	73.8	7.2	1.73	959 (5%)
Terres de l'Ebre	75.1	6.0	1.68	318 (2%)
Catalonia	**74.4**	**7.1**	**2.47**	**18,522 (100%)**

Source: Catalan Health Service. Minimum basic data set for hospital admission (MBDS HA), 2007.

Selection criteria: main diagnosis codes "491.2, 492.8, 493.2, 494 and 496" and main diagnosis codes "518.81 and 518.84" with first secondary diagnosis codes "491.2, 492.8, 493.2, 494 and 496" of the International Classification of Diseases; ninth revision; clinical modification: ICD-9-CM.

** Gross rate of hospitalisation: contacts per 1,000 inhabitants.*

In Catalonia in 2007, the global percentage of readmissions 30 days after discharge over the total number of contacts was 15%. That is, 2,530 patients were readmitted for COPD 30 days after they were discharged more than once, of the total of 16,800 contacts with a registered personal identification code (CIP).

If a subanalysis is undertaken for the population aged 40 or over with COPD, according to the same diagnostic criteria, the existence of territorial variability is once again evident, as shown in table 6.

Table 6. Characteristics of acute hospitalisation of the population ≥ 40 with COPD. Catalonia, 2008

Healthcare area		Average age	Men (%)	Average stay (days)	Gross rate of hospitalisation*	Intrahospital mortality (number, %)	Hospital contacts (number)
Alt Pirineu i Aran		76	104 (78)	8 ± 11	0.13	9 (7)	134
Barcelona	**Garraf i Alt Penedès**	74	274 (82)	8 ± 8	0.33	21 (6)	334
	Llobregat	74	1.259 (80)	6 ± 6	1.6	101 (6)	1,571
	Barcelonès nord i Maresme	74	1.096 (74)	7 ± 6	1.5	101 (7)	1,481
	City of Barcelona	76	2.228 (71)	7 ± 7	3.14	197 (6)	3,144
	Vallès Oriental i Occidental	75	1.740 (76)	7 ± 7	2.27	85 (4)	2,274
Catalunya central		76	600 (75)	8 ± 7	0.81	66 (8)	806
Girona		75	851 (76)	7 ± 6	1.12	78 (7)	1,124
Lleida		75	507 (71)	9 ± 7	0.71	38 (5)	711
Camp de Tarragona		74	408 (70)	8 ± 7	0.58	24 (4)	580
Terres de l'Ebre		76	185 (78)	7 ± 8	0.23	20 (8)	237

Source: Catalan Health Service. Minimum basic data set for hospital admission (MBDS HA), 2008.

Selection criteria: patients ≥ 40 and main diagnosis codes "491.2, 492.8, 493.2, 494 and 496" and main diagnosis codes "518.81 and 518.84" with first secondary diagnosis codes "491.2, 492.8, 493.2, 494 and 496" of the International Classification of Diseases; ninth revision; clinical modification: ICD-9-CM.

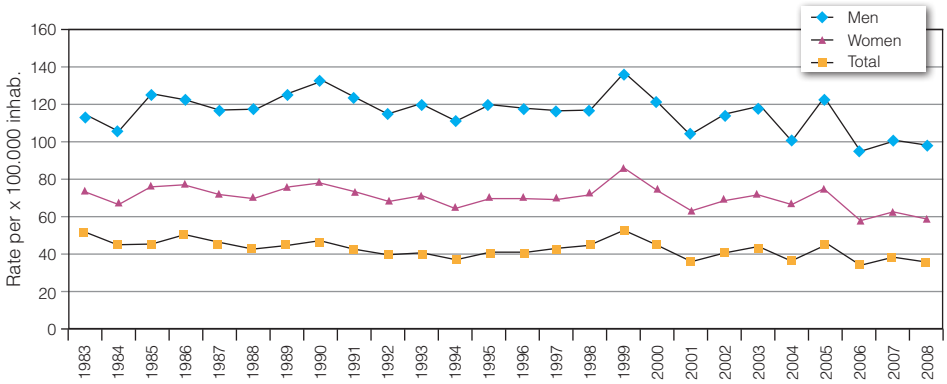
** Gross rate of hospitalisation: contacts per 1,000 inhabitants.*

5.2 Mortality of Diseases of the Respiratory System

In Catalonia, diseases of the respiratory system were the third cause of death in 2008 in both sexes, with a net rate of 83.60 deaths per 100,000 inhabitants. The 6,105 deaths due to respiratory diseases represented 10.26% of the total. 60% of the deaths in this group corresponded to men.

Graph 2 shows the evolution of mortality due to diseases of the respiratory system from 1983 to 2008 by sex. In general, there is a slight reduction in mortality, standardised by age, for this group of causes until 2001, and a more marked decrease, of almost 6%, from 2001 to 2008.

Graph 2. Evolution of the standardised mortality rates (SMR) by age for diseases of the respiratory system by sex. Catalonia, 1983-2008



Source: Ministry of Health. Mortality register. Groups of causes 49 to 53 of list D73 of causes of death

NOTE: standardisation of the population of Catalunya 1991. Direct method.
Global mortality: rates per 100,000 inhabitants.

Within the European context, mortality due to diseases of the respiratory system places Catalonia as one of the regions with high mortality, among western European countries, with a rate of 50.6 deaths per 100,000 inhabitants, slightly lower than the Netherlands and much higher than Germany and certain Nordic countries, such as Finland and Sweden (with the exception of Denmark, with a rate of 60.6 deaths per 100,000 inhabitants).

Table 7. Rates of mortality standardised by age due to diseases of the respiratory system in Europe and Catalonia

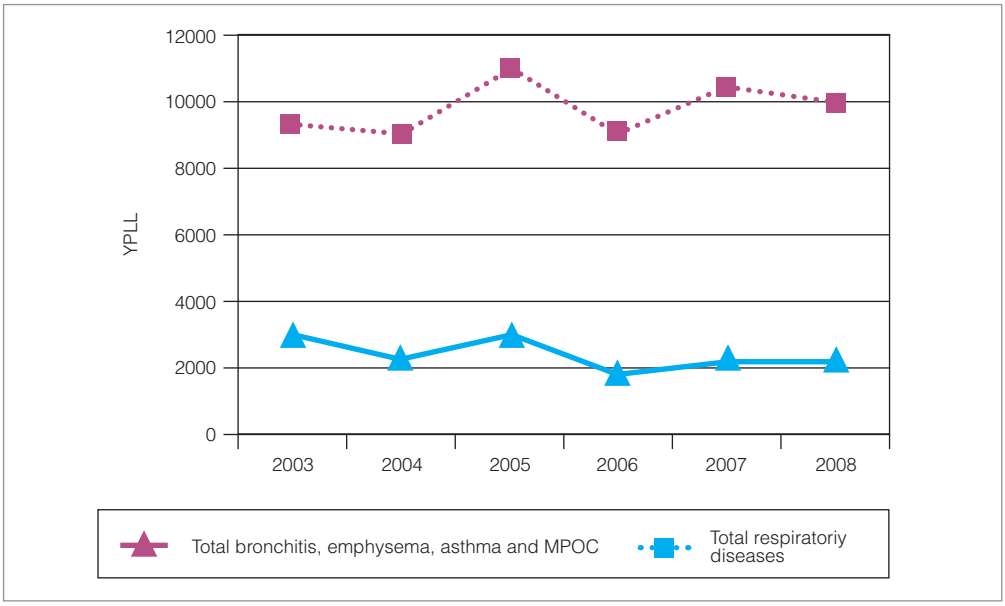
Country	SMR	Year
Finland	25.84	2007
Switzerland	27.59	2006
France	27.65	2006
Italy	29.12	2006
Sweden	30.82	2006
Austria	32.19	2007
Slovenia	35.37	2007
Germany	36.97	2006
Catalonia	50.60	2007
The Netherlands	54.16	2007
Denmark	60.56	2006
Spain	61.83	2005
Ireland	72.19	2007
United Kingdom	73.39	2007

Source: World Health Organization. Mortality rates standardised by age according to the European population.

Premature mortality, measured by means of the years of potential life lost (YPLL) is one of the health indicators that offer a truer approximation to the cost and the burden of a disease in our environment. In 2008, in Catalonia a total of 9,918 years of potential life were lost due to diseases of the respiratory system, which represented 5.6% of YPLL in Catalonia. Men lost 7,249 years of potential life, 73% of the total for respiratory diseases, whereas women lost 2,669. For each one of these deaths an average of 13.8 years of potential life were lost. By sex, women lose 15.88 years of potential life, whereas men lose 13.23.

Graph 3 shows the evolution of the YPLL between 1 and 70, due to bronchitis, asthma, emphysema and COPD (according to grouping D73 of causes of death) from 2003 to 2008. In Catalonia, in 2008 2,273 years of potential life were lost due to this set of respiratory clinical entities, 23% of the total YPLL for the total of respiratory diseases. By sex, men present a much higher loss of potential years of life due to this set of diseases than women. With regard to avoidable mortality, now, tuberculosis (with 25 deaths in 2008 and a rate standardised by age per 100,000 inhabitants of 0.4 deaths) and asthma (with 9 deaths in the same year with a mortality rate of 0.2 deaths per 100,000 inhabitants) continue to be the two respiratory diseases susceptible to intervention by health services considered by consensus to be causes of death that are unnecessarily premature and avoidable. If lung cancer is excluded, diseases of the respiratory system represent 1.8% of avoidable deaths.

Graph 3. Evolution of years of potential life lost (YPLL) from 1 to 70 for the total of respiratory diseases and for bronchitis, emphysema, asthma and COPD. Catalonia, 2003-2008



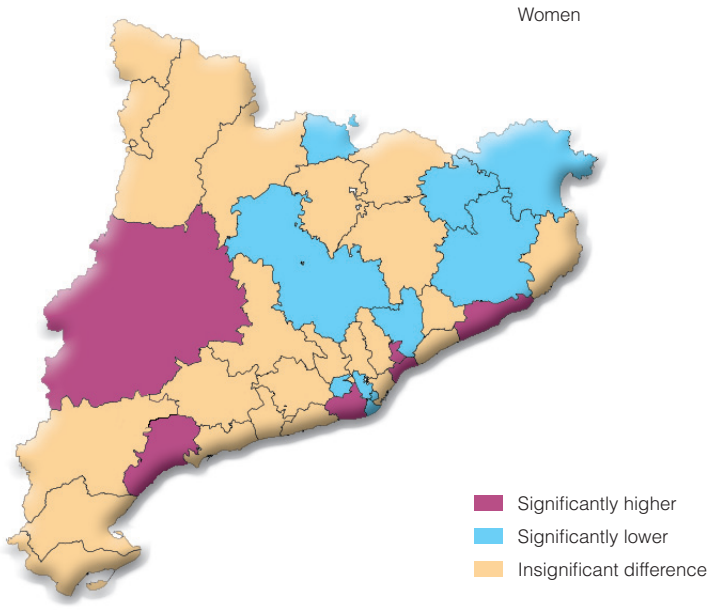
Source: Ministry of Health. Mortality register. Group of causes 52 of list D73 of causes of death. Years of potential life lost: rates per 10,000 inhabitants.

5.2.1. Territorial Analysis of Mortality

The territorial analysis undertaken by the Catalan Health Plan for the six-year period from 1999 to 2004 shows the differences by sex and territory of the standard mortality rates (SMR). In men, diseases of the respiratory system present a higher SMR in the Barcelona healthcare area, whereas the figure is significantly lower in Terres de l'Ebre and Girona.

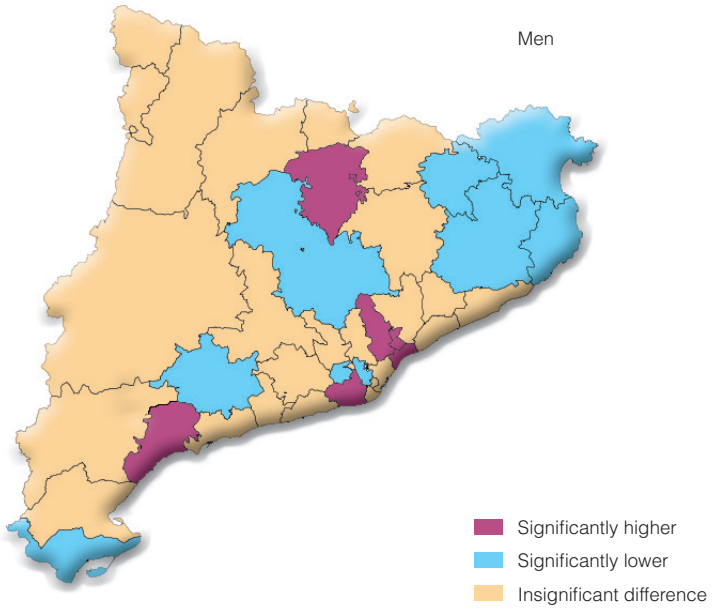
In women, the SMR is significantly higher in Lleida and Camp de Tarragona and lower in Girona and Catalunya Central. The territorial differences in mortality due to diseases of the respiratory system by sex in the regional health authorities are shown below.

Figure 1. Map of the distribution of the mortality differences due to diseases of the respiratory system in the regional health authorities in women. Catalonia, 1999-2004



Source: Catalan Health Plan. Register of Mortality in Catalonia. Municipal registers of the IDESCAT.

Figure 2. Map of the distribution of the mortality differences due to diseases of the respiratory system in the regional health authorities in men. Catalonia, 1999-2004



Source: Catalan Health Plan. Register of Mortality in Catalonia. Municipal registers of the IDESCAT.

5.3 Perception of the Health Status of the Population in the Sphere of Respiratory Diseases

According to data of the Health Survey for Catalonia (ESCA), carried out in 2006, 6.2% of the population over 14 state that they suffer chronic bronchitis, which is more prevalent in men (6.9%) than in women (5.6%). In the case of chronic allergies, 16.2% of the population state they are sufferers, but in this type of disease the proportion by sex is opposite, it is slightly more prevalent in women (14.8%) than in men (11.1%). In asthma, the stated prevalence in people over 14 is higher in women (6.7%) than in men (5.5%).

Table 8. Percentage of people over 14 stating they suffer from chronic bronchitis. Catalonia, 2006

Chronic bronchitis	Men	Women	Total
15-44 years	3.2	3.8	3.5
45-64 years	7.4	5.2	6.2
65-74 years	17.4	11.2	14.0
> 74 years	20.5	10.0	13.9
Total	6.9	5.6	6.2

Source: ESCA 2006. Ministry of Health.

Table 9. Percentage of people over 14 stating they suffer from asthma. Catalonia, 2006

Asthma	Men	Women	Total
15-44 years	4.8	5.9	5.3
45-64 years	4.4	5.8	5.1
65-74 years	7.9	10.1	9.1
> 74 years	12.1	9.3	10.3
Total	5.5	6.7	6.1

Source: ESCA 2006. Ministry of Health.

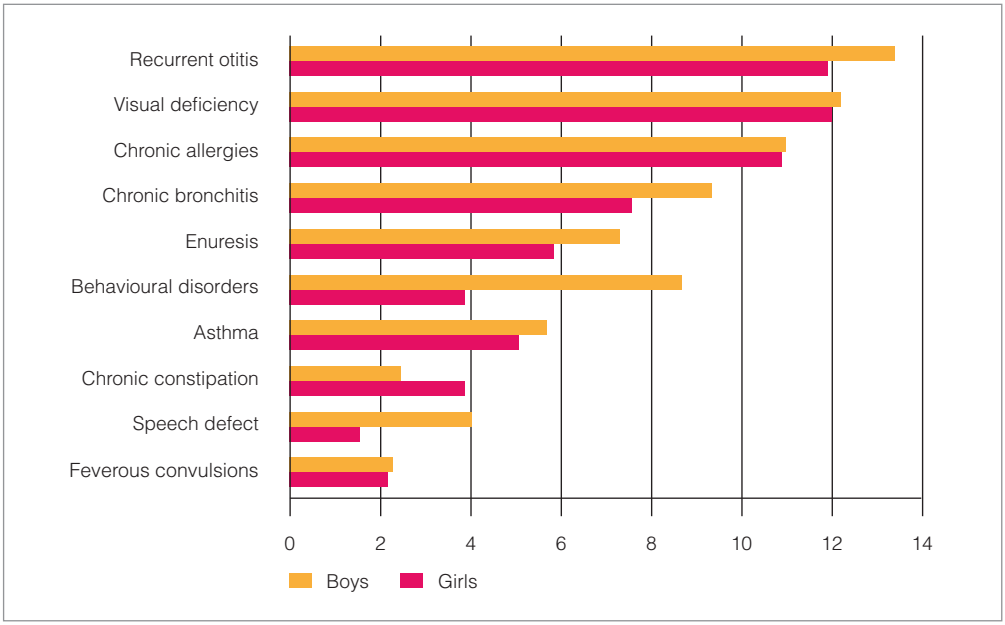
Table 10. Percentage of people over 14 stating they suffer from chronic allergies. Catalonia, 2006

Chronic allergies	Men	Women	Total
15-44 years	16.3	17.9	17.1
45-64 years	13.6	17.6	15.7
65-74 years	11	19.8	15.7
> 74 years	11.1	14.8	13.4
Total	14.7	17.6	16.2

Source: ESCA 2006. Ministry of Health.

With regard to children, almost 8% of girls state they suffer chronic bronchitis or repeated bronchitis, whereas in boys this percentage is over 9%. Asthma is another of the respiratory health problems most declared by children (between 5% and 6%), and it is slightly more prevalent in boys than in girls.

Graph 4. Percentage of the main disorders stated by the population aged 0 to 14 by sex. Catalonia, 2006

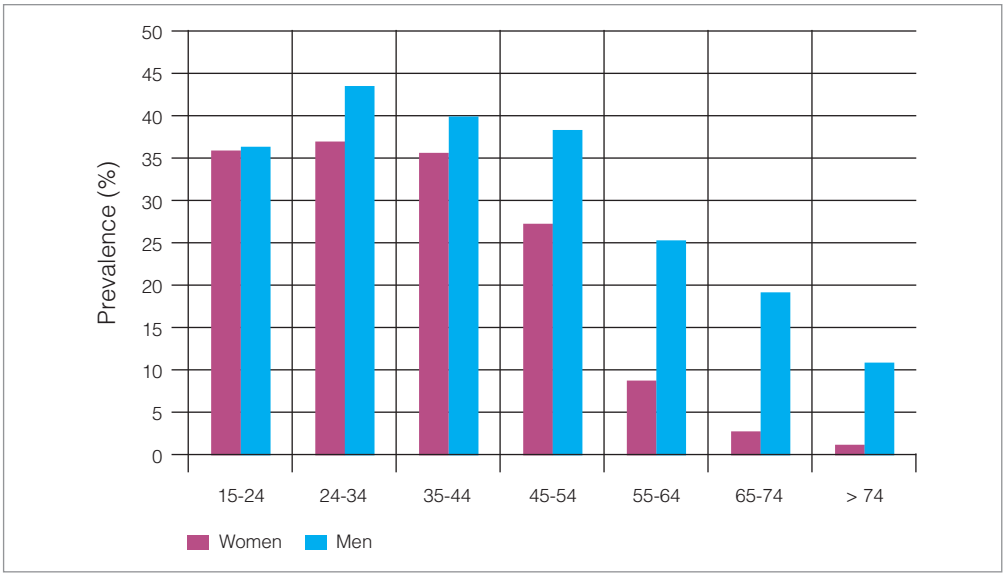


Source: ESCA, 2006. Ministry of Health.

5.4 Analysis of the Data on Smoking in Catalonia

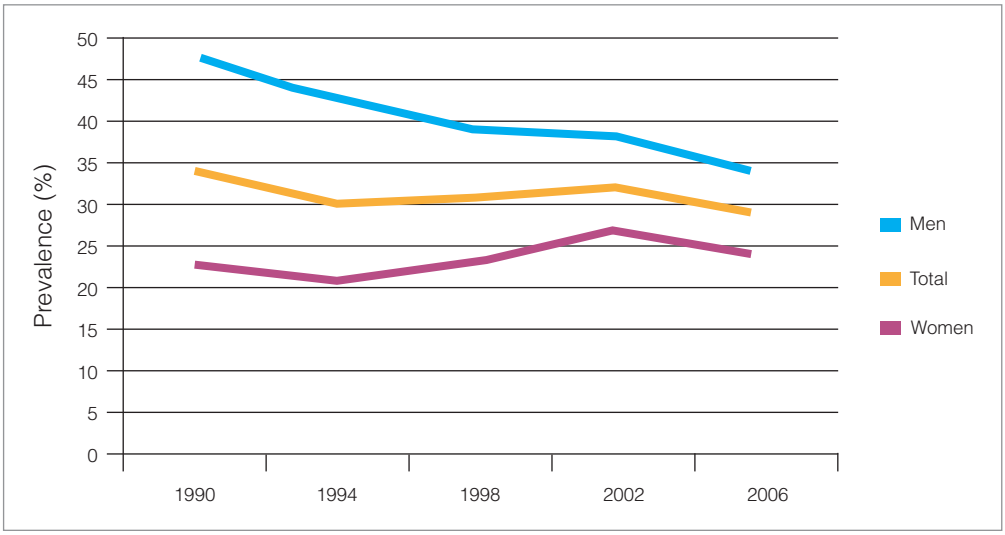
Smoking is the leading cause of predictable premature death in developed countries. The evolution of smoking in recent years shows a reduction of the habit in men and a change in trend in women, which since 2006 has shown a reduction. Currently, the prevalence of smoking in Catalonia is lower than 30%. There are many factors that might have influenced this favourable trend, but in any case it is considered that the effect of the Law of 2006 was fundamental. By sex, men smoke more than women in all age ranges.

Graph 5. Prevalence of smoking* by age group and sex. Catalonia, 2006



Source: 2006 Health Survey for Catalonia. Ministry of Health.
**Daily and occasional smokers.*

Graph 6. Evolution of the prevalence of smoking (daily and occasional smokers) in the population over 15 by sex. Catalonia, 1990-2006



Source: Survey on smoking in Catalonia, 1900 and 1998; and Health Survey for Catalonia, 1994, 2002 and 2006. Ministry of Health

The Catalan Ministry of Health carried out a study on mortality attributable to smoking in the population of Catalonia from 1998 to 2006, to determine the evolution in recent years. In 1998, in Catalunya there were 53,720 deaths in the population over 35, of which 8,604 (16.0%) were due to smoking (7,136 men and 1,468 women). In 2002, in Catalunya there were 55,800 deaths in the population over 35, of which 9,073 (16.3%) were attributable to smoking (7,282 men and 1,791 women). In 2006, there were 56,045 deaths for all causes in the population over 35, of which 8,673 (15.5%) were attributed to smoking (6,984 men and 1,689 women).

It is estimated than in 2006, 6% of the total number of deaths in women and 20% for men were attributable to smoking.

According to the latest data, in Catalonia 400 fewer people die due to causes attributable to smoking (in 2006, 298 men and 102 women) each year. In 2006, the total number of deaths attributable to smoking was 8,673 (6,984 men and 1,689 women). This corresponds to 15.5% of the total deaths in people aged 35 or over.

In 2006, in Catalonia 30,253,069 fewer packs of cigarettes were sold than in 2005 and this decrease continued in 2007 and stabilised in 2008. Cigarette consumption per capita has dropped from 2,541 in 2005 to 2,305 in 2008.

There are many actions to prevent smoking, including:

The “Smokeless Primary Care” programme, in conjunction with primary care scientific societies, prepared and published the Guide for the Treatment of Active and Passive Smoking, which was distributed to all primary care centres in Catalonia.

Care activity related to helping people to stop smoking has slightly increased. In 2008, with the help of the primary care professionals of the ICS, a total of 47,261 people stopped smoking. With regard to hospitals, from 2006 to 2008, 1,313 admitted patients received help to stop smoking. Each year, specialist units treat more than 2,100 patients.

In this sense, the information and awareness programme on the effects of smoking, "Smoke is fatal" should be mentioned. The objective is to promote assertive attitudes and behaviours in non-smokers to avoid and reduce exposure to smoke, and respect for and adhesion to applicable legislation, and to increase the use of healthcare resources to stop smoking, such as the healthcare response telephone line.

The "Smokeless Pregnancy" programme undertaken in sexual and reproductive healthcare centres (ASSIR) and primary care centres in Catalonia. Mention should also be made of the tenth Smokeless Week "A life without smoke tastes better", an initiative organised by the Smoking Treatment Primary Care Group (GRAPAT), the Catalan Family and Community Medicine Society (CAMFiC) and the Ministry of Health of the Government of Catalonia, in conjunction with the Spanish Family and Community Medicine Society (semFYC) and the Programme of activities for health promotion and prevention (PAPPS).

From the perspective of primary prevention, the master plan is working with the Directorate-General for Public Health of the Ministry of Health on the plan to help patients with acute exacerbation of COPD to stop smoking upon their admission to hospital (PDT-MPOC). This initiative will be developed from September 2010 in five hospitals in the Network of Smokeless Hospitals and will continue once the patients are in other healthcare entities of the system (primary care and specialist care). This programme may include the funding, if necessary, of the pharmacological treatment to stop smoking.

Furthermore, the Ministry of Health maintains its inspection activity with an average of 11,000 inspections per year in various establishments, 14% of which have led to legal proceedings. From January 2001 (the date that Law 28/2005, on measures against smoking, came into force) to 31 March 2009, 35,890 inspections were made, 5,143 of which found infringements.

5.5 Indicators Related to Primary Care Mechanisms

The data presented below is from the primary care teams of the Catalan Institute of Health (ICS). In primary care, cases of COPD are slightly reducing, and the tendency to use spirometry in the diagnosis of COPD and asthma is on the increase. In 2007, the use of spirometry in the diagnosis of COPD was registered in computerised clinical histories in 33% of new cases of patients with COPD diagnosed in primary care, whereas in 2009 this percentage increased to 40.8%. With regard to the use of spirometry in the diagnosis of asthma in primary care, in 2007 it was used with 7.8% of the population, whereas in 2009 this percentage doubled to 16.3% of cases.

It should be stated that in 2007 the computerisation process for primary care teams was not effective for all care entities, which is why the data from that year does not reflect the percentage of clinical practice per se, rather it is closer to the level registered for this practice. In 2009, the level of computerisation for the primary care teams was exhaustive. This enabled, among other things, the entry of data referring to spirometry in the computerised system of primary care centres. Notwithstanding, this transfer is still not automatic and for this reason, with regard to data on the level of spirometry registration, underregistration could occur.

Table 11. Evolution of the activity undertaken in primary care in relation to the treatment of respiratory diseases. Catalonia, 2007-2009

	2007	2009*
Number of diagnoses of COPD (prevalent)	83,455	105,947
Number of diagnoses of COPD (incident)	14,636	12,286
Spirometry in the diagnosis of COPD	4,855	5,012
Number of smokers	614,605	682,162
Number of smoking cessations in the last year	38,222	47,901
Number of diagnoses of asthma (incident)	15,022	12,821
Spirometry tests in the diagnosis of asthma	1,174	2,088
Training and verification of the inhaling technique in COPD	21,244	65,319

Source: Information Service of the Primary Care Services (SISAP); ICS, 2007-2009.
* The data from 2009 corresponds to the analysis of the first quarter of the year.

COPD: The study on primary care clinical histories of ICS centres (equivalent to approximately 80% of primary care in Catalonia) reveals that there are 113,900 clinical histories with a **COPD** diagnosis. Of these, in 24% of the cases there is a record of the use of spirometry in the diagnosis. It is also observed that in approximately 23% of the cases inhalers were prescribed for the treatment of COPD and that approximately 66% of diagnosed patients were vaccinated for influenza and received pneumococcal prohylaxis (a slightly lower proportion for this). With regard to the practice and the verification of the inhalant technique in COPD, there has been an increase in this activity of 67% (in 2007 this verification was only present in 21,244 clinical histories, whereas in 2009, 65,319 patients with COPD received training and verification of the use and the technique of inhalers).

Asthma: With regard to **asthma**, of the 152,588 clinical histories in the adult population with this diagnosis, diagnostic spirometry is only present in 10% of the cases and a third of the patients were prescribed inhalant drugs. For asthma in children, spirometry is only present in 4.4% of the 41,687 clinical histories.

If we analyse the data referring to the vaccination of the general population and in accordance with data from the primary care information systems of the ICS, 6% of the population between 15 and 59 have been vaccinated for influenza, whereas the coverage of the population older than 59 is 57%. Finally, it should be stated that 15% of adults (older than 15) treated in primary care have been vaccinated for pneumococcus, whereas the coverage of the population older than 59 is 56%. This data matches the information facilitated by the assessment of the contracting of services from specialist and primary care suppliers. According to data from this source, in 2009 the prevalence of ex-smokers was 35.2% (understanding an ex-smoker to be one who has not smoked for a year or more). Furthermore, the percentage of people stopping smoking in primary care entities has shown an increase of 25% in the last two years.

With regard to the data provided by specialist care providers obtained from the assessment of the variable part of the service purchasing contract of CatSalut from 2006

to 2008, the percentage of emergency readmissions 30 days after discharge for COPD shows a decreasing trend. In 2008, this percentage was 11%. It should be said that, as stated in section five of this document (situation analysis) and more specifically in the analysis of morbidity, the same indicator for 2007 according to the data of the MBDS HA was 15%. This data does not appear to disagree with the 7.2% reflected by the assessment of the contracting of services given that this assessment is not made for all the providers of specialist care, whereas the data facilitated by the MBDS HA covers 100% of hospital centres of the XHUP. With regard to the data on the resolution of quick diagnosis circuit programmes for lung cancer, and specifically when the percentage of patients with times shorter than 15 and 30 days from entry into the programme to treatment is evaluated, it can be concluded that there is an increase for this indicator for 2006 to 2008. Accordingly, in 2008 almost 57% of patients who entered a lung cancer quick diagnosis circuit programme received treatment in fewer than 15 days and almost 60% in fewer than 30 days. This data seems coherent with the data subsequently facilitated for the same indicator (see section 5.6.3 of this document), according to the official data of the waiting lists for lung cancer quick diagnosis circuits.

Table 12. Evolution of the main indicators of the assessment of the purchasing of primary and specialist care services for respiratory diseases. Catalonia, 2006-2008

Indicator	2006	2007	2008
Primary care			
Influenza vaccine cover in the population over 60 (percentage of people) *Reference: 85% (risk population)*	57.40%	56.60%	57.50%
Pneumococcal vaccine cover in the population over 60 (percentage of people)	46.70%	52.80%	56.00%
Ex-smoker patients *Reference: 35%*	32.60%	28.40%	35.20%
Specialist care			
Percentage of emergency readmissions for COPD	11.8%	7.2%	10.6%
Cases of lung cancer with a time interval from entry into the quick diagnosis circuit programme of fewer than 15 days (percentage of cases)	47.7%	53.3%	56.9%
Cases of lung cancer with a time interval from entry into the quick diagnosis circuit programme of fewer than 30 days (percentage of cases)	31.8%	46.1%	59.5%

Source: Evaluation of the variable part of the service purchasing contract. CatSalut, 2006-2008.
Data declared by the providers.

5.6 Diagnostic Tests and Waiting Lists

5.6.1. Spirometry

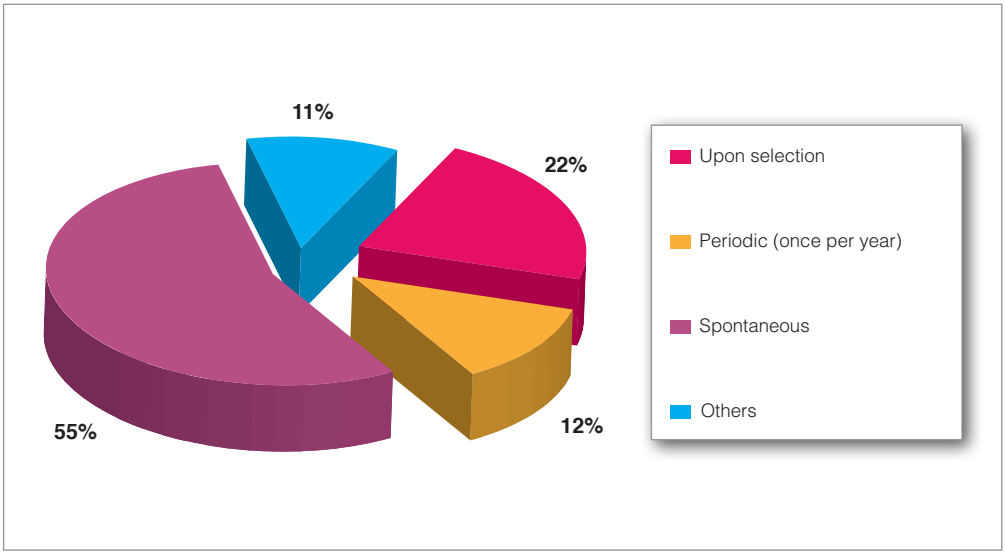
Spirometry or the study of the lung function is the essential tool for the assessment of respiratory disease. Due to the characteristics of these diseases, it is essential have spirometers throughout the territory and in all scopes, with a suitable level of quality. Accordingly, this is one of the primary strategic and operational objectives set for the master plan in the initial phase.

Globally accepted clinical practice guides for the treatment of COPD and asthma (GOLD and GINA) establish spirometry as a fundamental tool for the diagnosis, classification and monitoring of patients with these diseases. Therefore, underuse of this test can result in the underdiagnosis of these diseases with all the consequences that this might entail. Furthermore, there are articles that show an underuse of spirometry in the hospital sphere in the treatment of patients with COPD when compared to the use of complementary tests used in other diseases (such as echocardiography in cardiac insufficiency).

Therefore, given that the study of the lung function is an essential element for the assessment of patients with respiratory diseases, it seems reasonable that the starting point for a project should be access to basic diagnostic tools. However, studies carried out in our environment show that there are various reasons why not enough spirometry tests are carried out in primary care. Lack of training is the cause in 35.1% of cases, lack of personnel in 21.4%, and lack of time in 19.9% of cases. In 10.6% of cases there is a preference to refer the patient to a specialist.

In any case, professional training and high turnover rates are two problems related to the number and the quality of spirometers available for professionals. In fact, the results of a hospital survey on the extension and the use of spirometry in centres in Catalonia prepared by the master plan shows this, given that 55% of professionals who perform spirometry tests in hospitals access training through unregulated channels.

Graph 7. Distribution of the type of training received by professionals who carry out spirometry tests in the public hospital network. Catalonia, 2009



Source: survey undertaken by the PDMAR in the hospitals of the XHUP. Catalonia, 2009

In addition to the evidence of a lack of training for professionals who perform this type of test, variability has been detected in the practice of spirometry in Catalonia. This is shown in the results of the aforementioned survey, aimed at 65 hospitals of the XHUP in the first half of 2009, in which the aim was to specifically analyse aspects related to the number of spirometry tests that are performed, who does them, the training they received, the treatment of the data and information about quality controls.

The analysis of the number of spirometry tests performed in hospitals shows significant variability in the number of tests performed in hospitals, which ranges from 1 per 100 inhabitants in the healthcare areas of Lleida and Tarragon, to 1.6 per 100 in Girona. Due to the high concentration of inhabitants in the metropolitan area of Barcelona, the data of the healthcare area of Barcelona was analysed and then a disaggregated analysis was carried out based on the various healthcare sectors into which the healthcare area of Barcelona is organised.

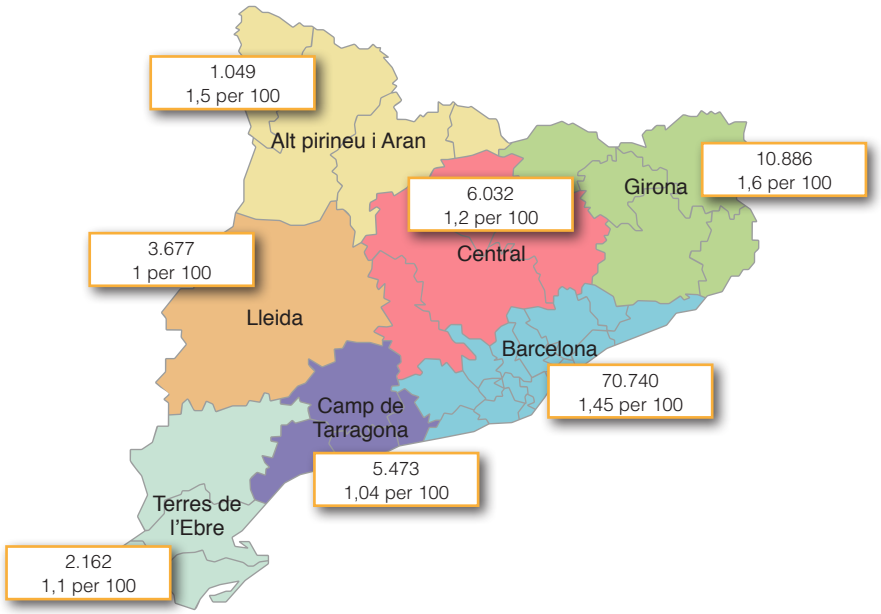
Within the healthcare area of Barcelona there is also evidence of diversity in the distribution of the number of spirometry tests per 100 inhabitants, which ranges from 0.47 per 100 in Vallès Occidental to 2.67 per 100 inhabitants in Baix Llobregat ($p < 0.05$).

These variations are not explained by proximity to tertiary hospitals or metropolitan or rural areas. The same study revealed the existence of major variability in the various zones of the metropolitan area of Barcelona. So, in the region to the north of Barcelona (Barcelonès Nord i Maresme) significantly fewer spirometry tests are performed than in the southern region (Metropolitana Sud).

Even though there is no ideal standard for the number of spirometry tests per 100 inhabitants, the results of this survey show significant territorial variability, which could be related to possible implications in the variability of the treatment of respiratory patients in the hospital scope.

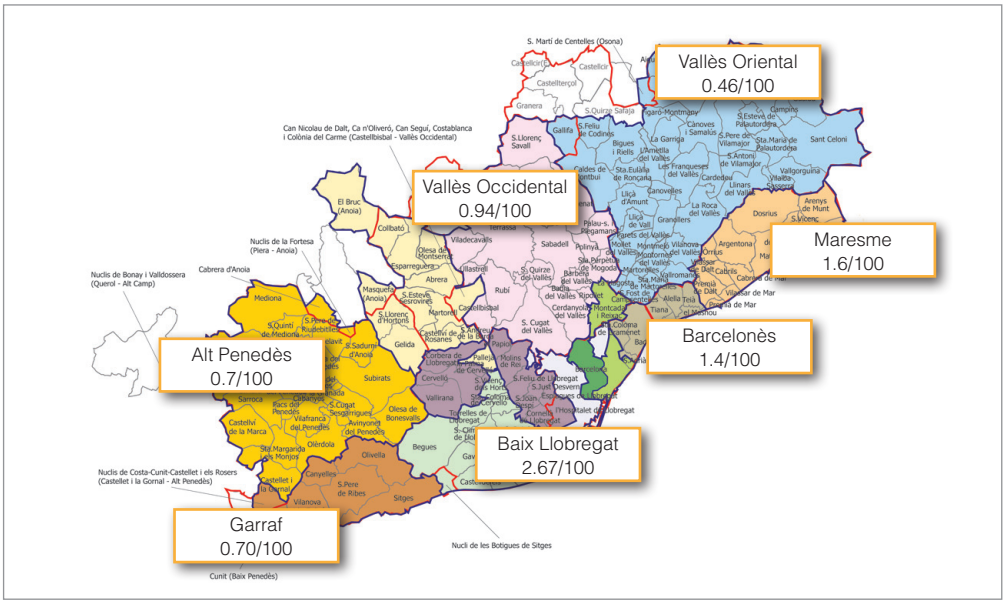
Other results arising from this study indicate that only 21.5% of professionals who perform spirometry tests have received training prior to starting this activity. It also shows that in 30% of the hospitals, spirometry data is automatically included in the hospital's database. These last two points show the need to promote programmes to control the quality of spirometry tests.

Figure 3. Number of spirometry tests per 100 inhabitants in the various healthcare areas. Catalonia, 2009



Source: survey undertaken by the PDMAR in the hospitals of the XHUP. Catalonia, 2009.

Figure 4. Number of spirometry tests per 100 inhabitants in the various healthcare sectors of Barcelona healthcare area (RSB), 2009



Source: survey undertaken by the PDMAR in the hospitals of the XHUP. Catalonia, 2009.

5.6.2. Sleep Studies

Another diagnostic test with widespread use in the clinical scope of respiratory diseases is polysomnography, which is fundamental to detect respiratory disorders related to sleep. The polysomnographic test is a continuous and supervised neurological and respiratory test of the waking-sleeping cycle, recording electroencephalographic activity, electrocardiographic activity and eye movements, the flow of air, the saturation of oxygen and the presence of snoring, among other aspects.

Basic polysomnography is indicated for the presence of the following: diurnal hypersomnia (excessive sleepiness), snoring and periods of apnoea perceived by the patients or third parties, arterial hypertension that is difficult to manage, pulmonary hypertension, cor pulmonale heart failure or non-apparent erythrocytosis, in cases of disorders that involve falling asleep and remaining sleep in which a disorder is suspected, assessment of chronic persistent insomnia that does not respond to initial treatment or monitoring of sleep disorders diagnosed by means of a previous polysomnography.

The most frequent diagnoses obtained by means of polysomnography are, in addition to insomnia, narcolepsy, epilepsy and certain parasomnia, respiratory disorders produced while sleeping. Of these, the ones detected most often are apnoea and/or hypopnoea, obstructive or central.

The latest official data available corresponds to the health register of the waiting lists for surgery and diagnostic tests for December 2009 (latest data available for this document), and it indicates that the accessibility of the users of the Catalan health system to this type of test is, generally, still improvable, although clear heterogeneity is observed according to the healthcare area where the patients are treated, which makes it difficult to judge the possible causes. Notwithstanding, both the waiting lists and the waiting times for polysomnography in Catalan hospitals can be said to have improved in recent months with respect to the same period in 2008. In 2009, reductions were observed in the waiting lists and waiting times in some regions of Catalonia, such as Lleida and Terres de l'Ebre, with respect to 2008.

The data for the Alt Pirineu i Aran healthcare area suggests that it is probable that patients are treated in Lleida, which is, after Camp de Tarragona, the area with the best results for polysomnography, with an average waiting time of 4 days. With the exception of the healthcare areas with the largest volume of patients (Barcelona and Catalunya Central), Girona with 142 patients on the waiting list and Les Terres de l'Ebre with 75 are the two areas with moderate waiting lists. Waiting times, however, are very different.

A patient in Girona has to wait an average of eighteen days for polysomnography, whereas a patient in Terres de l'Ebre has to wait three months. It will probably be necessary to review the circuits for referral from this area to the Camp de Tarragona or Lleida areas, given that they have shorter waiting lists and times.

Barcelona healthcare area, due to its reference population volume (5 million patients according to 2010 data), deserves a special mention. In spite of the long waiting list (3,407 patients in December 2009), a patient in Barcelona will only have to wait a average of fifty days for polysomnography in any centre of the XHUP of Barcelona and its metropolitan area.

It will be necessary to carry out a more detailed study in order to detect possible improvements in the referral flow in order to reduce even further the waiting lists and times for polysomnography, a key point in the diagnostic process of a disorder as prevalent as OSAS.

Table 13. Evolution of the waiting lists and the average waiting times for polysomnography. Catalonia, 2009

	Waiting list (patients)	Average waiting time (days)
Alt Pirineu i Aran Healthcare Area	0	0
Lleida Healthcare Area	12	3.7
Camp de Tarragona Healthcare Area	8	0
Terres de l'Ebre Healthcare Area	75	100
Catalunya Central Healthcare Area	467	125
Barcelona Healthcare Area	3,407	53
Girona Healthcare Area	142	17.7
Total Catalonia (average)	4,111	130

Source: waiting list healthcare register. Services and Quality Area. CatSalut, official data corresponding to December 2009.

5.6.3. Quick Diagnosis Circuit for Lung Cancer

The objective of this programme is to reduce the delay attributable to healthcare services between suspected cancer and diagnosis and treatment. This organisational mechanism combines the quick access of patients suspected to have cancer in primary care with the use of external consultation and day hospitalisation and with the establishment of preferential circuits for diagnostic examinations.

A period of less than 30 days from the time of consultation for suspected cancer to the start of treatment is determined as a treatment objective.

The monitoring indicators for 2008 show, in general, a very positive evolution with respect to the results obtained in 2007. In Catalonia, in 2008, 3,662 patients were included in the quick diagnosis circuit for lung cancer. This represents an increase of 23% with respect to the 2,819 patients included in 2007. The average waiting period between the entry of the patients to the programme and the start of treatment has been reduced. In 2008 it was 32.5 days, whereas in the previous year it was almost 39 days. The waiting period for access to the lung cancer quick diagnosis circuit has also been reduced. In Catalonia in 2008, in 58% of cases the waiting period was less than 30 days, whereas in 2007 this indicator was 48%. The reduction of the percentage of patients with longer waiting periods is also very positive, almost 10 points (22.5% in 2008 compared to 31.43% in 2007).

Table 14. Lung cancer quick diagnosis circuit monitoring indicators. Catalonia, 2007-2008

Indicator	2007	2008
Number of patients included in quick diagnosis circuits	2.819	3.662
Number of patients included in quick diagnosis circuits who comply with inclusion criteria	2.006	3.159
Percentage of patients included in quick diagnosis circuits who comply with inclusion criteria	71,16%	85,52%
Average waiting period between entry into the quick diagnosis circuit and the start of treatment (days)	38,88	32,25
Percentage of cases with an interval < 30 days between entry into the quick diagnosis circuit and the start of treatment	48,20%	57,93%
Percentage of cases with an interval of 30 to 45 days between entry into the quick diagnosis circuit and the start of treatment	20,36%	19,54%
Percentage of cases with an interval > 45 days between entry into the quick diagnosis circuit and the start of treatment	31,43%	22,53%

Source: quick diagnosis circuit monitoring reports. Service Evaluation Division. CatSalut, 2007-2008.

5.7 Home Respiratory Therapy

Home respiratory therapy (HRT) is a term that groups all the therapeutic services indicated for the treatment of respiratory disorders, ventilation support and control of various parameters indicating alterations in oxygenation.

Home treatment services are developed with express medical prescription, and it is the specialist who details the necessary therapy, the parameters and the duration of the treatment. This home care provides advantages for the patient in certain kinds of disease, such as respiratory diseases, it provides more comfort and individualised and protocolised care.

In 2009, almost 73,500 patients were included in home therapy programmes. The most prescribed HRT is for treating patients with sleep apnoea. In 2009, 50,835 continuous positive airway pressure devices (CPAP) were prescribed. With regard to the second type of HRT, almost 16,000 patients received oxygen therapy with a concentrator in 80% of the cases (12,499 patients) and the rest, 3,467 patients, received liquid oxygen. The third type of HRT most prescribed is aerosol therapy, with 3,806 patients included in 2009. This is followed by mechanical ventilation for 12 and 14 hours, with 2,196 patients, and finally monitoring of apnoea in children with 787 patients. In 2007, CatSalut assigned €27.8 million to finance HRT, 7.6% of the total specialist care budget for respiratory diseases and 4% of the total for diseases of the respiratory system.

Table 15. Home respiratory therapy. Catalonia, 2009

Home respiratory therapy	Prescription (%)
CPAP	69
Concentrator	17
Liquid	5
Ventilation	3
Nebulisers	5
Monitoring	1

Source: Service Evaluation Division. CatSalut, 2009.

5.8 Economic Impact and Healthcare Costs related to Diseases of the Respiratory System

The evaluation of the distribution of the budget is an important tool in the analysis of the situation and the planning of health services. This economic evaluation has been, therefore, an important element in the analysis of the situation of the master plan for diseases of the respiratory system. According to another study, in 2008, 9.3% of CatSalut's budget was assigned to the treatment of diseases of the respiratory system. Of this budget, almost 52% is assigned to specialist treatment, 24% to primary care and 24.3% to pharmaceutical treatment. Of the total budget for specialist treatment of diseases of the respiratory system, 86.3% is for hospital treatment, 7.6% for oxygen therapy and the remaining 5.5% for social health mechanisms.

According to a study undertaken in Baix Empordà on the impact of morbidity on the losses for the Catalan economy within the framework of integrated healthcare, premature deaths due to diseases of the respiratory system represented a loss in 2004 in productivity of 76.4 million euros (4.5% of the total). Moreover, it is estimated that the healthcare cost of COPD is 2 million euros, whereas for asthma is almost three quarters of a million euros.

6. Strategic Lines

6. Strategic Lines

The master plan for diseases for the respiratory system assumes as its own strategic and operational objectives those set by the Catalan Health Plan in all areas of actions related to the prevention and treatment of respiratory diseases. In this sense, it is necessary to indicate the following objectives:

- Reduce mortality caused by influenza, respiratory system acute infectious disease and pneumonia by 10% among the population aged 60 and over.
- Reduce mortality due to chronic obstructive pulmonary disease among the population aged 40 and over by 10%.
- Reduce the prevalence of smoking among the population aged 15 and over to 28%.
- Reduce the prevalence of smoking among young people aged 15 to 24 to 32%.
- Reduce the prevalence of smoking among women aged 15 and over to 22%.
- Reduce the prevalence of smoking among men aged 15 and over to 34%.
- Increase the proportion of people aged 15 and over stopping smoking to 35%.
- Reduce the prevalence of people between 18 and 74 with a completely sedentary lifestyle to lower than 16%.
- Reduce the prevalence of people between 18 and 74 with an insufficient level of physical activity in their free time by 10%.
- Increase the prevalence of people between 18 and 74 who walk more than 30 minutes a day by 20%.
- Increase the prevalence of people from 18 to 74 who carry out moderate physical activity 5 or more times per week or an equivalent quantity to above 14%.

STRATEGIC LINES AND ACTION PROPOSALS 2010-2012

6.1. Preventive Treatment of Diseases of the Respiratory System

General Objective
Improve the health results of respiratory diseases by means of preventive measures

Justification
Prevention is one of the most efficient interventions in public health to avoid, reduce or delay health problems. Respiratory diseases, due to their chronicity component, are a set of clinical entities with known and established risk factors and, therefore, susceptible to obtaining good results with preventive actions with documented efficacy and effectiveness, undertaken in this environment.

Specific Objectives
- Help COPD patients to stop smoking.
- Increase the promotion of physical activity in patients with respiratory diseases.
- Promote vaccination in respiratory patients in accordance with the recommendations of the Ministry of Health's vaccinations programme.

Projects
- Work in conjunction with the Directorate-General for Public Health in common areas susceptible to the establishment of collaborations.

Actions

- Design and implement programmes to help people to stop smoking taking advantage of their admission for serious decompensation of COPD. In addition to a strategy to help people stop smoking when diagnosed. In this sense, the master plan will work with the Directorate-General for Public Health on the plan to help patients with COPD stop smoking in the acute phase of the disease upon admission to hospital (PDT-MPOC) within the sphere of the Network of Smokeless Hospitals.
- Create a didactic unit to promote interventions to help patients with respiratory diseases stop smoking.
- Design a physical activity program for patients with COPD.
- Promote vaccination in respiratory patients assuming the recommendations of the Ministry of Health vaccinations programme:
  - Influenza: vaccination is advisable for people of any age (older than 6 months) with chronic respiratory disease, including asthma. From the age of 60 for everybody.
  - Pneumococcal 23-valent: the vaccination of people over the age of 5 with chronic respiratory diseases is advisable. From the age of 60 for everybody.
  - Pneumococcal conjugate: currently the Ministry only recommends vaccination (with 13-valent conjugate vaccine) in infants aged 2 months to 5 years with base diseases that are a risk factor. The risk groups continue to be those established in 2001 for heptavalent vaccine. This includes chronic respiratory disease, but asthma is excluded from the recommendations.

6.2. Accessibility and Quality of Diagnostic Tests, Especially Spirometry

Justification

Spirometry is the main diagnostic test for respiratory diseases, but the small amount of available data shows very low usage levels even in respiratory patients. There is enough scientific evidence, corroborated by a study carried out by the master plan, on the reality of the practice of spirometry in hospitals and primary care centres in Catalonia, to conclude that many patients with asthma or COPD are underdiagnosed and, consequently, undertreated. To ensure that the diagnostic tool is used with quality criteria, it is necessary to carry out a programme of training aimed at professionals who perform these tests, with regulated and standardised content in order to ensure homogenous, quality practice throughout the territory.

General Objective

Improve access to spirometry and achieve quality spirometry throughout the territory.

Specific Objectives

- A survey to explore the current situation of the practice of spirometry in Catalonia.
- Improve the training of professionals who perform spirometry tests by means of the design of a course with standardised content.
- Create territorial networks to effectively control the quality of spirometry tests.
- Increase the practice of quality spirometry for the diagnosis of patients with COPD and asthma.

Actions

- Prepare surveys on the practice of spirometry in hospitals and in primary care.
- Design a standard training course for the performance of spirometry tests and define a training procedure for trainers.
- Create networks with professionals from various care levels to regularly control the

quality of the spirometry tests performed in the territory, by means of data processing procedures.
- Increase the practice of spirometry for the diagnosis of patients with COPD and asthma.

6.3. Care for Patients with Acute Exacerbation of COPD

Justification

COPD is one of the most frequent respiratory diseases and the one that most affects the quality of life of its sufferers. The disease progresses in the form of acute exacerbations that, to a great extent, can be avoided. In addition to the risks directly related to exacerbation and the impact for the patient and the health system, a further two aspects should be considered: readmissions and the global impact on the health system.

From the theoretical perspective, in the exacerbation of COPD there are different phases in which active intervention is possible:

a) Days prior to the admission (patients with COPD usually present symptoms 4 to 8 days before admission for exacerbation and during this period it is assumed that they repeatedly enter into contact with the health system).
b) Acute care during the exacerbation. This care is mostly provided in the emergency services of hospitals. The decision-making process is not standardised and in many cases patients do not receive the most suitable treatment at the right time (some patients could benefit from non-invasive ventilation, for example).
c) Care during and after hospitalisation. Patients with COPD require specific discharge plans that guarantee continued care.
e) Once discharged, it is necessary to design proactive programmes to avoid readmission.

General Objective

Improve care for patients with acute exacerbation of COPD.

Specific Objectives

- Analyse the care process for the exacerbation of COPD (identify the factors that can prevent the exacerbation of patients with COPD and improve care for exacerbation and the discharge of COPD).
- Design an integrated care model for COPD and guarantee continued care.

Actions

- Analysis of the acute exacerbation of COPD. Prepare a technical document.
- Study on the needs of non-invasive ventilation.
- Creation of an integrated care model for COPD.
- Dissemination of the standard model so that each healthcare area can adapt to the needs and resources of the territory.
- Foster home hospitalisation programmes and early discharges for sufferers of acute COPD.

6.4. Sleep Disorder Care

Justification

OSAS is, with insomnia, the most frequent sleep disorder. It is characterised by the presence of apnoea and/or hypopnoea with more than 10 episodes per hour. It predominantly affects overweight men with a history of arterial hypertension and coronary cardiac problems. The diagnosis is based on a detailed anamnesis, a physical examination of the

patient, followed by a polysomnography, which is currently the diagnostic test to confirm the disease. The treatment includes three areas: hygienic-dietary measures (weight loss as the principal factor to correct), prescription of CPAP (which is the preferred treatment in moderate and serious cases) and surgery (when there are specific anatomical alterations). Sleep disorders are frequent and considerably affect the quality of life of sufferers. It is a treatable disorder, with a high level of therapeutic success. The main danger currently lies in the design of a care model to respond to current needs and lacks.

General Objective
Improve care for patients with sleep disorders by means of the design of a care model.

Specific Objectives
- Analyse the variability of prescription.
- Design a care model proposal to treat sleep disorders.

Actions
- Report on the variability of prescription.
- Creation of a specific work group for sleep disorders and obstructive sleep apnoea syndrome. Preparation of a technical document on the proposed care model.

6.5. Care for Asthmatic Patients

Justification
Bronchial asthma is a frequent respiratory disorder that has seen an increase in recent years.

General Objective
Improve care for asthmatic patients based on the improvement of the diagnosis and the referral process for patients with asthma and the improvement of the health education of patients and the training of professionals.

Specific Objectives
- Propose a structured diagnosis and treatment model for infants with asthma in Catalonia.
- Propose a structured diagnosis and treatment model for adults with asthma in Catalonia.
- Propose a model for the monitoring and education of patients with asthma.
- Prepare recommendations to cover occupational asthma.

Actions
- Creation of a work group on asthma in children to prepare a technical document with recommendations.
- Creation of a work group on asthma in adults to prepare a technical document with recommendations.
- Creation of a work group to prepare a technical document with the proposals and the script of the educational content for patients.
- Creation of a work group to prepare a technical document with the proposals and the script of the educational content for professionals.
- Creation of a work group to prepare a study and recommendations for the treatment of occupational respiratory disease, with a special emphasis on occupational asthma.

6.6. Care for Patients with Diseases that Require Special and Specific Treatment

Justification

There is a group of diseases and clinical situations related to respiratory health that need highly specific treatment. Therefore, it is necessary to design specific actions with a specific scope with a different strategy in each case.

General Objective

Improve care for patients with highly specific respiratory diseases that require very specific actions.

Projects

Design, propose and prepare recommendations or specific actions in specific spheres of action for respiratory diseases that although minority or fewer in number are transcendental for the patients who suffer them and require individualised treatment.

Actions

- Specific recommendation for the treatment of:
  - Pulmonary hypertension.
  - Quick diagnosis of cancer.
  - Cystic fibrosis.
  - Neuromuscular diseases with respiratory problems.
  - Home respiratory therapy.
  - Allergy.

7. Care Model and Planning Criteria

7. Care Model and Planning Criteria

The master plan for diseases of the respiratory system focuses on prevention and integrated care for certain respiratory diseases: COPD, obstructive sleep apnoea syndrome and asthma, mainly. The objective of this section is to provide reference elements for the definition of the criteria for the planning of services for the treatment of these diseases within the framework of the master plan for diseases of the respiratory system and the healthcare, social health and public health map.

The healthcare, social health and public health map is conceived as the main service planning instrument in Catalonia. Its preparation requires, as the first step, in conjunction with the analysis of the situation, the definition of service planning criteria to assess the deployment and adaptation needs of resources to respond to the population's health problems.

The principles that guide the health policies and services of the Catalan public health system are equity, efficiency, sustainability and the satisfaction of the citizens with the services. In service planning, these principles are translated into three key elements: accessibility, in the various components (spatial, time, social and cultural), quality in the results and in the care process, and the cost of the interventions required to be undertaken in the various types of service. The process for the definition of criteria and the discussion of the proposals for the deployment and adaptation of the resources are based on the interrelationship between these elements, in such a way that care can be provided as close as possible to the homes of the affected, at the right time, without producing inequalities between population groups and territories, but guaranteeing maximum quality and the most profitable alternative.

The work to define service planning criteria for the treatment of respiratory diseases will be carried out by means of a series of work groups, with the participation of care professionals in the sphere of pneumology, emergency services managers, various healthcare areas and professionals from the Directorate-General for Planning and Evaluation of the Ministry of Health. These work groups will identify the most suitable services to undertake the interventions prioritised by the master plan. The results of the work sessions will enable the establishment of the orientations required to be taken into account in the definition of the service planning criteria: the interventions to be considered, the services in which they are to be undertaken, the main resource requirements they can be derived from. And the relationships between the various types of service to be produced.

As an overview, as a result of the preliminary discussions of some work groups established in the first phase of the master plan, specific lacks have been identified, representing a common denominator in all spheres of care for diseases of the respiratory system and helping to identify a series of problems in the care model that must be worked on:

- Treatment demand in relation to diseases of the respiratory system is considerable both in primary care and specialist care, with a significant weight of exacerbations of certain diseases causing an increase in visits to hospitals for acute patients. This demand also displays territorial variability.

- There are certain territorial imbalances in the provision of certain services in the care models. It is necessary to re-assess the situation in certain territories and diseases.

- There is a lack of criteria common to primary care and specialist care and various specialities, with regard to the portfolio of services and the suitability of referral in certain diseases. It seems that in the case of asthma the criteria are clear and the scope is centred more on the consolidation of circuits and the reorganisation of the system.

- There are isolated lacks in some diseases in accessibility to certain resources of specialist care and deficits in continued care are generated because there is a lack of adequate coordination between levels. Sometimes, the lack of definition and the fragmentation of care result in unnecessary duplication in care and in the consumption of resources.

- The current information systems and systems for collaboration between primary care and specialist care can be improved to achieve a good level of care for respiratory diseases. There is an evident lack of assessment of the results.

- It is necessary to increase the level of training of professionals and that of patients for integrated management of chronic diseases such as COPD and asthma.

Furthermore, based on the information compiled in the analysis of the situation, it has been observed that there is a territorial imbalance in certain aspects that are fundamental for the treatment of diseases of the respiratory system. This is especially relevant in aspects such as access to forced spirometry. For this reason, studies have been carried out on the practice of spirometry in hospital care and primary care in order to analyse the situation in depth. Thanks to these studies we know that the care services have the devices necessary for spirometry, but there is a lack of regulated training, high turnover of trained personnel and the lack of a quality control system. The master plan, to correct this situation in the most important diagnostic procedure in respiratory diseases, in addition to continuing to carry out in-depth studies of the forced practice of spirometry, has designed a training course for which territorial deployment has already started. The master plan is promoting the incorporation of spirometry in electronic clinical histories in order to facilitate both the diagnosis of diseases and the quality control of the tests by means of territorial networks.

One of the most relevant respiratory diseases is asthma. In part related to the previous point, it is considered that there is significant underdiagnosis in asthma and that the current care model in Catalonia is not homogenous. The master plan has created a work group to redress this. In principle, the group has been organised into four areas that are currently in various stages of development. In any case, there is a now a consensus in relation to documents for the treatment of asthma in children and the monitoring of asthma. The treatment of asthma in adults is in the advanced stage and work is set to begin on occupational asthma. The aforementioned consensus implies a territorial vision with the establishment of specific tasks for the various care levels and referral criteria. In this sense, the involvement of the master plan in the development of a care model for allergies should also be mentioned.

Smoking is considered to be most vital risk factor for respiratory diseases. Its harmful effects include the deterioration of the lung function, which leads to COPD. This disease, in addition to being a significant cause of death, represents the loss of the quality of life for those who suffer it. As we have already mentioned, it is the objective of the master plan to collaborate with the Directorate-General for Public Health's programme to help

people stop smoking in order to prevent respiratory problems caused by smoking, both with regard to preventing people from starting smoking and helping patients and health citizens to stop. COPD evolves in the form of exacerbations and, from the care perspective, it is important to prevent them and treat them as suitably as possible to avoid the high number of hospital admissions that these patients can cause for the health system. In this sense, identification by means of the study of a sufficient number of cases, of the key points to improve care, and helping patients to stop smoking when they are diagnosed and in exacerbations are the objectives of the master plan.

Sleep disorders are a health problem that affects 2% to 4% of the adult population. Diagnostic confirmation is by means of sleep respiratory studies (in hospital or at home but with the control of hospital specialists). Currently, there are numerous treatments but the majority of patients have to use devices at night to generate continuous positive airway pressure (CPAP). From the perspective of the organisation of care, the health system has to resolve the challenge of the long-term monitoring of these patients. The majority of these patients have to be treated indefinitely, so prevalence progressively increases. Experts now agree that there is no need to increase the number of hospital laboratories to carry out sleep studies, but there is an evident need to reorganise the monitoring of these patients. A disease as prevalent as sleep disorders must foster monitoring in the resources of the community (especially primary care devices) with the support of specialists. The master plan will work on these two directions: optimise the current sleep laboratories, and promote networking and define the role of primary care in the monitoring of this disorder.

Minority diseases present common traits and shared needs: prolonged periods of time before being diagnosed, difficulties accessing expertise, and in many cases, ignorance of the specific problems of each disease in the majority of healthcare areas. The prevalence of pulmonary hypertension (not secondary to any other previous disease) is around 16 cases per million inhabitants (with 3 or 4 new cases per million inhabitants per year). As in the majority of the cases of minority diseases, hypertension has an impact on patients (poor prognosis in the short term), highly specialised treatment needs and high levels of consumption of therapeutic resources.

The proposal of the master plan is to identify natural nodes of expertise and create care networks based on them that define how to share care for patients and how support from the most expert nodes is to be received. This aim of creating networks must be accompanied by the commitment to share information by all the participating centres. This network idea can be extrapolated to the rest of minority diseases that affect the respiratory system.

8. Objectives and Evaluation

8. Objectives and Evaluation

In order to make progress in the use and analysis of the available information, and with the objective of improving the quality of healthcare in diseases of the respiratory system it is necessary to compile the indicators to evaluate the completion of the proposed objectives. The integration of this information could contribute to the identification of improvement margins and suggest new initiatives for the purchasing and provision of services for healthcare managers and planners.

A set of indicators to enable information to be provided to support the decision-making process for planning, organising, managing and assessing the progress of the master plan for diseases of the respiratory system is presented. The purpose, therefore, is to have reliable, consistent and systematic information that, with suitable periodicity, enables the monitoring and assessment of the progress of the main strategic objectives of the master plan and of the operational objectives important for the correct implementation of the plan.

The choice of the monitoring and evaluation indicators is based on the principles of objectivity, validity, sensitivity, specificity and consensus. In this sense, it should be taken into account that the current information systems do not enable an exhaustive set of indicators to be obtained. It is for this reason that, in accordance with progressiveness and feasibility criteria, the existing indicators will be perfected and others deemed to be necessary for a good analysis of the situation and the development of care for diseases of the respiratory system in Catalonia and the response of the Catalan health system to this problem will be added.

With regard to the rest of the objectives that for technological, functional or conceptual reasons are not susceptible to being evaluated based on synthetic indicators, the ad hoc evaluation mechanisms and tools described in this document will be used.

The master plan for diseases of the respiratory system will use, therefore, as basic synthetic monitoring and evaluation indicators those presented below. The global indicator for Catalonia will always be calculated as will, if technically possible, indicators for men and women and for the various territorial areas.

With regard to the objectives related to the master plan for diseases of the respiratory system, they will be evaluated based on the aforementioned sources of information. The objective of the master plan for the first quarter of 2010 in relation to the monitoring and evaluation of the proposed actions will be to prepare the indicators that will enable evaluation.

The improvement of information systems in relation to the treatment of diseases of the respiratory system will be one of the strategic pillars to be able to establish suitable mechanisms for the monitoring and evaluation of the process to implement the master plan.

Table 16. Summary of the general objectives set for the PDMAR with the respective actions and the indicators to evaluate them. Period 2010-2012

GENERAL OBJECTIVE	SPECIFIC OBJECTIVES	ACTION AND TIMESCALE	INDICATOR AND TIMESCALE
1. Improve the health results of respiratory diseases by means of preventive measures	**1.1. Help COPD patients to stop smoking**	1.1.1. Design of a strategy to help people stop smoking when diagnosed (2011)	**1.1.1.1. Existence of experience (2011)**
		1.1.2. Design of a stop smoking programme upon admission for serious decompensation of COPD (2011)	**1.1.1.2. Involve at least 50% of the hospitals in Catalonia (2012)**
		1.1.3. Design of a didactic unit to promote non-smoking in patients with COPD (2011)	**1.1.1.3. Increase the number of COPD patients who stop smoking to 10% above the rate of the general population (2012)**
			1.1.1.4. Reduce the rate of readmission of patients with COPD to below 15% (2012)
			1.1.2. Existence of experience (2011)
			1.1.3 Existence of teaching material (2012)
	1.2. Increase the promotion of physical activity in patients with respiratory diseases	1.2.1. Design of a physical activity programme for patients with COPD (2011)	**1.2.1. Existence of the programme (2011)**
			1.2.1.1. Determine the proportion of patients with COPD who are included in PAFES programmes (2012)
	1.3. Promote vaccination for respiratory patients	1.3.1. Strengthen the recommendations on vaccination in primary care (2010-2012)	**1.3.1. Achieve an additional 10% of influenza vaccinations in patients with COPD (with respect to 2009 levels) (2012).**
			1.3.1.1. Achieve an additional 10% of pneumococcal vaccinations in patients with COPD (with respect to 2009 levels) (2012)

GENERAL OBJECTIVE	SPECIFIC OBJECTIVES	ACTION AND TIMESCALE	INDICATOR AND TIMESCALE
2. Improve access to spirometry and achieve quality spirometry throughout the territory	**2.1. Perform a survey to explore the current situation of the practice of spirometry in Catalonia**	2.1.1. Carry out a survey to study the practice of spirometry in XHUP hospitals (2010)	**2.1.1. Undertaken (yes/no (2010)**
		2.1.2. Carry out a survey to study the practice of spirometry in primary care (2010)	**2.1.2. Undertaken (yes/no) (2010)**
	2.2. Improve the training of professionals who perform spirometry tests by means of the design of a course with standardised content	2.2.1.Create a work group to meet the objective (2010)	**2.2.1. Creation of the work group (2010)**
		2.2.2. Carry out 6 training courses in the territory (2010-2012)	**2.2.2. Undertaking of 6 courses (yes/no) and undertaking of at least one in each healthcare area (2010-2011)**
		2.2.3. Carry out a training course for trainers (2011)	**2.2.3. Undertaking of courses (yes/no) and design at least one in each healthcare area (2011)**
		2.2.4. Carry out a specific course for paediatrics (2010-2012)	**2.2.4. Undertaking of the course (yes/no) (2010-2012)**
	2.3. Create a network of professionals in the territory to control the quality of spirometry tests	2.3.1. Incorporate spirometry into the electronic clinical history (2010)	**2.3.1. Have the technical requirements to incorporate spirometry into hospital and primary care centre equipment (yes/no) (2010)**
		2.3.2. Pilot network programme in a zone with ICS primary care and hospitals (2011)	**2.3.2. Undertaken (yes/no) (2011)**
		2.3.3. Pilot network programme in a zone with a diversity of providers (2011)	**2.3.3. Undertaken (yes/no) (2011)**
			2.3.4. Ensure that at least 60% of the spirometry tests performed have a level A quality standard (2012)
	2.4. Increase the practice of spirometry for the diagnosis of patients with COPD and asthma.		**2.4.1. Achieve higher levels than in 2010 with regard to the practice of spirometry in the diagnosis of patients:** **2.4.1.1. With COPD by at least 50% (2012)** **2.4.1.2. With asthma by at least 50% (2012)**

GENERAL OBJECTIVE	SPECIFIC OBJECTIVES	ACTION AND TIMESCALE	INDICATOR AND TIMESCALE
3. Improve care for patients with acute exacerbation of COPD	**3.1. Analyse the care process for exacerbation of COPD**	3.1.1. Analysis of the exacerbation before and during admission and discharge (history review) (2010-2011)	**3.1.1. Undertaken (yes/no) (2010-2011)** **3.1.1.1. Achieve a reduction in the global rate of readmissions to under 15% (see indicator 1.1.1.5) (2012)** **3.1.1.2. Reduce the variability of readmissions by healthcare area with respect to 2010 (2012)**
	3.2. Design an integrated care model for COPD	3.2.1. Study on the needs of non-invasive ventilation (2010-2011)	**3.2.1. Undertaken (yes/no) (2010-2011)**
		3.2.2. Create an integrated care model for COPD (2012)	**3.2.2. Creation of the model (2012)**
		3.2.3. Have each healthcare area adapt to the standard model in accordance with the needs and resources of the territory (2012)	**3.2.3. Adaptation by the healthcare areas (2012)**
		3.2.4. Foster home hospitalisation programmes and early discharges for sufferers of acute COPD	**3.2.4. Number of programmes created (2012)**
4. Improve care for patients with sleep disorders by means of the design of a care model	**4.1. Analysis of the variability of prescription**	4.1.1. Report on the variability of prescription (2011)	**4.1.1. Existence of the document (2011)**
	4.2. Proposal of a care model	4.2.1. Creation of a work group to prepare a care model proposal (2011)	**4.2.1. Existence of the document (2011)** **4.2.1.1. Carry out three pilot programmes to evaluate the sleep disorder model in 3 area profiles (metropolitan, non-metropolitan and areas with integration of sleep laboratories) (2012)** **4.2.1.1.1. Evaluate results (structure and satisfaction)**

GENERAL OBJECTIVE	SPECIFIC OBJECTIVES	ACTION AND TIMESCALE	INDICATOR AND TIMESCALE
5. Improve care for asthmatic patients	**5.1. Propose a structured diagnosis and treatment model for infants with asthma in Catalonia**	5.1.1.Creation of a work group on asthma in children to prepare a technical document with recommendations (2010)	**5.1.1. Existence of the document (yes/no) (2010)** **5.1.1.1. Ensure that the guide on asthma in children is used and applied by providers in Catalonia (2011)**
	5.2. Propose a structured diagnosis and treatment model for adults with asthma in Catalonia	5.1.2. Creation of a work group on asthma in adults to prepare a technical document with recommendations (2010)	**5.1.2. Creation of the work group (2011)** **5.1.2.1. Existence of the document (yes/no) (2011)**
	5.3. Propose a model for the monitoring and education of patients with asthma	5.1.3. Creation of a work group to prepare a technical document with the proposals and the script of the educational content for patients (2011)	**5.1.3. Creation of the work group (2010)** **5.1.3.1. Existence of the document (yes/no) (2011)** **5.1.3.2. Ensure that in each healthcare area there is at least one reference on training for trainers (2011)**
		5.1.3.1. Creation of a work group to prepare a technical document with the proposals and the script of the educational content for professionals (2010)	**5.1.3.1. Creation of the work group (2010)** **5.1.3.2. Existence of the document (yes/no) (2011)** **5.1.3.3. Ensure that in each healthcare area there is at least one reference on training for trainers (2011)**
	5.1.4. Prepare recommendations to cover occupational asthma	5.1.4. Creation of a work group to prepare a study and recommendations for the treatment of occupational respiratory disease, with a special emphasis on occupational asthma (2012)	**5.1.4. Creation of the work group (2011)** **5.1.4.1. Existence of the document (yes/no) (2011)**

GENERAL OBJECTIVE	SPECIFIC OBJECTIVES	ACTION AND TIMESCALE	INDICATOR AND TIMESCALE
6. Improve care for patients with highly specific respiratory diseases that require very specific actions	**6.1. Pulmonary hypertension**	6.1.1. Prepare a document to protocolise care for patients with pulmonary hypertension. Inclusion of the document in the Catalan healthcare and social health map (2010)	**6.1.1.Existence of the document (yes/no) (2010)**
	6.2. Quick diagnosis of cancer	6.2.1. Explore synergies with the master plan for oncology. Analyse the response times from the diagnosis to the treatment of lung cancer (2010-2012)	
	6.3. Minority respiratory diseases (cystic fibrosis)	6.3.1. Creation of a work group with the Catalan Cystic Fibrosis Association (2010-2012)	
	6.4. Neuromuscular diseases with respiratory problems (amyotrophic lateral sclerosis)	6.4.1. Study the referral circuits (2010-2012)	
	6.5. Home Respiratory Therapy	6.5.1. Collaborate with CatSalut in the analysis and management of HRTs	**6.5.1. Existence of the document (yes/no) (2011)**
	6.6. Allergy	6.6.1. Collaborate with CatSalut and the plan for the innovation of primary care and community health to define the Catalan allergy care model (2010)	**6.6.1. Existence of the document (yes/no) (2010)**

9. Bibliography

9. Bibliography

Asensio de la Cruz O, Cordón Martínez A, Elorz Lambarri J, Moreno Galdó A, Villa JR, Asensi y Grupo de Técnicas de la Sociedad Española de Neumología Pediátrica. Estudio de la función pulmonar en el paciente colaborador. Parte II. An Pediatr (Barc) 2007; 66 (5): 518-530.

Bahadori K, FitzGerald JM, Levy RD, Fera T, Swiston J. Risk factors and outcomes associated with chronic obstructive pulmonary disease exacerbations requiring hospitalization. Can Respir J 2009; 16: e43-49.

British Thoracic Society. The burden of lung diseases. 2001.

Casas A, Troosters T, Garcia-Aymerich J, Roca J, Hernández C, Alonso A, del Pozo F, Antó JM, Rodriguez-Roisin R, M. Decramer of the CHRONIC Project. Integrated care prevents hospitalisations for exacerbations in COPD patients. Eur Respir J 2006; 28: 1-8.

Departament de Salut. Enquesta de salut de Catalunya 2006. http://www.gencat.cat/salut/depsalut/pdf/r15.pdf

Departament de Salut. Informació sobre tabac adreçada a professionals i pacients. http://www.gencat.cat/salut/depsalut/html/ca/dir469/index.html

Departament de Salut. Mapa sanitari, sociosanitari i de salut pública. http://www.gencat.cat/salut/depsalut/html/ca/dir488/index.html

Departament de Salut. Pla de salut de Catalunya a l'horitzó 2010 http://www20.gencat.cat/portal/site/pla-salut

Fletcher M, Hernández C. An exciting future for respiratory nurses? SAGE Publications. Chronic Respiratory Disease 2006; 3: 177-178.

Garcia-Aymerich J, Escarrabill J, Marrades RM, Monsó E, Barreiro E, Antó JM; EFRAM Investigators. Differences in COPD care among doctors who control the disease: general practitioner vs. pneumologist. Respir Med 2006; 100: 332-339.

Giner J, Macián V, Hernández C, grup EDEN. Estudio multicéntrico y prospectivo de "educación y enseñanza" del procedimiento de inhalación en pacientes respiratorios (estudio EDEN). Arch Bronconeumología 2002; 38 (7): 300-305.

Gore JM, Brophy CJ, Greenstone MA. How well do we care for patients with end stage chronic obstructive pulmonary disease (COPD)? A comparison of palliative care and quality of life in COPD and lung cancer. Thorax 2000; 55: 1000-1006.

Guía española para el manejo del asma. Gema 2009
http://www.gemasma.com/

Hernández C, Casas A, Escarrabill J, Alonso J, Puig-Junoy J, Farrero E, Viliagut G, Collvinent B, Rodriguez-Roisin R, Roca R and partners of CHRONIC project. Home hospitalisation of exacerbated chronic obstructive pulmonary disease patients. Eur Respir J 2003; 21: 58-67.

Hernández C, Jansa M, Vidal M, Nuñez M, Bertran MJ, Garcia-Aymerich J i Roca J. The burden of chronic disorders on hospital admissions prompts the need for new modalities of care: A cross-sectional analysis in a tertiary hospital. Q J Med 2009; 102: 193-202.

Holgate S, Bisgaard, Bjermer L. The Brussels declaration: the need for change in asthma management. Eur respir J 2008; 32: 1433-1442.

Hospital Clínic, Forum Clínic i Fundació BBVA. La enfermedad pulmonar obstructiva crónica (EPOC). Guía interactiva para pacientes con enfermedades de larga duración. (Versió en Català i Castellà). Hernández C, Roca J.

Inoriza JM, Coderch-Lassaletta J, Carreras M, Vall Llosera L, Lisbona JM, Ibern P, Garcia-Goñi M. La despesa sanitària segons morbiditat. Estudis d'Economia de la Salut (volum II).
http://www.gencat.cat/salut/depsalut/html/ca/dir505/index.html

Institut Català de la Salut, Barcelona. Guies de pràctica clínica i material docent. 2008; núm. 13
http://www.gencat.net/ics/professionals/guies/asma_infantil.htm

Institut Català de la Salut, Barcelona. Guies de pràctica clínica i material docent. 2008; núm. 16
http://www.gencat.net/ics/professionals/guies/mpoc/mpoc.htm

Kogevinas M, Zock JP, Jarvis D, Kromhout H, Lillienberg L, Plana E, Radon K, Torén K, Alliksoo A, Benke G, Blanc PD, Dahlman-Hoglund A, D'Errico A, Héry M, Kennedy S, Kunzli N, Leynaert B, Mirabelli MC, Muniozguren N, Norbäck D, Olivieri M, Payo F, Villani S, van Sprundel M, Urrutia I, Wieslander G, Sunyer J, Antó JM. Exposure to substances in the workplace and new-onset asthma: an international prospective population-based study (ECRHS-II). Lancet 2007; 370: 336-341.

Levy ML, Quanjer PH, Booker R, Cooper BG, Holmes S, Small I; General Practice Airways Group. Diagnostic spirometry in primary care: Proposed standards for general practice compliant with American Thoracic Society and European Respiratory Society recommendations. Prim Care Respir J 2009; 18: 130-147.

Mannino DM, Buist AS. Global burden of COPD: risk factors, prevalence, and future trends. Lancet 2007; 370: 765-773.

Miller MR, Hankinson J, Brusasco V et al. Standardisation of spirometry. Eur Respir J 2005; 26 (2): 319-338.

Ministerio de Sanidad y Política Social. Estrategia en EPOC del Sistema Nacional de Salud.
http://www.msps.es/organizacion/sns/planCalidadSNS/EPOC.htm

Miravitlles M, Soriano JB, García-Río F, Muñoz L, Duran-Tauleria E, Sánchez G, Sobradillo V, Ancochea J. Prevalence of COPD in Spain: impact of undiagnosed COPD on quality of life and daily life activities. Thorax 2009; 64: 863-868.

Naberan K, de la Roza C, Lamban M, Gobartt E, Martín A, Miravitlles M. Uso de la espirometría en el diagnóstico de la enfermedad pulmonar obstructiva crónica en atención primaria. Arch Bronconeumol 2006; 42: 638-644.

Oliva J. Informe sobre les pèrdues per a l'economia catalana degudes a la malaltia. Estudis d'Economia de la Salut (volum II).
http://www.gencat.cat/salut/depsalut/html/ca/dir505/index.html

Orriols R, Costa R, Albanell M, Alberti C, Castejón J, Monso E, Panades R, Rubira N, Zock JP; Malaltia Ocupacional Respiratòria (MOR) Group. Reported occupational respiratory diseases in Catalonia. Occup Environ Med abril 2006; 63 (4): 255-260.

Pastor Fàbregas M, Gisbert Gelonch R. Evolució de la participació dels plans directors en la despesa i en el pressupost sanitari del CatSalut. Any 2008. Estudis d'Economia de la Salut (volum III).
http://www.gencat.cat/salut/depsalut/html/ca/dir505/index.html

Pauwels RA, Buist AS, Calverley PM, Jenkins CR, Hurd SS. Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease. NHLBI/WHO Global Initiative for Chronic Obstructive Lung Disease (GOLD) Workshop summary. Am J Respir Crit Care Med 2001; 163 (5): 1256-1276.

Peña VS, Miravitlles M, Gabriel R, Jiménez-Ruiz CA, Villasante C, Masa JF, Viejo JL, Fernández-Fau L. Geographic variations in prevalence and underdiagnosis of COPD: results of the IBERPOC multicentre epidemiological study. Chest 2000 oct.; 118 (4): 981-989.

Pérez-Yarza EG, Villa JR, Cobos N, Navarro M, Salcedo A, Martın C, Escribano A, Arranz L, Rueda S, Martinez A, Sardon O, Emparanza JI en representació del Grup CANDELA. Espirometría forzada en preescolares sanos bajo las recomendaciones de la ATS/ERS: estudio CANDELA . An Pediatr (Barc) 2009; 70 (1): 3-11.

Pozo F, Alvárez CJ, Castro-Acosta A, Hernández C, López A, Agustí A. Auditoría clínica de los pacientes hospitalizados por exacerbación de EPOC en España (estudio AUDIPOC): Método y organización del trabajo. Archivos de Bronconeumología 2010; 46 (7): 349-357.

Puhan M, Scharplatz M, Troosters T, Walters EH, Steurer J. Pulmonary rehabilitation following exacerbations of chronic obstructive pulmonary disease. Cochrane Database of Systematic Reviews 2009, Issue 1. Art. No.: CD005305. DOI: 10.1002/14651858. CD005305.pub2.

Roca J, Alonso A, Borrell M, Hernández C, de Toledo P. Acute Exacerbations of Chronic Obstructive Pulmonary Disease. Lung Biology in Health and Disease. Home management of exacerbations of chronic obstructive pulmonary disease, capítol 29, 183: 531-550.

Servei d'Informació i Estudis de la Direcció General de Recursos Sanitaris del Departament de Salut. Anàlisi de la mortalitat a Catalunya, 2007. Butlletí Epidemiològic 2009; (3): 37-46.

Sociedad Española de Neumología y Cirugía Torácica (SEPAR). Controlando la EPOC. J. Giner, R. Cabarcos, F. Burgos, M. Calpena, F. Morante, V. Macián, I. Andres, I. Martínez, M. Benito, G. Peces Barba.

Sociedad Española de Neumología y Cirugía Torácica (SEPAR) (Torrejón M, Hernández C, Abadía MC, Aldasoro A, Bazús MT, Cabarcos R, Casan P, Castillo JA, Drobnic F, Burgos F, Macián V, Naberan K, González Pérez-Yarza E, Plaza V). Controlando el asma.

Sociedad Española de Neumología y Cirugía Torácica (SEPAR) (Alonso ML, Bosch M, Casero L, Castañon C, Fernández MJ, García ML, Louza E, Martínez I, Payo F, Puig M). Controlando la apnea del sueño.

Sociedad Española de Neumología y Cirugía Torácica (SEPAR). Normativa SEPAR, n. 25. Coordinador: Jordi Giner, Luís V. Basualdo, Pere Casan, Carmen Hernández, Vicente Macián, Inmaculada Martínez, Ángel Mengíbar. Utilización de fármacos inhalados. Arch Bronconeumol 2000; 36: 34-43.

Sociedad Española de Neumología y Cirugía Torácica (SEPAR). Monografía sobre Hipertensión Pulmonar. Coordinador: Joan Albert Barberà. Fármacos y sistemas de administración empleados en el tratamiento de la hipertensión pulmonar. Hernández Carcereny C. Arch. Bronconeumol 2002; 38 (1): 39-47.

Sociedad Española de Neumología y Cirugía Torácica (SEPAR). Normativa SEPAR n. 52. Autors: Dr. Escarrabill J, Dr. Soler Cataluña JJ, DUE Hernández Carme, Dr. Servera Emilio. Recomendaciones sobre la atención al final de vida en pacientes con EPOC. Arch Bronconeumol 2009; 45 (6): 297-303.

Soler-Cataluña JJ, Martínez-García MA, Román Sánchez P, Salcedo E, Navarro M, Ochando R. Severe acute exacerbations and mortality in patients with chronic obstructive pulmonary disease. Thorax 2005; 60: 925-931.

Sullivan SD, Ramsey SD, Lee TA. The economic burden of COPD. Chest 2000; 117 (2 supl.): 5S-9S.

Taylor DR, Bateman ED, Boulet L-P. A new perspective on concepts of asthma severity and control. Eur Respir J. 2008; 32: 545-554.

The Global Initiative for Chronic Obstructive Lung Disease (GOLD). Estratègia i guia per al diagnòstic, seguiment i prevenció de l'MPOC.
http://www.goldcopd.com/GuidelinesResources.asp?l1=2&l2=0

The Global Initiative for Asthma (GINA). Estratègia i guia per al diagnòstic, seguiment i prevenció de l'asma.
http://www.ginasthma.com/GuidelinesResources.asp?l1=2&l2=0

Tratado de rehabilitación respiratoria. Coordinadores: Rosa Güell Rous, Pilar de Lucas Ramos. Ed. Grupo Ars XXI de Comunicación, S.L. 2005. Autores: Escarrabill Sanglas J., Hernández C. Manejo del paciente en la fase final de la enfermedad 2005; cap. 30: 341-349.

Walters JAE, Turnock AC, Walters EH, Wood-Baker R. Action plans with limited patient education only for exacerbations of chronic obstructive pulmonary disease. Cochrane Database of Systematic Reviews 2010, Issue 5. Art. No.: CD005074. DOI: 10.1002/14651858.CD005074.pub3.

World Health Organization (WHO). Preparing a Health Care Work Force for the 21st Century. The Challenge of Chronic Conditions 2005.

10. Participating Professionals

10. Participating Professionals

MANAGEMENT

María Luisa de la Puente Martorell
Director-General. Directorate-General for Planning and Evaluation
Sotsdirectora del Servei Català de la Salut

Antoni Plasència Taradach
Director-General. Directorate-General for Public Health

Joan Escarrabill Sanglas
Director. Master plan for diseases of the respiratory system

Francesc Brosa Llinares
Director of the Services and Quality Division. Catalan Health Service

Ricard Tresserras Gaju
Assistant Director of Healthcare Planning. Ministry of Health

COLLABORATORS FROM THE MINISTRY OF HEALTH

Secretariat-General

Marta Segura Bonet
Secretary-General

Maria Josep Borràs Pascual
Head of the Legal Affairs Department

Directorate-General for Planning and Assessment

Dolors Costa Sampere
Management Assistant

Pilar Brugulat Guiteras
Head of the Health Plan Service

Elena Calvo Valencia
Head of the Technical Office

Cristina Colls Guerra
Head of the Information Analysis Unit

Josep Fusté Sugrañés
Head of the Healthcare Map and Strategic Plans Unit

Institute for Health Studies

Mateu Huguet Recasens
Director

Directorate-General for Public Health

Antoni Plasència Taradach
Director-General

Josep Lluís de Peray Baiges
Public Health Agency

Carmen Cabezas Peña
Assistant Director of Health Protection

Lluís Urbiztondo Perdices
Preventive Medicine Service

Joan Batalla Clavell
Preventive Medicine Service

Directorate-General for Healthcare Resources

David Elvira Martínez
Director-General

Josep Davins Miralles
Subdirector-General for Healthcare Services

Rosa Gispert Magarolas
Head of the Mortality Register Service

Anna Puigdefàbregas Serra
Mortality register

Glòria Ribas Serra
Mortality register

Catalan Health Service

Sebastià Barranco Tomàs
Manager of Lleida Healthcare Area

Joan Victorià Peralta Biosca
Manager of Alt Pirineu i Aran Healthcare Area

Joaquim Pellejà Pellejà
Manager of Camp de Tarragona Healthcare Area

Ismael Roldan Bermejo
Manager of Terres de l'Ebre Healthcare Area

Marta Pedrerol Mas
Manager of Girona Healthcare Area

Antoni Iruela López
Manager of Catalunya Central Healthcare Area

Jaume Estany Ricart
Manager of Barcelona Healthcare Consortium

Carme Esteve Orti
Assistant Manager of Barcelona Healthcare Area. Manager of Barcelona Nord Territorial Area (Barcelonès Nord, Maresme, Vallès Occidental and Vallès Oriental) of Barcelona Healthcare Area

Mònica Almiñana Rique
Assistant Manager of Barcelona Healthcare Area. Manager of Barcelona Sud Territorial Area

Josep Maria Argimon Pallàs
Service Evaluation and Purchasing Division

Teresa Salas Ibáñez
Services and Quality Area

Montse Bustins Poblet
Services and Quality Area

Elisa Sagarra Morera
Services and Quality Area of CatSalut

Institut Català de la Salut
Ermengol Coma Redon
SISAP

Manel Ferran Mercadé
SISAP

Francesc Fina Avilés
SISAP

Manolo Medina Peralta
SISAP

HEADS OF PLANNING OF THE HEALTHCARE AREAS

Alt Pirineu i Aran
Felip Benavent Viladegut

Lleida
Marta Miret Montané

Camp de Tarragona
Jeroni Ferrer Santaulària

Terres de l'Ebre
Manel Chànovas Borràs
Montserrat Genaró Jornet
Josep Fabá Piñol

Girona
Meia Faixedas Brunsoms

Vallesos and Maresme
Carme Albinyana Gil

Catalunya Central
Paulina Viñas Folch

Alt Penedès, Garraf and Baix Llobregat
Carme Albinyana Gil

Barcelonès Nord and Maresme
Carme Albinyana Gil
Vicenç Perelló Ferret

ADVISORY COUNCIL

Josep Maria Antó Boqué
Chairman of the Advisory Council

Ricard Tresserras Gaju
Vice-chairman of the Advisory Council

Joan Escarrabill Sanglas
Director of the Master Plan for Diseases of the Respiratory System

Alba Rosas Ruiz
Technical Secretary of the Advisory Council

Members

Salvador Altimir Losada
Catalonia-Balearic Islands Society of Geriatrics and Gerontology

Enric Argelagués Vidal
Catalan Institute of Health (ICS)

Carme Boqué Oliva
Catalan Society of Emergency Medicine (SOCMUE)

Maria Alba Brugués Brugués
Association of Family and Community Nursing of Catalonia (AIFICC)

Mercè Canela Cardona
Catalan Thoracic Surgery Society

Montserrat Casamitjana Abella
Public Health Society of Catalonia and the Balearic Islands

Ramon Cristófol Allué
Internal Medicine Society of Catalonia and the Balearic Islands

Empar Cuxart Fina
Catalan Rehabilitation and Physical Medicine Society

Rafael Fernández Fernández
Catalan Intensive and Critical Medicine Society (SOCMIC)

Esteve Fernández Muñoz
Smoking Research and Control Unit. Catalan Institute of Oncology (ICO)

Maria Dolors Forés García
Catalan Family and Community Medicine Society (CAMFIC)

Xavier Guinart Primé
Ministry of the Environment and Housing

Mateu Huguet Recasens
Director of the Health Studies Institute (IES)

Lluís Marzal Torrent
Medical Emergencies Service SEMSA

Vicente Molina Morales
Catalan Paediatrics Society

Eduard Monsó Molas
Catalan Pneumology Society (SOCAP)

Ferran Morell Brotard
Catalan Pneumology Foundation (FUCAP)

Maria Dolors Navarro Rubio
Catalan Forum of Patients

Montse Nuevo Gayoso
Physiotherapy Society of Catalonia and the Balearic Islands

Anna Ribera Massaguer
Catalan Health and Social Consortium (CSC)

Joaquima Ribot Puig
Catalan Nursing Association

Josep Roca Torrent
Ex-chairman of the European Respiratory Society

María Jesús Rodríguez Bayarri
Catalan Safety and Medicine in the Workplace Society (SCSMT)

Josep Rodríguez-Roisín
Ex-chairman of the European Respiratory Society

Boi Ruiz García
Catalan Union of Hospitals (UCH)

Juan Ruiz Manzano
Spanish Pneumology and Thoracic Surgery Society (SEPAR)

Carme Sala Rovira
Palliative Care Society of Catalonia and the Balearic Islands

Maria del Mar Sevillano Lalinde
Nursing Society of Catalonia and the Balearic Islands

Carlos Sisternas Suris
Spanish Federation of Health Technology Companies (FENIN)

Antonio Valero Santiago
Catalan Allergy and Clinical Immunology Society (SCAIC)

PERMANENT COMMISSION

Vinyet Casolivé Carbonell
Bellvitge Hospital Physiotherapist

Joan Escarrabill Sanglas
Director of the Master Plan for Diseases of the Respiratory System

Antoni Grau Àvia
Internal Medicine of Tortosa Verge de la Cinta Hospital

Carme Hernández Carcereny
Barcelona Clinical and Provincial Hospital

Josep Jiménez Villa
Service Evaluation Division of CatSalut

Maria Antònia Llauger Rosselló
10E Encants Encants Primary Care Team Maragall ICS Health Centre

Ester Marco Navarro
Rehabilitation Service of Hospital del Mar

Francisco Martin Luján
Jaume I Primary Care Centre of Tarragona 3 Primary Care Team

Lluís Marquès Amat
Arnau de Vilanova-Santa Maria de Lleida Hospitals

Laureano Molins López-Rodó
Thoracic Surgery Service of Hospital Clínic

Antonio Moreno Galdó
Paediatrics Service of Vall d'Hebron Hospital

José Morera Prat
Head of the Pneumology Service Germans Trias i Pujol Hopsital

Núria Nadal Braqué
Lleida Primary Care Service, Segrià-Garrigues

Assumpta Parramon Bregolat
Fundació Sant Hospital de la Seu d'Urgell

Núria Roger Casals
Vic Regional Hospital

Alba Rosas Ruiz
Directorate-General for Planning and Assessment

Esteve Saltó Cerezuela
Directorate-General for Public Health

Josep Sánchez Jiménez
Sant Jaume Calella Regional Hospital

Salvi Sendra Salillas
Pneumology Service of Girona Josep Trueta Hospital

Montserrat Torrejón Lázaro
Santa Creu i Sant Pau Hospital

Ricard Tresserras Gaju
Vice-chairman of the Advisory Council

WORK GROUPS

QUALITY SPIROMETRY

Quality Survey

Felip Burgos Rincón
Barcelona Clinical and Provincial Hospital

Joan Clotet Solsona
Ponts Primary Care Centre (Lleida)

Ramona Hervàs Pérez
Dr Barraquer Specialist Care Centre, Sant Adrià de Besòs

Tino Martí Aguasca
Institute for Health Studies

Francisco Martin Luján
Jaume I Primary Care Centre of Tarragona 3 Primary Care Team

Núria Roger Casals
Vic General Hospital

Training of Professionals

Berta Avilés Huertas
Palamós Hospital

Felip Burgos Rincón
Barcelona Clinical and Provincial Hospital

Jordi Giner Donaire
Sant Pau Hospital

Ainhoa Molins Mesalles
Institute for Health Studies

Marc Pinar Bertran
Ministry of Health

Núria Roger Casals
Vic General Hospital

Spirometry and ICT (Information and Communication Technologies)

Felip Burgos Rincón
Barcelona Clinical and Provincial Hospital

Carles Domínguez Font
Head of the Information Systems Area of the ICS

Francisco Martin Luján
Jaume I Primary Care Centre of Tarragona 3 Primary Care Team

Francesc Moya Olvera
TicSalut Foundation

Núria Roger Casals
Vic General Hospital

Carles Rubies Feijoo
Ministry of Health. Information Technologies Division

Acute Patient Hospitalisation: MBDS HA

Montse Bustins Poblet
Services and Quality Area of CatSalut

Carme Hernández Carcereny
Barcelona Clinical and Provincial Hospital

Marc Pinar Bertran
Ministry of Health

Alba Rosas Ruiz
Ministry of Health

Teresa Salas Ibáñez
Services and Quality Area of CatSalut

ASTHMA WORK GROUP

Josep Maria Antó Boqué
Centre for Research
into Environmental Epidemiology (CREAL)

Maria Antònia Llauger Rosselló
10E Encants Encants Primary Care Team
Maragall ICS Health Centre

Núria López Galbany
Sabadell Corporació Parc Taulí Hospital

Lluís Marquès Amat
Arnau de Vilanova-Santa Maria de Lleida Hospitals

Xavier Muñoz Gall
Vall d'Hebron Hospital

César Picado Vallès
Barcelona Clinical and Provincial Hospital

Vicente Plaza Moral
Santa Creu i Sant Pau Hospital

Núria Roger Casals
Vic General Hospital

Alba Rosas Ruiz
Directorate-General for Planning and Assessment

Josep Sánchez Jiménez
Sant Jaume Calella Regional Hospital

Montserrat Torrejón Lázaro
Santa Creu i Sant Pau Hospital

Structured Diagnosis and Monitoring of Asthma in Children Subgroup

Coordinator:
Josep Sánchez Jiménez
Sant Jaume de Calella Regional Hospital

Miembros:
Rosa Grau Lorente
Hospital Parc Taulí de Sabadell

Maria Montserrat Bosque García
Sabadell CPT Hospital

Jordi Fàbrega Sabaté
Fundació Sant Hospital de la Seu d'Urgell

Emili Fos Escrivà
Sta. Margarita i els Monjos Primary Care Centre

Alba Gairí Burgués
Hospital Arnau de Vilanova

Marcel Ibero Iborra
Terrassa Hospital

Antonio Moreno Galdó
Vall d'Hebron Hospital

Núria Nadal Braqué
Lleida Primary Care Service

Xavier Maria Pérez Porcuna
Santa Eugènia de Berga Primary Care Centre

Núria Sánchez Ruano
CAPSE Casanova Primary Care Team

Maria del Carme Santafé Méndez
La Marina Primary Care Centre

Lídia Sanz Borrell
Serós de Lleida Primary Care Centre

Pilar Villalobos Arévalo
Figueres Hospital

Structured Diagnosis and Monitoring of Asthma in Adults Subgroup

Coordinator:
César Picado Vallès
Barcelona Clinical and Provincial Hospital

Members:
Santiago Bardagí Forns
Mataró Hospital

Enric Hernández Huet
Corró d'Avall (les Franqueses del Vallès) Primary Care Team

Iñigo Maria Lorente Doria
1r de Maig de la Mariola Primary Care Centre

Lluís Marquès Amat
Arnau de Vilanova-Santa Maria de Lleida Hospitals

Meritxell Peiró Fàbrega
Passeig de Maragall de Barcelona Primary Care Centre

Pere Simonet Aineto
ABS Viladecans 2

Monitoring of Patients with Asthma Subgroup

Coordinator:
Montserrat Torrejón Lázaro
Santa Creu i Sant Pau Hospital

Members:
Miquel Baltasar Drago
Tortosa Verge de la Cinta Hospital

Santiago Bardagí Forns
Mataró Hospital

Joan Josep Cabré Vila
ABS Reus-1

Sílvia del Valle Fernández
Sant Joan de Déu Hospital

Amparo Gaitano García
CAP Bordeta-Magòria

Jordi Giner Donaire
Santa Creu i Sant Pau Hospital

Maria Mercè Lavega Llorens
Lleida Primer de Maig Primary Care Centre

Núria López Galbany
Hospital de Sabadell Corporació Parc Taulí

Marian Llussà Arboix
Guillermo Mas Riera Primary Care Centre

María Asunción Martín Mateos
Sant Joan de Déu Hospital

Sara Peños Mayor
Hospital Comarcal de Sant Jaume de Calella

Vicente Plaza Moral
Hospital de la Santa Creu i Sant Pau

Núria Roger Casals
Hospital General de Vic

Maria José Torregrosa Bertet
La Mina-Sant Adrià del Besòs 2 Primary Care Centre

Alba Rosas Ruiz
Directorate-General for Planning and Assessment
Ministry of Health

Pepi Valverde Trillo
Integrated Health Consortium

CARE FOR EXACERBATION OF COPD

Montserrat Freixas Laporta
Dreta de l'Eixample Primary Care Team

Carme Hernández Carcereny
Barcelona Clinical and Provincial Hospital

Maria Antònia Llauger Rosselló
10E Encants Encants Primary Care Team
Maragall ICS Health Centre

Eduard Monsó Molas
Catalan Pneumology Society (SOCAP)

Esteve Saltó Cerezuela
Directorate-General for Public Health

SLEEP OBSTRUCTIVE APNOEA DISORDER CARE

Ferran Barbé Illa
Arnau de Vilanova de Lleida Hospital

Joan Escarrabill Sanglas
Director of the Master Plan for Diseases of the Respiratory System

Josep Maria Montserrat Canal
Barcelona Clinical and Provincial Hospital

Núria Nadal Braqué
Lleida Primary Care Service, Segrià-Garrigues

11. Annexes

AGREEMENT

GOVE/235/2010, of 23 November, approving the Master Plan for Respiratory System Diseases.

General health Law 14/1986, of 25 April, and Law 15/1990, of 9 July, on the planning of the healthcare system in Spain, states that the healthcare system must be directed towards promoting health and preventing disease.

Following from this, Article 62 of Law 15/1999, of 9 July, created the Catalan Health Plan as a guiding instrument and reference framework for all public actions in the field by the Government of Catalonia.

The Government Plan 2007-2010, approved by the Government of Catalonia on 13 March 2007, in Article 1.3.3 (strengthening comprehensive care of the public, prioritising primary and community care and care of dependency and chronic conditions) established the objective in the area of healthcare planning the creation of Master Plans for respiratory, digestive and rheumatic diseases and neurological healthcare, which complement the five existing Master Plans for other diseases.

Respiratory diseases are the third-highest cause of death in Catalonia and have a very significant impact on disability and limitation to the quality of life of people who suffer from them, especially chronic obstructive pulmonary disease. Chronic respiratory diseases affect the health system as a whole, both in economic terms (numerous hospital admissions, drugs, and home respiratory therapy) and organisational terms, given that the need to minimise under-diagnosis and improve ongoing care is clear.

From this perspective, a priority is to establish directives for respiratory disease care through specific planning instruments that, in the overall context of the Catalan Health Plan's objectives and interventions for the respiratory disease care, define the adequate healthcare strategies.

Thus, primary care services must adapt the care response, in the context of healthcare, to the promotion of lifestyles that protect from respiratory diseases, the prevention of related diseases, early detection of respiratory diseases, and evidence-based healthcare, which enables the quality of life of patients to be improved and allows them to return to an active life. Specialist care services must base their decisions on the interventions best supported by evidence, while attempting to reduce the high degree of variability in clinical practice.

The Master Plan for Respiratory System Diseases must set healthcare objectives for these diseases and establish actions to achieve them.

To coordinate the Master Plan for Respiratory System Diseases territorially and based on the decentralised organisation of the Catalan health system, the plan should be developed in accordance with the territorial organisation of the Catalan Health Service (CatSalut) and the public health network. In this context, it will be within the scope of the territorial health governments created under Decree 38/2006, of 14 March, regulating the creation of territorial health governments, to apply them in their area, adapted to the objectives of the Plan to the specific conditions in their reference territory and ensure, through this territorial structure and the health regions.

In accordance with Law 15/1990, of 9 July, on planning of the healthcare system in Catalonia, as well as the general regulation for all actions that enable the right to health protection to be effectively exercised, and Law 13/2008, of 5 November, of the Presidential Department of the Government of Catalonia;

For all of the above, at the proposal of the Minister for Health, the Government of Catalonia

AGREES:

- 1 To approve the Master Plan for Respiratory System Diseases, with the actions foreseen by it, appended to this Agreement.

- 2 To establish that the Master Plan for Respiratory System Diseases will be valid until 31 December 2011, notwithstanding the possibility of its extension, at the agreement of the Government, if this is required to meets its objectives and develop the Plan.

- 3 To entrust management of the execution of the actions included in the Master Plan for Respiratory System Diseases, its assessment and its monitoring to the Ministry of Health.

- 4 To publish this agreement in the *Official Journal of the Government of Catalonia*, with its annex, which may be viewed at www.gencat.cat/salut.

Barcelona, 23 November 2010

LAIA BONET RULL
Government Secretary
(10.326.150)

ORDER

SLT/570/2010, of 25 November, creating the structure of the Master Plan for Respiratory System Diseases.

through Agreement GOV/235/2010, of 23 November, the Government has approved the Master Plan for Respiratory System Diseases, valid until 31 December 2011, notwithstanding the possibility of its extension, at the agreement of the Government, if this is required to meets its objectives and develop the Plan. This agreement entrusts management of the execution of the actions included in the Master Plan for Respiratory System Diseases, its evaluation and its monitoring to the Ministry of Health. To this end, it is necessary to define, within the Ministry of Health, the structure required to achieve the objectives, meet the challenges they represent and assign responsibilities. Furthermore, the structure of the plan also requires, for its greater efficiency, the collaboration and support of experts in this field, who will be coordinated through the Master Plan for Respiratory System Diseases Advisory Board, which is to be created through this order.
To this end, based on Law 15/1999, of 9 July, on the planning of the healthcare system in Catalonia, whose purpose is to organise the healthcare system in Catalonia, as well as the general regulation for all the actions that enable the right to health protection to be effectively exercised, using the powers conferred by Article 39.3 with respect to Article 40.1, both in Law 13/2008, of 5 November, of the Presidential Department of the Government of Catalonia,
ORDERS:

Article 1

Structure of the Plan

1.1 The Master Plan for Respiratory System Diseases has the following structure:
a) Director.
b) The Advisory Board.

1.2 To optimise the functions of the Plan, the Director may agree to set up working groups, which will act under this Director in accordance with the guidelines of the Advisory Board. The working groups, when required by the nature of specific conditions of the field, may include external collaboration from professionals of known expertise in the given field, ensuring the presence of experts based on gender.

Article 2

Director

2.1 The Plan will be directed by an expert in the field of respiratory system diseases, being a statutory civil servant with the health or occupational services of the Ministry of Health or the organisations associated with it, and will be appointed by the Minister for Health at the proposal of the Director-General for Planning and Assessment.

2.2 The appointment to undertake the functions of Director does not represent appointment to a new work post and thus does not involve consolidation of any rights to this effect.

2.3 The Director is included in the organisation of the Directorate-General for Planning and Assessment.

2.4 The Director has the following functions:
a) Establishing the general and specific objectives of the Plan and the priorities, programming of actions and schedule for implementation.
b) Formulating the strategic and operative directions for the Plan in each of the indicated fields of action and report them to the Director-General for Planning and Assessment, for their proposal to the Minister for Health.

c) Creating the working groups required to execute the Plan.
d) Defining and specifying the actions to be taken based on the established objectives and propose them to the relevant bodies.
e) Promoting and monitoring implementation of the Plan in the different Catalan healthcare regions.
f) Assessing the Plan application process.
g) Producing the reports, judgements and analyses required by the Ministry for Health Executive Committee in issues relating to healthcare for respiratory system diseases.

Article 3

The Advisory Board

3.1 The Advisory Board for the Master Plan for Respiratory System Diseases is an advisory body of the Ministry of Health in the field of healthcare for respiratory system diseases, assigned to the Directorate-General for Planning and Assessment, which will provide administrative and management support to the Advisory Board.

3.2 The Advisory Board has the following structure:

a) President, appointed by the Minister for Health from renowned experts in the field of respiratory system diseases.
b) Vice-president, appointed by the Minister for Health among renowned experts in the field of respiratory system diseases. The person appointed Vice-president will substitute the President in cases of absence, vacation, sickness or any other justified cause.
c) Coordinator: the Plan Director, who is assigned the functions of coordinating the developing the Advisory Board's functions and guaranteeing technical and administrative support for this body.
d) Members: up to 60 persons, renowned experts in the field of respiratory system diseases linked to the Catalan universities, service providers, health centres, professional associations in the field of health sciences, biomedical research institutions and centres, scientific societies, patients and families' associations, users' associations, women's organisations and groups in the field of women's health and the healthcare administrations.

3.3 The members are appointed by the Minister for Health under proposals from the respective bodies. With the aim of achieving gender equality, the appointment of members will observe the principle of balance between men and women.

3.4 The position of Secretary of the Plan's Advisory Board will be exercised by a person who provides services to the Ministry of Health, assigned to the Directorate-General for Planning and Assessment, and will under no circumstances involve the creation of a new work position. The person acting as the Secretary will attend the meetings of the Plan Advisory Board with the right to speak but not to vote.

3.5 The Advisory Board has the following functions:

a) Providing their advice on the actions arising from the Plan implementation, development and assessment process.
b) Analysing, debating and studying the proposals and general conclusions of the working groups.
c) Providing specific and technical advice on the tasks for implementing, assessing and updating the Plan.
d) Assessing the progress of the Plan and issuing prospectuses on new needs that guide its future progress and updating, incorporating in all cases the gender perspective and the rights of women in its formulation in order to identify the different consequences and repercussions that the planned actions may have on men and women.

3.6 In exercising the functions of the Plan Advisory Board that affect the areas of responsibility of the Advisory Board on Smoking in Catalonia and/or the Advisory Board on Physical Activity and the Promotion of Health, the Presidents of the affected bodies must establish by common agreement the necessary coordination.

3.7 In order to function better, the Advisory Board may exercise its functions in a Plenary Committee and in Permanent Committee.

3.8 In all events, it will be the responsibility of the Plenary Committee to establish a schedule of meetings of the Advisory Board and determine the proposals of objectives to be executed by the Permanent Committee. The Plenary Committee must hold an ordinary meeting once a year and extraordinary meetings whenever they are called by the Presidency, at his or her own initiative or at the request of at least a third of the members.

3.9 The Permanent Committee has the following structure:

a) President of the Advisory Board.

b) Plan Director, who acts as coordinator.

c) A maximum of 20 members, qualified persons appointed by the Minister for Health among the members of the Plenary Committee, based on criteria of equal representation for men and women experts in this field.The Permanent Committee must hold an ordinary meeting at last twice a year and extraordinary meetings whenever they are called by the Presidency, at his or her own initiative of at the request of at least a third of the members.

3.10 The internal function and agreement adoption process of the Advisory Board must meet the general regulations of the Government of Catalonia's administrative bodies.

3.11 The members of the Advisory Board may receive the expenses and remuneration they are entitled to, in accordance with current regulationsnt.

Article 4

Assignment of human and material resources

The Minister for Health must assign sufficient human and material resources to fulfil the functions of the Master Plan for Respiratory System Diseases through the corresponding units of the Ministry of Health and/or the organisations assigned to it.

SINGLE FINAL PROVISION

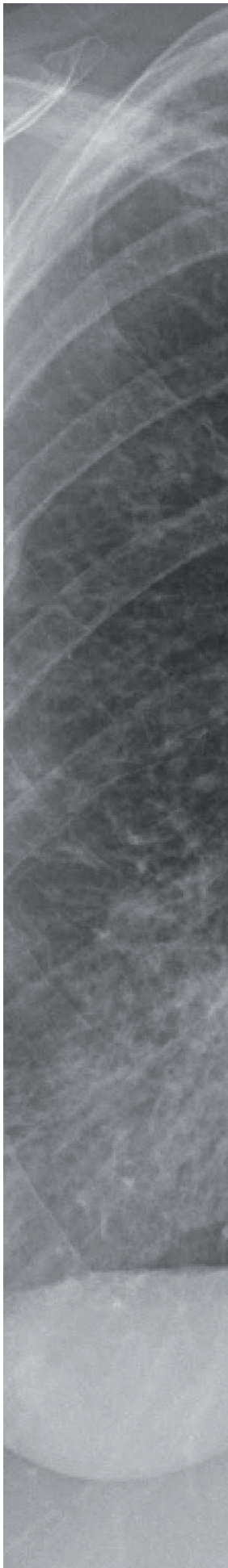
The validity of this Order is conditional to the Master Plan for Respiratory System Diseases.

Barcelona, 25 November 2010

MARINA GELI I FÀBREGA

Minister for Health

(10.326.022)



www.gencat.cat/salut