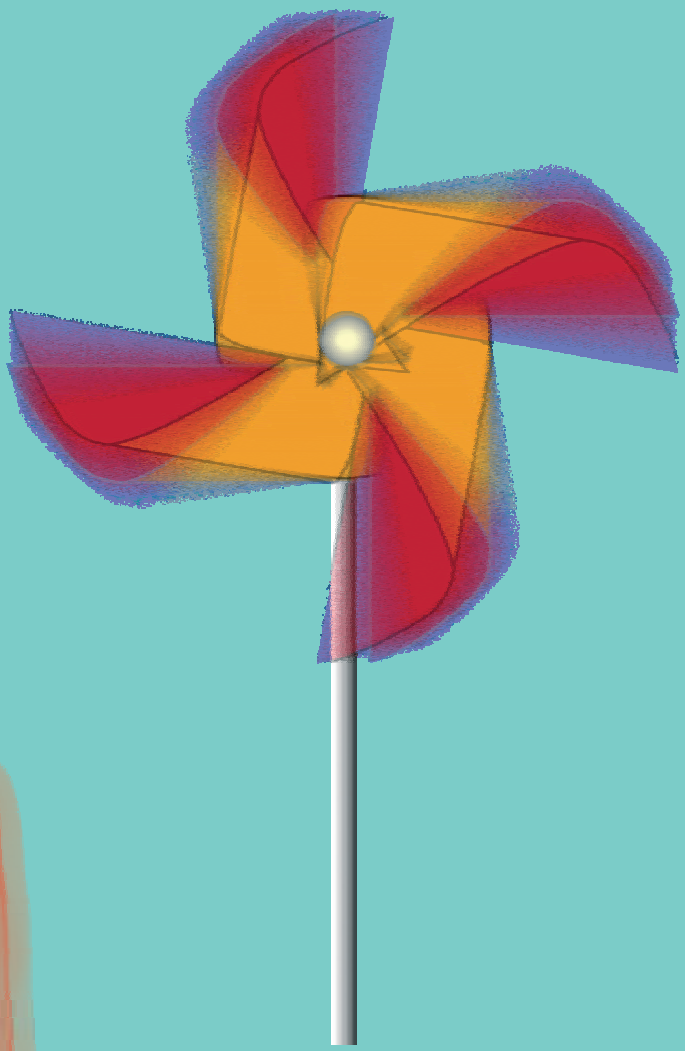
NATIONAL PROGRAMME FOR ASTHMA CONTROL



DIRECTORATE-GENERAL OF HEALTH

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DIVISION, GENETIC, CHRONIC AND GERIATRIC DISEASES

NATIONAL PROGRAMME FOR ASTHMA CONTROL

LISBON, 2005

PORTUGAL. Directorate-General of Health
National programme for asthma control / trad. by Margarida Serra, Jessica Jones. – Lisbon: Directorate-General of Health, 2005. – 24 p. - Original title: Programa nacional de controlo da asma

ISBN 972-675-134-9

Asthma – prevention and control / National health programmes

The National Programme For Asthma Control was approved by Ministerial Dispatch No. 6 536/99, on the 1st April

This document was carried out in the ambit of the
Co-ordinating Commission to the Asthma Programme by

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Printer
Europress, Lda.

Print run
500 copies

Legal Deposit
241588/06

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INTRODUCTION

In the terms of the present Programme, **Asthma** is considered **"a chronic inflammatory disease of the airways that in susceptible individuals, causes recurrent episodes of dyspnoea, wheezing, chest discomfort and coughing, usually nocturnal or in the early morning. These symptoms are usually associated with a generalised, though variable, airway narrowing, which is reversible, spontaneously or with treatment"**[1]

Asthma is, at world level, one of the most common chronic disorders, which affects, according to international estimates, more than 150 million people around the globe.

Due to several reasons of etiopathogenic and epidemiological order, it was calculated that in developed countries, there was a 20 to 50 % increase of its incidence and prevalence in each decade and this figure is much higher in certain countries. In view of this, asthma has been responsible, globally, for the inevitable death of approximately 100 000 individuals per year.

The prevalence of asthma is higher in the child and youth population, being a common cause of hospitalisation. In fact, since it is a common chronic disorder in the child and adult population, one knows that in Portugal, the average prevalence of asthma is higher than 11,0% in the 6-7 year-old[2] age group population, 11,8% in the 13-14 year-olds[3] and 5,2% in the 20-44 year-olds[4]. One estimates that the total number of patients may range over 600 000.
Thus, one in every 15 Portuguese individuals will probably suffer from asthma.

The increasing trend in incidence and severity of this disorder, as well as the non optimisation on behalf of the patients and their families, the medical resources, psychological and social ones that permit a better disease control and, consequently, a better quality of life, may represent an avoidable cause of higher affluence to the emergency departments and hospitalisation.

The investment in asthmatic self-control, together with the efforts that are developed at an epidemiological and technical level as well as with preventive, diagnostic and therapeutic procedures is, therefore, potentially important.

Beyond the extent of the problem, from a clinical point of view, asthma determines, in a very significant percentage of patients, suffering at several physical, psychiatric and social levels. Exacerbations are often on a daily and repetitive basis, affecting family, work and social settings, conditioning normal activity that may induce a progressive deterioration of patient's quality of life and well being.

The heavy personal and social duties caused by asthma, such as, school and work absenteeism should not be overlooked. In view of this, all measures should be incremented, not only by health professionals but also, by patients and their families who by undergoing a better disease control will, undoubtedly, promote the attainment of substantial health gains.

The notion that there are under-diagnosed asthmatic conditions associated with substantial changes of paradigms and concepts, which occurred in the late 80's and early 90's, thanks to the great efforts of the health professionals and health technicians, justify and underline the importance of asthma in terms of public health, demonstrated by its dimension and also, its vulnerability to the professionals' performance, to the health services and to the patient.

Thus, it was considered a priority, at an international level, to assume a global attitude from which derived the Global Initiative for Asthma[5] (GINA). A movement in which, tens of countries is involved. Portugal was not indifferent to this Movement, through the Portuguese Society of Allergology and Immunology Clinical and the Portuguese Society of Pulmonology.

The Ministry of Health considering the approach to asthma a priority, established a National Comission[6] for the elaboration of the current National Programme for Asthma Control, which being of technical-normative feature, includes the performance strategy to be implemented by the primary health care delivery services.

A GLOBAL INITIATIVE FOR ASTHMA – GINA

This initiative was set up to give support to the health professionals and official entities to decrease the morbidity and mortality prevalence due to asthma, to encourage the dissemination and adoption of technical recommendations and to promote the international collaboration on asthma research.

In 1995, under the support of the National Heart, Lung and Blood Institute of the USA and of the World Health Organisation, the report of the workshop "Global Strategy for the treatment and prevention of asthma" was published. This report comprises the consensual aspects of numerous scientific societies, patients' associations, experts, and governmental organisations.

The World Project for Asthma is based on

1. Definition and mechanisms of the disease
2. Epidemiological and socio-economic aspects
3. Risk and prevention factors
4. Diagnosis and classification
5. Treatment plan
6. Educational and care delivery

Owing to the fact that this project has currently been translated into fifteen languages and disseminated in more than fifty countries, one assumes that:

- New methods exist to diagnose and control asthma
- Personal and social costs of asthma can be minimised
- Education for the asthmatic patients and their families, decisively, plays an important role in success management

DEVELOPMENT OF THE PROGRAMME

GENERAL AIMS

- Reduction of morbidity and of mortality due to asthma
- Improved quality of life and well being of the asthmatic patient

SPECIFIC AIMS

- Improvement of the asthmatic patients' self-management.
- Discerning detection of the asthmatic patients' health needs, such as the unmet needs and the detection of groups with additional risk factors (age, social, economical and cultural) that demand specific strategies of intervention.
- Improvement of the health cares delivery effectiveness and efficiency to the asthmatic-improvement of the quality of the environment.
- Improvement of the epidemiological asthma survey, particularly throughout entities, institutions and systems that already exist or to be set up.
- Monitoring and evaluating.

STRATEGIES

1. DEVELOPMENT OF THE PATIENT AND FAMILY'S CAPACITIES TO CONTROL ASTHMA, SPECIFICALLY:

- A better understanding of the disease
- Stimulus to adoption adequate behaviours
- Increasing the knowledge on asthma, in order to reduce delays when seeking care – promoting adhesion to treatment
- Promoting the improvement of self-esteem, self-conceit and self-image
- Eradication of mystifying fears and myths
- Adequate integration of asthmatics in school and work environments, as well as in their core groups

To achieve these goals, the following should be set up:

a) "Asthma Schools" – spaces where knowledge is conveyed, by technical teams, in accordance with a trans-disciplinary approach, involving, besides the health professionals, other professional groups who deal with children, adolescents and asthmatic adults and who hold pedagogical know-how, such as the child educators, teachers, psychologists, etc. The information should be essential, with previously outlined programmes, supported by adequate audio-visual material, making use of participating methodologies. These "Schools" may function anywhere, namely in the health services or other adequate sites
b) "Asthma Practical Manual", which will contemplate essential information for the patient and for the population in general.

2. Intervention in groups with additional risk, either to the disease itself, the disease determinants, the difficulties or to obstacles that arise from self-control and care access, detecting unmet needs and development of specific projects and programmes to overcome the detected iniquities.

3. Improvement of the patients' access to timely health care, efficacious and efficient, through the easiest access for the patients to health care services and to a better articulation among care levels, in order to ensure both the optimising of seeking and the continuity in the follow up.

4 Promotion of good professional practices based on the new diagnosis and treatment conceits of asthma, through:

- Training courses for trainers and courses on asthma, destined to health professionals
- Audio-visual material
- Manual on professional good practices

5. Intervention in the environmental atmosphere, through:

- updated and comprehensive information on the domestic, school, professional and atmospheric environmental aggressive factors
- promotion of the intersector articulation of the several entities involved

6. **Development of the association-spirit among** asthmatics, **especially** through the Portuguese Association of Asthmatics and other forms of existing associations, as others that may be set up, with emphasis on the help-among-each-other informal groups.

7. **Asthma epidemiological survey**, through an information system that will enable:

   - Follow up on the evolutionary trend of the incidence and prevalence of the several age and socio-economic groups
   - Detection of additional risk groups
   - Detection of the health needs and well-being of the asthmatic population, of the determinants of the iniquities within the disease genesis and the accessibility
   - Performing studies and applied research, specifically for the evaluation of the unmet needs and of parameters that show the degree of the asthmatic population's quality of lifestyle and well-being

8. **Integrated disease management**, through the study impact of the Programme to be carried out by the Ministry of Health's central services, in terms of identification and estimation of:

   - The health gains to be accomplished
   - The materials and equipment, to be selected in terms of improving the accessibility, which will provide a better control of asthma, such as: spirometry, bronchodilator aerosol, medication and respiratory functional rehabilitation

GOALS FOR 2007

- To reduce the number of hospitalisations due to asthma, which in children and adolescents (<19 years) should attain, at least, 20% of the basic values
- To reduce school and work absenteeism due to asthma, which in the school population will attain, at least, 30% of the basic values
- To attain a significant percentage of asthmatics (25% of the asthmatic population estimated) capable of self-managing their disease

DIAGNOSIS AND CLASSIFICATION OF ASTHMA SEVERITY

Asthma is a chronic inflammatory disorder of the airways that in susceptible individuals causes recurring episodes of wheezing, dyspnoea, chest discomfort and coughing, especially nocturnal or in the early morning. These symptoms are usually associated with generalised, though variable, airway narrowing which is reversible, either spontaneously or with medication. Increased bronchial reactivity due to several stimulants is characteristic of asthma.

The **Diagnosis of Asthma is based on:**

- **A clinical history** showing the clinical hallmarks precipitated by exposure to a variety of provocative agents
- **A Physical examination** with findings of bronchial obstructive signs, although a normal examination does not exclude the diagnosis
- **Pulmonary function tests** that demonstrate
  - Bronchial obstruction and its reversibility
  - Bronchial hyperresponsiveness
  - Variable airway flow limitation
- **Allergic history and evaluation**
- **Exclusion of conditions that may be mistaken with asthma**

ASTHMA DIAGNOSIS

One suspects of asthma if the clinical history presents any one of the following signs or symptoms:

Cough with nocturnal predominance:

- Recurrent wheezing
- Recurrent respiratory difficulty
- Recurrent chest discomfort

Eczema, allergic rhinitis, family history of asthma or atopy is frequently associated with asthma.

A normal chest observation does not exclude the hypothesis of asthma.

Asthma symptoms may occur, or aggravate, during the night, awakening the patient.

Asthma symptoms may occur, or aggravate, in the presence of:

- Physical exertion
- Viral infection
- Pets
- Prolonged exposure to house-dust and mites especially in mattress cushions and carpets
- Smoke, particularly that of tobacco and timber
- Pollen
- Changes in the air temperature
- Extreme emotional outbursts, particularly when they cause laughter or crying
- Inhaled chemical irritants
- Drugs sensitivity, especially to acetylsalicylic acid and beta-blockers

CLASSIFICATION OF ASTHMA SEVERITY

Asthma can be stratified into degrees or "steps" of severity according to the frequency / intensity of symptoms and the need for medication. Thus, the classification of asthma severity is as follows:

STEP 1 – MILD INTERMITTENT ASTHMA

Symptoms occur less than once per week or, nighttime symptoms, twice or less times per month. The patient is asymptomatic between exacerbations.

STEP 2 – MILD PERSISTENT ASTHMA

Symptoms occur more than once per week, but less than once a day. Nighttime symptoms occur more than twice a month.

STEP 3 – MODERATE PERSISTENT ASTHMA

Daily symptoms. Nighttime symptoms more than once per week. Daily use of inhaled short-acting ß2 agonist. Symptoms interfere with the patient's daily activities.

STEP 4 – SEVERE PERSISTENT ASTHMA

Continuous symptoms. Frequent nighttime symptoms. Significant impairment of daily activities.

The stratification of symptoms according to severity is sufficiently enough to determine the patient's "degree" of severity.

The intensity of exacerbations may vary whatever the level of severity is, such as in intermittent asthma.

Over time, a same patient may vary a "step" in severity and treatment should be adjusted accordingly.

CLASSIFICATION OF THE ASTHMATIC CRISES SEVERITY

Asthma crises may be classified according to the patient's following signs and symptoms:

MILD CRISIS

- dyspnoea at the outset
- endures decubitus position
- an almost normal speech
- patient is conscious, normally calm but may show some anxiety
- generally no respiratory chest retraction
- respiratory rate is usually normal, though, sometimes slightly high
- cardiac rate is normally below 100/min
- moderate wheezing
- no pulsus paradoxus

MODERATE CRISIS

- Dyspnoea when speaking
- Adopts the seating position
- Speaks in short phrases
- Conscious though anxious
- Chest retraction
- High respiratory rate
- Cardiac rate ranging between 100 and 120/min
- Clear signs of wheezing
- Pulsus paradoxus may be present

SEVERE CRISIS

- dyspnoea when resting
- adopts bent over position
- unable to speak in full sentences
- anxious or even agitated
- respiratory chest retraction
- respiratory rate greater than 30 breaths per minute
- cardiac rate is above 120/min
- significant wheezing
- pulsus paradoxus

FOREBODING FINDINGS SUGGESTING IMPENDING RESPIRATORY FAILURE

- somnolence or confusion
- bradicardia
- loss of breath sounds
- no paradoxical pulse

ASTHMATIC PATIENT MANAGEMENT

Management of the asthmatic patient should be programmed according to stages, in which the initial one should continue until the clinical situation has been stabilised and therapeutic aims achieved. After which, there should be a periodic evaluation, depending upon the patient's progression.

Besides the clinical physical findings, the first stage should include further diagnostic exams, which are deemed necessary including allergy skin tests, pulmonary function studies and laboratory or radiological data.

The treatment plan should always contemplate the development programme regarding the patient and family's capabilities and competencies.

In subsequent management stages, beyond the clinical re-evaluation, other exams are used in a supplementary fashion to adequately evaluate the disease and to review both the therapeutic plan and the development programme regarding the patient and family's capabilities and competencies.

HIGH RISK ASTHMATIC PATIENT

One should consider a high-risk asthmatic patient when there is:

1. severe long-lasting asthma
2. unstable asthma, demonstrated by a large variety of daily symptoms and spirometry values
3. a clinical history that shows that the disorder is not under control, such as:
   - frequent referrals to the emergency department
   - frequent medical visits
   - hospitalisation in the last year
   - need for mechanical ventilation
   - recent hospital discharge
4. Persistent abnormal pulmonary function test

ASTHMA STABILITY CRITERIA

One should consider that asthma has been stabilised when:

1. Symptoms are lacking or minimal
2. Exacerbations are lacking or minimal
3. Quick-relief medication (B2-agonists) is never or minimally needed
4. A normal daily routine is carried out including physical exercise
5. Lung function normalises or improves significantly
6. Side effects caused by medication are lacking or minimal

CARE DELIVERY LEVELS DISTRIBUTION

To approach asthma, the competencies of the health centres and of the hospital services are as follows:

PRIMARY LEVEL

- Basic respiratory function test
- Treatment of intermittent and mild persistent asthma (Steps 1 and 2)
- Education
- Development of capabilities and competencies in the patient and family
- Referral to asthma specialists

SECONDARY LEVEL

- Complete respiratory function test
- Immune-allergic evaluation
- Treatment of persistent, moderate and severe asthma (Steps 3 and 4)
- Respiratory rehabilitation
- Education
- Development of capabilities and competencies in the patient and family
- Clinical report to the general practitioner/family doctor

REFERRAL CRITERIA

It is advisable to consider referral to an asthmatic specialist, in the following situations:

- previous severe asthmatic exacerbations
- difficulties in differential diagnosis
- existence of concomitant conditions that may potentially complicate asthma, such as sinusitis, nasal polyps, severe rhinitis, etc.
- need for specialised diagnostic evaluation to identify allergens and/or complete pulmonary function evaluation
- non- response to treatment
- persistent, moderate and severe asthma
- need for specific environmental guidelines
- need for immunological therapy
- difficulties in self-management
- difficulties in sticking to treatment
- difficulties with family support
- complications occurring during treatment

EVALUATION OF THE PROGRAMME

The National Programme of Asthma Control will be evaluated by monitoring its implementation and assessment of achieved health gains:

- annual mortality due to asthma
- number of hospitalisations due to asthma
- referrals to hospital emergency departments
- school absenteeism
- work absenteeism

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