

# NATIONAL PROGRAMME FOR VISUAL HEALTH



DIRECTORATE-GENERAL OF HEALTH

DIRECTORATE-GENERALE OF HEALTH  
DIVISION, GENETIC, CHRONIC AND GERIATRIC DISEASES

# NATIONAL PROGRAMME FOR VISUAL HEALTH

LISBON, 2005

PORTUGAL. Directorate-General of Health. Department of Genetic, Chronic and Geriatric Diseases  
National programme for vision health / trad. by Margarida Serra. - Lisbon : Directorate-General of Health,  
2005. - 20 p. - Título original: Programa nacional para a saúde da visão.

ISBN 972-675-131-4

Vision / Eye diseases / National health programs / Health plans and programmes / Diagnosis, eye /  
Portugal

The International Programme for Visual Health was approved by Ministerial Dispatch on 31st January, 2005

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Printer

Europress, Lda.

Print Run

500 copies

Legal Deposit

241584/06

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## INTRODUCTION

Sight plays a highly important social role, in that it is a fundamental means of communication in regards not only to personal relationships but also professional life.

Nowadays, it is clear that the way in which a person uses his or her own sight – that is, functional vision – is more important than visual acuity itself and that there might be measures to improve it.

It is also common knowledge that vision should be preserved from birth. Furthermore that treating and preventing visual disease is of the utmost importance, as failure to do so carries a decrease in the quality of life with negative repercussions on a personal, familiar and professional level, not to mention the high social costs involved.

However, eye and visual pathway diseases are extremely frequent among the general population and one of the factors that has contributed the most to this situation is the progressive ageing of the Portuguese population.

The divergence between the required ophthalmological care and that provided has been widening and highlights the need for the access improvement to timely and proper ophthalmological care.

Technical advancements in general and especially in the medical sciences have made it possible to avoid not only visual acuity decrease, but also blindness in large numbers of individuals.

In fact, a better-informed public, associated with significant advances, in terms of diagnosis and treatment of ophthalmological diseases has over the last few years enabled the prevention and treatment of such diseases that, some years ago, were considered to be either inevitable or incurable.

On the other hand, when treatable visual impairments fail to be diagnosed in time, severe public health repercussions follow. This is clearly identified in the National Health Plan 2004-2010 and it is also the grounds for the need of the National Programme for Visual Health.

Ophthalmology in Portugal has long-standing traditions and it is characterized by a high level of quality in the scientific study of ophthalmological diseases and their treatments. However, to enhance this, it is extremely important to complement this National Programme for Visual Health with the establishment of a network of ophthalmological referral, which will enable a better use of the existing resources, offer conditions to nurture growth, to fill gaps and to lessen disparities in the care provided in what continues to be an imperfect system.

The National Programme for Visual Health implements strategies in areas such as intervention, training, data acquisition and analysis. Furthermore it acts through product development and national initiatives that should be subject to regional modulation and duplication according to specific local conditions and by maximising existing resources.

The frequency of ophthalmological examinations – as currently recommended by best practice – requires the evolution of strategic resource management such that the needs can be gradually controlled, especially those concerning the rising age demographics of the population.

In order to accomplish these strategies, the Directorate-General of Health (Direcção-Geral da Saúde) has elected the Portuguese Society of Ophthalmology and the Departments which are responsible for Ophthalmology teaching within the Universities as its permanent scientific messengers, whilst not excluding the possibility of scientific and technical cooperation with institutions and societies, as well as with patients and professional associations.

The strategies for intervention, training, data acquisition and analysis outlined in the National Programme for Visual Health that have been scientifically approved by the Portuguese Society of Ophthalmology must operate in parallel with other national programmes that are integrated in the National Health Plan 2004-2010, namely:

- a) The National Programme of Intervention on Health Determinants Related to Lifestyles;
- b) The National Programme for Diabetes Control;
- c) The National Programme Against Rheumatic Diseases;
- d) The National Programme for the Health of the Elderly People.

## CONTEXT

Visual acuity decrease is fundamentally caused by refraction problems that can be optically corrected, such as myopia, hypermetropia, astigmatism and presbyopia.

Apart from refractive errors, the diseases that are more likely to cause long-term visual impairment in adults are cataracts, ocular diabetes, glaucoma and macular diseases. As for children, the pathologies most frequently responsible for visual impairment are congenital and juvenile cataract, congenital glaucoma, strabismus, amblyopia, retinoblastoma, all prematurity related diseases, genetic and metabolic diseases.

Several studies conducted in Portugal allow us to estimate that:

- a) about half of the population suffers from visual impairment, ranging from visual acuity decrease to blindness.
- b) about 20% of children and half of the adult population suffer from significant refractive errors.
- c) about half of the people suffering from blindness are of working age.
- d) more than a third of the people with diabetes have either never been examined or are not regularly examined by an ophthalmologist.
- e) the majority of glaucoma or age-related macular degeneration cases, are referred to ophthalmological care too late, when it is no longer possible to provide effective treatment.
- f) keratic and conjunctival diseases, are responsible for about 210,000 cases of decreased vision and 1,300 cases of blindness.
- g) about 170,000 people suffer from cataracts, with 6 out of 10 people over 60 years old showing signs of this disease.
- h) about 200,000 people present ocular hypertension, of which a third suffer from glaucoma.
- i) about 6,000 people may present irreversible blindness due to glaucoma, being that the development of this disease, to blindness, can, in many cases, be prevented through adequate ophthalmological care;
- j) about 35,000 people suffer from decreased vision, due to retinal and choroidal diseases, namely age-related macular degeneration, which will affect 5% of people over 55 years old and 10% of people over 65;

- k) about 15,000 diabetics are at risk of going blind due to diabetic retinopathy and maculopathy, with most cases preventable or treatable through retinal photocoagulation by laser and/or by vitrectomy;
- l) about 300,000 people suffer from amblyopia and/or strabismus.

Portugal is facing a public health problem that must be addressed. This requires pro-active measures on a national level that encompass the entire healthcare system.

It is well accepted that primary prevention and early detection, as well as access to ophthalmological surgery and global visual recovery, constitute important public health measures in reducing morbid visual diseases.

It is clear that the majority of visual disorders can be prevented when adequate responses are taken for each nosological entity. Furthermore that prevention is primarily based on an early diagnosis.

The final goal of the National Programme for Visual Health is to prevent avoidable blindness, thus preserving and restoring the population's best possible vision.

In order to do so, the Programme defines the most frequent nosological entities likely to provoke blindness or visual morbidity, as well as the best possible strategies for treatment and recovery.

## OBJECTIVES

The National Programme for Visual Health sets the following general objectives:

1. To reduce the predicted incidence and prevalence of legal blindness and cases of vision loss associated with treatable pathologies.
2. To reduce the proportion of non-diagnosed vision health problems in children, young people and adult population.
3. To reduce the proportion of visual health problems that are determinant to functional impairment and loss of independence, in people over 55 years old.

To achieve these general goals, it is of the utmost importance that the National Programme for Visual Health achieves the following specific objectives:

1. To reduce the incidence of amblyopia/visual loss in neonates, children and adolescents.
2. To reduce the proportion of reduced visual acuity, equal to or below 5/10, due to non-corrected refractive errors.
3. To reduce the incidence of reduced visual acuity/legal blindness due to glaucoma.
4. To reduce the incidence of reduced visual acuity/legal blindness due to diabetic retinopathy/maculopathy.
5. To reduce the incidence of reduced visual acuity/legal blindness due to age-related macular degeneration.
6. To reduce the incidence of reduced visual acuity/legal blindness due to untreated cataract.

## TARGET POPULATION

Without prejudicing the especial attention dedicated to those people considered at risk, or those with a personal or a family history of visual diseases, the general population should be considered as the primary target group of the National Programme for Visual Health.

## TIME FRAME

The National Programme for Visual Health is being operated by the health service using a time frame, in accordance with the National Health Plan, which will run until 2010, not taking into account possible alterations of this time frame, due to periodic evaluations and their recommendations.

## INTERVENTION STRATEGIES

The intervention strategies take into account the initiatives of an operational nature and those that improve professional practices, which not only improve the whole detection and follow up of those considered at risk but also the diagnosis, treatment, recuperation and subsequent evaluation of patients, as well as improving the obtained results and ratings in terms of actual health benefits.

The primary prevention and the reduction of risk, the opportune tracking and early detection, carried out in collaboration with General Practitioners/Family Doctors, constitute indispensable measures in the reduction of the morbidity and incidence rates of visual diseases. Although ophthalmology is an area of medicine that is practised in hospitals, it should necessarily be inter-connected with the primary healthcare system.

It is essential to establish a network of referral such that after presumptive diagnosis or early detection, patients can be referred, diagnosis can be confirmed and treatment initiated.

To achieve the objectives of the National Programme for Visual Health, the following points should be considered as principal intervention strategies:

### S1

The ophthalmological examination of high risk children within the first two months, namely those who will potentially suffer from retinopathy of prematurity,

those with a family history and/or clinical suspicion of retinoblastoma, infantile cataracts, congenital glaucoma and genetic and metabolic diseases.

## **S2**

The establishment of a systematic ophthalmological screening programme including, at least, one ophthalmological examination in children from 0 to 2 years old and another programme for those between 2 and 5 years old. This procedure is to be included in the standard programme for infantile and juvenile health.

## **S3**

The occasional ophthalmological examinations of people between 14 and 45 years old who show symptoms and have complaints of visual impairment, trauma or diabetes.

## **S4**

The periodic ophthalmological examinations, at least every 4 years, of people who are over 45 years old.

## **S5**

The ophthalmological examinations of everyone considered to be at high risk of developing an ophthalmological pathology, based on their clinical history, family history and age, even in the absence of symptoms.

## **S6**

The advertising to be directed at health care professionals of the locations of ophthalmological appointments with assured access to screenings and regular examinations.

## S7

Production and dissemination of technical guidelines on:

- a. diagnosis, follow up and referral of patients with amblyopia/decreased vision;
- b. diagnosis, follow up and referral of patients with diabetic retinopathy;
- c. diagnosis, follow up and referral of patients with refractive errors;
- d. diagnosis, follow up and referral of patients with age-related macular degeneration.
- e. diagnosis, follow up and referral of patients with glaucoma;
- f. diagnosis, follow up and referral of patients with cataracts;
- g. quality control and safety rules when applying optical instruments, used in ophthalmology;
- h. adequate lighting conditions in houses, schools and workplaces;
- i. preventing ocular trauma of an occupational nature, namely in sports or during work;
- j. providing technical help for people with decreased vision.

## S8

Promoting quality and access to hospital services in areas such as visual rehabilitation, orientation and mobility.

## S9

Validating the evaluation criteria in order to determine the degree of functionality of ophthalmological patients with visual impairments.

## S10

Elaborating a proposal for a stratification model to define the access to benefits granted to visually impaired patients on a special regime.

## S11

Defining a referral network in ophthalmology.

## TRAINING STRATEGIES

Training strategies are composed of initiatives of an informative, pedagogical and educational nature that are aimed at healthcare professionals and the public – whether it is the general population or specific sub-groups – with the objective of better educating and fostering skills to manage visual health.

To achieve the objectives of the National Programme for Visual Health one must consider the following as principal training strategies:

### **S12**

To promote in Medical Faculties an increase in the number of hours dedicated to Ophthalmology.

### **S13**

To promote, along with the National Commission of Medical Internship and Hospital Administrations, an increase in the number of spaces available for Complementary Internship in Ophthalmology.

### **S14**

To promote compulsory training in Ophthalmology for Complementary Internships of General and Family Medicine.

### **S15**

To elaborate pedagogical means and procedures for training healthcare professionals, related to the early diagnosis of visual problems.

### **S16**

To increase awareness in employers, unions and other labour organisations, of the need for and actions to take in order to safeguard visual health in the workplace.

**S17**

To develop multi-sectional partnerships for dissemination to the general public and specific groups, information on ophthalmological diseases and prevention, in particular, visual health in domestic, scholastic, labour and sporting activities.

## **STRATEGIES FOR THE COLLECTION AND ANALYSIS OF DATA**

The strategies for gathering and analysing information incorporate actions to improve the epidemiological understanding of ophthalmological diseases and to obtain information on their impact on the functionality of those affected by them.

To achieve the objectives of the National Programme for Visual Health we must consider the following as principal strategies for the gathering and analysis of data:

**S18**

To develop multi-sector partnerships with a view to the creation of a data set for ophthalmological diseases that includes information gathering systems which in turn permit the acquisition and analysis of data concerning the prevalence and incidence of ophthalmological diseases, as well as data on temporary and long term incapacities and absenteeism in the workplace caused by these diseases or their complications.

**S19**

To develop multi-sector partnerships to promote the quality of basic and clinical investigation in the Visual Sciences.

**S20**

To monitor the health benefits which result from the actions of the National Programme for Visual Health.

## TIMETABLE

Strategies	2005 Quarter				2006 Quarter				2007 Quarter				2008 Quarter				2009 Quarter				
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	
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## FOLLOW UP AND EVALUATION

The National co-ordination of the National Programme for Visual Health, along with the accompaniment of its execution and annual evaluation, is the responsibility of the Directorate-General of Health (Direcção-Geral da Saúde) through a National Co-ordination Commission created by directive of the Minister for Health.

The periodic monitoring, of the health benefits obtained from the National Programme for Visual Health's initiatives, is to be achieved with the following indicators differentiated by gender:

1. Incidence of Amblyopia/reduced visual acuity equal to or less than 5/10, with correction, detected before the age of 5.
2. Incidence of Legal Blindness caused by Glaucoma.
3. Incidence of Legal Blindness caused by Diabetic Retinopathy/Maculopathy.
4. Incidence of Legal Blindness caused by age-related macular degeneration.
5. Incidence of treated cataracts, with corrected visual acuity equal to or more than 5/10.

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