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**ACCELERATING THE ELIMINATION OF AVOIDABLE BLINDNESS:  
A STRATEGY FOR THE WHO AFRICAN REGION**

**Report of the Regional Director**

**Executive Summary**

1. The number of blind people in the African Region is estimated at 6.8 million. Blindness is a real public health problem.
2. Several countries in the Region have blindness control programmes. However, the programmes have limited impact due to lack of appropriate structures and resources. The Global Initiative for the Elimination of Avoidable Blindness, also known as “Vision 2020: The Right to Sight”, launched in partnership with the International Agency for the Prevention of Blindness, is an opportunity and appropriate response to the challenges posed by blindness.
3. The present strategy is intended to help implement the Vision 2020 Initiative in the African Region.
4. Interventions proposed under the strategy are: (i) advocacy and development of policies and plans; (ii) integrating eye care activities in existing health systems; (iii) adopting specific approaches to controlling priority diseases; (iv) developing human resources and infrastructures; (v) strengthening partnership and mobilizing resources; (vi) developing research.
5. The Regional Committee is requested to review and adopt the present strategy.

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## INTRODUCTION

1. Visual impairment refers to low vision and blindness which correspond to partial or total loss of sight as measured by a standard scale.<sup>1</sup> Blindness is preventable or treatable in 75% of cases.
2. Blindness is a real public health and socioeconomic problem. In developing countries, it worsens the problem of poverty. The burden of blindness remains high despite all efforts.
3. “Vision 2020: The Right to Sight” is a global initiative that aims to eliminate avoidable blindness by the year 2020. The Initiative is a partnership between WHO and the International Agency for the Prevention of Blindness (IAPB), which is a broad coalition of nongovernmental organizations.
4. The World Health Assembly, by its Resolution WHA56.26,<sup>2</sup> urges Member States to commit themselves to supporting this global initiative by developing national Vision 2020 plans in partnership with nongovernmental organizations, the private sector and civil society, and by starting to implement these plans by 2007 at the latest.
5. Resolution WHA59.25<sup>3</sup> for its part urges Member States to develop and strengthen eye care services, integrate them into existing health systems, train key categories of personnel, re-train health workers in visual health care and mobilize domestic financial resources.
6. The present strategy proposes specific interventions as part of the Vision 2020 Initiative for preventing and eliminating avoidable blindness in the African Region.

## SITUATION ANALYSIS AND JUSTIFICATION

### Situation analysis

7. Lack of reliable epidemiological data is a basic problem in Africa. About 161 million people have visual impairment worldwide; of these, 37 million are blind. It is estimated that the number of people with visual impairment in sub-Saharan Africa is 27 million, of whom 6.8 million are blind.<sup>4</sup>
8. The main causes of avoidable blindness in developing countries worldwide are: cataract (50%); glaucoma (12%); corneal opacity (5%); diabetes (5%); trachoma (4%); affecting especially women and children; childhood blindness due to vitamin A deficiency, measles and neonatal conjunctivitis (4%); onchocerciasis (0.8%); other causes (14%)<sup>5</sup> including low vision and refractive errors.

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<sup>1</sup> *International Statistical Classification of Diseases (ICD-10)*, volume 1, H54, pp. 456–457.

<sup>2</sup> Resolution WHA56.26, Elimination of avoidable blindness, Geneva, World Health Organization, 28 May 2003.

<sup>3</sup> Resolution WHA59.25, Prevention of avoidable blindness and visual impairment, Geneva, World Health Organization, 27 May 2006.

<sup>4</sup> Resnikoff S et al, Global data on visual impairment in the year 2002, *Bulletin of the World Health Organization*, 82: 844–851, 2004.

<sup>5</sup> Resnikoff S et al, *Prévention de la cécité: nouvelles données et nouveaux défis*, *Revue de santé oculaire communautaire* 2(1) : 1, 2005.

9. Cataract is the main cause of blindness in the Region. It is either congenital or acquired (due to ageing, diabetes, injury) and corresponds to opacity of the lens, gradually leading to diminished vision. It is estimated that 3–4 million cataract cases are not operated upon, and only a small proportion of patients actually undergo surgery. Specifically, only 200 cases per million inhabitants undergo operation annually in the African Region as opposed to 3000 to 5000 in the developed countries.<sup>6</sup> Difficulties of access to care and the high cost of surgery make this situation even worse.

10. Glaucoma, a condition linked to insidious rise in intraocular pressure, raises the problem of adherence due to long-term treatment. The main risk factors are high ocular pressure, age (over 40 years), family history and ethnicity (the black race at greater risk). Its treatment, whether by lifelong intake of medicines or by surgical intervention, requires expensive clinical services, yet the outcomes are modest.

11. Diabetic retinopathy is an ocular complication of diabetes. Globally, 2% of cases develop into blindness. Its rate of development into blindness in the African Region is unknown. This disease, which is a complication of uncontrolled diabetes, raises problems of case detection and management.

12. Lack of hygiene, poverty and difficulty of access to water are enabling factors for trachoma, an infectious eye disease whose complications and sequels can lead to blindness. A four-component strategy called SAFE (meaning Surgery, Antibiotics, Facial cleanliness and Environmental change), implemented in the 19 endemic countries of the Region,<sup>7</sup> can help reduce the burden of blinding trachoma.

13. Onchocerciasis is endemic in 30 countries of the Region. It has been controlled successfully in 10 out of 11 affected west African countries, thanks to the Onchocerciasis Control Programme (OCP) that ended in 2002. In the remaining 19 affected countries in the Region, the African Programme for Onchocerciasis Control (APOC) aims to eliminate the disease.

14. Childhood blindness is preventable or avoidable in the majority of cases, and its incidence has been reduced through integrated actions for combined elimination of vitamin A deficiency and measles (Global Child Survival Initiative). Preventive measures include immunization and the prevention of both vitamin A deficiency and sexually-transmitted infections. Detection and management of congenital cataract and congenital glaucoma remain difficult in the Region. Only four pilot countries (Ethiopia, Ghana, Kenya and Mali) have the appropriate surgical facilities.

15. Refractive errors and low vision affect a significant proportion of the population. With the exception of Ethiopia, countries of the Region do not have reliable data on these two conditions. Some countries have initiated and started implementing specific programmes.

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<sup>6</sup> Thylefors B, *Une initiative mondiale pour l'élimination de la cécité évitable*, *Revue de Santé oculaire communautaire*, 1(1): 1–3, 2004.

<sup>7</sup> Algeria, Burkina Faso, Chad, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Mali, Malawi, Mauritania, Mozambique, Niger, Nigeria, Senegal, Tanzania, Togo and Zambia.

16. Eye care facilities are often inadequate, with obsolete and dysfunctional equipment. Lack of staff and shortage of medicines and other essential eye care products are frequent. The resulting rise in the incidence of diseases that cause blindness increases the threat to health in the Region. Adequate management of eye conditions in the Region would require a reorganization of care systems and services.

### **Justification**

17. Blindness is one of the main public health problems in Africa, even though 75% of the underlying causes are preventable. The World Health Assembly has already adopted two resolutions on blindness prevention. Vision 2020 is an appropriate response to the problem of blindness and provides an opportunity for governments, nongovernmental organizations, eye care professionals and the private sector to work together to eliminate avoidable blindness. This strategy for the African Region will facilitate the implementation of Vision 2020.

## **REGIONAL STRATEGY**

### **Aim and objectives**

18. The aim of this strategy is to help reduce the burden of avoidable blindness.

19. The objectives of the strategy are:

- (a) to help create a favourable political environment for the implementation of Vision 2020;
- (b) to integrate eye care services into primary health care;
- (c) to strengthen the development of human resources and appropriate technologies and infrastructures;
- (d) to strengthen partnership and resource mobilization;
- (e) to support studies on effective community interventions.

### **Guiding principles**

20. The proposed strategy is based on the following guiding principles:

- (a) adopting preventive, curative and rehabilitative interventions which are cost-effective;
- (b) promoting equity by ensuring that disadvantaged groups have access to quality care;
- (c) multisectoral and multidisciplinary partnerships, with the health sector playing a predominant role;
- (d) community involvement in obtaining adequate data on blindness, and fostering community responsiveness to eye diseases.

### **Priority interventions**

21. Priority interventions for improving blindness prevention and control are:

*Advocacy and development of policies and plans*

22. Creating and strengthening favourable conditions for **increasing advocacy and awareness** are crucial to decision making and resource mobilization for the implementation of interventions.

23. Data on avoidable blindness should be gathered to create an evidence base for use partly in the policy development process in order to convince stakeholders during discussions to support and guide interventions.

24. There is a need to strengthen the **development** and implementation of **national plans**. In addition, all blindness control stakeholders must be brought together for consultations leading to appropriate national programmes.

*Integrating eye care activities into existing health systems*

25. **Integration** of eye care will involve all existing levels of health care systems. It should be inspired by primary health care principles, including the referral function. At the community level, promotional activities and health education should be integrated into common familiar activities and the activities of already-established associations. Basic eye care and the management of simple cases of refractive errors should be developed at the primary level under formative supervision.

26. Cases beyond the competency of the primary level, especially cataract cases recommended for operation and trichiasis cases in blinding trachoma recommended for surgery should be referred to the secondary level. Complicated and difficult cases beyond the competency of the secondary level should be referred to the tertiary level. Rehabilitation, training and research should be carried out at all levels.

*Adopting specific approaches to controlling priority diseases*

27. Vision 2020 provides specific orientations on interventions deemed appropriate for cataract, trachoma, onchocerciasis, childhood blindness and refractive errors. The need for countries to have access to these interventions will be stressed. Screening and surgery are the recommended interventions for cataract.

28. The SAFE strategy should be **intensified and better implemented** in countries where blinding trachoma is endemic. For countries where blinding trachoma and other parasitic diseases are co-endemic, the antibiotics component of the SAFE strategy should be integrated into programmes on neglected tropical diseases. Facial cleanliness and environmental hygiene should also be integrated within other water and sanitation programmes.

29. Implementation of the Yaounde Declaration of 2006 will help **accelerate** onchocerciasis elimination in the Region. To that end, activities, including surveillance, should be strengthened in countries in post-conflict situations and countries where there are pockets of onchocerciasis co-endemicity with loiasis, another parasitic disease. In addition, the activities must be extended to the ex-OCP countries.

30. Partnership with the Global Child Survival Initiative should be **strengthened**. Education and training of community health workers and traditional health practitioners should be developed. There is need to enhance the capacity of maternity and postnatal care providers and mothers to detect congenital eye conditions, particularly those linked to vitamin A deficiency and congenital cataract.

31. Refractive error cases involving children aged from 6 to 15 years and adults over 45 years should be given priority. This will require **developing and strengthening** case detection within schools, colleges, associations and public places. This activity should be supplemented with a programme for supplying low-cost spectacles.

32. For glaucoma, there will be need to **develop and strengthen** health education, screening targeted at high-risk subjects and early management. Access to affordable, essential antiglaucoma medicines will be provided.

33. Primary and secondary prevention of diabetes should be **strengthened** to minimize the onset of diabetic retinopathy which, once developed, is irreversible. Appropriate equipment and technology should be made available to stop the progression of blindness.

#### *Developing human resources and infrastructures*

34. **Strengthening** the capacities of all categories of eye care personnel is essential. **Training** should be provided for eye care personnel in order to fill the noted shortfalls in skills and abilities. The capacity of communities to conduct preventive and promotional activities and identify cases of visual impairment will be strengthened.

35. At the primary level, competencies in cataract and active trachoma detection in endemic countries and provision of basic eye care should be strengthened. The programme for initial training of paramedical staff should be improved by including basic notions of priority eye diseases.

36. At the secondary and tertiary levels, it will be necessary to train a larger number of ophthalmologists; cataracts surgeons from among general practitioners, and eye care assistants, based on the specific context of each country; other categories of essential medical and non-medical staff such as nurses specialized in ophthalmology, refractionists, low vision technicians, maintenance technicians and programme managers. The skills of ophthalmologists must be reinforced with additional subspecialities.

37. Infrastructure should be rehabilitated, equipment renovated, and eye care consumables and medicines made available all year round. At the same time, new eye care services that meet the set standards in microsurgery and basic eye tests should be established.

#### *Strengthening partnerships and mobilizing resources*

38. It is essential to **strengthen** the mobilization of resources and the development of effective and coordinated partnerships among all actors at the national, interregional and international levels in order to assure and facilitate the implementation of interventions and optimize the use of resources. Existing partnerships should be strengthened.

### ***Developing research***

39. Countries will identify research priorities to support the implementation of avoidable blindness prevention and control programmes. They will be encouraged to **support** and finance research work, especially operational research. It will be helpful to **encourage** training of researchers and equip research institutions, schools of medicine and training centres.

### **Roles and responsibilities**

40. Countries should:

- (a) develop and implement blindness control policies and plans and integrate eye care into existing health systems based on field surveys;
- (b) strengthen health systems and blindness control capacities by fostering community involvement, collaboration with partners and operational research;
- (c) mobilize resources from domestic and external sources, establish national committees, coordinate the activities of all stakeholders and monitor blindness control programmes;
- (d) coordinate all partners;
- (e) undertake synchronized and integrated cross-border cataract campaigns.

41. WHO and partners should support countries to:

- (a) provide technical assistance for the development of policies and plans, and for data collection through surveys and data analysis and dissemination;
- (b) support countries to establish and implement control mechanisms and standards;
- (c) carry out advocacy among policy-makers, international partners and other key stakeholders for increased resources;
- (d) support training programmes;
- (e) support harmonization of country programmes.

### **Resource implications**

42. Additional domestic and external resources are needed to support the strategy in the context of a broader partnership (bilateral and multilateral funding partners, NGOs and donors). Blindness control programmes in countries are currently supported mainly by partners with very limited contribution from governments. The proposed interventions will require reorganization and concentration of resources to facilitate their implementation.

43. Available human resources adequately trained in eye care delivery at all levels; essential eye care equipment, medicines and consumables; and a community monitoring mechanism should be guaranteed.

## **MONITORING AND EVALUATION**

44. Establishment of a monitoring and evaluation system will help improve the implementation of interventions in accordance with the main objectives of this strategy. Countries will be provided with indicators for monitoring cataract surgery rates, the prevalence of trichiasis and active trachoma, implementation of the SAFE strategy in endemic countries, national onchocerciasis control programmes, measles immunization coverage, incidence of vitamin A deficiency, and prevalence of blindness and ocular disability due to uncorrected refractive errors.

## **CONCLUSION**

45. Blindness is a real and serious public health problem in the African Region. Existing interventions are highly cost-effective and will help achieve the objective of reducing avoidable blindness which accounts for 75% of blindness cases. Emphasis must be put on the need for advocacy to sensitize decision-makers, partners, health professionals and the populations to support the implementation of these interventions.

46. The Regional Committee is requested to review and adopt this strategy.