

# Community Eye Health

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## A GLOBAL INITIATIVE FOR THE ELIMINATION OF AVOIDABLE BLINDNESS

Bjorn Thylefors MD

*Director, Programme for the Prevention of Blindness and Deafness  
World Health Organization  
CH-1211 Geneva 27  
Switzerland*



Despite considerable efforts in many developing countries, through national blindness prevention programmes, the global number of blind and visually disabled seems to be growing, mainly as an effect of population increase and ageing. Thus, the most recent (1997) projected estimate for world blindness points to some 45 million blind, and an additional 135 million visually disabled ('low vision'). About 80% of blindness is avoidable (preventable or curable), and nine out of 10 of the world's blind live in a developing country.

Given this alarming situation, with a potential doubling of the world's blindness burden by 2020, a series of consultations were held during 1996 and 1997, between the WHO Programme and the Task Force to the Partnership Committee of collaborating Non-Governmental Organisations, with a view to developing a common agenda for global action against avoidable blindness; the expected result would be a strengthened

and accelerated movement for blindness prevention, particularly in the developing world.

The Global Initiative for the Elimination of Avoidable Blindness, as a result of the consultations held, is focusing on a few priority disorders, and on what action needs to be taken from now to the year 2020, in terms of (i) disease control; (ii) human resource development; and (iii) infrastructure strengthening and appropriate technology development for eye care delivery.

### Disease Control

Cataract stands out as the first priority amongst the major causes of blindness, with an estimated present backlog of 16-20 million unoperated cases. The number of cataract operations/million population/per year is a useful measure of the delivery of eye care in different settings; this demonstrates great differences, as follows:



*Spectacle aphakic correction for an 'only' eye in Uganda*

*Photo: Murray McGavin*

Operations/Million Population/Per Year	
Africa:	approximately 200
Latin America:	500-1500
India:	approximately 2000
Europe:	approximately 3000
USA:	approximately 5000

Thus, there is a need to increase drastically the number of cataract surgeries in the developing world; the present estimate is that approximately 7 million operations were performed globally in 1995, and there will be a need to perform 12 million surgeries in the year 2000, to prevent a further growth of the backlog. Similarly, by the year 2010, 20 million operations should be done, and in 2020, an impressive 32 million cataract operations will be needed. At the same time as numbers go up, there should also be a change in technology with intraocular lens implantation as a common standard, and the proper follow-up of quality of surgery. This will call for better manage-

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International Centre for Eye Health  
Institute of Ophthalmology  
University College London  
11- 43 Bath Street  
London EC1V 9EL

Tel: (+44)(0)171-608 6909/6910/6923  
Fax: (+44)(0)171-250 3207  
e-mail: eyesource@ucl.ac.uk

Associated with  
Moorfields Eye Hospital  
World Health Organization  
Collaborating Centre for  
Prevention of Blindness

### *Editor*

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### *Design/Layout & Graphics*

Mr Hugh Lugg

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ment and monitoring of services, including patient satisfaction.

Trachoma is still the most common cause of preventable blindness in the world, with some 5.6 million blind, and around 146 million cases of active disease in need of treatment. A suitable strategy, referred to as 'SAFE' (Surgery, Antibiotics, Facial Cleanliness and Environmental Hygiene) has been defined, and is being increasingly applied in endemic countries. A recently established (1997) WHO Alliance for the Global Elimination of Trachoma will facilitate collaboration with all interested parties, including 46 endemic countries with blinding trachoma. Actions envisaged under the Global Initiative include the provision of around 5 million trichiasis operations, from the year 2000 to 2010, and treating at least 60 million people with active disease in the same period. By the year 2020, global elimination of blindness due to trachoma should be achieved.

Onchocerciasis will be brought under control by the year 2010 if ongoing operations in endemic countries are successfully completed. The recent development of community-directed treatment with annual doses of ivermectin will make it possible to eliminate this burden of blinding disease from the countries affected in Africa and Latin America.

Childhood blindness is caused mainly by vitamin A deficiency, measles, conjunctivitis in the newborn, congenital cataract and retinopathy of prematurity. There is rapid progress in eliminating xerophthalmia and measles, as part of 'child survival' initiatives, supported by several UN and other organisations. However, much more work is needed to detect, at an early stage, the other causes of childhood blindness and to manage them optimally.

Refractive errors and low vision constitute another priority in terms of visual disability; there is an enormous need globally for spectacles and low vision devices. The Global Initiative will focus on refractive services as part of primary health care and

school services, and local low-cost production of glasses and optical devices will be promoted.

### Human Resource Development

In the field of human resource development emphasis will be on the primary health care approach to blindness prevention. This implies continuing support for primary eye care training in countries. In addition, there will be strengthened efforts to train more ophthalmologists, from the present situation of one ophthalmologist per 500,000 people in Africa, to achieve 1:250,000 by the year 2020. The corresponding figures for Asia would be from 1:200,000 today, to 1:50,000 in 2020. Similarly, increased training of ophthalmic medical assistants and ophthalmic nurses should result in a ratio of 1:100,000 or 1:50,000 in the year 2020, as compared to 1:400,000 today in Africa and 1:200,000 in Asia respectively. It is also envisaged that there should be 100% coverage of training in basic eye care in medical schools by the year 2020. Other categories of staff to be trained under the Global Initiative include refractionists, managers for national/regional programmes and for major clinics, and also equipment technicians.

### Infrastructure and Appropriate Technology

Infrastructure and appropriate technology development is the third essential component of the Global Initiative. Standards for the availability of eye beds, refraction facilities, basic eye medicines, etc. will be applied to make sure that the availability, access, utilisation and coverage of basic eye care will be at least 90% to all populations in the year 2020.

With regard to appropriate technology development, emphasis will be put on the sustainable use of modern technology, making use of local production in developing countries whenever appropriate. The particular fields of interest concern instruments

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and consumables for cataract surgery, basic eye examinations, trichiasis surgery, glasses and other optical devices, as well as computers and other communications systems for effective management and co-ordination of work.

The Global Initiative is still in its early planning phase, but there is a clearly recog-

nised need for a global awareness campaign, to sensitise decision-makers and health care providers as to the rationale and great benefits of blindness prevention. The future scenario of a doubling of world blindness by the year 2020, unless more preventive action is taken, is unacceptable from a humanitarian point of view, and would have

far-reaching socio-economic and developmental consequences. This is why a strengthened partnership between all those working for blindness prevention is essential for optimal utilisation of resources available today and in the future.

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## Editorial

### Global Initiative for the Elimination of Avoidable Blindness

Future editions of the Journal of Community Eye Health will devote one page to the Global Initiative for the Elimination of Avoidable Blindness. This important initiative is introduced as our lead article by Dr Bjorn Thylefors, Director, Programme for the Prevention of Blindness and Deafness, World Health Organization (WHO PBD).

Discussions involving the WHO PBD and

the Task Force of Non-Governmental Development Organisations has resulted in a document outlining objectives, strategies, indicators and targets until the year 2020 AD, with emphasis on disease control, human resource development and infrastructure and appropriate technology.

Cataract is the most common cause of blindness worldwide and we publish three reports from India, two on Cataract Surgical Coverage and one on Counselling for Cataract Surgery. India has pioneered much in the field of eye care programmes, particularly in the provision of high volume cataract surgical services. Since we have published a 4-page Indian Supplement (see back page) we have missed some of the excellent articles which have been circulated in India alone. This issue redresses that situation.

A significant challenge for cataract surgeons in developing countries is the creation of the necessary surgical environment and skills to facilitate intraocular lens (IOL) implant surgery. Allen Foster and Albrecht Hennig discuss the option of using anterior chamber IOLs as an alternative to the proven technique of posterior chamber IOL surgery. This report is based on ongoing studies at Lahan Eye Hospital in Nepal. We look forward to publishing the major findings of the 2-5 year study which should reach its conclusions in 1998.

D D Murray McGavin  
MD FRCS(Ed) FRCOphth  
*Editor*

## Cataract Surgery

### CATARACT SURGICAL COVERAGE: An Indicator to Measure the Impact of Cataract Intervention Programmes

Hans Limburg MD DCEH  
*Chief Adviser DANPCB*  
A1/148 Safdarjung Enclave  
New Delhi 110029  
India

Allen Foster FRCS FRCOphth  
*Senior Lecturer*  
International Centre for Eye Health  
11-43 Bath Street  
London EC1V 9EL, UK

#### Introduction

Cataract is a public health problem in many developing countries, including India. Traditionally, the cataract intervention programme is evaluated by the number of cataract operations performed per year. In India this has increased from 1.2 million in 1989 to 2.7 million operations in 1996.<sup>1</sup> However impressive this increase may be, the figure does not indicate the extent to which the problem of cataract blindness has been reduced.

Two indicators are used to measure impact. First, it can be measured by a change in prevalence of cataract blindness, obtained through community based surveys. Since blindness surveys are costly and lengthy exercises, these are not conducted regularly. In India, a national study was done in the period 1971-74 and a National Survey on Blindness in 1986-89. The variation in prevalence of blindness and visual impairment due to cataract over this period indicates the impact surgical services have had on the magnitude of the problem.

#### Aim

To describe Cataract Surgical Coverage (CSC) as an indicator to measure the impact of cataract intervention programmes.

#### Methods and Materials

Cataract Surgical Coverage, both for 'eyes' as well as 'persons', was calculated from community based surveys conducted in 19 rural districts in the south-west and one urban district in the north-west of India.

#### Results

Cataract Surgical Coverage (VA < 3/60) ranged from 42% to 68% (for persons)

and from 22% to 45% (for eyes) in 19 districts of Karnataka State. The coverage for males was higher than for females. In Ahmedabad the coverage was high with 93% for persons and 83% for eyes.

#### Discussion

Together with prevalence data, Cataract Surgical Coverage can provide important information on the impact of cataract intervention programmes. Regular assessment of prevalence and coverage indicators through focused community surveys will reveal trends. Coverage indicators are also important as input data for mathematical models to predict future trends in cataract blindness.