

What's new at the back of the eye?

EDITORIAL



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The changing demographic pattern of visual impairment

VISION 2020 and the prevention of visual impairment are moving into the political and public spotlight.

Recent WHO discussions on the growing incidence of chronic, age-related, non-communicable diseases indicate that visual health and its preservation are now receiving attention. Recent publications illustrate the changing demographic pattern of visual impairment, implications for public health and possible interventions to control sight-threatening conditions. Both *The State of the World's Sight*, *VISION 2020: the Right to Sight, 1999-2005*,¹ published jointly by WHO and the International Agency for the Prevention of Blindness (IAPB), and an article in the *World Health Bulletin*, November 2004,² illustrate these trends.

The recent WHO data on blindness give clear evidence: among the causes of blindness, the share of chronic, age-related, non-communicable potentially blinding eye conditions is dramatically increasing (Figure 1, over page). *The State of the World's Sight* provides an insight into what has thus far been achieved in the prevention of visual impairment through international alliances and collaboration since the launch of VISION 2020 in 1999. Attempts to modernise the attitude of health care providers towards the preservation of visual health have been further cultivated by the representatives of many WHO member states when adopting, in 2003, the Resolution on the Elimination of Avoidable Blindness, and when preparing a new resolution for the World Health Assembly in 2006. What does all this mean for eye health care professionals – new challenges, new opportunities?

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An ophthalmologist examining the posterior segment of the eye. UK

Richard Leung

Meeting the challenge through specialised eye care services

One challenging aspect of the latest WHO data on the changing pattern of blindness prevalence in the world is that the demand for high-quality eye care services is expected to increase. Predicted population growth, along with the increase in life expectancy, will substantially alter the picture of future recipients of eye care. The numbers of people affected by sight-threatening eye conditions requiring highly specialised health services are likely to increase.

One such condition is diabetes. Diabetic retinopathy accounts for about 5 per cent of the global pattern of blindness. WHO is expecting a significant increase in the incidence of diabetes in all geographic regions. For instance, in many highly populated countries in Asia, the number of individuals suffering from diabetes will double by 2030.

Glaucoma is another example which, from the public health perspective, may be even more challenging. Controlling blindness from glaucoma requires early detection, life-long treatment and the compliance of patients. It is estimated that glaucoma is responsible for 12 per cent of global blindness. However, numerous unresolved issues in glaucoma control deprive many populations from effectively planned and delivered specialised eye care services.

The WHO data also indicate the growing threat of age-related macular degeneration. The increasing share of this eye condition is progressively reshaping the ratio of avoidable sight-threatening eye conditions to those in which conventional eye care is thus far failing. Cataract is another age-related eye condition causing avoidable blindness. Given that it has been one of the major stimuli for technological research and development in eye care, the failure of modern society to adequately control



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Direct ophthalmoscopy provides a magnified view of the fundus.UK

‘The recent WHO data on blindness give clear evidence: among the causes of blindness, the share of chronic, age-related, non-communicable potentially blinding eye conditions is dramatically increasing.’

cataract blindness is particularly shameful. The last WHO data indicate that cataract is still responsible for almost half of global blindness. Its cure is known, and several options for its surgical treatment have been tested and broadly implemented to reasonably fit healthcare budgets, even in the poorest societies. Demographic changes and longevity, along with the lack, for the foreseeable future, of knowledge about cataract prevention, will further increase the demand for cataract surgical services. Age-related macular degeneration poses a different set of challenges, as the condition cannot be prevented, and only some forms are amenable to very expensive, time-consuming interventions which are of limited benefit. The mainstay will need to be rapid expansion of low vision services, along with raising awareness among the general public and eye care professionals.

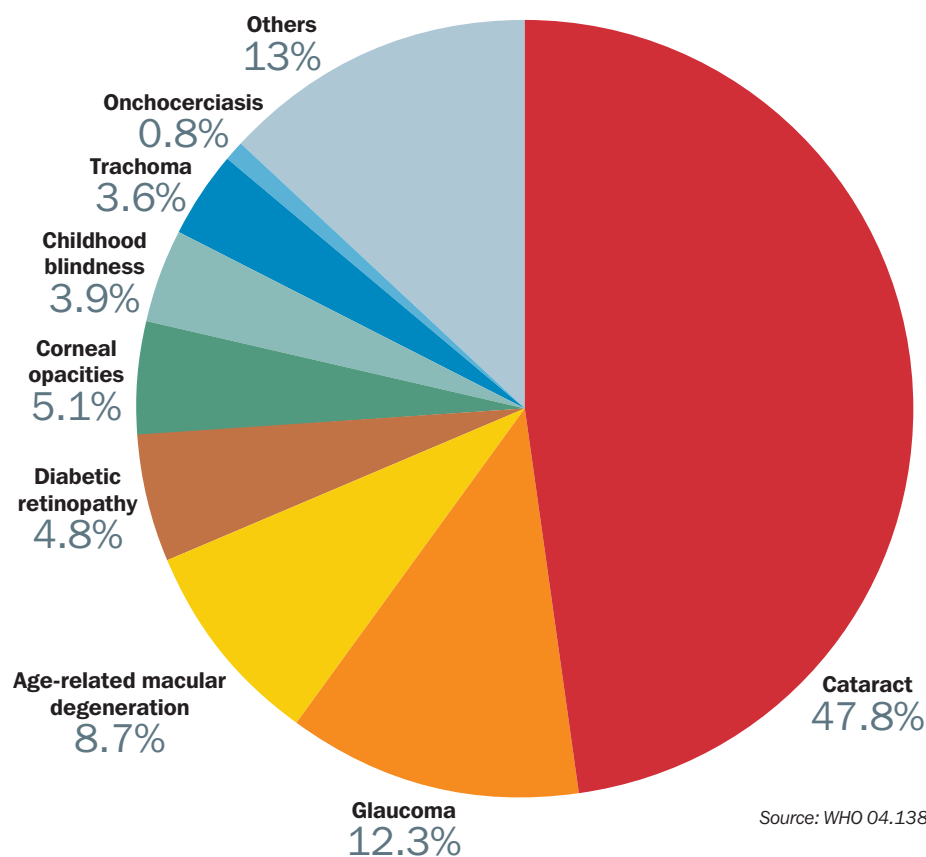
The implications of demographic changes and the ageing of populations are a growing concern. However, preventable and treatable sight-threatening eye conditions occurring in children must also remain among the top priorities. The World Health Bulletin of November 2004² also sent a strong warning signal emphasising the need to address uncorrected refractive errors, an often overlooked public health issue relevant to all age groups. The importance of refractive errors in the pattern of visual impairment is likely to be substantially greater than generally assumed.

The need for targeted action and an interdisciplinary approach

The current situation presents us with a new opportunity for targeted action. The preservation of visual health requires, more than ever, a coordinated approach by health care providers, who will develop comprehensive, integrated eye care services. An effectively designed eye care component in primary, secondary and tertiary health care is an essential prerequisite to respond adequately to the changing pattern of avoidable visual impairment. Over the long term, vertical interventions and projects oriented to a single eye disease may no longer bring the desired achievements.

The nature of the causes of blindness which WHO considers to be preventable and/or treatable, and therefore avoidable, requires an interdisciplinary approach for long-term control. For example, controlling diabetic retinopathy is complex, requiring: health education to prevent diabetes; early diagnosis of diabetes; comprehensive, cost-

Figure 1: Global causes of blindness as a percentage of total blindness in 2002



Source: WHO 04.138

effective screening programmes to detect diabetics with treatable retinopathy; laser treatment and follow-up; and patient education and compliance. In many countries, attitudes about diabetes control are being reshaped by constituting national diabetes control programmes, rather than by pursuing the control of this disease through uncoordinated efforts within individual medical sub-specialties. In those countries where the number of diabetic patients is rapidly increasing, introducing control programmes on the scale needed will be extremely challenging. We need to educate more ophthalmologists to manage diabetic retinopathy, make appropriate technology available, develop new programmes, establish new partnerships, and develop a major public health education strategy.

Integrating eye care into national health plans

Health care providers in the most affluent societies and in many other countries with modern health care systems are becoming increasingly interested in comprehensive, integrated care. In this context, eye care providers have three responsibilities: to be ready to explain the known and tested options in blindness control to national

health care planners and providers; to be proactive in health care policy development; and to take part in updating national health care strategies where eye care should be addressed. It would be disappointing to lose the opportunity for integrating eye care into national health care plans because of a failure to provide health care planners with an adequate briefing on the management of sight-threatening conditions. Several national health care areas should be explored, especially neonatal care, health care programmes for mothers and children, preventive health care programmes for working-age populations as well as for the elderly. As the world copes more adequately with the challenges of blindness control, eye care professionals will play a vital role in advocating for comprehensive health care which integrates and adequately addresses visual health.

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