

# Avoidable blindness

## Astrid Bonfield

Ninety-eight million people across the Commonwealth are blind or have low vision, from a range of causes. Besides the suffering of those affected, there are appreciable associated economic and social costs. It is a startling fact that 80 per cent of blindness is now preventable. The prevention of avoidable blindness, now firmly on the Commonwealth agenda, is not a pipe dream. Major advances are within our grasp over the next five years which will be supported by the Queen Elizabeth Diamond Jubilee Trust and can be entrenched through the implementation of the World Health Organization (WHO) Global Action Plan for the Prevention of Avoidable blindness and Visual Impairment 2014–19: Towards Universal Eye Health (GAP). The target for the Commonwealth is to reduce the number of people affected by at least 20 million by 2019.

‘Avoidable blindness’ is a term used to describe eye conditions that could be easily treated so that sight is restored or that can be prevented through public health measures. Low vision refers to severe or moderate visual impairment which seriously affects a person’s ability to function and his or her quality of life.

Eighty per cent of both blindness and low vision is avoidable.

The Queen Elizabeth Diamond Jubilee Trust has made tackling avoidable blindness the main focus of its five-year programmes.

### Impact

Besides its impact on individuals, sight loss gives rise to a huge economic burden. Estimates suggest that the global cost, in terms of



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**Figure 1** Total number of blind and low vision persons (millions)

| <i>Commonwealth countries</i>   | <i>Number of blind persons</i> | <i>Number of persons with low vision</i> | <i>Total</i>  |
|---|--------------------------------|--|---------------|
| India   | 8.075                          | 54.544                                   | 62.619        |
| Africa (19 countries)   | 3.156                          | 10.938                                   | 14.094        |
| Pakistan, Bangladesh, Sri Lanka and Maldives  | 2.740                          | 13.136                                   | 15.876        |
| Pacific island nations (eight countries), Australia, Brunei Darussalam, Malaysia, New Zealand, Papua New Guinea and Singapore | 0.348                          | 1.846                                    | 2.194         |
| Caribbean (12 countries) and Canada   | 0.138                          | 1.006                                    | 1.144         |
| UK, Cyprus and Malta  | 0.190                          | 1.785                                    | 1.975         |
| <b>Commonwealth total</b>   | <b>14.647</b>                  | <b>83.255</b>                            | <b>97.902</b> |

lost economic productivity plus the costs of health and social care for people with visual impairment, is in excess of US\$100 billion per year.

The investment required worldwide to develop the eye health systems required to eliminate avoidable blindness and treat long-term chronic eye disease is one third of that. Cost benefit ratios of 4:1 are achievable in low-income countries (Fred Hollows Foundation, 2013).

The social impacts of preventing avoidable vision impairment are wide ranging, affecting both the individual and their family. They include access to education and educational attainment, poverty eradication, health and well-being, mental health and gender equity: certain eye conditions are more prevalent in women.



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Students of medicine with eye equipment at Islamic University IIUM Kuala Lumpur, Malaysia

## Strategies

The strategies to tackle avoidable blindness are as diverse as its causes (see Box 1).

When it comes to infectious causes of blindness, the good news is that the strategies to eliminate them are known, tried and tested. Elimination of these diseases, which are known from ancient texts to have plagued humankind for millennia, is within our grasp. We will be unable to stamp out other causes of avoidable blindness in this satisfying way, but can build into health systems effective means to prevent, diagnose and treat them. Here the Commonwealth network can be of real value: just as the Commonwealth is diverse so it has developed a wealth of experience and knowhow in tackling different forms of avoidable blindness in different settings.

Strategies to eliminate or prevent some forms of avoidable blindness go beyond the sphere of health and require concerted approaches with other sectors: hence the particular value of national plans that identify, agree and monitor action across sectors, involving the relevant actors. For example, elimination of blinding trachoma, besides mass drug administration and surgery, requires action on water, sanitation and health education to promote face washing to break the cycle of transmission.

## The post-2015 framework

Nor should we forget those for whom prevention, diagnosis and treatment are sadly not relevant: the irreversibly blind and visually impaired people who need more than our compassion.

The Millennium Development Goals (MDGs) make no mention of any kind of disability.

For the new post-2015 framework to make a significant impact on poverty reduction and equity, and ensure that no one is left behind,

it needs to reach the most vulnerable, including people with disabilities. Promoting universal health coverage, stronger health systems and health care that is accessible without causing financial hardship and without barriers for persons with disabilities, including sight loss, can make a huge difference. But to promote genuine inclusion, disability should be considered under all the goals, not just health, and we should set targets and measure our progress in relation to disability under each of them.

## Long-term strengthening of eye health: The WHO Global Action Plan

A big push on the prevention of avoidable blindness will yield major gains. To sustain these gains, eyecare must be permanently strengthened, not separate from but as part of health care, and made accessible to all – this is the way forward. Health ministers from across the globe recognised this at the 2013 World Health Assembly in adopting the World Health Organization's Global Action Plan for the Prevention of Avoidable Blindness and Visual Impairment 2014–19: Towards Universal Eye Health (GAP).

The key points of the Global Action Plan for the Prevention of Avoidable Blindness and Visual Impairment 2014–19: Towards Universal Eye Health, adopted by Health Ministers at the World Health Assembly in 2013, are:

### 1. Generating evidence

Generating evidence on the magnitude and causes of visual impairment and eye care services, and using it to advocate greater political and financial commitment by member states to eye health

In recent years, national surveys of the prevalence of blindness have been conducted in Pakistan and Nigeria and the findings used to justify increases in budgets for eye health. Studies in India have led to state and federal government-level investments. New

## Box 1 Strategies for tackling different forms of avoidable blindness<sup>1</sup>

**Refractive error and glasses:** Refractive error is a leading cause of vision impairment, including severe vision impairment. Treatment requires only an eye examination and a pair of spectacles.

**Cataract:** Cataract surgery is an easy and cheap operation that can be done in minutes. The World Health Organization says this is one of the most cost effective of all health interventions.

**Diabetic retinopathy (DR):** People with DR whose sight is at risk can be treated, most commonly with lasers, to prevent visual impairment and blindness. However, there is no treatment that can restore vision that has already been lost. Many people with diabetes are not aware that their condition may affect their vision and lead to blindness. Screening and early intervention are critical.

**Trachoma:** Blindness caused by the neglected tropical disease (NTD) trachoma can be treated with simple surgery to address the trichiasis (inturning of the upper lid). The infection and its spread can be tackled with the SAFE strategy – surgery, antibiotics, facial cleanliness and environmental improvement. Prospects of eliminating blinding trachoma within a decade are good.

**Onchocerciasis (river blindness):** Treatment involves spraying the breeding sites of the blackfly, which transmits the parasite,

and providing medication to communities affected by this NTD. The drug used is ivermectin (Mectizan). Treatment must be carried out annually to halt progression.

**Retinopathy of prematurity:** Control entails improving neonatal care, in particular the delivery of oxygen (which, wrongly provided, causes the damage to the blood vessels in the eye) to premature babies in incubators and detecting infants who develop the treatable stages of the disease, followed by laser treatment of the peripheral retina.

**Macular degeneration (MD):** MD is now the most common cause of blindness in high-income countries. Obesity and smoking can be contributory factors and MD is closely associated with ageing. Health education programmes to increase awareness about modifiable risk factors, regular eye examinations and prompt referral to centres with appropriate facilities and personnel are necessary for diagnosis and treatment.

**Glaucoma:** Treatments are available but require long-term medical interventions and surgical interventions (such as laser treatment or surgery on the iris) in more advanced cases. Free eye tests soon reap dividends in terms of savings to social and health care costs.

rapid assessment surveys have been developed which can be conducted quickly and cheaply. They could be a valuable investment for all Commonwealth countries to determine the local situation.

## 2. National eyes health policies

Encouraging the development and implementation of integrated national eye health policies, plans and programmes to enhance universal eye health

Sierra Leone and Ghana both conducted eye health service assessments in 2013. These employ the latest tools to assess how well eye health is integrated into national health systems and to identify priority areas for cost effective investment. WHO is currently developing these assessment tools further. They could be valuable for all Commonwealth countries.

## 3. Effective partnerships and engagement

Multi-sectoral engagement and effective partnerships are required to strengthen eye health.

The elimination of blinding trachoma in the next decade is possible only because of the long-term commitment and unique partnership between national governments, local communities, WHO, international non-governmental organisations and Pfizer, which donates the antibiotic needed to treat the whole trachoma-infected community. It is a similar story with the elimination of transmission of river blindness and the Merck donation of Mectizan. These elimination programmes are outstanding examples of what can be achieved by sectors working together. They are attracting a boost in international funding as the goal of elimination becomes achievable.

The Global Action Plan has a number of core indicators for inclusion in countries' health management information systems, to be reported on annually. These are as follows:

### Box 2 Trust programmes

Working with national governments and with established implementing partners with a strong track record in their field, the Trust's programmes will:

- Support elimination of blinding trachoma in Kenya and Malawi, and major advances towards elimination in Nigeria, Uganda, Mozambique and possibly other African Commonwealth countries. A programme is under development for Commonwealth countries in the Pacific
- Establish effective ways of tackling diabetic retinopathy in India and support their inclusion in existing health systems. Programmes for South Asia and the Caribbean are under development
- Support plans to tackle retinopathy of prematurity across India
- Support a cross-Commonwealth fellowships, research and technology programme to build capacity on eye health, including through development of new technology with the potential to bring about a revolution in affordable eye care

1. Prevalence and causes of visual impairment
2. Number of eye care personnel, broken down by cadre
3. Cataract surgical rate and coverage

## The target for the Commonwealth

There is a global target of a reduction in prevalence of avoidable blindness and low vision by 25 per cent by 2019, from the baseline of 2010.

For the Commonwealth this means we need to reduce the number of persons with blindness or low vision to no more than 78 million by the year 2019, some 20 million fewer than there are now.

## The Queen Elizabeth Diamond Jubilee Trust

The mission of the Queen Elizabeth Diamond Jubilee Trust is to enrich the lives of people from all backgrounds within the Commonwealth. With a five-year timeframe in which to deliver successful programmes, and using the generous contributions it has received from across the Commonwealth, the Trust's aim is to leave a lasting legacy, owned by the whole Commonwealth, to honour Her Majesty the Queen. It has chosen as its principal focus to work in alliance towards eliminating avoidable blindness, through both programmes and advocacy.

The Trust's lifespan of five years happily coincides with that of the WHO GAP 2014–19.

Much will come out of the Trust's programmes in terms of good practice and lessons learnt which will be disseminated across the Commonwealth and beyond. The Trust will also be part of the effort to encourage all relevant actors and networks to join forces in supporting national action plans to reduce avoidable blindness.

Following the presentation of the work of the Queen Elizabeth Diamond Jubilee Trust on avoidable blindness at the Commonwealth Health Ministers' Meeting in Geneva, May 2013, ministers welcomed this work and requested that the Trust further promote the WHO Global Action Plan across the Commonwealth in order to bring life-changing benefits to individuals and also significant economic and social benefits across the Commonwealth.<sup>2</sup>

## An agenda for the Commonwealth

In Sri Lanka in November 2013, avoidable blindness featured, possibly for the first time, in the proceedings of a Commonwealth Heads of Government Meeting. In their speeches at the opening ceremony, both HRH the Prince of Wales and the Prime Minister of Australia referred to the elimination of avoidable blindness. And in the final Communiqué, Heads of Government encouraged the Trust to work in partnership with others in the Vision 2020 initiative with the aim of making a decisive contribution to the objective of the global elimination of avoidable blindness.

The Trust aims to have major advances to report to the next Commonwealth Heads of Government meetings in 2015, 2017 and 2019, amounting at that point to a 'decisive contribution to the objective of global elimination of avoidable blindness'.

Drawing on its experience and assets, and with engagement and leadership by health ministers, the Commonwealth has the opportunity to set the pace in the prevention of avoidable blindness worldwide.

### Endnotes

1 Much of the narrative in this section is excerpted from the Vision 2020 Action Plan 2006–10, World Health Organization.

2 Extract from chairman's statement, Rev Dr John G. N. Seakgosing, Minister of Health of Botswana, following the Commonwealth Health Ministers Meeting in Geneva on 19 May 2013.

### References

Fred Hollows Foundation, 2013. *Investing in vision – Comparing the costs and benefits of eliminating avoidable blindness and visual impairment*. Australia: PricewaterhouseCoopers.

**DR ASTRID BONFIELD** was appointed chief executive of the Queen Elizabeth Diamond Jubilee Trust in June 2012. She was the chief executive of the Diana, Princess of Wales Memorial Fund from 2005 until it closed in 2012, before which she was director of policy at the Aga Khan Foundation. Previously, she was director of the Zimbabwean non-governmental organisation Inter-Country People's Aid (1997–2001) and programme development specialist at the Bernard van Leer Foundation (2001–03). Bonfield served on the board of the Association of Charitable Foundations from 2007 to 2010, was chair of the European Foundation Centre's HIV/AIDS Funders Group from 2006 to 2010 and chaired the management group of the Corston Independent Funders' Coalition in 2011. Bonfield was appointed to the board of the Big Lottery Fund in October 2012. She has a PhD in social anthropology from the University of Manchester and received a CBE in 2014.