Today, 39 million people are blind and a further 246 million people have poor vision that impairs their daily lives.¹² Ninety percent of the world’s 285 million visually impaired people live in low- and middle-income countries.³ Women are disproportionately affected⁴, as are those over the age of 50 years.⁵ Additionally, there are 19 million children who are visually impaired, over 60% from refractive errors that could easily be corrected.⁶

Figure: 1
Regional distribution of people with blindness and visual impairment (By WHO region, 2010 data)

MOST VISION LOSS IS UNNECESSARY

Eighty percent of blindness and vision loss can be either avoided or treated.⁷ The leading causes of blindness are shown in Figure 2.⁸ Refractive error that could be easily remedied with spectacles is the leading cause of visual impairment. Comprehensive eye health services should incorporate eye health promotion, prevention, treatment and rehabilitation.

PROGRESS HAS BEEN MADE – BUT IT IS AT RISK

The number of people with vision loss from infectious causes – notably onchocerciasis and trachoma – has been dramatically reduced over the past two decades. These successes show the impact of global efforts to provide quality services. However, future progress against visual impairment will be challenging. As populations age and non-communicable disease rates rise, even more people will be at risk of eye disease and avoidable blindness.

EYE HEALTH IS A DEVELOPMENT ISSUE

Low- and middle-income countries are disproportionately affected by avoidable blindness and vision loss. Within all countries, disadvantaged and vulnerable communities are the worst affected. This reflects the linkages of eye health to poverty, education, and access to housing, water and sanitation. Hence, eye health is an issue both of development and of equity.

EYE HEALTH ALSO LINKS TO THE MILLENNIUM DEVELOPMENT GOALS (MDGS)

Just as good vision is a fundamental contributor to good quality of life for individuals, vision underpins many aspects of development for countries.

**MDG 1 – Eradicate extreme poverty and hunger:**

Visual impairment causes people to drop out of the workforce, often also with another family member (typically a child) who cares for them. Families lose income and face the costs of treating eye disease. This translates to a global loss in productivity of US$168 billion, with an additional loss of US$246 billion with the informal care burden. In contrast, studies from India show that in India 85% of men and 58% of women were able to return to the workforce after receiving cataract surgery to treat vision loss.

**MDG 2 – Achieve universal primary education:**

About 90% of visually impaired children in developing countries are not in school. This reflects insufficient appropriate education materials, qualified teachers and supports to physically get to and from home. Additionally, girls are often kept home if visually impaired relatives require care.

**MDG 3 – Promote gender equality and empower women:**

Although women suffer from the greatest burden of blindness globally and have rates of visual impairment two to three times higher than in men, they typically have much poorer access to treatment and care. Women and girls also bear most of the responsibility for caring for blind and visually impaired relatives.

**MDG 4 – Reduce child mortality:**

About half a million children become blind every year, mostly in low- and middle-income countries. This is equivalent to one child becoming blind every minute of every day. Sixty percent of these children die within two years, including from the underlying causes such as measles, meningitis, rubella, prematurity, genetic diseases, and head injuries. About 40% of the causes of childhood blindness are preventable or treatable.

**MDG 8 – Develop a global partnership for development:**

Multi-stakeholder partnerships have made extraordinary contributions to eye health at national and international levels. The learnings from eye health can serve many other global health partnerships.
EYE HEALTH SHOULD BE CONSIDERED IN COUNTRIES’ NON-COMMUNICABLE DISEASE PLANS

Eye health shares many of the risk factors for non-communicable diseases (NCDs), and eye disease can be a complication of many NCDs. For example, three-quarters of people who have diabetes for twenty years will get a diabetes-related eye disease – yet timely treatment can avert 90% of diabetic vision loss. Other shared risk factors include smoking contributing to cataract and age-related macular degeneration (AMD) as well as obesity leading to type II diabetes. As countries develop and implement their national plans for the prevention and treatment of NCD, it is important to include the prevention and treatment of avoidable vision loss.

EYE HEALTH SHOULD BE BUILT INTO THE PRIMARY HEALTH CARE SYSTEM

To ensure sustainable, affordable, equitable, and comprehensive services for eye health, they need to be embedded in the primary health care system at the community level. Accessibility enables early diagnosis and treatment that is critical for preventing vision loss and promoting health. Screening for eye disease and its risk factors can be performed at the same time as other core health interventions so that people can be referred for appropriate eye health care.

THERE ARE MANY DIFFERENT BENEFITS FROM AVERTING VISION LOSS

Economic models of the global burden of vision loss and benefits of averting it are being developed. Previous estimates put the global economic loss from blindness and visual impairment in 2000 at US$42 billion, rising to US$110 billion per annum by 2020.\textsuperscript{16}

The benefits of preventing and treating blindness and vision loss - in terms of the health, economic, and societal gains - significantly outweigh these costs.\textsuperscript{17} The impact of successfully implementing the VISION 2020 commitments was foreseen to reduce annual losses to US$58 billion per year by 2020, a global savings of US$223 billion between 2000 and 2020, cumulatively.\textsuperscript{18}

Figure 3:
Prevention of blindness and vision loss brings a range of benefits.

<table>
<thead>
<tr>
<th>ECONOMIC</th>
<th>HEALTH</th>
<th>SOCIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increased employment</td>
<td>• Improved quality of life (measured in DALYs averted and QALYs gained)</td>
<td>• Reduced extreme poverty and hunger (MDG 1)</td>
</tr>
<tr>
<td>• Increased productivity</td>
<td>• Reduced co-morbidities and mortality (including HIV/AIDS, malaria – MDG 6)</td>
<td>• Increased independence</td>
</tr>
<tr>
<td>• Reduced welfare costs</td>
<td>• Reduced child mortality (MDG 4)</td>
<td>• Increased self esteem and improved social networks</td>
</tr>
<tr>
<td>• Achieving universal primary education</td>
<td>• Reduced hospitalisations, length of stay and other system costs</td>
<td>• Increased gender equality</td>
</tr>
</tbody>
</table>

PROVIDING EYE HEALTH SERVICES IS COST EFFECTIVE

The additional investment required to eliminate avoidable blindness in low- and middle-income countries is estimated as US$127.4 billion over 2011-2020. This represents the costs of preventing and treating new and existing vision loss over a decade, equivalent to US$2.20 per person per year.19

Strengthening primary health care systems in low and middle income countries to prevent future avoidable blindness while serving other health needs is estimated to require an additional investment of US$100 billion over the same period.20

Evaluating individual interventions points to the cost effectiveness of eye health programs. For example, at a cost of US$10-40 per disability-adjusted life year (DALY) averted, cataract surgery is as cost-effective as traditional immunizations – yet today, 18 million people remain blind from cataracts.21,22 Treating onchocerciasis has prevented over 600,000 cases of blindness, added 5 million years of productive work, and allowed 25 million hectares of land to be farmed. The economic rate of return for the onchocerciasis program across 19 African countries that has enabled these results is estimated at 20%.23

PARTNERSHIPS HAVE BEEN CRITICAL FOR SUCCESS

Eye health relies not just on the strength of the health system, but also on many other factors that are determined by other sectors.24 The skills, expertise and resources of many varied stakeholders have underpinned the past successes in preventing and treating the infectious causes of vision loss. This will be equally true as countries face the growing burden of non-infectious vision loss.

Notable are the successes in onchocerciasis and trachoma that were made possible by the collaboration of governments, philanthropic organizations, non-governmental organizations (NGOs), multilateral organizations (particularly the World Health Organization (WHO) and the World Bank), and the private sector. Countries including Ghana and Morocco have eliminated trachoma. The WHO Onchocerciasis Control Programme eliminated onchocerciasis as a public health problem in 11 West African countries between 1974 and 2002, and subsequent programs are building on these results in Africa and Latin America.

The key global partnership is VISION 2020: The Right to Sight, involving the WHO and the International Agency for the Prevention of Blindness and its members. The aim of VISION 2020 is to eliminate avoidable blindness by the year 2020 and to prevent the projected doubling of avoidable visual impairment between 1990 and 2020. It focuses on three areas: disease control and prevention of visual impairment, human resource development, and the provision of infrastructure and technology. Additionally, VISION 2020 promotes: community education, advocacy for national ownership of eye health plans and resource mobilization, and research.
FUTURE PARTNERSHIPS CAN CONTRIBUTE TO HEALTH SYSTEMS STRENGTHENING

Within many traditional eye health partnerships, there is a challenge to enhance contributions to the prevention of vision loss and health systems strengthening, building on a historical focus of treating vision loss. For example, many NGOs are expanding their collaborative programs with Ministries of Health to include health worker training and to invest in infrastructure and other health system strengthening.

EFFECTIVE EYE HEALTH PLANS GAIN FROM MULTISECTORAL APPROACHES AS WELL AS PARTNERSHIPS BEYOND HEALTH

There are real opportunities for countries to enhance their eye health programs, firstly through the development of national eye health strategies and secondly by incorporating eye health into national strategies for primary health care, health workforce development, water and sanitation, and non-communicable diseases. Multisectoral approaches and engagement with stakeholders including NGOs, academia and the private sector can contribute to the success of eye health programs.

MULTISECTORAL APPROACHES BENEFIT FROM POLITICAL LEADERSHIP AND ACCOUNTABILITY

Successes to date also point to a range of elements that are critical. These include:

- Informed and committed political leadership to shape a multisectoral response, to ensure sufficient and sustainable financing from domestic and international resources, and to mobilize community action.
- National eye health plans that balance prevention and treatment, and shorter-term goals to eliminate avoidable blindness with longer-term goals for comprehensive eye health programmes.
- National eye health committees that coordinate the implementation of national eye health plans by multisectoral and multistakeholder partnerships.
- Clear, time-linked targets and indicators that are supported by investments in data gathering and monitoring systems.
- Deliberate investment in an eye health work force, for both urban and rural settings.25
FURTHER ACTION IS NEEDED TO ELIMINATE PREVENTABLE BLINDNESS AND VISION LOSS

The WHO Secretariat is developing a new Action Plan for the prevention of avoidable blindness and visual impairment for the period 2014–2019. The Action Plan needs the engagement and input of Member States and NGOs from around the world. All Member States are encouraged to participate in the development of the Action Plan and to intensify their efforts to achieve the goal of eliminating avoidable blindness and vision loss. Key success factors will include:

- Multisectoral approaches and partnerships
- Integrating eye health in poverty alleviation and development efforts, including for water and sanitation
- Incorporating eye health as a priority in other health strategies, including primary health care strengthening, NCD prevention and treatment, and building the health work force.

The key documents to inform discussions at the 65th WHA comprise:

- WHA documents A65/6–A65/8: http://apps.who.int/gb/e/e_wha65.html

KEY RESOURCES

FOOTNOTES

3. Ibid
5. Op cit.
8. Ibid
12. Ibid
20. Ibid