The Value of Sight:
Resources for Making the Case

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The Public Need for Eye Care; 2010 WHO Data

- Worldwide 285 million are visually impaired:
  - 39 million blind - down from 45 million in 2004
  - 246 million with moderate to severe impairment – down from 269 million
  - 63% with low vision and 82% of blind people are 50+yrs
- Vision loss will increase, particularly in developing countries, with population growth and aging
- Continuing problems; cataract, refractive error
- Emerging problems AMD, diabetic retinopathy, glaucoma.
# Regional Distribution; 2010 WHO

<table>
<thead>
<tr>
<th>WHO Regions</th>
<th>Visual impairment (millions)</th>
<th>Blind (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFR</td>
<td>26.3</td>
<td>5.9</td>
</tr>
<tr>
<td>AMR</td>
<td>26.6</td>
<td>3.2</td>
</tr>
<tr>
<td>EMR</td>
<td>23.5</td>
<td>4.9</td>
</tr>
<tr>
<td>EUR</td>
<td>28.2</td>
<td>2</td>
</tr>
<tr>
<td><strong>SEAR</strong></td>
<td><strong>90.5</strong></td>
<td><strong>12</strong></td>
</tr>
<tr>
<td><strong>WPR</strong></td>
<td><strong>90.2</strong></td>
<td><strong>10.6</strong></td>
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</tbody>
</table>

The distribution of V.I. by age group is the following: 0-14 years 7%, 15-49 years 28%, 50 years and older 65%.

How many ophthalmologists in practice and training worldwide?

- Study designed and conducted by Serge Resnikoff for ICO in 2010
- Aim: to capture the *dynamics* of the global ophthalmic population, including residents
- Of the 193 countries surveyed, 192 responded (represents 99.99% of the global population)
- Total number of ophthalmologists in the world
  
  204,909

- Ranging from 28,338 in China to 0 in some Pacific Islands
15 Countries have 2/3 of the Ophthalmologists

3,500 ophthalmologists (2%) for 12% of Global Population

35 LICs

Other (143)

- China
- United States of America
- Russian Federation
- Japan
- Brazil
- India
- Germany
- France
- Poland
- Italy
- Spain
- Mexico
- Argentina
- Other (143)
On average, the ophthalmic population is growing slightly faster than the general population.

<table>
<thead>
<tr>
<th>Ophthalmologists growth rate</th>
<th>1.20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population growth rate</td>
<td>0.77%</td>
</tr>
<tr>
<td>Difference</td>
<td>0.43%</td>
</tr>
</tbody>
</table>
It will take…

• If no additional action taken and assuming a 3% actual growth rate

  • **58 years** to reach 25 ophthalmologists per million in Middle Income Countries

  • **97 years** to reach the current High Income Countries level (80 per million)
Training of Ophthalmologists

• Training more Ophthalmologists is obviously needed
• But training Ophthalmologists only is not the solution
• Need to training eye care teams, focused on meeting community needs
Need for Training: Principles

• Training in ophthalmology should focus on meeting needs of communities and populations, not just individuals
  • Philippine Academy of Ophthalmology, “My community, My problem”
  • Dr. Para, “If ophthalmology is your profession, prevention of blindness is your business”

• Needs are best met by eye care teams, trained together to work as teams

• Comprehensive eye care should be an integral part of the health care system

• Community-level primary eye care should be integrated into primary health care

• Those who are trained need infrastructure, support and continuing professional development
Eye Care Team Personnel Needed

Teams of:

- Ophthalmologists (surgeons and “eye doctors”)
- Subspecialists (pediatric, retina, etc.)
- Primary physicians trained in eye care
- Mid level eye personnel (MLEP) and nurses
- Optometrists or refractionists and opticians
- Managers and community eye health workers
The Big Question

• So how do we get the resources to address this?
• Let me tell you how we did it in Australia.
  1. Established the prevalence and causes of vision loss
  2. Determined the current cost of eye care and blindness
  3. Determined the cost of prevention or treatment
  4. Prepared documents summarising this
  5. Advocated strongly for government support

www.cera.org.au
Visual Impairment and Blindness

Australia - 2004

Age

0%
10%
20%
30%
40%
50%

Visual Impairment
Blindness

Clear Insight 2004
Years of Life Lost to Disability (YLD)

- Depression
- Dementia
- Asthma
- Osteoarthritis
- CHD
- Type 2 Diabetes
- Vision disorders
- Oral health
- Breast cancer
- Prostate cancer
- Melanoma
- HIV/AIDS

YLD as percent of total YLD

0%  2%  4%  6%  8%
Total Costs of Vision Disorders
Australia, 2004

Total $9.85bn

- Loss of Well-being $4,818m (49%)
- Hospital $692m (7%)
- Out-of-hospital medical $406m (7%)
- Other health costs $726m (4%)
- Aids, other indirect $371m (2%)
- Carers $845m (9%)
- Transfer DWLs $208m (18%)
- Lost income $1,781m (18%)

Direct Costs $1,824m
Indirect Costs $3,224m

Clear Insight 2004; www.cera.org.au
Blindness and Vision Loss – Australia, 2004

Blindness

- Refractive Error: 48%
- Macular Degeneration: 10%
- Retinitis Pigmentosa: 3%
- Diabetes and other Retinal: 8%
- Cataract: 14%
- Glaucoma: 12%
- Others: 1.5%
- Other: 2%

Vision Loss

- Refractive Error: 62%
- AMD: 14%
- Glaucoma: 3%
- Cataract: 10%
- Diabetic Retinopathy: 3%
- Other Retinal: 2%
- Neuro-ophthalmic: 4%
- Other: 2%

Blindness and Vision Loss – Australia, 2004
Three Quarters of Vision Loss in Unnecessary

It is preventable or treatable;
  • AMD
  • Cataract
  • Diabetic Retinopathy
  • Glaucoma
  • Refractive Error

What do we need to do about it?
  3 “Simple” Things
  1. Prevent the things we can prevent
  2. Treat the things we can treat
  3. Solve the remaining problems
### Eye Care Intervention Package
#### 3 “Simple” Things

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost</th>
<th>Net benefit</th>
<th>Total Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-6</td>
<td>$188.8m</td>
<td>-$25.7m</td>
<td>$911m $4.8</td>
</tr>
<tr>
<td>Lifetime</td>
<td>$1,620m</td>
<td>$662m</td>
<td>$10,016m $6.2</td>
</tr>
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National Eye Health Framework

Key Areas for Action

1. Reducing the risk
2. Increasing early detection
3. Improving access to eye care services
4. Improving the systems and quality of care
5. Improving the evidence base

2006  $14m for 3 years for Australia
2008  $24m for Australia and
       $45m for Pacific Region
2009  $58m for Aboriginal eye and ear health
       $50m for Eye Research
The Price and the Value of Sight

The price of sight
The global cost of eliminating avoidable blindness

The Value of Sight
The Fred Hollows Foundation

A quantification of the benefits associated with eliminating avoidable blindness and visual impairment
Final Draft Report
August 2013
Comparing costs and benefits

Globally, over a ten years period (2011 to 2020):

- Investment for eliminating blindness and VI
  \textit{USD 398 billion}
- Benefit of eliminating blindness and VI
  \textit{USD 1,115 billion}

- Benefit/Cost ratio of 2.8 times the cost

- Developing countries: 4.1 \ (523/127 billion)
- Developed countries: 2.2 \ (593/270 billion)
WHO and World Health Assembly

• 1976 WHO programme for Prevention of Blindness
• Critical role in Trachoma and Onchocerciasis control
• 1999 global initiative VISION 2020 – The Right to Sight
• WHA Resolutions – most recent in 2003, 2006, 2009
• Only way to keep Prevention of Blindness and Eye Health on the international health radar screen
• Current Action Plan: 2009 – 2013
What can we do to eliminate Vision Loss?

• Think globally - act locally

• For the World - Advocacy
  • Good data are essential
  • Need clear, concise key messages
    - targeted for audience
  • Need to speak in one voice
  • Talk often with policy leaders and implementers
  • Use media contacts

• For Home - 3 “Simple” Things;
  • diabetes, glaucoma, underserved
“Because I cannot do everything, I will not refuse to do something I can do”. Helen Keller

The elimination of avoidable blindness is an achievable goal; it is something we can do.