5th Annual

FOCUS ON EYE HEALTH NATIONAL SUMMIT

VISION TO ACTION: Collaborating Around a National Strategy

Wednesday, July 13, 2016
National Press Club | Washington, DC
Implementing a National Strategy
Suzanne Gilbert, PhD, MPH
SEVA Foundation
Implementing a National Strategy
the Australian Approach
Hugh R Taylor, AC
University of Melbourne
President of the International Council of Ophthalmology
Implementing a National Strategy
the Australian Approach

National Press Club,
Washington DC, 13\textsuperscript{th} July 2016

Hugh R Taylor, AC
Harold Mitchell Chair of Indigenous Eye Health
Melbourne School of Population and Global Health
President of the International Council of Ophthalmology
The work we have done in Australia

• Basic epidemiology of vision loss
• National Eye Health Framework
• Indigenous eye health
  – Survey and then health system analysis,
  – Complex problems need complex solutions
• But they need to be packaged and sold in a simple way
• Provide an understanding of the elements that have worked for us in Australia
Vision Impairment and Blindness

Australia - 2004

Age

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

Visual Impairment
Blindness

40-49 50-59 60-69 70-79 80-89 90+

Clear Insight 2004
Blindness – 50,000 Australians

- Macular Degeneration: 48%
- Cataract: 12%
- Glaucoma: 14%
- Diabetic and other Retinal Diseases: 10%
- Neuro-ophthalmic: 3%
- Retinitis Pigmentosa: 1.5%
- Refractive Error: 8%
- Others: 4%

Prevent Blindness Australia Logo

Our Vision Is Vision

Prevent Blindness Australia
Vision Impairment – 480,000

- 62% Refractive Error
- 14% Cataract
- 10% AMD
- 3% Diabetic Retinopathy
- 3% Other Retinal
- 2% Neuro-ophthalmic
- 2% Other
- 3% Glaucoma
Causes and Prevalence of Visual Impairment Among Adults in the United States

The Eye Diseases Prevalence Research Group*


Figure 2. Causes of blindness (best-corrected visual acuity <6/60 [<20/200] in the better-seeing eye) by race/ethnicity. AMD indicates age-related macular degeneration; DR, diabetic retinopathy.

Figure 3. Causes of low vision (best-corrected visual acuity <6/12 [<20/40] in the better-seeing eye, excluding those who were categorized as being blind by the US definition) by race/ethnicity. AMD indicates age-related macular degeneration; DR, diabetic retinopathy.
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 Cost of Vision Disorders - Australia

Total $9.85bn

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

Loss of Well-being $4,818m

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

Clear Insight 2004
The Cost of Vision Problems

$139 billion in direct and indirect costs
What do we need to do?

3 “Simple” Things

1. Prevent the things we can prevent
2. Treat the things we can treat
3. Solve the remaining problems
1. Prevent the Diseases We Can Prevent

Appropriately resourced, long-term eye health promotion initiatives to reduce avoidable vision loss;
regular eye exams, eye protection and smoking
2. Treat the Diseases We Can Treat

Adequate funding for eye care services for treatable conditions such as; cataract and diabetic retinopathy and for low vision support services
3. More Research to solve the present problems

Adequate funding for research into causes of vision loss and blindness that at present cannot be prevented or treated; particularly AMD and glaucoma
# Eye Care Intervention Package

3 “Simple” Things

<table>
<thead>
<tr>
<th></th>
<th>2005-6</th>
<th>Lifetime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>$188.8m</td>
<td>$1,620m</td>
</tr>
<tr>
<td>Net benefit</td>
<td>-$25.7m</td>
<td>$662m</td>
</tr>
<tr>
<td>Total Savings</td>
<td>$911m x4.8</td>
<td>$10,016m x6.2</td>
</tr>
</tbody>
</table>

www.cera.org.au 2005
Vision 2020 Australia

- Peak body for the eye health and vision care sector
- About 60 member organisations from professional bodies, NGOs and academic institutions
- Replicating VISION 2020’s global approach

- Speaks with one voice
- Provides a forum for members to work together
Facilitating Collaboration

- Key driver in the success of the Vision 2020 Australia partnership
- Platform for sector wide collaboration
  - committees & working groups
  - annual Member forums
  - Parliamentary Friends Group
  - World Sight Day activities
  - online Member Portal
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

<table>
<thead>
<tr>
<th>Year</th>
<th>Funding Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>$14m for 3 years for Australia</td>
</tr>
<tr>
<td>2008</td>
<td>$24m for Australia and $45m for Pacific Region</td>
</tr>
<tr>
<td>2009</td>
<td>$58m for Aboriginal eye and ear health $55m for Research</td>
</tr>
</tbody>
</table>
Australia is a Big Place
National Indigenous Eye Health Survey, 2008

30 randomly selected sites
5-15yr old and 40yr and older
2883 people examined (79%)
Indigenous children have much better vision than non-indigenous, but adults have 6 times as much blindness.
We know what we need to do...

- **Cataract**: provide access to surgery
- **Diabetes treatment**: eye exams and laser
- **Refractive Error**: provide the right glasses
- **Trachoma**: eliminate with SAFE Strategy
We know what we need to do...

- Cataract: provide access to surgery
- Diabetes treatment: eye exams and laser
- Refractive Error: provide the right glasses
- Trachoma: eliminate with SAFE Strategy
Vision Loss

Most of it can be fixed overnight!

With glasses you see right away

After cataract surgery you see the next day
We Reviewed the Causes the Gap?

- Existing service models and policies
- Service provision and availability
- Service utilisation
- Policy and program history
- Pathways of care and case-management
- Population needs for eye care services
- Cost to close the gap for vision
The Patient Journey is like a Leaky Pipe and there are multiple leaks.
The Patient Journey is like a Leaky Pipe and there are multiple leaks.

If you only fix 1 or 2 leaks it will still be leaky.
You have to fix each leak

42 recommendations
Cataract – 35
Diabetic retinopathy – 35
Refractive error – 34
Trachoma – 37

Many only require a bit of a tweak
The Roadmap to Close the Gap for Vision

1. Primary eye care as part of comprehensive health care
2. Indigenous Access to eye health services
3. Co-ordination
4. Eye health workforce
5. Elimination of trachoma
6. Monitoring and evaluation
7. Governance
8. Health promotion and awareness
9. Health financing

www.iehu.unimlb.edu.au
The Importance of Eye Care in Diabetes

- Community
  - Those needing eye exam each year
  - Those with Diabetes

- Hospital
  - Cataract surgery
  - Trichiasis surgery
  - Consultation Ophthalmologist
    - Glasses prescribed
    - Laser treatment
    - Cataract
      - Requires surgery
    - Refractive Error
      - Glasses prescribed
    - Diabetic Retinopathy
      - Requires treatment
    - Eye Examination
      - Optometrist/Ophthalmologist
      - Review in 12 months
    - Camera/Visual Acuity
The Importance of Eye Care

Community
- Those needing eye exam each year
  - Those with Diabetes 76%

Eye Examination
- Optometrist/Ophthalmologist
  - Refractive Error 49%
  - Cataract 32%
  - Trichiasis 3%
  - Glasses prescribed
  - Refractive Error 44%
  - Cataract 26%
  - Diabetic Retinopathy 21%

Hospital
- Consulation Ophthalmologist
  - Refer requires surgery
  - Glasses prescribed
  - Cataract surgery
  - Trichiasis surgery
  - Laser treatment

Camera/Visual Acuity
- Review in 12 months
- Refer requires treatment
The Importance of Eye Care

Community
Those needing eye exam each year 76%

Eye Examination
Optometrist/Ophthalmologist

Review in annual health check

Refractive Error 49%

Cataract 32%

Trichiasis 3%

Refer requires surgery

Glasses prescribed

Hospital

Cataract surgery

Trichiasis surgery

Consultation
Ophthalmologist

Refer requires surgery

Laser treatment

Eye Examination
Optometrist/Ophthalmologist

Camera/Visual Acuity

Review in 12 months

Refractive Error 44%

Diabetic Retinopathy 21%

Refer requires treatment

So we need to focus on eye care for diabetes
We are making good progress

Something is happening for all 42 recommendations

8 have been fully implemented
Diabetes Eye Health Promotion Material

- Need to promote annual eye exams for those with diabetes
- Developed with community involvement and ownership
Trachoma Interventions
SAFE Strategy

- Resource Book
- Background Material
- Flip Charts
- Posters
- School Curricula
- Colouring sheets
- Stickers and Stamps
- DVDs
- Mirrors

www.iehu.unimlb.edu.au
Trachoma prevalence in children aged 5-9 years in at-risk communities, by region, in Australia, 2015

- Darwin Rural: 1.1%
- Kimberley: 0.3%
- Pilbara: 0%
- Midwest: 9.2%
- Goldfields: 4.9%
- APY Land: 6.8%
- Eyre and Western: 7.8%
- Far North: 6.7%
- East Arnhem: 0.8%
- Katherine: 2.6%
- Barkly: 9.2%
- Alice Springs Remote: 12.8%

Legend:
- ≥20%
- ≥10% and <20%
- ≥5% and <10%
- <5%
- No trachoma

No data/Not screened/Not at-risk

Reported Prevalence of Trachoma in Children

Prevalence:
- 1-9 years
- 5-9 years
- Projected 5-9 years

Years:
- 2006 to 2014
Lessons Learned

From work in 9 regions

• Importance of jurisdictional support;
• Leadership;
• Data sharing and ongoing monitoring;
• Challenge of creating change;
• Support and funding.

Roundtable April 2014
Government Commitments

New Funding in last 12 months

- Trachoma health promotion $1.6m
- Fundholder coordination $1.6m + $4.6m
- IEH Unit support $2.6m
- National data reporting $0.4m
- Eye surgery initiatives $1.5m + $2.0m
- Medicare Item for DR screening $34m
- Diabetic retinopathy equipment $0.3m + $4.8m
- Other eye equipment $1.9m

- Total new funding committed $55m
A successful eye health strategy;
•is evidence based
•is cost effective
•is clearly achievable
•has sector agreement
•and is ready to go

It is the “Low Hanging Fruit” in improving health

www.iehu.unimlb.edu.au
The India Experience

Thulasiraj Ravilla
LAICO - Aravind Eye Care System
Indian Context - Demography

Population (2016 est.): 1.33 Billion
  - Rural 69%
  - Urban 31%

Density

Literacy rate:
  - Male 82%
  - Female 66%

Life Expectancy: 69 Years
Indian Context

- 12 million blind - 60% from cataract
- Estimated 2 million go blind each year
- Maldistribution of services – 60% of ophthalmologists serve 10% of popln.
- Most pay out of pocket for healthcare
- There is a gap between the need and the reach

Data from Thylefors B et al, Data on Global Blindness, Bulletin of the WHO, 1995;73; 115-121
1990: Major causes of Blindness by Region
Prevalence of Blindness based on National Surveys:

1974 (ICMR) : 1.38%
1986-89 (NPCB) : 1.49%
2001-04 (NPCB) : 1.10%
2007 (NPCB) : 1.00%
### Causes of Blindness

<table>
<thead>
<tr>
<th>Causes</th>
<th>1986-89 Survey</th>
<th>2001-02 Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cataract</strong></td>
<td>80.1%</td>
<td>62.60%</td>
</tr>
<tr>
<td>Refractive Errors</td>
<td>7.35%</td>
<td>5.80%</td>
</tr>
<tr>
<td>Glaucoma</td>
<td>1.7%</td>
<td>0.90%</td>
</tr>
<tr>
<td>Surgical Complications</td>
<td>4.69%</td>
<td>19.70%*</td>
</tr>
<tr>
<td>Corneal Opacity</td>
<td>1.91%</td>
<td>9.70%</td>
</tr>
<tr>
<td>Others</td>
<td>4.25%</td>
<td>1.20%</td>
</tr>
</tbody>
</table>

Largely associated with aphakic eyes in ICCE technique*

The focused effort against Cataract Blindness including the World Bank loan paid off
% of IOL surgeries over the years

Govt. Support

Years:
- 94-95: 5%
- 96-97: 12%
- 98-99: 34%
- 00-01: 58%
- 02-03: 77%
- 03-04: 88%
- 05-06: 93%
- 07-08: 95%
- 09-10: 95%
- 10-11: 95%
## Special drive with World Bank loan (1994-2001)

<table>
<thead>
<tr>
<th>World Bank Project States</th>
<th>Cataract Surgeries in ‘000</th>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target</td>
<td>Achieved</td>
<td></td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>1,320</td>
<td>2,040</td>
<td>155%</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>1,800</td>
<td>1,640</td>
<td>91%</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>1,380</td>
<td>2,560</td>
<td>185%</td>
</tr>
<tr>
<td>Orissa</td>
<td>730</td>
<td>460</td>
<td>62%</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>1,380</td>
<td>1,060</td>
<td>77%</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>1,550</td>
<td>2,250</td>
<td>145%</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>2,870</td>
<td>2,960</td>
<td>103%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11,030</strong></td>
<td><strong>12,970</strong></td>
<td><strong>118%</strong></td>
</tr>
</tbody>
</table>

Govt. supported the delivery for the rest of the country
How did this come about?
Political will

• Budgetary allocation
• Involvement of major stakeholders in design (INGO’s, national NGO’s, major providers)
• Public-Private partnerships (service delivery, training & research)
Leadership: Task Force for 11th Five Year Plan
### Fiscal Utilization – 10th Plan: Budget Allocation & Expenditure

<table>
<thead>
<tr>
<th>Year</th>
<th>Allocation (millions $)</th>
<th>Expenditure (millions $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-03</td>
<td>28.53</td>
<td>28.39</td>
</tr>
<tr>
<td>2003-04</td>
<td>28.85</td>
<td>28.71</td>
</tr>
<tr>
<td>2004-05</td>
<td>29.50</td>
<td>29.27</td>
</tr>
<tr>
<td>2005-06</td>
<td>31.17</td>
<td>31.10</td>
</tr>
<tr>
<td>2006-07</td>
<td>30.14</td>
<td>9.81 (partial year)</td>
</tr>
</tbody>
</table>

(Total allocation for 10th Plan was $148.19 millions)
### 10th Five year Plan (2002-07): Goal vs. Achievements

<table>
<thead>
<tr>
<th>Activity</th>
<th>Target (by Mar 2007)</th>
<th>Achievement (by Mar 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cataract Surgeries</td>
<td>16,753,000</td>
<td>17,366,896</td>
</tr>
<tr>
<td>Glasses to school children</td>
<td>313,500</td>
<td>915,120</td>
</tr>
<tr>
<td>Eye donations</td>
<td>175,000</td>
<td>92,436</td>
</tr>
<tr>
<td>Training of Oph Surgeons</td>
<td>1,200</td>
<td>1,030</td>
</tr>
<tr>
<td>Grants-in-aid to NGOs</td>
<td>89</td>
<td>45</td>
</tr>
</tbody>
</table>

Demonstrated the capacity to use the funds & deliver
Impact of Advocacy and Stakeholders’ Synergy

Plan Budgetary Allocation

10th Five Year Plan (2002-07) $148 million

11th Five Year Plan (2007-12) $500 million
Equipment & Supplies Facilitation by Govt. of India

- Duty free imports of IOLs
- Duty free import of Microscopes, Scans, Slit lamps, Lasers, etc.
- Reducing/abolishing sales tax on IOL’s
- Govt. hospitals equipped for IOL surgery
- Establishing standards & capped prices
- Boom in local production
• Support for ongoing skill development
• Enhanced the annual intake for the Ophthalmology residency program – estimated at 1,750
Financing

- Equipment & Supplies for Government facilities
- Subsidy for free cataract surgeries, glasses for school children, eye donations, etc.
- Insurance for the poor – covers expensive procedures for the entire family till about $2,000 per year.
We are far from being done!!!
Unfinished agenda

Huge geographic inequities

Cataract Surgical Rate: India (2012 – 13)

National Average (5124)
Unfinished agenda

• Human Resources – other than the Ophthalmologists and to some extent Optometrist, the other cadres of the eye care team are not recognized
• Still very “Cataract centric”
Challenges

• The growth of Insurance and third party payers
• Regulations for quality assurance – one standard fits all
  – Negotiating a separate standard for eye care
Thank you