Issues in eye care in India

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Magnitude of Blindness

Worldwide:
37 million are blind and 1 to 2 million is added to this every year.

In South East Asia:
33% of the world’s blind
50% of the world’s childhood blindness

Magnitude of Blindness in India

Largest number of blind in India estimated at 12 million
Expected to rise to 15 million by 2020
An estimated 320,000 Indian children are blind
In addition, an estimated 9.2 million children are functionally blind due to visual impairment

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Prevalence of Blindness in India

Category | Prevalence % | States & region
--- | --- | ---
Low Prevalence | Less than 1 | Punjab, Himachal Pradesh, Delhi, West Bengal, & N.E. States
Moderate Prevalence | 1 to 1.49 | Gujarat, Haryana, Kerala, Bihar, Karnataka, Andhra Pradesh and Assam
High Prevalence | 1.5 to 1.99 | Maharashtra, Orissa, Tamil Nadu & Uttar Pradesh
Very High Prevalence | 2 & above | Madhya Pradesh, Rajasthan and Jammu & Kashmir

Causes of Blindness in India

- Cataract: 62.2%
- Uncorrected Refractive Errors: 19.7%
- Glaucoma: 5.6%
- Diseases of Cornea: 0.9%
- Others including Leprosy, diabetic retinopathy etc: 11.4%

Emerging priorities and patterns of eye diseases

Cataract remains the leading cause of blindness despite impressive advancements in surgical services.
Uncorrected Refractive Errors is now recognised as the second leading cause, followed by Glaucoma, cornea.
Childhood Blindness is now gaining attention.
Diabetic Retinopathy is now becoming a major problem.
Despite an over increasing need, low vision services are dramatically lacking.
Some Challenges

- Changes in the pattern of eye diseases can be attributed to major progress done in the prevention and management of some causes of avoidable blindness.
- On the other hand, issues such as the following are the major challenges, in addition to others:
  - poverty,
  - inequity in access to care
  - the lack of affordable quality services
  - life style and
  - Ageing due to increased life expectancy.

Other Challenges for effective eye care

1. Human Resources
2. Eye Care Delivery System
3. Quality
4. Equity
5. Supply and Equipment
6. National and sub national structures
7. Urban rural divide

Human Resources Status

<table>
<thead>
<tr>
<th>Category/Years</th>
<th>Current</th>
<th>2015</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ophthalmologist</td>
<td>12,000</td>
<td>18,000</td>
<td>21,000</td>
<td>25,000</td>
</tr>
<tr>
<td>Ophthalmic Assistants</td>
<td>6,000</td>
<td>15,000</td>
<td>20,000</td>
<td>25,000</td>
</tr>
<tr>
<td>Ophthalmic Paramedic (Hospital)</td>
<td>18,000</td>
<td>36,000</td>
<td>42,000</td>
<td>48,000</td>
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<tr>
<td>Eye care managers</td>
<td>200</td>
<td>1,000</td>
<td>1,500</td>
<td>2,000</td>
</tr>
<tr>
<td>Community eye health specialist</td>
<td>20</td>
<td>100</td>
<td>150</td>
<td>200</td>
</tr>
</tbody>
</table>

Human Resources Status

- Sub-optimal utilization: 50% qualified surgeons are “non-operating” surgeons
- The current ratio of doctor and mid-level personnel is low (desirable is 1:4)
- Inadequate number of mid-level personnel forces surgeons to perform jobs like refraction, pre-operative care and routine diagnostic tests
- Inadequate/non-existing trained teams on integrated eye care to provide best eye care services
- Inequitable distribution of eye surgeons: 1:20,000 in urban area to 1 in 2,50,000 in rural areas

Strengthening Human Resources

- A larger number of training programs to enhance the skills of already qualified professionals
- Design of an appropriate matrix of human resource requirements
- Pilot projects should be carried out to find a solution to the complicated issue of under-utilization and unequal distribution of ophthalmologists
- Development of a global network of training centers
- Career advancement mechanisms should be explored for all eye care personnel

Source: Dr. G.N. Rao; Human resource and development

Insufficient teaching and education material available
No common guidelines to ensure basic infrastructure
About 65% of surgical performance in the country is performed in the private and voluntary sector and only 35% is within the government sector.

Eye Care Service Delivery

Center of Excellence: 50.0 million population
Training Center in 5.0 million population
Service Centers in 500,000 population
Vision Centers in 50,000 population

Eye Care Delivery

Service Centers 2,000 to be developed
A mismatch of equipments and trained human resources
Vision Centers to be developed 20,000
Vision Centers crucial to primary eye care are in the nascent stage

Eye Care Delivery

Population Base

50,000,000
5,000,000
500,000
50,000

No. of Centres (India)

20
100
2,000
20

Dimensions of Quality

Technical competence
Access to services
Effectiveness
Interpersonal relations
Efficiency
Continuity
Safety
Amenities

Quality

Quality Assurance Project: http://www.qaproject.org/
Equity

Gender bias: Prevalence of blindness was found to be 1.6% among females as against 1.42% in males (in Assam, Uttar Pradesh, Andaman and Nicobar Islands and West Bengal, males were observed to be suffering from higher blindness rates)

Undeserved areas: Inequitable distribution of eye care services across the country. North eastern states are underserved in view of the geographical location and socio-political issue.

Barriers to update of services

Equipment

Non-availability of proper equipment hampers providing eye care

Cases where equipments are available, lack of maintenance results in sub-optimal use of the equipment

Inadequate ophthalmologic equipment management training acts as a barrier in utilization of equipment

High costs and remote areas – pose challenges for maintenance of equipment

Urban/ Rural Divide

Rural areas had an overall prevalence of 1.63% as against the prevalence of 1.01 % in the urban areas (This trend was noticed in the states of Tamil Nadu, Bihar, Kerala, Tripura and West Bengal. The access to service facilities is the most important factor in determining these differences)

Nearly 80% of the ophthalmologists are clustered in urban areas, where only 24% of the population reside

Eye Surgeon-population ratio varies from 1:20,000 in urban area to 1 in 2,50,000 in rural areas

VISION 2020 the Right to Sight India

To coordinate and advocate for improved eye care programs in India, started in 2004

Collaborative efforts of Govt, INGOs, NGOs,

Gain more knowledge, understand problems better, and think solutions together.

Encourage to include comprehensive eye care, thinking not only cataract but all eye care problems.

Tackling avoidable blindness

Disease prevention and control

Training of required personnel

Infrastructure Development

Strengthening Existing eye care

Development of affordable technology

Advocacy and resource mobilization

Vision 2020 plan of action

Strengthen advocacy at all levels

Reduction of disease burden

Strengthen physical infrastructure and human resources

MIS for better program management, transparency and coordination

Central government – Advisory role in policy, resource mobilization and program implementation – XI plan was drafted at the request of GoI and was discussed at various levels for increased allocation of resources.
**Vision 2020 plan – lots to be done**
- Revamping of medical education for improved knowledge, skills, practice
- Redeployment of human resources at all levels
- Better coordination among all stakeholders
- Better service quality – standards & protocols
- Due emphasis on preventive eye care

**Creating Awareness**
- Large part of the population whom we are targeting are illiterate and under-privileged, largely in rural also in urban areas
- Lack awareness of such health issue and absence of health seeking behavior
- Adopt bottom up approach to create awareness and bring behavioral change using multiple mediums ranging from folk theatre to community radio, panchayat, peer group influence

**Eye Health Promotion**
- Health Education:
  - Eye health promoting behavior,
  - Uptake of Services, Promotion of awareness, knowledge, decision making, belief, attitudes, empowerment
- Service Improvement:
  - Improvement in the quality and quantity of services
  - Patient education
  - Community Outreach
  - Testing/screening provision of spectacles
  - School health services

**Eye Health Promotion**
- Advocacy for policies that promote eye health
- Support for expansion of eye health services and disease prevention in the most needy areas/population
- Economic support to increase affordability of preventive actions
- Provision of improved services of water, housing, sanitation

**Thank you!**