SITUATION ANALYSIS: EYE CARE IN NEPAL

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Prevalence of blindness

• Overall prevalence of blindness PVA <3/60 : 0.39 %
  PVA <6/60 : 0.82 %
• Disease specific prevalence esp. for cataract 65 %

• refractive error rural 3 to 5% (9 to 15 yrs)
  • urban 10 to 19% (9 to 15 yrs)
• Overall estimation 10%
• Presbyopia 59.5% (35+ Population)
• Childhood blindness 1/1000
• Glaucoma Prevalence 1% (5% of Blindness)
• Prevalence of Low Vision 0.7 %
Distribution of Blindness (PVA <6/60)
Cause of Blindness

1981

- Catataract: 72%
- Nutritional: 1%
- Small Pox: 2%
- Amblyopia: 1%
- Other infection: 3%
- Trauma: 2%
- Other: 2%
- Miscellaneous: 8%
- Undetermined: 2%

2010

- Catataract: 65%
- ARMD: 4%
- Refractive Error: 4%
- Glaucoma: 5%
- Cornea: 6%
- Retinal Diseases: 9%
- Other/Undetermined: 2%
- Globe abnormality: 3%
- Surgical Complications: 1%
- Trachoma: 1%
- Diabetic Retinopathy: 0.2%
OBJECTIVE 1. STRENGTHEN ADVOCACY TO INCREASE MEMBER STATES POLITICAL, FINANCIAL AND TECHNICAL COMMITMENT IN ORDER TO ELIMINATE AVOIDABLE BLINDNESS AND VISUAL IMPAIRMENT
Current Practices

• Eye care service is not an integral part of government health system, it is running almost parallel to health care service mostly by NGOs.

• After launching of Vision 2020 in 1999 the Apex Body for Eye Health was formed at MoHP.

• Regular workshop are conducted under the aegis of Apex Body for Eye Health

• Increasing Government involvement and commitment in recent years.

• Now government is preparing to integrate the primary eye care in to primary health care at grassroots level of health care system.
• Observe World Sight Day by NGOs/Hospitals

• Separate wings at NGO hospitals for IEC/BCC materials development not well integrated with government IEC programme

• Government support for Zithromax distribution in trachoma endemic area and

• National Vitamin A distribution Programme
OBJECTIVE 2. DEVELOP AND STRENGTHEN NATIONAL POLICIES, PLANS AND PROGRAMMES FOR EYE HEALTH AND PREVENTION OF BLINDNESS AND VISUAL IMPAIRMENT
Current Practices

- National Strategic Plan 2001 – 2020 was prepared in 2001.
- Mid term review of Vision 2020 Nepal conducted in 2011
- Revised National Strategic Plan 2012 – 2019 is under preparation
- Percentage allocation from health budget for eye care
  - Health Budget out of total budget: 6.5%
  - Eye Care allocation from Government Health budget: 0.5%
  - NNJS expenditure for Eye Health 750 million per annum (94% own income and INGO support, 6% Government support)
OBJECTIVE 3. INCREASE AND EXPAND RESEARCH FOR THE PREVENTION OF BLINDNESS AND VISUAL IMPAIRMENT
Current Practices

- RAAB Survey Completed (National level)

- Other Disease prevalence survey such as Refractive Error and Presbyopia, Glaucoma, Diabetic retinopathy, Clinical trial and other Risk factor and determinate investigation survey are conducted sporadically mainly by NGOs.

- Government do not have definite policy in research in eye health
OBJECTIVE 4. IMPROVE COORDINATION BETWEEN PARTNERSHIPS AND STAKEHOLDERS AT NATIONAL AND INTERNATIONAL LEVELS FOR THE PREVENTION OF BLINDNESS AND VISUAL IMPAIRMENT
Current Practices

• Apex Body for Eye Health in the MoH taking responsibility to coordinate among all the stakeholders.

• NNJS doing coordination with MoH and different INGOs and NGOs

• Similarly Tilganga also expanding its activities in service, research, HR development at national and international level.
OBJECTIVE 5. MONITOR PROGRESS IN ELIMINATION OF AVOIDABLE BLINDNESS AT NATIONAL, REGIONAL AND GLOBAL LEVELS
Current Practices

- Computerized Medical Registration / IHMS installed in all eye hospitals of Nepal
- Central level Data Bank at NNJS (network established within NNJS eye hospitals only)
- Prevalence (RAAB) Survey
- MTR of Vision 2020
  - Blindness and disease prevalence rate, service coverage, equity, integration and quality of service assessment conducted
Infrastructure for eye care (tertiary care centres, secondary eye facilities, vision centres, training institutes)

- Tertiary care centres: 5 but geographical distribution not uniformed.
  - Aim is to have 1 in each developmental region (5 million)
- Secondary: 15 Eye Hospitals (1 for 2 million people)
- Vision Centres: We have PECC/CECC in 70 district out of 75.
- 4 Institutes to conduct residency (25/year), 1 for optometry (6/year), 4 for OA (40/per year)
Primary Eye Care – Current Practices

• PECC/CECC in each district: Clinical, community outreach,
• Surgical eye camp periodically
• PEC training to health worker Organized but due to lack of proper supervision and monitoring it is not been very effective and efficient.
• No permanent/regular eye care service below district level
Service Delivery - Treatment Service

Outputs - Treatment Service

<table>
<thead>
<tr>
<th>Year</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
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<tr>
<td></td>
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<td>900000</td>
<td>1000000</td>
<td>1100000</td>
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<td>1300000</td>
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<td>1800000</td>
<td>1900000</td>
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</table>

The graph shows the outputs of the treatment service from 1999 to 2010, with a steady increase in output over the years.
### Ocular morbidity pattern at Eye Hospitals

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>SCEH, Lahan</th>
<th>Rapti</th>
<th>HEH</th>
<th>Lumbini LEI</th>
<th>BPKLCOS</th>
<th>Tilganga (TIO)</th>
<th>Biratnagar</th>
<th>NEH</th>
<th>GETA</th>
<th>NMC</th>
<th>Kedia</th>
<th>Total</th>
<th>%</th>
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<tbody>
<tr>
<td>Refractive error</td>
<td>33849</td>
<td>3531</td>
<td>15288</td>
<td>30237</td>
<td>34741</td>
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<td>12386</td>
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<td>Cataract</td>
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<td>3336</td>
<td>6852</td>
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<td>14780</td>
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<td>Conjunctiva</td>
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<td>8654</td>
<td>20816</td>
<td>6899</td>
<td>5125</td>
<td>17006</td>
<td>26287</td>
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<td>2580</td>
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<td>Corneal Lesions</td>
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<td>7282</td>
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<td>2056</td>
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<td>Eye Lid</td>
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<td>1018</td>
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<td>30</td>
<td>665</td>
<td>1130</td>
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<td>Glaucoma</td>
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<td>171</td>
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<td>639</td>
<td>840</td>
<td>5920</td>
<td>1520</td>
<td>1373</td>
<td>566</td>
<td>850</td>
<td>693</td>
<td>16615</td>
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<td>Trauma/Injury</td>
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<td>3113</td>
<td>1358</td>
<td>994</td>
<td>1989</td>
<td>360</td>
<td>657</td>
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<td>2293</td>
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<td>Strabismus</td>
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<td>175</td>
<td>373</td>
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<td>6145</td>
<td>404</td>
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<td></td>
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<tr>
<td>Vitreo/Retinaa</td>
<td>183</td>
<td>793</td>
<td>444</td>
<td>1401</td>
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<td>2351</td>
<td>369</td>
<td>232</td>
<td>341</td>
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<td></td>
<td>8629</td>
<td>1.2</td>
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<td>Uvea</td>
<td>111</td>
<td>925</td>
<td>435</td>
<td>242</td>
<td>3758</td>
<td>4</td>
<td>40</td>
<td>313</td>
<td>156</td>
<td>462</td>
<td></td>
<td>6446</td>
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</table>
Service Delivery – Surgical Service

Output - Surgical Service

1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
## Cataract Surgery procedures at Hospitals

<table>
<thead>
<tr>
<th>Cataract Surgery procedure</th>
<th>SCEH</th>
<th>Rapti</th>
<th>HEH</th>
<th>LEI</th>
<th>TIO</th>
<th>Birat</th>
<th>NEH</th>
<th>GETA</th>
<th>NMC</th>
<th>Kedia</th>
<th>Total</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>ICCE-IOL</td>
<td>401</td>
<td></td>
<td>8</td>
<td>0</td>
<td>276</td>
<td>71</td>
<td>0</td>
<td></td>
<td></td>
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<td>756</td>
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<tr>
<td>ECCE+IOL</td>
<td>1152</td>
<td>0</td>
<td>169</td>
<td>1283</td>
<td>0</td>
<td>236</td>
<td>1493</td>
<td>111</td>
<td>3</td>
<td>0</td>
<td>4473</td>
<td>3.0</td>
</tr>
<tr>
<td>SICS +IOL</td>
<td>27710</td>
<td>620</td>
<td>1335</td>
<td>23495</td>
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<td>23485</td>
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<td>25122</td>
<td>610</td>
<td>17083</td>
<td>122172</td>
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<tr>
<td>PHACO+IOL</td>
<td>9747</td>
<td>1268</td>
<td>1415</td>
<td>3724</td>
<td>1563</td>
<td>151</td>
<td>397</td>
<td>0</td>
<td>959</td>
<td>19224</td>
<td>19224</td>
<td>13.0</td>
</tr>
<tr>
<td>ICCE/ECCE only</td>
<td>205</td>
<td>2</td>
<td>4</td>
<td>421</td>
<td>28</td>
<td>160</td>
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<td>20</td>
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<td></td>
<td>959</td>
<td>0.6</td>
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<tr>
<td>Total</td>
<td>39215</td>
<td>622</td>
<td>2776</td>
<td>26622</td>
<td>6502</td>
<td>25720</td>
<td>1651</td>
<td>25721</td>
<td>613</td>
<td>18154</td>
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</table>
Cataract Surgery procedures at Eye Hospitals

- ICCE-IOL: 0.5%
- ECCE+IOL: 3.0%
- SICS: 82.8%
- PHACO: 13.0%
- ICCE/ECCE only: 0.6%
CSR per million Population

Year

Surgery per million population
0 500 1000 1500 2000 2500 3000 3500

543 605 685 842 944 1167 1355 1570 1754 2208 2182 2136 2588 2379 2913 3092
Cataract Surgical Coverage RAAB 2010 (BCVA <6/60) in eyes

#### Map Legend:
- **40 to 50%**
- **50 to 60%**
- **60 to 70%**
Map showing the districts with LV Services
## Status of HR in eye care

<table>
<thead>
<tr>
<th>Category of HR</th>
<th>Existing Number</th>
<th>Present HR: Population</th>
<th>Proposed Ratio by 2020 (WHO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ophthalmologists</td>
<td>147</td>
<td>1: 193877</td>
<td>1: 50,000</td>
</tr>
<tr>
<td>Optometrists</td>
<td>36</td>
<td>1: 791666</td>
<td>1: 50,000</td>
</tr>
<tr>
<td>Ophthalmic assistants</td>
<td>275</td>
<td>1: 103636</td>
<td>1: 25,000 *</td>
</tr>
<tr>
<td>Eye workers</td>
<td>220</td>
<td>1: 129545</td>
<td>1: 5000</td>
</tr>
<tr>
<td>Ophthalmic Nurses</td>
<td>52 ?</td>
<td>1: 548076</td>
<td>1: 50,000</td>
</tr>
<tr>
<td>Orthoptist</td>
<td>15</td>
<td>1: 1900000</td>
<td></td>
</tr>
<tr>
<td>Eye managers</td>
<td>Few</td>
<td></td>
<td>100% at tertiary level</td>
</tr>
</tbody>
</table>

NOTE: This ratio is calculated on the basis of population (28.5 million)
## Gap in HR

<table>
<thead>
<tr>
<th>Category</th>
<th>Existing Number</th>
<th>Required for proposed ratio</th>
<th>Gap in Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ophthalmologist</td>
<td>147</td>
<td>570</td>
<td>423</td>
</tr>
<tr>
<td>Optometrist</td>
<td>36</td>
<td>570</td>
<td>534</td>
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<tr>
<td>Ophthalmic assistants</td>
<td>275</td>
<td>1140</td>
<td>865</td>
</tr>
<tr>
<td>Eye worker</td>
<td>220</td>
<td>5700</td>
<td>5700</td>
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<tr>
<td>Ophthalmic nurses **</td>
<td>52</td>
<td>570</td>
<td></td>
</tr>
<tr>
<td>Orthoptist</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Managers</td>
<td>Few</td>
<td></td>
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</tr>
</tbody>
</table>

** work of ophthalmic nurses in Nepal are carried out by OA at majority of hospitals.
## Distribution of Ophthalmologists across Developmental regions

<table>
<thead>
<tr>
<th>Developmental regions</th>
<th>Males</th>
<th>Females</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Far western</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>2.6 %</td>
</tr>
<tr>
<td>Mid western</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2.6 %</td>
</tr>
<tr>
<td>Western</td>
<td>15</td>
<td>10</td>
<td>25</td>
<td>17.8%</td>
</tr>
<tr>
<td>Central</td>
<td>61</td>
<td>30</td>
<td>91</td>
<td>61.2%</td>
</tr>
<tr>
<td>Eastern</td>
<td>16</td>
<td>7</td>
<td>23</td>
<td>15.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>97</strong></td>
<td><strong>50</strong></td>
<td><strong>147</strong></td>
<td><strong>100%</strong></td>
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