Time Trends of MB : PB ratios among New Untreated Leprosy patients at a Referral hospital in North India

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• Multibacillary (MB) leprosy
  – the major source of infection
  – early detection becomes critical for NLEP.
• Thrust on NCDR and early reporting
• Disability rates and MB ratios still high in hospitals
  – Stigma?
  – Referrals/ specialized centre?
  – Integrated facilities?
• Study conducted at The Leprosy Mission Hospital, Naini - North India

• One of 14 TLMTI hospitals

• Have computerized EMR and detailed statistical records of a few decades

• Retrospective data extracted from the medical records and Annual Statistical Reports

• 137 years old
• 150 bedded
• 2600 new Leprosy registrations
• 20,000 leprosy OP visits
MB:PB among New Untreated cases at The Leprosy Mission, Naini

<table>
<thead>
<tr>
<th>Year</th>
<th>MB</th>
<th>PB</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>363</td>
<td>1403</td>
<td>1766</td>
</tr>
<tr>
<td>2012</td>
<td>373</td>
<td>1643</td>
<td>2016</td>
</tr>
<tr>
<td>2010</td>
<td>394</td>
<td>1403</td>
<td>1797</td>
</tr>
<tr>
<td>2009</td>
<td>364</td>
<td>1565</td>
<td>1929</td>
</tr>
<tr>
<td>2008</td>
<td>311</td>
<td>1579</td>
<td>1890</td>
</tr>
<tr>
<td>2007</td>
<td>250</td>
<td>1283</td>
<td>1533</td>
</tr>
<tr>
<td>2006</td>
<td>230</td>
<td>1052</td>
<td>1282</td>
</tr>
<tr>
<td>2005</td>
<td>228</td>
<td>841</td>
<td>1069</td>
</tr>
<tr>
<td>2004</td>
<td>258</td>
<td>755</td>
<td>1013</td>
</tr>
<tr>
<td>2003</td>
<td>299</td>
<td>1114</td>
<td>1413</td>
</tr>
<tr>
<td>2002</td>
<td>306</td>
<td>1222</td>
<td>1528</td>
</tr>
<tr>
<td>2001</td>
<td>411</td>
<td>1498</td>
<td>1909</td>
</tr>
</tbody>
</table>

PB %: 22, 20, 21, 25, 24, 27, 24, 23, 25, 26, 23
MB %: 78, 80, 79, 75, 76, 73, 76, 77, 75, 74, 77
## MB:PB Time Trends Vs Origin

<table>
<thead>
<tr>
<th>Year</th>
<th>Allahabad</th>
<th>Uttar Pradesh (Other than Allahabad)</th>
<th>Other States (Other than Uttar Pradesh)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Total</td>
<td>MB</td>
<td>PB</td>
</tr>
<tr>
<td>2005</td>
<td>336</td>
<td>232</td>
<td>104</td>
</tr>
<tr>
<td>2006</td>
<td>278</td>
<td>198</td>
<td>80</td>
</tr>
<tr>
<td>2007</td>
<td>357</td>
<td>256</td>
<td>101</td>
</tr>
<tr>
<td>2008</td>
<td>287</td>
<td>249</td>
<td>38</td>
</tr>
<tr>
<td>2009</td>
<td>425</td>
<td>296</td>
<td>129</td>
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<tr>
<td>2010</td>
<td>377</td>
<td>259</td>
<td>118</td>
</tr>
<tr>
<td>2011</td>
<td>340</td>
<td>237</td>
<td>103</td>
</tr>
<tr>
<td>2012</td>
<td>379</td>
<td>278</td>
<td>101</td>
</tr>
</tbody>
</table>
• Previous table demonstrates that the MB %age of 70 - 80 is consistent irrespective of the patient coming from nearby (50km) or neighbouring districts/states (700-1000km)

• 76% of patients come from outside the district
Infiltration, Highly positive, MB
Smear status of New UNTREATED Cases = 1607

- Data of New Registrations of 2012
  - Patients who were newly diagnosed
  - No previous Treatment
- 77% (1234) are MB
- 32% are smear positive
- 19% (300) have a BI exceeding 4+
Percentage of New Cases
Male:Female:Children

2005: Male 71.3, Female 69.1, Children 24.2
2006: Male 66.2, Female 27, Children 3.9
2007: Male 69.9, Female 31.4, Children 2.3
2008: Male 69.9, Female 26.6, Children 3.4
2009: Male 67.1, Female 26.2, Children 4.0
2010: Male 65, Female 27.0, Children 5.8
2011: Male 65, Female 29.4, Children 5.6
2012: Male 65.2, Female 28.8, Children 6
VARIATIONS

Government (NLEP) 2012-2013
• MB - 49.9%
• Female – 37.7%
• Child – 9.9%
• Deformity Rate – 3.5%

REFERRAL Hospital - 2012
• MB - 77.3%
• Female – 30.9%
• Child – 6.0%
• Deformity Rate – 24.1%
MB patients, undiagnosed and without patches are not uncommon

Nodules – in Leprosy (5.33+)

In the year 2012 in a single hospital
- 1607 newly diagnosed
- 511 were smear positive
- We are hopeful that the WHO MDT (Novartis) Blister Packs, would be available for these patients, in the near future
CONCLUSIONS/ RECOMMENDATIONS

• No change in MB %age or decline in number of cases
• More interventions to promote early detection of MB cases
• Suggest a similar study at the community level to distinguish epidemiological and operational factors
ACKNOWLEDGEMENTS

The Leprosy Mission
The patients for being supportive
and staff for their commitment to leprosy care