TB control activities and introduction of stop TB Korea

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The Korean Institute of Tuberculosis
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## TB Prevalence Survey

<table>
<thead>
<tr>
<th>Year</th>
<th>X-ray(%)</th>
<th>No.(x1,000)</th>
<th>Bacillary+ (%)</th>
<th>No.(x1,000)</th>
<th>Smear+ (%)</th>
<th>No.(x1,000)</th>
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</thead>
<tbody>
<tr>
<td>1965</td>
<td>5.1</td>
<td>1,240</td>
<td>0.94</td>
<td>226</td>
<td>0.69</td>
<td>170</td>
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<tr>
<td>1970</td>
<td>4.02</td>
<td>1,118</td>
<td>0.74</td>
<td>197</td>
<td>0.56</td>
<td>152</td>
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<tr>
<td>1975</td>
<td>3.3</td>
<td>1,014</td>
<td>0.76</td>
<td>235</td>
<td>0.48</td>
<td>146</td>
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<tr>
<td>1980</td>
<td>2.5</td>
<td>852</td>
<td>0.54</td>
<td>186</td>
<td>0.31</td>
<td>104</td>
</tr>
<tr>
<td>1985</td>
<td>2.2</td>
<td>798</td>
<td>0.44</td>
<td>164</td>
<td>0.24</td>
<td>89</td>
</tr>
<tr>
<td>1990</td>
<td>1.8</td>
<td>728</td>
<td>0.24</td>
<td>95</td>
<td>0.14</td>
<td>56</td>
</tr>
<tr>
<td>1995</td>
<td>1.0</td>
<td>429</td>
<td>0.22</td>
<td>91</td>
<td>0.09</td>
<td>39</td>
</tr>
<tr>
<td>2010*</td>
<td>0.23</td>
<td>113</td>
<td>0.18</td>
<td>86</td>
<td>0.04</td>
<td>17</td>
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</tbody>
</table>

* Estimation

**WHO; 151(121-182)/10^5 (2010)**
Annual TB mortality rate ($/10^5$)
Comparison of notification between public and private sector
Notification rate (/10^5) of new cases
To understand TB situation in Korea...
HIV co-infected TB cases
(Number and proportion)

No. cases

% of HIV infection TB patient


2.1 1.8 1.1 1.5 1.2 1.6 1.3 1.6 1.4 1.8 1.5
## Trend of Drug Resistance

### Primary Drug Resistance by DRS

(Bai GH. Int J Tuberc Lung Dis. 2007)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No. strains</td>
<td>2,489</td>
<td>2,370</td>
<td>1,348</td>
<td>2,636</td>
</tr>
<tr>
<td>All susceptible</td>
<td>88.7%</td>
<td>89.1%</td>
<td>87.2%</td>
<td>87.2%</td>
</tr>
<tr>
<td>Any DR</td>
<td>11.3%</td>
<td>10.0%</td>
<td>12.8%</td>
<td>12.8%</td>
</tr>
<tr>
<td>MDR</td>
<td>1.6%</td>
<td>2.2%</td>
<td>2.4%</td>
<td>2.7%</td>
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</tbody>
</table>

### Notified MDR & XDR cases in 2011

(KCDC Annual report, 2012)

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>New</th>
<th>Relapse</th>
<th>TAF</th>
<th>TAD</th>
<th>T-in</th>
<th>Chronic</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>50491</td>
<td>39557</td>
<td>5844</td>
<td>206</td>
<td>1165</td>
<td>2149</td>
<td>55</td>
<td>1515</td>
</tr>
<tr>
<td>MDR</td>
<td>975</td>
<td>190</td>
<td>203</td>
<td>86</td>
<td>115</td>
<td>326</td>
<td>38</td>
<td>17</td>
</tr>
<tr>
<td>XDR</td>
<td>140</td>
<td>30</td>
<td>27</td>
<td>14</td>
<td>8</td>
<td>41</td>
<td>18</td>
<td>2</td>
</tr>
</tbody>
</table>
# TB patients care in Korea

<table>
<thead>
<tr>
<th></th>
<th>NTP</th>
<th>Non-NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tx facilities</td>
<td>Public health centers</td>
<td>Public and private hospitals, clinics</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Drugs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLDs</td>
<td>available</td>
<td>available</td>
</tr>
<tr>
<td>SLDs</td>
<td><strong>Not available</strong></td>
<td>available</td>
</tr>
<tr>
<td>Treatment cost</td>
<td>free</td>
<td>Patient’s charge, but covered by health insurance</td>
</tr>
<tr>
<td>TB HWs</td>
<td>allocated</td>
<td>Not allocated</td>
</tr>
</tbody>
</table>
New 2020 plan

Target:
Reduce TB incidence half by 2015 (90/10^5 in 2010 to 40/10^5 in 2015)
Reduce TB incidence to 20/10^5 by 2020

Strategy:
1) Early case finding to reduce transmission
   TB symptomatics, screening to risk/vulnerable groups, contact investigations
   ‘Web-PACS system’ network by health centers and KCDC with KIT
2) Treatment
   Public health center; treat with first-line drugs, standardized treatment
   Private sector; treat with first- or second-line drugs, 90%-95% reimbursed by health insurance, non-standardized treatment
   Thorough case management through modified public-private mix collaboration
3) Prevention of TB
   BCG vaccination to all newborns
   Treatment of latent TB infection; children among family contacts → expanding to all close contacts and high risk groups among infected people
4) Monitoring through integrated TB information system
   Surveillance system, web-PACS system, public TB laboratory, TB patient management in the public health centers and laboratory surveillance system in future
5) R & D
   Korea National Institute of Health, Korean Institute of TB, International TB Research Center
Current issues

• **Patient care**
  - Expansion of PPM
  - Implementation of Directly observation of Treatment
  - Supporting medical expanses and social support
  - Development of FDCs in 2012-3

• **Case finding**
  - Expansion of close contacts investigation
  - TB screening (incl. X-ray) to the vulnerable populations
  - Implementation of Xpert in 2013

• **Prevention of TB disease**
  - Expansion of treatment of LTBI, mass BCG vaccination

• **Prevention of TB infection**
  - Isolation of non-compliant or infectious MDR cases
  - Infection control - protection of HCWs
Public-Private Mixture Collaboration

TB health workers dispatched in the private sector – health education, consultation, notification to the surveillance system

<table>
<thead>
<tr>
<th>Year</th>
<th>Total No. notified cases</th>
<th>Total No. managed cases</th>
<th>%</th>
<th>Hospital-PPM</th>
<th>PHC-PPM</th>
<th>PHC-NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>43,758</td>
<td>27,252</td>
<td>62.3</td>
<td>7,792</td>
<td>13,352</td>
<td>6,108</td>
</tr>
<tr>
<td>2010</td>
<td>47,021</td>
<td>35,544</td>
<td>75.6</td>
<td>15,846</td>
<td>12,167</td>
<td>7,531</td>
</tr>
<tr>
<td>2011</td>
<td>54,266</td>
<td>48,649</td>
<td>89.6</td>
<td>31,222</td>
<td>11,978</td>
<td>5,449</td>
</tr>
</tbody>
</table>

Hospital-PPM (2012); 220 HWs in 117 medical institutions
PHCPPM (2012); 45 HWs in 43 PHCs
Accomplishments in 2010-11

• Hosp-PPM treatment outcomes in 2010; cured: 5,234 (37%), completed: 6,878 (49%), failed 23, defaulted: 1,007, transferred out: 329, died: 565

• Contact investigation; 7,903 contacts / 5,772 cases Bacillary +ive; 5, Bacillary –tive; 78, LTBI +ive; 2,369

• TB screening to the vulnerable populations 146,858 subjects screened 40 smear positive cases, 45 culture positive cases total 848 (0.6%) active TB cases
Standard DOT
Digital DOT
Mobile DOT
Introduction of the STOP-TB Partnership KOREA

2008. 3 Announcement of establishment / operation plan of the STOP-TB Partnership KOREA by the Ministry of Health and Welfare and Korean Center for Disease Control
2009. 6 Establishment of the STOP-TB Partnership KOREA Secretariat in Korean National Tuberculosis Association
2010. 3 Formal registration as the national cooperation partner of WHO Stop TB Partnership.
2010. 12 The STOP-TB Partnership KOREA Launching (Cooperation Committee Chairperson : Sook Mi Son, legislator / 19 partners)
2012. 11 25 organizations such as the National Assembly, civil society group and pharmaceutical company and individual partners of 47,000 people take part in.
Objectives

1. Advocacy of TB to general population and expansion of partners to participate in partnership
2. Supporting advocacy, health education, TB screening, and treatment to the vulnerable population
3. Participation in global stop TB campaign
Activities

• 2010
- Constructing and managing STOP-TB Partnership KOREA website
- Campaign message of hope for Stop TB (Classic concert, photo exhibition)
- On-line TB handwriting contest exhibit (Supporting treatment for 15 patients)
- Holding forum of ‘Proper understanding and managing of Drug resistance TB’
- Enforcing to prevent TB promotion in radio public service advertisement

• 2011
- Producing and Broadcasting KBS 1TV ‘Tuberculosis’ Documentary programs
- Starting radio TB campaign (Introducing patient’s story and supporting treatment)
- Hosting Multicultural Festival ‘The world to live together, with TB Free in Korea’
- Holding Congressional Policy forum of TB Control Program of issues and improvements

• 2012
- Starting Youth TB education and the prevention of TB camps
- Promoting Health Teacher TB Education and producing Student TB educational materials
- Holding “Policy forum of Effective Management Plan for TB patients
- Supporting treatment of multiple drug resistance tuberculosis patients
Support for ‘Secret of the four phases of life’ KBS TV Documentary production

Monthly webzine publication and e-mail service

*birth, aging, sickness, and death*
A commemorative photo event on the “World TB day”

Opening of policy forum to support efficient TB patient care
Performance of TB prevention campaign for teenagers by youth organizations

Open of tuberculosis prevention idea contest camp for youth
Providing free TB X-ray screening during multicultural festival for the immigrants

Free TB X-ray screening in rural area
Future challenges

- Development and vitalization of various tuberculosis eradication activities among partners to support national tuberculosis control program

- Tuberculosis screening for vulnerable groups and expansion of treatment support. Besides the support for the national tuberculosis control program through research project support

- Participating in active international tuberculosis eradication movement through the reinforcement of global cooperation capability by developing specific cooperation project and reinforcing link with the STOP-TB partnership office of the countries, with this forum as a momentum
Thank you for your attention!