Expanding an accelerating access to tuberculosis diagnostics and laboratory services
2nd meeting of the Global Laboratory Initiative, Veyrier-du-Lac

Scaling up management and control of multidrug resistant TB – what will it take?

Paul Nunn, WHO, Geneva
Scaling up projections of the Global Plan to Stop TB, 2006-2015
Scaling up means to treat 80% of smear and/or culture-positive MDR-TB cases by 2015

Target: Total patients treated over 7 years = 1.4 million

18x number planned for 2009 → 357,000

3x currently planned number

63,000
Global MDR and XDR –TB Response Plan

In 2009, 3% of incident cases treated according to WHO standards
What will it take?

- Money
- Greatly strengthened laboratories with new tools
- Infection control
- Coordination
Global Plan projections of funding required for MDR-TB, 2009–2015
MDR-TB budgets and funding, 2009

Budgets, 2009 (total US$ 438 million)

- S. Africa (55%)
- Russia Federation (30%)
- Europe (other)
- Africa (other)
- Asia

Funding, 2009 (total US$ 72 million)

- Russian Federation
- Asia
- Africa
- Europe (other)

Patients to be treated = 20,000

< 5% of estimated total of 435,000 cases

Estimated cases, 2007 (total 435,000)

Source: WHO TB database
Cost per patient treated

N.B. "model of care" has major impact on treatment costs

Costs estimated from detailed costing studies in Tomsk (Russia), Estonia, the Philippines and Peru, adjusted for pattern of drug resistance, country income level, anticipated use of hospitalization.

As does expected level of drug resistance and cost of drugs.
Funding required, 2009–2015

Total US$16.9 billion over 7 years, average US$2.4 billion per year
Much higher than existing budgets and funding
Reducing cost of second-line drugs and use of hospitalization would substantially lower funding requirements
Main cost components, 2009–2015

Treatment

- Programme management, 25%
- Second-line drugs, 53%
- Hospitalization, 22%

Infection control

- Personal protective controls, 2%
- Managerial activities, 18%
- Engineering + environmental controls, 40%
- Administrative controls, 40%

Laboratory diagnosis and monitoring

- Recurrent
- Capital

Year:
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
Most of the funding required is in Europe (total US$8.9 billion), followed by Asia (US$7.1 billion, mostly in China and India)
**Infection control costs, 2009-2015 – 22 High Burden Countries plus 14 MDR HBCs**

<table>
<thead>
<tr>
<th>DR or non DR</th>
<th>Predominant locus of care</th>
<th>Scenario 1 MDR Facilities only</th>
<th>Scenario 2 All TB Facilities and Community Health Centres</th>
<th>Scenario 3 All Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>DR only</td>
<td>Community</td>
<td>758</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>DR only</td>
<td>Hospitalised</td>
<td>1,045</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>DR Non DR</td>
<td>Community, Community</td>
<td>n/a</td>
<td>1,088</td>
<td>3,898</td>
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<tr>
<td>DR Non DR</td>
<td>Hospitalised, Community</td>
<td>n/a</td>
<td>1,425</td>
<td>4,240</td>
</tr>
<tr>
<td>DR Non DR</td>
<td>Hospitalised, Hospitalised</td>
<td>n/a</td>
<td>1,728</td>
<td>4,546</td>
</tr>
</tbody>
</table>

Work in progress as of October 2009
How can the required funding be mobilized?
Can patients pay?

Catastrophic health expenditure defined as 40% of household "capacity to pay" "Capacity to pay" based on income after basic subsistence needs are met
The Global Fund and UNITAID – the good news

[Bar chart showing grant amount Phase 1 (2-year funding) and total budget approved (5-year funding) for Rounds 1 to 9.]

[Line graph showing approval rate for DOTS, TB/HIV, MDR TB, high risk/IC, HSS/PAL, PPM/ISTC, Empower people, and OR.]
The Global Fund and UNITAID – the sad news

Unlikely to finance more than a relatively small share of the costs of MDR-TB diagnosis and treatment, unless either
a) both agencies mobilize substantially more funding and/or
b) the cost of MDR-TB diagnosis and treatment can be reduced

NB. assumption Global Fund and UNITAID financing sustained at 2009 levels
Can HBC governments pay?

Commission on Macroeconomics and Health (2001) suggested middle-income countries could finance 96–100% of health care needs.

High Level Taskforce (HLTF) on Innovative International Financing for Health Systems is focusing on low-income countries.

<table>
<thead>
<tr>
<th>Low Income (GNI &lt;US$ 936 per capita)</th>
<th>Bangladesh, DR Congo, Ethiopia, Kyrgyzstan, Myanmar, Nigeria, Pakistan, Tajikistan, Uzbekistan, Viet Nam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower-middle income (GNI US$ 936–3705 per capita)</td>
<td>Armenia, Azerbaijan, China, India, Indonesia, Philippines, Moldova, Ukraine</td>
</tr>
<tr>
<td>Upper-middle income (GNI US$ 3706–11455)</td>
<td>Belarus, Bulgaria, Estonia, Georgia, Kazakhstan, Latvia, Lithuania, Russian Federation, South Africa</td>
</tr>
</tbody>
</table>
• Some aspects of Coordination
The Green Light Committee

- Started up as a Committee – to give a green light to MDR management proposals – AND prevent development of further resistance
- GLC has approved 108 projects in 68* countries with 59,142 patients approved for treatment. About 20,000 have started treatment
- Also provides technical support for proposal development, follow-up, monitoring and evaluation and policy advice to WHO, and now to GFATM
- All GF MDR proposals require the "Green Light"
The Green Light Committee

- GLC ensures quality of drugs, using its own procurement agent buying from stringent drug regulatory agency approved suppliers, or WHO pre-qualified suppliers (Stream A)
- GLC will soon approve "Stream B" that allows countries to procure drugs themselves from similarly QA'ed suppliers
Some other things needing coordination

- Better information
- Involvement of the private sector
- Human resources
  - Training, planning, recruitment
- Technical support
  - Short-, middle-, long-term
  - Centres of excellence
- Matching diagnoses with treatment
- Coordinating with other disease control programmes
Conclusions

- Substantial increases in funding are required for TB control going forward
- Fund-raising strategies need much more focus on national domestic expenditure needs
- More attention needed on reducing costs of commodities and models of care
- Countries may effectively postpone targets