MDR-TB SITUATION UPDATE

OUR CURRENT PREDICAMENT AND POSSIBLE SOLUTIONS

SALMAAN KESHAVJEE, MD, PHD

HARVARD MEDICAL SCHOOL
BRIGHAM AND WOMEN’S HOSPITAL
PARTNERS IN HEALTH

MDR-TB STAKEHOLDERS MEETING
KUALA LUMPUR, MALAYSIA
NOVEMBER 11, 2012
OVERVIEW

- First ten years – a brief history
- Where are we with MDR-TB care delivery today?
- What is the role for the MDR-TB Working Group moving forward?
What did we do for the first ten years of the Working Group?
2000
The creation of a multi-institutional partnership to promote treatment of MDR-TB:

Make drugs available at low cost to “DOTS-Plus” pilot projects
Help *pilot projects* successfully treat MDR-TB
Provide data to the WHO to change global policy
Successful collaboration with donors

"To help contain resistance to second-line anti-TB drugs and consistent with the policies of other international funding sources, all procurement of medications to treat MDR-TB must be conducted through the Green Light Committee (GLC)"

Third Board Meeting, 10-11 October, 2002

Second-line drugs for low and lower-middle income countries; thousands of patients to be enrolled in 2007-2011; creation of a Global Buffer Stock of SLDs and a Revolving Fund

Funds for Technical Assistance and Monitoring/Evaluation
Global recommendations to countries were changed

Standard of care for rich countries (1992) was “mainstreamed” (2006)
POLICY SUCCESS...

GLC Projects by WHO-defined Regions – August 2009

Source: GLC Secretariat
Patients Approved For Enrollment in GLC Projects 2000-2009

- 166 approved applications
- 108 projects
- 67 countries
- 59,282 patients

Source: GLC Secretariat, Slide adapted from Dr. Ernesto Jaramillo, WHO, Geneva
Few patients who needed care were able to receive care

~5 million cases

10 YEAR PICTURE (2000-2009)

3.5 million patients
No treatment reported.
Some treatment probably obtained, quality unknown.
Continued transmission

Treated in GLC approved programmes

1.5 million patients – DEAD

Photo: James Nachtwey, XDRTB.org
Where are we today with MDR tuberculosis care delivery?

Photo: James Nachtwey, XDRTB.org
1. MDR-TB continues to grow globally

Number of MDR-TB cases estimated to occur among notified pulmonary TB cases, 2011

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

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Source: WHO, gGLC Secretariat, November 2012
2. Number of patients treated is low

Enrolments on MDR-TB treatment:
Reported by countries to the WHO (2009-2011) and projected (2012-2015)

Adapted from: WHO, gGLC Secretariat, November 2012
## MDR cases reported versus estimated among notified TB, 2011

<table>
<thead>
<tr>
<th>WHO Region</th>
<th>Estimated</th>
<th>Reported</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>African</td>
<td>45,000</td>
<td>12,384</td>
<td>28%</td>
</tr>
<tr>
<td>American</td>
<td>5,900</td>
<td>2,969</td>
<td>50%</td>
</tr>
<tr>
<td>East Med.</td>
<td>17,000</td>
<td>841</td>
<td>5%</td>
</tr>
<tr>
<td>European</td>
<td>76,000</td>
<td>32,348</td>
<td>43%</td>
</tr>
<tr>
<td>S-E Asian</td>
<td>89,000</td>
<td>6,615</td>
<td>7%</td>
</tr>
<tr>
<td>West Pacific</td>
<td>78,000</td>
<td>4,392</td>
<td>6%</td>
</tr>
<tr>
<td>Global</td>
<td>310,000</td>
<td>59,549</td>
<td>19%</td>
</tr>
</tbody>
</table>

Source: WHO, gGLC Secretariat, November 2012
3. Not enough patients are being diagnosed

Photo: James Nachtwey, XDRTB.org

Source: WHO, Tuberculosis Control Report, 2010
4. Quality-assured second line drugs remain expensive

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>2001</th>
<th>2010</th>
<th>% ↑*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amikacin (1 gram vial)</td>
<td>0.11</td>
<td>1.46</td>
<td>1323.64</td>
</tr>
<tr>
<td>Capreomycin (1 gram vial)</td>
<td>1.02</td>
<td>3.21</td>
<td>314.71</td>
</tr>
<tr>
<td>Kanamycin (1 gram vial)</td>
<td>0.36</td>
<td>2.80</td>
<td>778.33</td>
</tr>
<tr>
<td>Ethionamide (250 mg tablet)</td>
<td>0.10</td>
<td>0.10</td>
<td>0.00</td>
</tr>
<tr>
<td>Levofloxacin (250 mg tablet)</td>
<td></td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>Moxifloxacin 400 mg (5)</td>
<td></td>
<td>4.38</td>
<td></td>
</tr>
<tr>
<td>Moxifloxacin 400 mg (70)</td>
<td></td>
<td>4.38</td>
<td></td>
</tr>
<tr>
<td>PAS (1 sachet)</td>
<td>1.51</td>
<td>1.88</td>
<td>124.50</td>
</tr>
<tr>
<td>Cycloserine (250 mg capsule)</td>
<td>0.14</td>
<td>0.66</td>
<td>472.79</td>
</tr>
</tbody>
</table>

*comparison between 2001 and 2010

Sources: MSF/IUATLD 2011, GDF 2012
FIGURE 9  Costs of second-line anti-TB drugs and treatment as a percentage of gross national income (GNI) per capita in the 27 high MDR-TB burden countries
Patients using drugs of unknown quality
6. Children have not received enough attention
“Results: Multidrug-resistant tuberculosis was found in 35.3% (95%CI: 27.7-42.8) of new patients and 76.5% (95%CI: 66.1-86.8) of those previously treated. Overall nearly one in two patients enrolled had multidrug-resistant tuberculosis. Extensively drug-resistant tuberculosis was found in 15 of the 107 multidrug-resistant tuberculosis patients (14.0%; 95%CI: 7.3-20.7). Patients under 35 years old have shown a 2 times higher odds of MDR-TB than those 35 and older.”

Skrahina et al., *European Respiratory Journal* (e-pub Oct 20th, 2011)
Fig. 10.7. Multidrug resistance in all groups of RTB MbT+ patients with respiratory tuberculosis: the share in RTB patients and the number of MDR-TB cases registered per 100,000 population (the indicator of registered MDR-TB prevalence in the population), the Russian Federation (Source: Form No. 33)
10. The level of resistance continues to increase

Global distribution of countries reporting at least one XDR-TB case by March 2011

11. The disease causes immense suffering globally
A serious question arises: Why, despite nearly 20 years of WHO-promoted activities in tuberculosis control and >12 years of MDR tuberculosis-specific activity, has the global response to the DR tuberculosis epidemic been so slow and ineffectual?
Treatment delivery and follow-up

Supply of Second-line drugs

Diagnosis of drug Resistance

2007+

Implementation bottleneck
The role of the MDR-TB Working Group and the Stop TB Partnership in improving the situation
1.2 Its mission is to:
- ensure that every TB patient has access to effective diagnosis, treatment, and cure;
- stop transmission of TB;
- reduce the inequitable social and economic toll of TB; and
- develop and implement new preventive, diagnostic, and therapeutic tools and strategies to stop TB.

1.3 In order to achieve that purpose and mission, the Stop TB Partnership will have the following objectives:
- Promote wider and wiser use of existing strategies to interrupt TB transmission, by:
  - increasing access to accurate diagnosis and effective treatments by accelerating expansion of DOTS to achieve the global target for TB control; and
  - increasing the availability, affordability, and quality of TB drugs.
- Adapt existing strategies to address the challenges posed by emerging threats, by:
  - developing an effective strategy to prevent and manage multi-drug resistant TB; and
  - developing an effective strategy to reduce the impact of HIV-related TB.
- Accelerate elimination of TB, by:
  - promoting research to develop new and improved diagnostic tests, drugs and vaccines; and
  - promoting adoption of new and improved tools by ensuring appropriate use, access and affordability.
Partnership Structure

Global Partners Forum

Global TB Drug Facility

Coordinating Board
Partnership Secretariat

WHO Strategic &
Technical Advisory
Group

DOTS Expansion
TB/HIV
MDR-TB
New TB Vaccines
New TB Diagnostics
New TB Drugs
Global Laboratory
Initiative

Advocacy Advisory Committee

Source: Stop TB Partnership Basic Framework, February 2001
MDR-TB Working Group – Role

3. The Working Groups are essential components of the Partnership which contribute in a major way to the achievement of the Partnership aims. At present, there are seven such Groups – Diagnostics, Drug Development, TB-HIV, Vaccines, DOTS Expansion, DOTS Plus for multi-drug resistant TB, and Advocacy and Communications.

3.1 The role and mission are to:

- implement research, advocacy and/or operational activities in pursuit of the Group’s specific area of interest and of the aims of the Partnership; and
- collaborate with other elements of the Partnership so as to create synergy and value added to actions taken in pursuit of the aims of the Partnership.

Source: Stop TB Partnership Basic Framework, February 2001
3.3 The functions of the Working Groups are to:

a) provide a coordination mechanism for the implementation of policies and actions agreed by the partnership and approved by the Coordinating Board;

b) act as a consensus building mechanism in support of the development of new technical standards where appropriate;

c) serve as a mechanism for developing broad global consensus, unifying strategies, objectives and priorities and monitoring global tuberculosis control efforts and research activities;

d) identify and highlight gaps and areas of overlap within the Group’s area of interest and in global tuberculosis control and research activities and to propose solutions;

e) develop a strategic agenda, including a research agenda, a work plan and an estimate of resource needs for activities in the area of interest and in the framework of the Partnership;

f) advocate for the “package” of activities represented within the Partnership and to help to define priorities within the total package;

g) develop overarching policies that involve multiple sectors and partners;

h) provide a mechanism whereby a group of partners with similar interests can collaborate on agreed specific tasks or areas within tuberculosis control and/or research;

i) participate in developing and implementing approaches to communications, resource mobilization and advocacy for the Partnership as a whole; and

j) report to the Board at each formal Board session on plans and progress towards reaching targets.

Source: Stop TB Partnership Basic Framework, February 2001
Current situation

In many settings, scale-up of MDR-TB diagnosis and treatment is not happening at an optimal pace.

Given it’s mandate, the MDR-TB working group can and should bring the STP partners together to help with scale-up of drug resistant tuberculosis treatment and optimization of care delivery.
DISCUSSIONS AT PAST WORKING GROUP MEETINGS
Many of the original GLC Pilot projects had at least one strong technical partner:

- Latvia and Estonia worked with US CDC
- Tomsk (Russia) worked with PHRI and PIH
- LHL worked with Arkhangelsk
- Orël (Russia) worked with CDC and WHO
- Kazakhstan worked with Gorgas, KNCV, PIH
- PIH assisted the NTP in Peru with national scale-up
- TDF was the NTP’s main technical partner in the Philippines
- Lesotho received technical assistance from PIH and FIND
- MSF worked with Uzbekistan, Georgia, Armenia, South Africa, Swaziland
Medium to long-term **technical accompaniment**:

- ongoing, on-site assistance
- working closely, daily, with the NTP
- facilitating immediate solutions (filling gaps)
- providing ongoing training
2007-2009

1. STRENGTHEN CURRENT TECHNICAL ASSISTANCE CENTERS/KNOWLEDGE HUBS

Map showing locations of Lima, Riga, Maseru, Tomsk, and Manila with connections between them.
INTENSE MODELS OF ON-SITE TECHNICAL ASSISTANCE

FOR EXAMPLE (and/or):
- Country manager
- Laboratory consultant
- Community organizer
- Clinician
- Etc.
Clear Models for Integration and Expansion of DR-TB Treatment

- Develop clear case studies/models based on current successful examples:
  - Nepal
  - Peru
  - Philippines
  - Lesotho
  - Tomsk
  - Karachi

- Backed up with a systematic step-by-step plan and budget for the implementation in the country including:
  - Guidelines
  - Training program
  - Implementation strategy
  - Generic HR/Capacity building plans that can be adapted by countries
CAN THE WORKING GROUP PICK UP WHERE IT LEFT OFF AND WORK TO CATALYZE MDR-TB TREATMENT SCALE-UP?
STRATEGY – PHASE ONE

• Choose two or three EXPAND-TB/TBXpert countries with a gap between diagnosis and treatment – may choose countries with different issues that can act as a model for others

• Perform an in-depth analysis of the situation on the ground (Core Group point person + one or two other WG members)

• Work with the WHO regional offices and key stakeholders to develop a solution (e.g. with the NTP, private sector, the WHO, rGLCs, funding agencies, local and international civil society, local innovators, technical assistance providers, etc.)

• Work with stakeholders to implement the solution
In-depth country analysis

Development of strategy with stakeholders

Refinement of strategy as needed

Implementation of strategy with appropriate technical assistance

Measure the outcomes

Diagnose and treat more patients

INTERVENTION CYCLE
OUTCOMES OF INTEREST

• More patients on treatment
• Less mortality
• Higher treatment success

↓

• Less tuberculosis transmission
• Less death
• Less suffering
• Will be based on the success of phase one
• Start 8 to 12 months after phase one begins
• Will choose additional countries
HOW WILL THIS BE HELPFUL?

• Provides an concrete and targeted mechanism to bring together stakeholders with a focus on particular countries

• Capitalizes on the strength of the STP as a forum for partners to work closely together

• Create a system that will improve outcomes for patients and reduce the burden of tuberculosis
“Whatever… we try to create, it always ends up looking like the Communist Party.”
WE ASPIRE TO A WORLD WITH ZERO TB DEATHS

Thank you

Photo: Open Society Institute/Pep Bonet