What is new in WHO-guidelines relevant for childhood TB?

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12th NTP Managers’ Meeting and 16th Wolfheze Workshops
28 May – 31 May 2013, The Hague, The Netherlands
Overview of this presentation

• Global burden of childhood TB and challenges with country implementation

• WHO and Partners' response
  • WHO and other partners guidelines related to childhood TB – WHAT'S NEW?

Estimated number of cases

All forms of TB
- 8.7 million
  (8.3–9.0 million)

Childhood TB
- 490,000
  (470,000–510,000)
  ~ 5.6% of the total burden

Estimated number of deaths

- 1.4 million*
  (1.3–1.6 million)

- 64,000**
  (58,000 – 71,000)

Source: WHO Global Tuberculosis Report 2012

* Including deaths attributed to HIV/TB
** Excluding deaths attributed to TB/HIV
## WHO and Union survey – data from 9 countries, 2010

<table>
<thead>
<tr>
<th>Country</th>
<th>TB notification (in 100,000)</th>
<th>New TB cases reported to WHO</th>
<th>New TB cases reported in survey</th>
<th>Child TB of all cases notified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>28,238</td>
<td>642</td>
<td>2,946</td>
<td>10.4% (2.3%)</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>158,252</td>
<td>4,235</td>
<td>4,235</td>
<td>2.7% (2.7%)</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>156,928</td>
<td>3,190</td>
<td>17,566</td>
<td>11.2% (2%)</td>
</tr>
<tr>
<td>India</td>
<td>1,522,147</td>
<td>13,415</td>
<td>85,756</td>
<td>5.6% (0.8%)</td>
</tr>
<tr>
<td>Indonesia</td>
<td>302,861</td>
<td>28,312</td>
<td>28,312</td>
<td>9.3% (9.3%)</td>
</tr>
<tr>
<td>Myanmar</td>
<td>137,403</td>
<td>302</td>
<td>32,471</td>
<td>26.3% (0.2%)</td>
</tr>
<tr>
<td>Pakistan</td>
<td>269,290</td>
<td>24,474</td>
<td>24,474</td>
<td>9.1% (9.1%)</td>
</tr>
<tr>
<td>Uganda</td>
<td>45,546</td>
<td>669</td>
<td>662</td>
<td>1.5% (1.5%)</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>47,557</td>
<td>4371</td>
<td>4383</td>
<td>9.2% (9.2%)</td>
</tr>
</tbody>
</table>

Why children with TB are not reported?

- Difficulty in confirming a case of childhood TB - lack of accurate, reliable diagnostic tools;
- Focus on smear-positive cases (mostly adults);
  - Misperception of childhood TB as a low public health priority;
  - Misperception that childhood TB would disappear simply by containing TB in adults;
  - Use of "old" reporting formats (age/sex disaggregation for SS+ only)
- Hospitals and private providers not linked;
- Lack of recognition of childhood TB importance within existing child health programs;
- Lack of country guidelines and training material
- Lack of advocacy on behalf of children with TB;
Increasing International Leadership and Guidance

• 2003 – creation of **Childhood TB subgroup** of the DEWG (Stop TB Partnership)
  – 125 active members in 2013;

• 2006 – 2012 – **several international policy guidelines:**
  – WHO Guidance for national TB programmes on the management of TB in children
  – WHO recommendation on recording and reporting in two age groups for children (0-4 years and 5-14 years)
  – WHO Rapid Advice on treatment of tuberculosis in children
  – WHO/IUATLD Guidance for national TB and HIV programmes on the management of TB in HIV-infected children
  – IUATLD Desk guide for diagnosis and management of TB in children
  – **Sentinel project: management of *multidrug resistant tuberculosis in children*: a Field Guide**
Sentinel project: a Field Guide management of multidrug resistant tuberculosis in children:

- If you would like to receive printed versions of this Field Guide, please send an email with this request to sentinel_project@hms.harvard.edu and include your name and mailing address. Please also let us know how many copies you would like to receive.

Global momentum on Childhood TB

- World TB Day 2012 devoted to pediatric TB
- First estimates published in TB Report 2012
- Closing the gap between policy and practice is an identified priority
- WHO/UNICEF/CDC/Union/TAG Childhood TB Roadmap and advocacy to engage other programmes and care providers

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**Prevention, Diagnosis, and Treatment of Tuberculosis in Children and Mothers: Evidence for Action for Maternal, Neonatal, and Child Health Services**

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Revision of Childhood TB Guidance (2012-2013)

• First Guidance published in 2006
• New developments (policy documents and guidelines) on: diagnostics, treatment, contact investigation, TB/HIV, BCG, etc.
• Draft document developed by Union and WHO (Steve Graham lead)
  – Review of new evidence; expert panel (July 2012); peer-review (Aug-Oct 2012)
  – Awaiting editing and GRC clearance
What's new related to Childhood TB - Diagnosis

• Use of new, rapid, molecular diagnostic tools – when and where available;
  – Roll-out of Xpert MTB/RIF (73 countries as of Sept. 2012)
Use of new, rapid, molecular diagnostic tools – when and where available

- The WHO expert group met on 20-21 May 2013 to evaluate the evidence for the use of Xpert MTB/RIF in children and formulate recommendations;
- The recommendations need to be approved by the WHO Guidelines Review Committee (GRC), hence not yet available;
- However – recommended use of the technology expected, especially in severely ill children when time is crucial for making the diagnosis.

- IMPORTANT – negative Xpert test does NOT exclude TB in children and clinical decision should be made in all such cases.
What's new related to Childhood TB – Treatment

- Treatment with **new dosing of H, R, Z, E**
  - Isoniazid (H) 10mg/kg (range 7-15 mg/kg);
  - Rifampicin (R) 15mg/kg (range 10-20 mg/kg);
  - Pyrazinamide (Z) (35mg/kg (range 30-40 mg/kg)
  - Ethambutol (E) 20mg/kg (range 15-25 mg/kg)

- New, "ideal" FDC proposed: **RHZ 75/50/150**
  - Included in invitation to manufacturers for prequalification
  - UNITAID grant to Global TB Alliance and WHO for the development of new FDC
Priority should be given to contacts who are:
- children with symptoms suggestive of TB,
- children < 5 years of age,
- children with known or suspected immunocompromising conditions (especially people living with HIV (PLHIV)), and
- child contacts of index cases with MDR-TB or XDR TB (proven or suspected).

Children < 5 years of age who are household or close contacts of people with TB (and all children living with HIV, regardless of age) and who, after an appropriate clinical evaluation, are found not to have active TB should be given six months of IPT (10 mg/kg/day, range 7–15 mg/kg, maximum dose 300 mg/day).
What's new related to Childhood TB –
Age groups for reporting

- Many countries just report children as <15
- Further disaggregation is recommended since 2006: 0-4, 5-14

2.16 New pulmonary smear-negative/smear-unknown/smear-not done TB cases by age and sex, 2009 calendar year (number of patients)

Time-changes in the distribution of cases by age and sex are analyzed by WHO to understand trends in disease burden and gaps in the performance of TB surveillance

If you have data by age and sex that do not fit this framework (e.g., different age groups), please provide the data that you do have in the "Remarks" section.
Conclusions

- Capitalize on advocacy efforts and global momentum - to close the policy-practice gap through
  - Scaling up training and TA to countries;
  - Engaging with MCH, HIV/AIDS and child health services;
  - Pursuing fund raising for program implementation and advocating for more R&D funding
Acknowledgements

• Steve Graham and the core team of the Childhood TB subgroup
• Mario Raviglione, Babis Sismanidis and Annemieke Brands,
  – Stop TB Department/WHO HQ
Thank you for your attention!