MANAGEMENT OF TB IN CHILDREN IN VIETNAM: IMPLEMENTATION AND ROLL-OUT

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KNCV Tuberculosis Foundation\TB CARE I - Vietnam
# TB burden in Vietnam

<table>
<thead>
<tr>
<th>Estimate of TB burden in Vietnam(*)</th>
<th>Number (thousand people)</th>
<th>% (over 100,000 people)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death due to TB</td>
<td>18 (12-25)</td>
<td>20 (13 - 27)</td>
</tr>
<tr>
<td>TB cases of all forms (incl. HIV+)</td>
<td>200 (79 - 370)</td>
<td>218 (86 - 410)</td>
</tr>
<tr>
<td>New TB cases of all forms (incl. HIV+)</td>
<td>130 (99 - 170)</td>
<td>147 (109 - 192)</td>
</tr>
<tr>
<td>New TB/HIV(+) cases</td>
<td>9.3 (6.9 - 12)</td>
<td>10 (7.6 - 13)</td>
</tr>
<tr>
<td>Detection rate (%)</td>
<td></td>
<td>76 (59 - 100)</td>
</tr>
<tr>
<td>Percentage of MDR-TB in new TB patients (%)</td>
<td>2.7 (2 - 3.7)</td>
<td></td>
</tr>
<tr>
<td>Percentage of MDR-TB in retreatment TB patients</td>
<td>19 (14 - 25)</td>
<td></td>
</tr>
<tr>
<td>Percentage of TB patients having HIV test done</td>
<td>66%</td>
<td></td>
</tr>
<tr>
<td>Percentage of TB patients having HIV</td>
<td></td>
<td>7%</td>
</tr>
</tbody>
</table>

(*) Global TB report 2013
Situation of childhood TB in Vietnam

- Children aged <5 yrs accounts for 24% population (21 million children) (1)
- ARIT: 1.67% (2) i.e approximate 351,000 children infected with TB annually
- WHO guidance 2006, (3) around 13,000 children estimated with TB annually
- NTP reports 1200 – 1300 child TB cases each year
- IPT not widely implemented – recommended since 2011

(1): General Department of Population Statistics 2010,
(2): NTP Prevalence Survey in 2006
TB network in Vietnam

Ministry of Health

Provincial Health Service

National Lung Hospital

National TB Program

Provincial Tuberculosis Center/Hospital (63)

District Health Services

Tuberculosis Unit (780)

Commune Health Center (10,100)

Command line

Technical line
NEW APPROACH OF THE MANAGEMENT OF TB IN CHILDREN

1. Screen and manage children that are close contacts (living in the same household) of a sputum smear positive TB case in community

2. Provide IPT for child contacts aged <5 and children having HIV (once TB excluded) at communal (primary care) health center level.

3. Develop diagnostic algorithm to be applied for diagnosis of TB in children at the district (second care) level.

4. Engage the wider health care sector by the NTP strengthening links and collaborating with the child health sector
Progress

2010 - 2012

- Establish and develop TORs for the childhood TB working group of NTP (including NTP members and extended to Pediatrics Association, ARI)
- Develop the national guidelines on management of TB in children including child contact screening and diagnostic and treatment algorithms, forms & registers, M&E (monitoring checklist), etc...
GUIDANCE for the diagnosis of children who present with symptoms suggestive of TB

At every assessment, consider:
Other possible diagnosis
Need for immediate hospitalization or referral?

Present with symptoms suggestive of TB?

- Sputum smear-negative or not available

  Positive TB contact for 1 year - 2

    No
    - Sputum (+)
    - Yes
    - Physical signs or CXR supportive of TB diagnosis - 3
    - Yes
    - TREAT FOR TB
    - Two or more of these symptoms are highly suggestive of TB disease

  No
  - Regular follow-up
  - Refer if poor response to therapy after 2 months

Consider other diagnoses
Or Refer if symptoms persist
GUIDANCE for the screening of children in close contact with a newly diagnosed pulmonary TB

Children in contact with a pulmonary TB patient are registered and screened at communal level (Register book #S1)

Any current symptoms suspicious of TB? cough, wheeze, fever, lethargy, fatigue, weight loss, neck swelling

- No
  - <5yrs OR HIV-infected
    - IPT for 6 months
    - Regular follow-up
    - Remains well
    - Complete 6 months of IPT

- ≥5yrs AND HIV-uninfected
  - No IPT
  - If typical symptoms develop
    - Remains well
    - Complete 6 months of IPT

- Yes
  - Refer to DTU for TB examination
    - No
      - IPT consultation
    - Yes
      - TB treatment
Progress

- Training: provide training on childhood TB management for NTP staff, pediatricians, doctors in general hospitals at provincial, district level and HCWs at commune level
- Provide Isoniazid, forms and registers, etc... for the pilot implementation
- Develop and distribute IEC materials
Progress

- Incorporate childhood TB management into 5-year strategic plan 2016-2020
- Include childhood TB data in routine reporting and reviews
- Provide TA for rolling out to other provinces with GFATM funds (6 (2013-2014), 12 (2015))
HA NOI: 10 districts, 179 communes

THAI BINH: 8 districts, 286 communes

HCMC: 24 districts, 307 communes
(13 districts with 156 communes rolled out with local budget)

CAN THO: 9 districts, 85 communes

Childhood TB management in 4 pilot provinces with 51 districts and 857 communes
# Results of community contact screening in 4 pilot provinces in Viet Nam

<table>
<thead>
<tr>
<th></th>
<th>2012 (Q4)</th>
<th>2013</th>
<th>2014 Q1 &amp; Q2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td># of close contact children screened and managed</td>
<td>1084</td>
<td>3025</td>
<td>2002</td>
<td>6111</td>
</tr>
<tr>
<td># of eligible children for IPT</td>
<td>339</td>
<td>1238</td>
<td>817</td>
<td>2394</td>
</tr>
<tr>
<td># of children put on IPT</td>
<td>184</td>
<td>764</td>
<td>465</td>
<td>1413</td>
</tr>
<tr>
<td>% put on IPT</td>
<td>54.3</td>
<td>61.7</td>
<td>56.9</td>
<td>59.0</td>
</tr>
<tr>
<td># of children with TB disease</td>
<td>57</td>
<td>286</td>
<td>116</td>
<td>459</td>
</tr>
<tr>
<td>Pulmonary TB ss(+)</td>
<td>7</td>
<td>30</td>
<td>7</td>
<td>44</td>
</tr>
<tr>
<td>Pulmonary TB ss(-)</td>
<td>27</td>
<td>130</td>
<td>57</td>
<td>214</td>
</tr>
<tr>
<td>Extra-pulmonary TB</td>
<td>23</td>
<td>128</td>
<td>52</td>
<td>203</td>
</tr>
</tbody>
</table>
### Results of IPT

<table>
<thead>
<tr>
<th>Province</th>
<th>Total (cohort Q4/2012 – Q2/2013)</th>
<th>IPT results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Completed</td>
</tr>
<tr>
<td>Hanoi</td>
<td>79</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(90.0%)</td>
</tr>
<tr>
<td>HCMC</td>
<td>167</td>
<td>130</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(77.6%)</td>
</tr>
<tr>
<td>Can tho</td>
<td>283</td>
<td>226</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(79.9%)</td>
</tr>
<tr>
<td>Thai binh</td>
<td>94</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(99.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>624</td>
<td>520</td>
</tr>
<tr>
<td></td>
<td></td>
<td>83.3%</td>
</tr>
</tbody>
</table>

- IPT completion rate is 83.5%. The default rate is 16.5%
- The rate of side-effect is 0.2%
**Xpert MTB\RIF for diagnosis of TB in children (Q3/2012 – Q2/2014, 17 GeneXpert sites)**

<table>
<thead>
<tr>
<th>Total</th>
<th>MTB(-)</th>
<th>MTB(+)</th>
<th>Error/ indeterminate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>Subtotal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MTB(+)\R(-)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MTB(+)\R(+)</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>1093</td>
<td>991</td>
<td>90,7</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>69</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>29</td>
</tr>
</tbody>
</table>

Specimen: 30% sputum, 65% gastric aspirate
NATIONAL WORKPLAN FOR ROLL-OUT OF THE MANAGEMENT OF TB IN CHILDREN IN 2015-2020 PERIOD
Workplan development process  
(April – August 2014)

- Establishment of a team for childhood TB workplan 2015-2020 development (NTP Childhood TB Group and other technical groups)
- Partners: Vietnam Association of Pediatrics, ARI, HIV program, WHO, KNCV, CDC, ...
- First stakeholders workshop to get commitment of childhood TB, identify priority and gap and agree on workplan’s framework (Apr 2014)
- Second stakeholders workshop to discuss and finalize the plan for management of TB in children, 2015-2020 (Jul 2014)
- The workplan approved by NTP and submitted to WPRO in Aug 2014
- The plan has been included in NTP National Strategic Plan for 2015-2020 which has been approved by MOH and included in the concept note to GF (Aug 2014)
Management of TB in children Plan in 2015-2020 period


Objectives:

2. Strengthening detection and early treatment for children, increasing the percentage of childhood TB in total new TB cases detected annually, from 1.2% (2013) to 6% (2020).
3. Strengthening management, screening and IPT for children with close contact with a PTB case, to ensure 100% PTB cases are investigated for child contacts management, at least 80% child contacts eligible for IPT on IPT and 90% IPT completion.
## Key indicators by 2020
(GF proposal and concept note)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Year</th>
<th>Information source</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of provinces scaling up the new approach</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>% of childhood TB cases/total TB cases</td>
<td>1.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Treatment success</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of children receiving IPT</td>
<td>896</td>
<td>2050</td>
</tr>
<tr>
<td>% of IPT completion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Estimated budget for childhood TB 2015-2020 period

<table>
<thead>
<tr>
<th></th>
<th>Obj 1</th>
<th>Obj 2</th>
<th>Obj 3</th>
<th>Obj 4</th>
<th>Total (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD</td>
<td>177,050</td>
<td>1,729,410</td>
<td>1,370,500</td>
<td>150,000</td>
<td>3,426,960</td>
</tr>
</tbody>
</table>

Excluded TB drugs and supply for diagnosis
Main activities in Objective 1 (ACSM)

1. Communicate in mass media on the situation of TB in children to attract the attention of stakeholders and community.
2. Organize workshops with related partners to call for and strengthen collaboration for TB control in children.
3. Establish an inter-sectional technical working group to implement TB control activities under the administration of NTP.
4. Organize workshop to advocate MOH to issue policies in support of TB control in children.
5. Develop plans for and implement activities to communicate, advocate and mobilize participation of partners and community in activities of TB control in children.
Main activities in Objective 2 (Diagnosis and treatment)

1. Update national guidance on TB management in children
2. Train NTP staff, pediatricians on the diagnosis and treatment of TB in children.
4. Set up Childhood TB and Respiratory Disease Department in provincial TB and Lung Disease Hospitals.
5. Strengthen PPM in detecting TB in children
6. Step by step equip new technologies in diagnosing TB in children
7. Provide children-friendly drugs for childhood TB treatment
8. Maintain M&E for childhood TB control activities
Main activities in Objective 3 (child contact management)

1. Training for TB in charge staff at commune/ward level on the procedure for screening and IPT for child contacts.

2. Design, print and disseminate R&R, forms on child contacts screening and IPT.

3. Develop the plan to procure and supply INH contents of 50 mg and 150 mg.

4. M&E in screening and IPT activities.
Main activities in Objective 4 (M&E and OR)

1. Add indicators of TB control in children in NTP’s R&R forms and registers
2. Integrate the information management of childhood TB activities in NTP’s information management system
3. Assess performance indicators for ACSM and planning development.
4. Conduct evaluation on the performance of and studies on TB management in children in terms of:
   - R&R and supervision system at different levels.
   - Treatment outcomes.
   - TB prevalence in child contacts through active case finding.
   - Effectiveness of new technologies in the diagnosis of TB in children.
   - Monitoring the TB morbidity in children and IPT,...
Thank you very much!