Scaling up Child TB Activities: the Kenyan Experience

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### Population

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<tbody>
<tr>
<td><strong>Children &lt; 14 yr</strong></td>
<td><strong>33.4 Million</strong></td>
</tr>
<tr>
<td><strong>40% of population</strong></td>
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### Case Notification Rate (2006)
- **329/100,000**

### Incidence of TB (2006)
- **115,324 (58,854 – 07)**

### Case Notification Rate (2006) HIV prevalence
- **6.1%**

### TB patients with HIV (2007)
- **49%**
Kenya

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
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<tr>
<td>Population</td>
<td>2006</td>
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<tr>
<td>Population</td>
<td>39.4 million</td>
</tr>
<tr>
<td>Children &lt; 14yr</td>
<td>~ 43% of population</td>
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<tr>
<th>Indicator</th>
<th>Value</th>
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<tr>
<td>TB CDR (WHO-2007, Report)</td>
<td>50%</td>
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Historical Picture in Kenya (before 2008)

Child TB under-recognized and under-represented on several fronts.....

• Policy level
  – Minimal mention child TB in policy documents & meetings

• Health services delivery level
  – Children managed as “small adults”
  – Health workers inadequate understanding & skills to diagnose and manage children
  – Use of scoring system a barrier (complex, lab and xray limited availability)
  – Much up-referral to paediatrician for diagnosis
  – Use of adult drug formulations
Historical Picture in Kenya

• Monitoring & Outcomes
  – Tailored to adults (registers, Rx cards, outcome indicators)
• Training material & TB Guidelines
  – Child TB module - 2 hrs in 5 day national TB training Course
  – National guidelines 2006 version – child TB absent
  – Target trainees usually NTP personelle, rarely from MCH or pediatric fraternity
• Prevention
  – Child contact tracing low
  – Health workers not confident at ruling out active TB in children
  – No INH prophylaxis available
The Pathway to Scaling Up Child TB Activities in Kenya
Advocacy

• Two paediatricians realized lack of child issues in TB program activities (researcher, lecturer)
• Began inviting ourselves to Ministry of Health forums on TB
• Created awareness of child TB, the gaps and poor outcomes we see in hospitals
• At National TB Program Policy makers slowly began to listen (Head of National TB Program, and some NTP officers.....)
Advocacy bears fruit....

• National TB Program – began to regularly seek technical guidance from paediatricians on child TB and lung diseases (from 2008....)
  – Paediatrician involvement in developing child Tb content for National Guidelines book when reviewed in 2008-9 (first time substantively included)

• Kenya Paediatric Association – organized one day symposium on Child TB
  – Invited NTP to participate (present and hear CME)
  – Updated paediatric fraternity on child TB

• This was the beginning of true scale up of child TB activities...
The Pathway to Scale Up

• Afro WHO office organised Workshop on Child TB involving Sub-Saharan African country teams (Malawi 2009)

• Kenya Ministry of Health sent combined team including a Provincial TB Officer & two paediatricians

• Supported by Kenya WHO TB point person

• Developed a matrix outlining SWOT – with action and implementation plan to address child TB issues in-country
The Pathway to Scale Up

• One Provincial TB officer – requested to handle child TB agenda – coordinated activities and various technical experts & partners to move agenda forward
  – (WHO, Universities, Research Institutes, NGOs)

• Developed stand alone guidelines “Management of Child TB” (2010)
NLTP Strengthens Leadership in Child TB

• Child TB Technical Working Group in NTLP set up in Nov 2011. Multi-organisational representation:
  – MoH – NLTP + HIV, MCH and Nutrition programs
  – Medical Schools & Research Institute
  – Partners – CDC, other NGOs (ICAP, AMREF)
  – TWG meets at least twice each year

• NLTP Officer in National Office given dedicated portfolio of Child Tb as full-time responsibility

• Inclusion of Child TB in National Strategic Plan 2013 – 2018 (with Budget line)
The Pathway to Improvement

Widespread creating of awareness on Child TB including:

• Official launch of Child TB Guidelines at World TB day 2012
• Sensitisation and distribution of child TB guidelines at Kenya Paediatric Association Conference 2012
• Child TB included in World AIDS day ceremony program
Equipping Health Workers to Manage Child TB

- Child TB TWG organised workshop to write training material for equipping & updating health workers to manage Child TB
  - Two hour CME “A to Z of Child TB”
  - 5 day course on “Management of Child TB”
- Job-aids specific for children also developed:
  - Screening for TB - IPT dosage charts
  - Diagnostic algorithm - Drug dosage charts
- Monitoring card adapted to include child-specific aspects

All Aligned to revised National Guidelines
Resource material - WHO child TB generic course material
Equipping Health Workers to Manage Child TB

• Roll out of training health workers from August 2013 county by county

• Strategy:
  – Train potential trainers including paediatrician, medical officers alongside TB program personnele
  – Train staff from MCH and paediatric wards, hospital pharmacists, lab personnele
  – Introduce job-aids and updated child TB guidelines
Mid-term Review of National TB Program Feb 2014

- Child TB – included as separate focus area
- Key recommendations made:
  1. Access to diagnostics - CXR and xpert testing should be scaled up and free for children.
  2. Child TB capacity building (knowledge and skill development) on diagnosis, management and prevention.
  3. Scale-up child contact tracing to improve case finding and IPT uptake.
- Child TB activities scaled up accordingly in the current TB program strategic plan (2014-2018)
TB Cases - Child versus Adult

Kenya experience Child TB, Obimbo
Asante! Thank you! Orio! Erokamano!
Bien venue! Grazios! Danke!
SUPPLEMENTAL SLIDES

Numbers of reported cases

Year

'S87 '88 '89 '90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06

- Smear Positive Pulmonary TB
- Smear Negative Pulmonary TB
- Extra Pulmonary TB
- Retreatment Cases
- All TB

SMN increase is worrying

Kenya experience Child TB, Obimbo
Child TB Diagnostics - Situation 2006

• Diagnostic approach
  – Clinical scoring system approach by most
  – Many health workers found this too complex – not confident
  – Required CXR, ESR, TST – frequently not available

• Diagnostic tests
  – CXR mainstay – poor access due cost, no Xray facilities most clinics where children seen
  – Gastric lavage – recommended but largely un-available
  – Sputum – rarely collected even in older children
  – MTb tests on child specimens – microscopy only which has low sensitivity in child pauci-bacillary disease
  – Mantoux (tuberculin) test not available
  – HIV testing – low testing rates in children with TB, HIV PCR for infants required referral to HIV services
Child TB Treatment - Situation 2006

- General tendency towards up-referral of children with suspected TB – led delay in Rx initiation
- Pediatric drug dosage tables available
- Pediatric drug formulation availability inconsistent
- Predominant use of adult TB drugs even for young children – HW choice
- Low awareness on need to weigh child and adjust dosage during 6 months of Rx as child gains weight
- Adjunct Rx – pyridoxine adult formulation

Kenya experience Child TB, Obimbo
Follow-up Monitoring – Situation 2006

Patient follow-up TB treatment card

• Tailored for adults
• Weight captured only at start of Rx
• No place to adjust drug dose with change of weight
• Outcome recording tailored to sputum positive individuals
  – no sputum done in most children
  – therefore poor capture of child TB Rx outcomes

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