Finding the children
TB REACH Project

‘Finding the Children’ is supported by the STOP TB Partnership’s TB Reach Initiative and is funded by the Government of Canada and the Bill and Melinda Gates Foundation
Outline

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Background

- Tuberculosis is a major public health problem in Kenya
- Kenya is listed among the 30 high burden countries for TB (WHO, 2017)
- Great strides have been made in TB management in Kenya including being the first country to roll out the new pediatric formulations
- However the recently released TB Prevalence survey results on 24\textsuperscript{th} March 2017 shows a higher prevalence hence an estimated 40% missed cases annually

\begin{itemize}
  \item \textbf{2015 WHO estimate}\textbf{ 233 per 100,000 population}
  \item \textbf{2016 Prevalence survey estimate}\textbf{ 558 per 100,000 population}
\end{itemize}

- The estimated prevalence estimates for 0-14 years still pending
Problem statement (1)

- In 2017, 7,714 children became ill with TB; representing 9.1% of the total TB cases

- WHO estimates 10-15% of total cases notified should be children hence Kenya still has to improve the pediatric case finding

- Only 13% of children living in Bac+ TB households received IPT in 2017

- Children remain one of the most vulnerable populations where TB response remains suboptimal in Kenya
Problem statement (2)

• Case finding is low for children due to:
  ✓ Socio-economic constraints; poverty that prevents children from accessing care
  ✓ Diagnostic Challenges; diagnostic options with poor sensitivity, difficulties in getting a sputum sample, more than 50% of children thought to be asymptomatic in early stages of disease
  ✓ Inadequate health care worker knowledge and skills on screening, sample collection and TB management in children

• Uptake of Isoniazid preventative therapy for under 5 eligible is low due to:
  • Barriers to access for contact screening
  • Follow up to ensure completion of therapy
Project Goal

• To increase pediatric case finding in 9 counties
• To increase number of children under 5 years eligible for IPT to be put on IPT
• To improve cohort outcomes for both children on TB treatment and IPT
Implementation Area

<table>
<thead>
<tr>
<th>Name of district/BMU</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nairobi</td>
<td>1,136,638</td>
</tr>
<tr>
<td>Mombasa</td>
<td>362,166</td>
</tr>
<tr>
<td>Machakos</td>
<td>500,558</td>
</tr>
<tr>
<td>Garissa</td>
<td>349,404</td>
</tr>
<tr>
<td>Siaya</td>
<td>442,831</td>
</tr>
<tr>
<td>Makueni</td>
<td>484,538</td>
</tr>
<tr>
<td>Kericho</td>
<td>389,828</td>
</tr>
<tr>
<td>Meru</td>
<td>633,830</td>
</tr>
<tr>
<td>Kirinyaga</td>
<td>203,586</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,043,862</strong></td>
</tr>
</tbody>
</table>

- Implementation in 9 counties
- Start with 3 counties and add 3 per month
- 10 high volume facilities per county
- Target population: Children 0-14 years old

*Children living in Bac+ households as this is the most important risk factor for TB in children and ill children visiting maternal child health clinics and the*
Implementation strategy and innovations

- Health care worker capacity building on nasopharyngeal aspirates (*Best practice from CDC/KEMRI*) and gastric aspirates
- GeneXpert testing for all collected samples
- Innovative training through didactic, ECHO, You tube videos
- Develop a mobile app for childhood TB information on screening, diagnosis and treatment
- Reimbursement of transport and Xray costs for the children brought in for contact tracing (*Best practice from Wave 2, AMPATH*)
- Introduction of a single combined register for contact screening and Isoniazid preventative therapy monitoring
Intervention

• The interventions will include:
  ✓ Facility based screening of children in all departments/units e.g. MCH, POPC, pediatric wards, nutrition clinics, CCC etc.
  ✓ Household contact investigation for childhood TB using Index TB case
  ✓ Cohort follow-up and treatment outcomes

• This will be done by addressing barriers to contact screening:
  ✓ Increasing access to care by engaging Community Health Volunteers to trace contacts
  ✓ Facilitating transport and X-ray access costs and for high risk children
  ✓ Health care worker capacity building
Other expected outcomes

- Increased case finding for adults due to reverse contact tracing
- Increased knowledge and skills on TB among HCWs
- Screening for TB at all departments/units e.g. MCH, POPC, pediatric wards, nutrition clinics, CCC etc.
- Adoption of NPA as an acceptable technique for collecting of samples
- Evaluation of the different training interventions; what works best
- Adoption of the pediatric App in the whole country
Scalability and sustainability

• There will be plans to scale up the interventions by NTLD-Program

• GF ATM and USAID grants will be targeted for country scale up

• Local funding through counties will also be sought
Research questions?

• Provider/patient acceptability for NPA/GA procedure? What are the barriers to pediatric diagnosis? Does the simplified procedure work? Yield???

• Yield from pediatric TB screening interventions

• Contact tracing yield for under 5s with history of contact with bacteriologically confirmed TB patients; barriers and enablers for contact tracing?

• Evaluate Isoniazid Preventative Therapy (IPT) outcomes among under 5’s TB contacts; barriers and enablers for IPT initiation & completion of therapy

• Evaluate the role of X-ray in pediatric TB Diagnosis
Key Messages

• High index of suspicion for TB in children with recurrent cough, fever, weight loss/ poor weight gain
• Bacteriological confirmation of TB in children - use of gene xpert
• Use of chest X-ray to screen and diagnose TB
• Linkage with the NTP for child friendly TB formulations
• Pediatricians’ support in TB trainings and CME’s
• Generation of evidence in pediatric TB for informed policy formulation & decision making
Acknowledgements

1. Ministry of Health – National Tuberculosis, Leprosy and Lung Diseases Program

2. The County government

3. The Stop TB Partnership

4. KPA

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