Using available evidence to inform a prioritized and patient-centred National Strategic Plan

Maureen Kamene
NSP 2015-2018

Evidence-based plan

Evidence was epidemiological and related to programmatic performance

Strategic Priorities

Identify and treat all cases
1. Core DOTS
2. MDR-TB
3. Pediatric TB
4. Leprosy

2. Engage all care providers
3. Promote and strengthen community engagement
4. Enhance the multi-sectoral response to TB/HIV
5. Accelerate appropriate diagnosis
6. Ensure stable & quality supply of all commodities
7. Enhance evidence-based programme monitoring & evaluation
8. Create an enabling, multi-sectoral environment
9. Support devolution

Everything was equally “prioritized”
NSP Development Process

NSP 2015 – 2018
We thought we knew the epi. We planned using it.

1. Identify and treat all cases
   1. Core DOTS
   2. MDR-TB
   3. Pediatric TB
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8. Create an enabling, multi-sectoral environment
9. Support devolution

What’s New?
Global Fund application

Prevalence survey
- More TB than previously estimated
- Non-specific symptoms & asymptomatic TB

Patient pathway analysis
- People with TB in the health system, undiagnosed
- Etc.

1. Core DOTS
2. MDR-TB
3. Pediatric TB
4. Leprosy

Diagnostic gap
- Pediatric
- Drug resistance
- Stigma

Drug sensitive
- Nontuberculosis mycobacteria

Drug resistance
- Treatment failure

Contacts
- Preventive therapy

Diagnostic services
- Stigma

Drug shortages
- Stigma

Pediatric disease
- Stigma

Drug sensitive
- Stigma

Asymptomatic disease
- Stigma

Catastrophic costs
- Stigma

Private sector
- Stigma

Non-adherence
- Stigma

Public sector
- Stigma

Social support
- Stigma

Preventive therapy
- Stigma

HIV connection
- Stigma

Support devolution
NSP Development Process

**NSP 2015 – 2018**
*We thought we knew the epi.*
*We planned using it.*

1. Identify and treat all cases
   1. Core DOTS
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**What’s New?**

**Prevalence survey**
- more TB than previously estimated

**Patient pathway analysis**
- people with TB in the health system, undiagnosed

**Adherence study**

**Inventory study**
- Many patients on care, not notified

**Epi review**

**NSP 2018 - 2023**
*We know more about the epi.*
*Now we know about patient behavior. We can plan to local patient needs.*

**3 ways this NSP can be ground-breaking:**

1. Use **consolidated national data** to incorporate a robust evidence base to establish priorities for action

2. Use **sub-national data** to build a plan that responds to county-specific needs and successes

3. Use **impact evaluations** and **modeling to optimize the effectiveness** of packages of interventions

   enabling a prioritized / tiered plan
Framework for prioritization and planning

Reviewing the evidence about the biggest epidemiological challenges and the biggest challenges on a patient’s pathway to care can help to identify which sets of problems should be priorities for the national TB program.

- **Pre-work**: People don’t make it to the health system
- **Day 1**: People are in the health system, but not notified/diagnosed
- **Day 2**: People with TB are notified, but not cured

### Day 1: Problem Prioritization
- **Which are the biggest problems?**

### Day 2: Root Cause Analysis
- **What contributes to the problem?**
- **What does it look like?**
- **What are priority solutions to optimize impact?**

### Day 3: Intervention Identification
- **Implement the best solutions**
- **What was the impact of these solutions?**
Framework for prioritization and planning

Reviewing the evidence about the biggest **epidemiological challenges** and the biggest **challenges on a patient's pathway to care** can help to identify which sets of problems should be priorities for the national TB program.

1. **Problem Prioritization**
   - Which are the biggest problems?

2. **Root Cause Analysis**
   - What contributes to the problem? What does it look like?

3. **Intervention Identification**
   - What are priority solutions to optimize impact?

**Pre-work**

- People don’t make it to the health system
- People are in the health system, but not notified/diagnosed
- People with TB are notified, but not cured
- People with TB are notified, but not cured

Implement the best solutions

What was the impact of these solutions?
## National data and evidence compiled (1/2)

<table>
<thead>
<tr>
<th>Resource Title</th>
<th>Year</th>
<th>Problem Prioritization</th>
<th>Root Cause Analysis</th>
<th>Solution Optimization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveillance, Surveys and Studies</td>
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<tr>
<td>TB Surveillance Data (TIBU)</td>
<td>All</td>
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<td>X</td>
<td></td>
</tr>
<tr>
<td>TB Prevalence Survey 2015/2016^</td>
<td>2016</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Adherence survey 2017^</td>
<td>2017</td>
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<tr>
<td>TB Patient cost survey 2017^</td>
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<td>X</td>
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<tr>
<td>Inventory study 2014/2015^</td>
<td>2016</td>
<td>X</td>
<td>X</td>
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<td>Drug resistant survey 2014/2015</td>
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<td>Delay in Diagnosis 2013/2014*</td>
<td>2014</td>
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<tr>
<td>Kenya Demographic and Health survey (KDHS) 2013^</td>
<td>2013</td>
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<td>KAI 2012*</td>
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<td>Community survey 2017*</td>
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<td>Keheala study to improve Treatment Adherence*</td>
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<td>Health Expenditure Utilization Survey 2016</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>Analyses</td>
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<tr>
<td>Patient Pathway analysis 2017^</td>
<td>2017</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Legal environmental assessment by KELIN 2017*</td>
<td>2017</td>
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<td>X</td>
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<tr>
<td>Data for action for Key, Vulnerable and underserved population by KELIN 2017/2018*</td>
<td>2018</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Gender barriers to TB by KELIN 2017*</td>
<td>2018</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>TB/DM by AMPATH*</td>
<td>2017</td>
<td></td>
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## NATIONAL DATA AND EVIDENCE COMPILED (2/2)

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<tr>
<td><strong>Reviews/Reports</strong></td>
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<tr>
<td>WHO Global TB Report 2017(^\wedge)</td>
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<td></td>
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<tr>
<td>GF concept note</td>
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<td>NTLDP Annual report 2017</td>
<td>2018</td>
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<td></td>
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<tr>
<td>Mid term review 2017</td>
<td>2017</td>
<td></td>
<td>X</td>
<td>X</td>
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<tr>
<td>Epi Review 2017(^\wedge)</td>
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<td>X</td>
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<td>X</td>
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<tr>
<td>ACF Experience sharing report 2017</td>
<td>2017</td>
<td>X</td>
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<tr>
<td><strong>Policy Documents</strong></td>
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<tr>
<td>Kenya Health Sector Strategic and Investment Plan 2013-2017</td>
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<td>END TB Strategy</td>
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<tr>
<td>Isolation policy</td>
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<td>Social protection policy</td>
<td>2018</td>
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<td>Sustainability framework</td>
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<tr>
<td>Investment case</td>
<td>2017</td>
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<td></td>
<td>X</td>
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<tr>
<td>NSP 2015-2018</td>
<td>2015</td>
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<td>X</td>
</tr>
</tbody>
</table>
**Data and Evidence Mapped to the Care Continuum**

Priority setting requires: Know your epidemiology, know your patient, know your system

<table>
<thead>
<tr>
<th>Patient</th>
<th>People don’t make it to the health system</th>
<th>People with TB in the health system, but not notified/diagnosed</th>
<th>People with TB are notified, but not cured</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>People with TB infection, high-risk for disease</td>
<td>Asymptomatic disease, not seeking care</td>
<td>Symptomatic disease, not seeking care</td>
<td>Presenting to health facilities, not diagnosed</td>
<td>Diagnosed by non-NTP, not notified</td>
</tr>
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<td></td>
</tr>
<tr>
<td>Symptomatic disease, not seeking care</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>DS-TB</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DR-TB</td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>TB/HIV</td>
<td></td>
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</tr>
</tbody>
</table>

# Important metrics from available evidence resources (see following slides)
**Kenya TB Prevalence Survey: Call to Action, Finding the Missed TB Cases**

**TB Testing and Diagnosis**
- Expand symptom lists for TB screening beyond the 4 cardinal symptoms - cough of more than two weeks, fever, night sweats and weight loss - and include any TB-related symptoms - cough of any duration, night sweats, vomiting, fatigue, fever, and shortness of breath.
- Screen all persons with respiratory symptoms: seeking care in health facilities for TB.
- Make diagnostics accessible where patients seek care.
- Expand use of Chest X-ray to screen all persons presumed to have TB.
- Make development the first diagnostic test for all presumed TB cases.

**Public-Private Sector Partnership**
- Engage the private sector in TB screening, treatment, and treatment, including private pharmacies.

**Community Based Action**
- Develop and implement targeted approaches for communication, TB screening and active case finding among young men and the elderly.
- Enhance focus on urban TB care and prevention to address the high burden of TB in cities and towns by the Ministry of Health, County Governments and civil society partners.
- Focus on targeted screening and active case finding among high-risk groups: men, urban youth, prisoners, informal labor sector, schools/colleges.
- Expansion of social protection and food subsidies to include TB.

**Improve Community Awareness of TB Symptoms**
- Develop targeted messages and health education on TB to key affected populations encouraging people to seek early intervention for any symptoms.
- Expand school health programs to include TB and target children as change agents to reach young families.

**Malawi TB Everyone’s Business**
- The Ministry of Health in Malawi has been a multi-sectorial engagement for TB control to particularly address issues to do with poor nutrition, sanitation, housing, poverty and overcrowding.

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**Symptomatic disease, not seeking care**

Majority of people found to have TB had not sought health care for their symptoms prior to the survey. – Majority did not seek health care because they did not perceive their symptoms as being serious.
Presenting to health facilities, not diagnosed

43% of people with TB are likely to visit a health facility with capacity for TB diagnosis on their first visit to the health care system. Even fewer are likely to receive a DR diagnosis on their first visit.

Diagnosed by non-NTP, not notified

Over 40% of people initiate their care seeking journey in private (formal or informal) facilities. Diagnostic capacity exists in the private sector, however only notifications from the private sector only account for 13% of the estimated burden.
# Evidence Review Sessions

## Burden of Disease

<table>
<thead>
<tr>
<th>Patient</th>
<th>People Who aren’t in the health system</th>
<th>People with TB in the health system, but not notified/diagnosed</th>
<th>People with TB are notified, but not cured</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High-risk for TB infection, or breakdown to disease</td>
<td>Presenting to health facilities, not diagnosed</td>
<td>People with TB notified to the NTP</td>
</tr>
<tr>
<td></td>
<td>Asymptomatic disease, not seeking care</td>
<td>Diagnosed by private sector, not notified</td>
<td>On treatment without treatment success</td>
</tr>
<tr>
<td></td>
<td>Symptomatic disease, not seeking care</td>
<td>Diagnosed by public sector, not notified</td>
<td>Complete Tx, w/out durable, relapse-free cure</td>
</tr>
</tbody>
</table>

### Session 1

- **DS-TB***
- **DR-TB**
- **TB/HIV**

### Session 2

- Evidence related to people not in the health system

### Session 3

- Evidence related to people in the health system not being diagnosed/notified

### Session 4

- Evidence related to people who are notified, but not cured
WORKING GROUPS ACCESSED DATA / EVIDENCE SUMMARY SHEETS

Session 1 – Burden of Disease

Session 2 – People not in health system

Session 3 – People in system, not notified/dx

Session 4 – people notified, but not cured

2016 Prevalence Survey
2017 WHO TB Report
2014 DHS
2016 Inventory Study

2017 Patient Pathway Analysis
2017 Epi Review
2013 HEUS
Among prevalent TB patients in the prevalence survey, 13.4% were recorded in TIBU as HIV(+) while 23% of these patients self-reported as HIV(+).

**Table 3.8: Survey participants HIV status from self-reporting**

<table>
<thead>
<tr>
<th>HIV Status</th>
<th>Enrolled (%)</th>
<th>TB Cases (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Know HIV status</td>
<td>32,386 (51)</td>
<td>200 (66)</td>
</tr>
<tr>
<td>2. Positive</td>
<td>1,627 (5)</td>
<td>46 (23)</td>
</tr>
<tr>
<td>3. Negative</td>
<td>30,759 (95)</td>
<td>154 (77)</td>
</tr>
<tr>
<td>4. No knowledge</td>
<td>30 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>5. No answer</td>
<td>30,634 (49)</td>
<td>105 (34)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>63,050 (100)</strong></td>
<td><strong>305 (100)</strong></td>
</tr>
</tbody>
</table>

**Table 3.7: HIV status of the prevalent cases by age group and sex**

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>HIV-Negative</th>
<th>HIV-Positive</th>
<th>Died before start of RX</th>
<th>Declined</th>
<th>Not traced</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-24</td>
<td>39</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>10</td>
<td>54</td>
</tr>
<tr>
<td>25-34</td>
<td>53</td>
<td>13</td>
<td>0</td>
<td>3</td>
<td>21</td>
<td>90</td>
</tr>
<tr>
<td>35-44</td>
<td>34</td>
<td>14</td>
<td>0</td>
<td>2</td>
<td>9</td>
<td>59</td>
</tr>
<tr>
<td>45-54</td>
<td>35</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>43</td>
</tr>
<tr>
<td>55-64</td>
<td>16</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>27</td>
</tr>
<tr>
<td>65+</td>
<td>27</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>204 (66.9%)</td>
<td>41 (13.4%)</td>
<td>1 (0.3%)</td>
<td>6 (2.0%)</td>
<td>53 (17.4%)</td>
<td><strong>305</strong></td>
</tr>
</tbody>
</table>
According to the WHO report, 96% of patients have known HIV status, and 31% of patients with known HIV status are HIV-positive;
WORKING GROUP: DISCUSSION PROMPTS

Review available data and establish a level of priority based on the evidence

1. How big of a problem is this, within the context of the overall TB burden?
   (rank between 1-5; 1=not a big problem, low priority; 5= top priority)

2. To what extent is there progress against this challenge
   (1=no progress; 5 = solid progress, commensurate with problem)

3. What level of priority should be given to filling the remaining gaps related to this challenge?
   (1=not a big problem, low priority; 5= top priority)

Comment on the quality of data

Either
Sufficient to establish a level of priority

Or
Additional data are available and need to be included

Or
Data gaps - - Define
Working group priority scores were consolidated

<table>
<thead>
<tr>
<th>Session</th>
<th>Category</th>
<th>Sub-Category</th>
<th>Problem - How big is the problem, within the context of the overall TB burden?</th>
<th>Progress - To what extent is there progress against this challenge?</th>
<th>Priority - What level of priority should be given to filling the remaining gaps related to this challenge?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session 1 - Epidemiology</td>
<td>Drug Sensitive</td>
<td>Pulmonary</td>
<td></td>
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<td></td>
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<td>EPTB</td>
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<td>Pediatric</td>
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<td>Special Populations</td>
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<td></td>
<td></td>
<td>Other</td>
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<tr>
<td></td>
<td>Drug Resistant</td>
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<td></td>
<td>TB HIV</td>
<td>-</td>
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<tr>
<td>Session 2 - People who are not in the health system</td>
<td>High-risk for TB infection or breakdown to disease</td>
<td>-</td>
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<tr>
<td></td>
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<td>-</td>
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<td></td>
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</tr>
<tr>
<td>Session 3 - People with TB in the health system, but not notified/diagnosed</td>
<td>Presenting to health facilities; not diagnosed</td>
<td>-</td>
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<tr>
<td></td>
<td>Diagnosed by private sector, not notified</td>
<td>-</td>
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<tr>
<td></td>
<td>Diagnosed by public sector, not notified</td>
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<tr>
<td>Session 4 - People with TB are notified, but not cured</td>
<td>People diagnosed with TB but not started on treatment</td>
<td>-</td>
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<tr>
<td></td>
<td>On treatment without treatment success</td>
<td>-</td>
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<td>-</td>
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</tr>
</tbody>
</table>
Inventory of Evidence Gaps was compiled

Priorities based on available data

But....

Insufficient data in some instances

So....

Reconsider based on available evidence from newly identified sources or

Add to research agenda
1. Problem Prioritization

Which are the biggest problems?

- People don’t make it to the health system
- People are in the health system, but not notified/diagnosed
- People with TB are notified, but not cured

2. Root Cause Analysis

- What contributes to the problem?
- What does it look like?

3. Intervention Optimization

- What are priority solutions to optimize impact?
- Implement the best solutions

What was the impact of these solutions?

Step-wise approach to strategic planning that focuses on where people with TB may be “missing” from care.
Participants were introduced to Root Cause analysis
Understanding the layers and determinants that contribute to priority challenges

1. What is known about the factors contributing to this problem?
2. What additional evidence is needed to better understand the root cause of this problem?
3. Which can feasibly be addressed?
Additional data were made available to assist working groups to think about determinants and root causes.

<table>
<thead>
<tr>
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<td>Presenting to health facilities, not diagnosed</td>
<td>On treatment without treatment success</td>
</tr>
<tr>
<td>Asymptomatic disease, not seeking care</td>
<td>Diagnosed by private sector, not notified</td>
<td>Complete Tx, w/out durable, relapse-free cure</td>
</tr>
<tr>
<td>Symptomatic disease, not seeking care</td>
<td>Diagnosed by public sector, not notified</td>
<td></td>
</tr>
</tbody>
</table>

- **DS-TB**: 1 2 4 1
- **DR-TB**: 2 3 5 2
- **TB/HIV**: 3 3 7 4 4 8

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**Notes on tables and figures:**

- **2016 Prevalence Survey**
- **2017 WHO TB Report**
- **2014 DHS**
- **2016 Inventory Study**
- **2017 Patient Cost Survey**
- **2017 Patient Pathway Analysis**
- **2017 Epi Review**
- **2013 HEUS**
- **2017 Adherence Study**

---
EXAMPLE: 2017 ADHERENCE STUDY

1. There was a statistically increased risk of non-adherence in the groups 25-34, 35-44 and 55-64 years compared to age group 18-14 years (p<0.05)

2. Males were 25% less likely to be adherence to TB treatment than their female counterparts (OR 0.758, 95% C.I 0.578-0.993)

3. Overall, 35% (N=527) of respondents in the survey were non-adherent

Note: Non-adherence was defined as any patient who:
- missed taking pills for more than two days in the four days prior to the interview and/or
- missed taking pills more than once every week or daily in the four months prior to the interview and/or
- scored less than 80% on the visual analogue scale
**ROOT CAUSE ANALYSIS**

Small working groups can map what is known / what evidence is still needed to inform evidence-based action

- What is known about the factors contributing to this problem?
- What additional evidence is needed to better understand the root cause of this problem?
- Of the possible root causes, which would be the most impactful to address? Which can feasibly be addressed?

<table>
<thead>
<tr>
<th>Group 6: DR-TB</th>
<th>People Who aren’t in the health system</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-risk for TB infection, or breakdown to disease</td>
<td>Asymptomatic disease, not seeking care</td>
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<table>
<thead>
<tr>
<th>Group 7: TB in children</th>
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<tbody>
<tr>
<td>Group 1 – Pre-care seeking, including community engagement</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Group 8: Key populations</th>
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<tbody>
<tr>
<td>Group 2 – diagnostic gap and PAL</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Group 9: TB/HIV</th>
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<tbody>
<tr>
<td>Group 3 – Private sector and</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Group 10: Leprosy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 4 – M&amp;E, including initial default (lab) and not notified</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>People with TB are notified, but not cured</th>
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<table>
<thead>
<tr>
<th>People with TB in the health system, but not notified/diagnosed</th>
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</thead>
<tbody>
<tr>
<td>People with TB notified to the NTP</td>
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<tr>
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</tbody>
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Group 5 – Ensuring cure, including treatment support and social protection

**Epi Patient**

Small working groups can map what is known / what evidence is still needed to inform evidence-based action

- What is known about the factors contributing to this problem?
- What additional evidence is needed to better understand the root cause of this problem?
- Of the possible root causes, which would be the most impactful to address? Which can feasibly be addressed?

Group 7: TB in children

Group 1 – Pre-care seeking, including community engagement

Group 8: Key populations

Group 9: TB/HIV

Group 10: Leprosy

**Epi Patient**
Lack of knowledge of TB among HCWs

No or Inadequate training

Lack of pre-service training on TB
Lack of OJT
Focus only on TB Rx sites – 40%

Outdated Curriculum
- Lack of engagement by NTP
- Lack of multi-sectoral approach

Lack of need assessment for training by counties
- Lack of advocacy to donors & counties
- Lack of measurement of training impact

- Supervision based on case notification
- Lack of policy on pre-Dx cascade
- Lack of M&E tools
- Lack of evidence on importance of pre-Dx prior to prevalence survey

Low Clinical Suspicion for TB

Inadequate quantification to allow accurate forecasting
- Forecasting based on notification data not presumptive

Lack of mechanisms at county level for distribution of tools

Inability to plan around long procurement cycles
- Multiple donors/partners with different cycles/roles

Tools for specimen collection not available

Stationary printing not done in time
Distribution of tools not prioritized by counties
Long TAT for printing tools

Patients visit the HF, not screened for TB

Tools for specimen collection not available
Step-wise approach to strategic planning that focuses on where people with TB may be “missing” from care

1. Problem Prioritization
   - Which are the biggest problems?
   - What contributes to the problem? What does it look like?

2. Root Cause Analysis
   - What are priority solutions to optimize impact?

3. Intervention Optimization
   - Implement the best solutions
   - What was the impact of these solutions?
Group: Not complete treatment (Treatment, UHC and social support)

Action Domain: Nutrition support

Objectives:
- Improve treatment outcome of patients with malnutrition (% death, % LTFU)
  ✓ All HCWs managing TB patients are competent in assessing and managing malnourished TB patients
  ✓ All TB patients are assessed for nutritional status (100%)
  ✓ All TB patients are provided with nutrition support according to their needs (100% for SAM, …)

1. Universal nutritional assessment and counselling
   • ~18% patient not evaluated
   • Systematic nutrition assessment at the start of treatment, follow up and at the end of treatment
   • System to alert if no improvement

2. Universal nutrition management for all eligible patients
   • ~20% SAM; ~30% MAM
   • Micronutrient supplementation
   • Therapeutic feeding for SAM
   • Supplemental feeds for MAM

3. Boldly address supply chain management issues of nutritional commodities up to beneficiary
   • Align supply of TB drugs to nutritional commodities
   • (Being the biggest constraint for the intervention 2)

4. Impact evaluation of nutrition interventions
   • Compilation of existing evidence
   • Establish a robust impact evaluation framework

Other:
- Multi-sector collaboration
- Case detection in other in-country nutritional interventions eg school, community, MUAC screening
Key Results

1. Results along the care continuum can be used as the context for understanding new data / evidence
2. Priorities established based on evidence, rather than politics or emotions
3. Interventions identified that target the most important determinants / root causes of remaining challenges
4. Priority data/evidence gaps documented; filling these gaps will directly impact the ability of the programme to make informed decisions
Current thinking: NSP framework 2019-2023

**Strategic objectives for TB, Leprosy and Lung Disease**

1. Close the gaps along the care continuum to find and cure the missing cases
2. Differentiated response by county to address TB in the local context
3. Inclusion of TB, Leprosy and Lung Disease within National UHC framework
4. Prevent infection, active disease, morbidity and mortality
5. Patient centered approach that promotes quality of care
Next steps

1. Problem Prioritization
2. Root Cause Analysis
3. Intervention Identification

People don't make it to the health system
People in the health system, but not notified/diagnosed
People with TB are notified, but not cured
People with TB are notified, but not cured

1. Refine at national level using additional available evidence
2. Repeat with counties to identify sub-national priorities
3. Conduct patient and health worker focus groups
4. Triangulate for evidence-based NSP
National Tuberculosis, Leprosy and Lung Disease Program
Email: mkamene@nltp.co.ke

Asante (Thank You)!