Commit to diagnosing and treating a cumulative 40 million people by 2022 through both public and private-sector health services - including 3.5 million children and 1.5 million people with drug-resistant TB.
Global TB Case Detection Gap

CLOSING GAPS IN CARE

3.6 MILLION GLOBAL GAP

6.4 MILLION WERE DETECTED AND NOTIFIED

3.6 MILLION PEOPLE WITH TB WERE UNDIAGNOSED OR DETECTED AND NOT REPORTED

TOP 3 COUNTRIES WITH THE BIGGEST GAPS

INDIA INDONESIA NIGERIA

From WHO Global Tuberculosis Report 2018
Closing the 3.6 million TB gap and reaching the TB UNGA targets

Countries need to:
• Improve demand for, and functionality of, existing diagnostic testing resources
• Simultaneously expand their TB diagnostic testing capacity
  – When compared to current investments, modeling revealed that countries would require a 4-fold increase in the number of Xpert modules and a 6-fold increase in the number of Xpert test cartridges per year in order to meet their full testing needs.

• Improve patient-centered access to diagnostic testing
  – Closer to home and community
  – At health provider or facility where they seek care
  – Integrated with other disease services like HIV
In 2017, 9% of people with TB were also living with HIV

From WHO Global Tuberculosis Report 2018
Integrated Diagnostic Networks

Are important because they can:
• Leverage resources across disease programs
• Increase diagnosis and treatment efficiencies for programs and patients

But they cannot –
• Jeopardize the integrity of disease-specific diagnostic goals
• Reduce timeliness of testing, reporting the result, or initiation of treatment
Programmatic Implications for Integrated TB/HIV Diagnostic Networks

<table>
<thead>
<tr>
<th></th>
<th>TB</th>
<th>HIV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose of Test</strong></td>
<td>Provides an initial, up-front diagnostic and drug susceptibility test result</td>
<td>Viral load testing: provides a post-HIV diagnosis test result</td>
</tr>
<tr>
<td><strong>Placement of instrument</strong></td>
<td>Decentralized testing is a priority for TB case detection; Diagnosis is sought at primary health care/TB clinics</td>
<td>Centralization to optimize utilization of high throughput instruments; Testing is referred via ART sites</td>
</tr>
<tr>
<td><strong>Specimen transport</strong></td>
<td>Can provide program and patient-relevant efficiencies but turn-around times can be long, cost prohibitive</td>
<td>Design of efficient, long-ranging (but possibly costly) specimen transport networks</td>
</tr>
<tr>
<td><strong>Operational capacity</strong></td>
<td>Manufacturer-defined testing capacity cannot be applied programmatically to account for system constraints and prioritization of patient access</td>
<td>Increased resources and mostly known patient population allow for more consistent utilization of instruments</td>
</tr>
</tbody>
</table>
Planning for Integrated Diagnostic Networks

HIV Viral Load and HIV/TB Lab Optimization Exercises:
• Should be designed to ensure that Xpert capacity and referral calculations for TB are as accurate as possible by including:
  – Appropriate and realistic instrument- and test-based operational assumptions
  – All persons eligible for TB testing
  – All TB Xpert, culture and drug susceptibility testing sites and patient referral sources

• Zimbabwe and Nigeria examples tomorrow
Key Takeaways

Integration of diagnostic networks
• Has to be responsive to disease burdens and level of co-morbidity
• Must not interfere with the purpose of the diagnostic test or programmatic plans, strategies or goals
• Must involve all disease programs in the design and implementation
• Must consider programmatic resources and limitations and not be dependent on one program or the other

Optimization of diagnostic networks
• Defined differently for different diseases, tests, countries, and resources/funding
• Must not become a barrier to ensure or improve access to diagnostic tests
Thank you!

Amy Piatek
Bureau of Global Health, USAID,
Washington DC USA
apiatek@usaid.gov