Pioneering Stool Testing in Bangladesh

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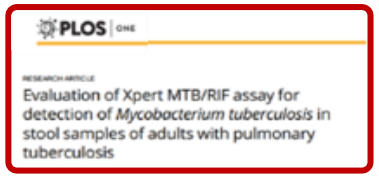
Journey of stool Xpert test in Bangladesh



Stool specimen optimized at icddr,b lab

2017

2018

Piloted: 4 healthcare facilities

Scaled up: 15 facilities

2021

2021

Recommended in National Guideline

Scaled up: 41 facilities

2022

2023

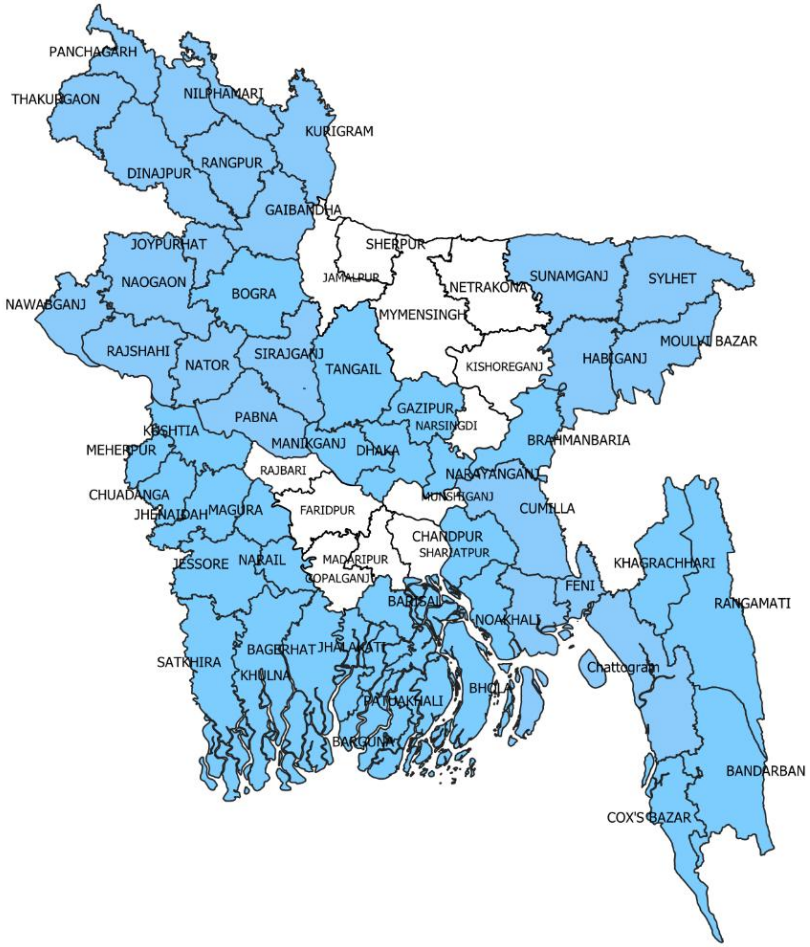
National Strategic Plan (2026-2030)

Scaled up: 80 facilities

2024

Area coverage across the country

- **USAID's ACTB Activity since 2021**
- **Facility based Active Case Finding approach for missing childhood TB detection**
- **Coverage:**
  - **ACF done in 350 facilities**
  - **Stool testing in 80 facilities in 50 districts**



Training/Sensitization

Physicians sensitized on stool testing

Field staff trained on sample collection and transportation

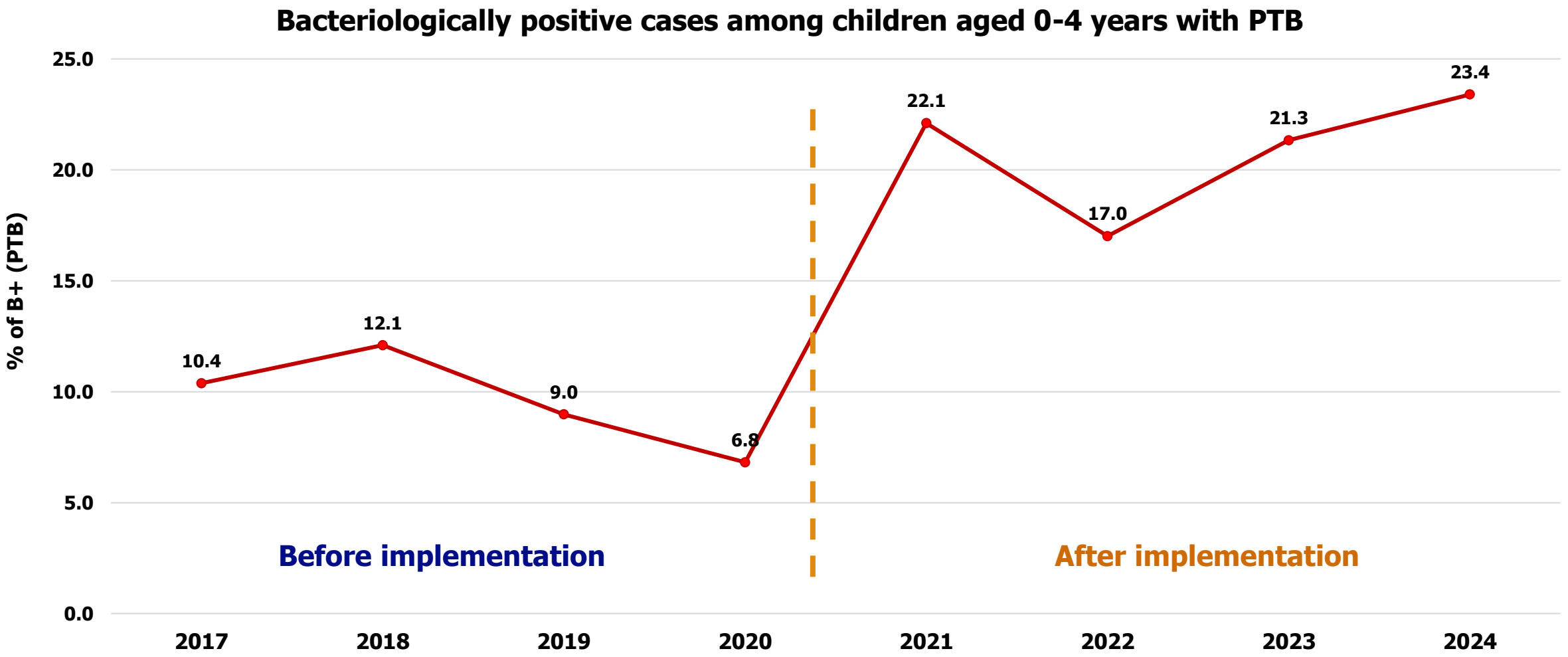
Performance of stool testing: ACTB working sites

July, 2021 – December, 2024

	Stool tested, (n)	MTB detected, n (%)
Overall	**33,333**	**1,356 (4.1)***
Age		
0-4 years	**16,060 (48%)**	**609 (3.8)**
5-14 years	**17,273 (52%)**	**747 (4.3)**
Non-determinate (initial)#	**n (%)**	
Error	**738 (2.2)**	
Invalid	**413 (1.2)**	

*80% are **'Trace Detected'** category; #After repeat testing found valid results

Bacteriologically positive cases among children aged under-five with PTB



Awareness and advocacy

Health Olympiad

Child TB Outreach

OUTREACH CAMPAIGN

Rickshaw Campaign

Courtyard Meeting

ADVOCACY

Stool Testing Using Xpert Ultra: A Game Changer for Childhood Pulmonary Tuberculosis Diagnosis

A POLICY BRIEF

September 2024

Brief description

Piloting stool as an alternative sample

Scaling up at large health care facilities of Dhaka city

Ultra as a tool for childhood TB detection

Ultra: a Game Changer
Tuberculosis Diagnosis

September 2024

Lessons learnt

Recommendations

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Bangladesh Experience on Introducing and Scaling Up of Simple One Step Stool Sample Testing to Diagnose Childhood TB

Sarder Tanzir Hossain
Diagnostics Technical Director

USAID Tuberculosis Diagnostic Network Strengthening Activity, FHI 360

Background

In late 2022, USAID's Infectious Disease Detection and Surveillance (IDDS) project supported NTP to train the staff of NTRL and RTRL on a ***Simple One Step (SOS) stool processing method*** using GeneXpert for childhood TB detection

Implementing GeneXpert testing on ***stool samples in Bangladesh shows promise*** for improving the diagnosis of pulmonary TB in children who can't produce sputum

Sarder Tanzir, IDDS, FHI 360 conducting training on extrapulmonary TB and stool sample processing for GeneXpert and culture. Photo Credit: Md. Monirul Islam/FHI 360.

Background

NTP ***decentralized training on stool sample testing to the sub-district level*** and began capturing programmatic data in July 2023

As of September 2024, ***198 GeneXpert sites perform stool sample testing***

Hands-on training on extrapulmonary TB and stool sample processing for GeneXpert and culture. Photo Credit: Asif Ikram/FHI 360.

Key Insights

Gradual ***expansion of number of sites*** performing stool GeneXpert tests from 112 (Q3 2023) to 198 (Q3 2024)

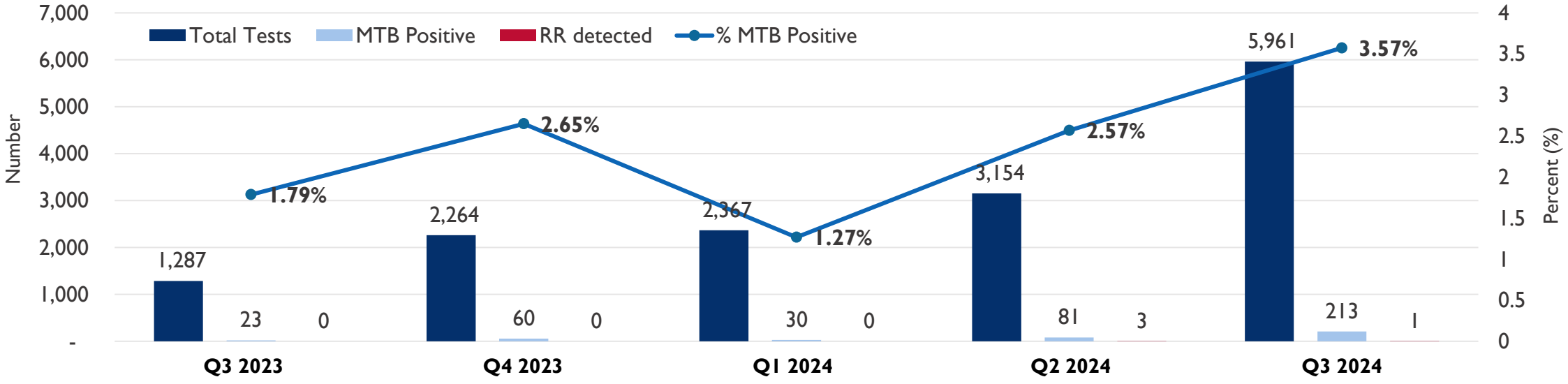
Total ***tests per quarter increased from 1,287 to 5,961*** indicating growth in testing capacity

Total ***RR detected was highest in Q2 2024*** (3 patients, 3.7%)

MTB positivity rate peaked in Q3 2024 at 3.57%

SOS has been proven to be ***the most convenient method***

Stool-based Test Performance (July 2023-September 2024)



Source: *NTP's MIS data*

Conclusions and way forward

- Successful introduction and scale up of stool testing led to significant increase of B+ TB among under-5 children
- Healthcare providers acceptive of the approach
- Large scale of sensitization and awareness of childhood TB diagnosis
- Trace detected cases may be missed with SOS approach
- SOS useful at root level, whereas concentration method ensures better yield
- Ensure logistics support, training of lab and field staff
- Develop SOPs: screening and specimen collection & referral

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