TB Treatment Decision Algorithms implementation increased pediatric TB treatment initiation, but its sustainability depends on reliable supplies, ongoing mentorship, stigma reduction, and integration into national systems.

DELIVERING NEW PAEDIATRIC TUBERCULOSIS CARE IN SOMALIA: IMPLEMENTATION OF TREATMENT DECISION ALGORITHMS AT BAY REGIONAL HOSPITAL

Background: TB incidence in Somalia, afflicted by decades of armed conflict, is high: only 42% of people with TB are started on treatment. High TB case fatality ratio (28%) disproportionately affects children - who are the most vulnerable in conflict settings. In 2023, WHO's updated pediatric TB recommendations, including the use of Treatment Decision Algorithms (TDA), were incorporated into national guidelines. However, implementation remains limited and largely dependent on partner support. We evaluated the implementation of TDAs in Baidoa, Somalia.

Objective

To assess the implementation of pediatric TB recommendations, focusing on TDA, and explore how contextual factors influenced adoption and clinical outcomes using the PRISM framework.

Methods

- Implementation period: Dec 2024 – July 2025.
- Approach: remote clinical and CXR interpretation training, onsite mentorship.
- Evaluation: PRISM domains – intervention, recipients, environment, infrastructure, outcomes.
- Data: Jan–July 2024 vs. Jan–July 2025 comparison.

The PRISM framework offers a systematic way to analyze implementation.

Intervention:

TDA provided a **structured approach for pediatric TB diagnosis** and **increased overall TB treatment initiation** in 2025 vs 2024;

Increased workload and **modest yield** (0.88% for overall ITFC admission) raised concerns for continuity.

External environment:

Insecurity and **reduced access**;

Reliance on **NTP/Global Fund and World Vision supply chains**;

Multi-partner coordination essential.

Infrastructure:

Remote MSF support with periodic visits;

Training and mentorship improved skills (80% CXR accuracy);

Monitoring through file audits and MMR data.

Recipients:

Providers **initially hesitant but gained confidence**;

Managers struggled with **TB treatment initiation forecasting**;

Caregivers influenced by TB stigma, but **TDA scoring system improved acceptance**.

Implementation outcomes:

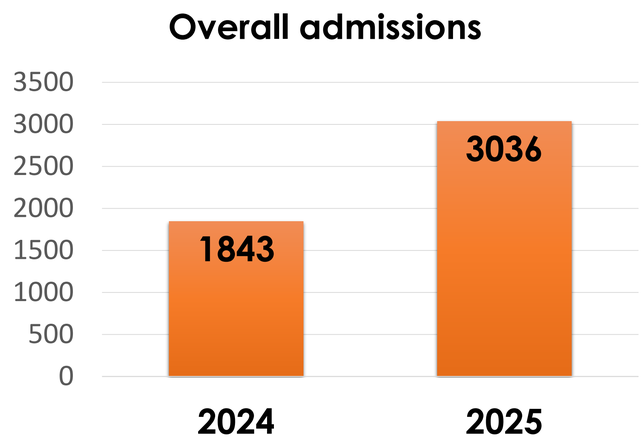
TDA use was limited to presumptive TB cases in Pediatrics but applied to 31.2% of ITFC cases, **adjusted for rising 2025 admissions and predominant non-TB diarrhea cases, and full reliance on external partner (such as World Vision) for further diagnostics and treatment** .

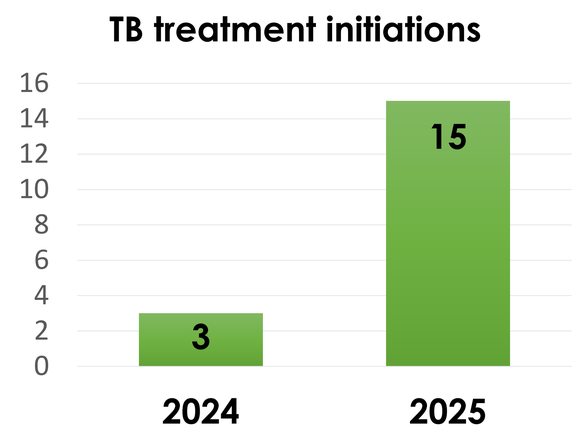
Sustainability:

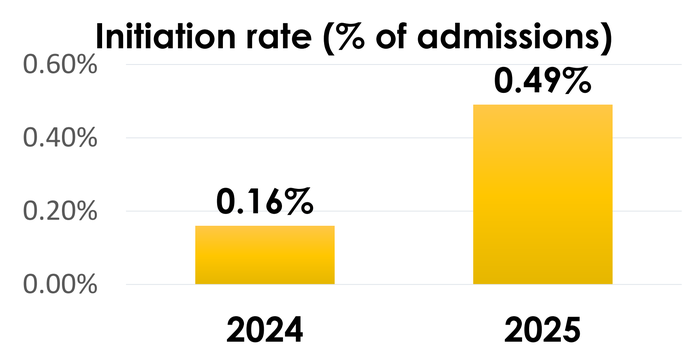
Dependent on external supply chains and continued mentorship, the long-term impact **requires practical integration into national TB systems** and **community engagement** to reduce stigma.

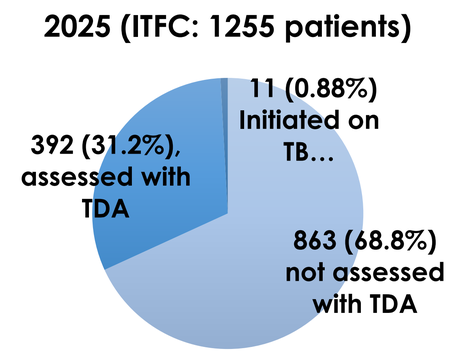
Result

Overall admissions increase in 2025 by 65% (pediatrics and ITFC): 1843 (2024) → 3036 (2025).
TB treatment initiations increased 5-fold: 3 cases (2024) → 15 cases (2025).
The TB initiation rate tripled (0.16% → 0.49%), suggesting that the rise in TB treatment is due to more admissions and improved diagnosis using TDA.
Yield: **5.8% of presumptive TB cases in ITFC were initiated on TB treatment following TDA assessment** — lower than anticipated. Because absolute numbers are still small, the difference was not statistically significant (p=0.07).









Lessons Learned

1. TDA improves TB initiation but with modest yield when viewed against total ITFC admissions.
2. Clinician motivation needs continuous reinforcement.
3. Strong coordination needed for availability of drugs and diagnostics.
4. Mentorship and CXR skill reinforcement, direct or remote, strengthen skills, build confidence and ensure constant quality after initial trainings.
5. TB stigma limits acceptance; community engagement is vital.

Limitations: Other contributing factors to increased TB treatment initiation likely include recent beginning of ITFC support, several specialized MSF trainings that improved clinical skills, and a February 2025 drought-related influx of ~2,500 people into Bay district.

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