

Test, Avoid, Cure TB in Children (TACTiC): experiences in nutrition sites

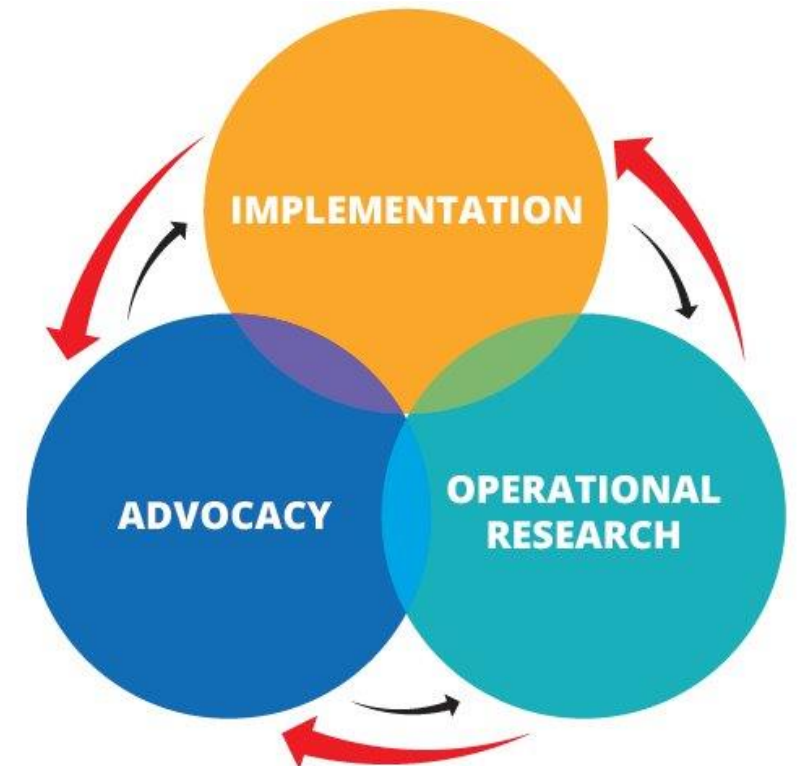
Muhammad Bashir Abdullahi

Annual Meeting of the STOP TB Child and Adolescent TB Working Group

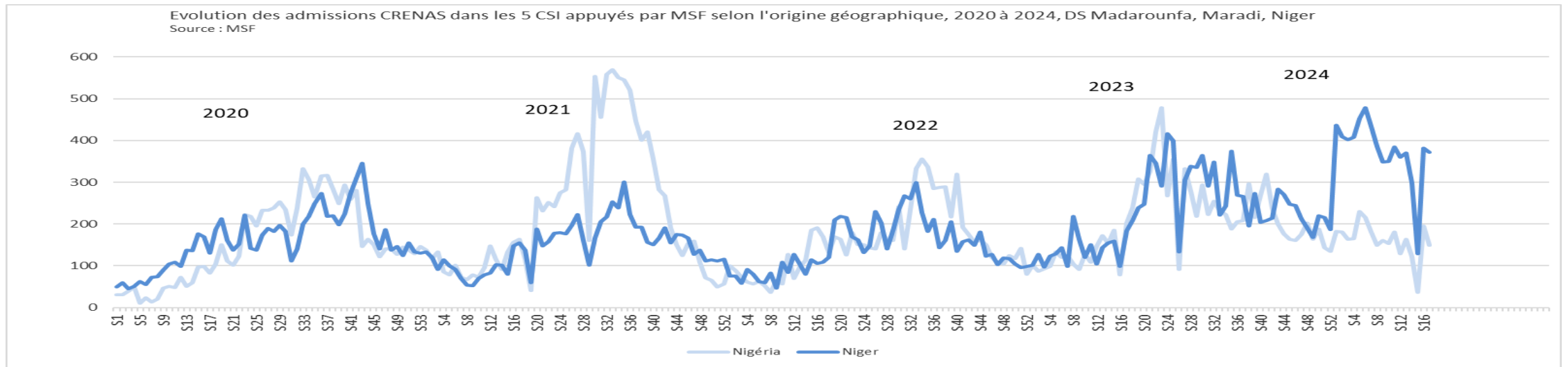
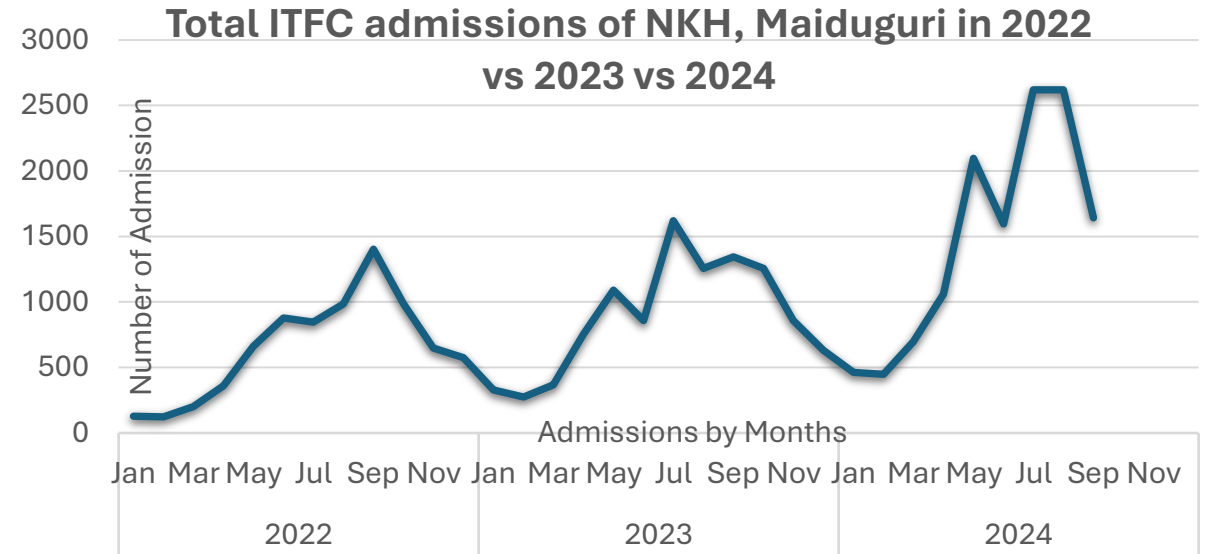
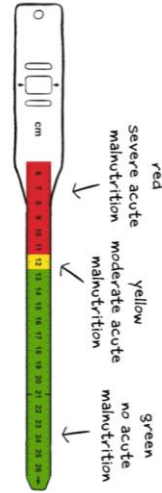
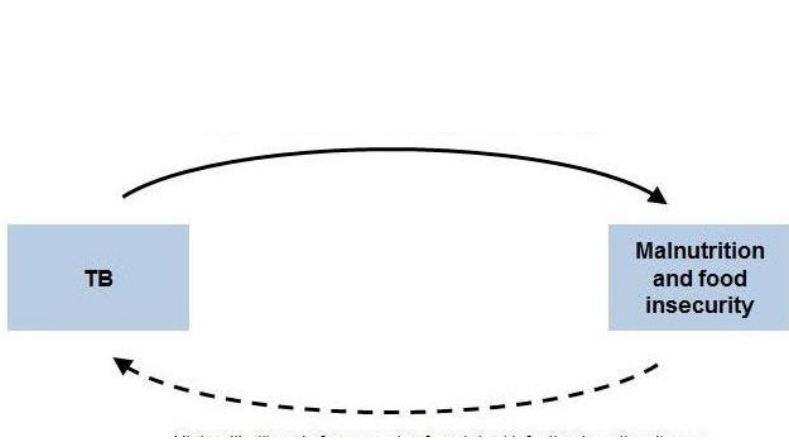
11 November 2024

In 2023 Médecins Sans Frontières (MSF) launched TACTiC: Test Cure Avoid TB in children

- Goal: reduce deaths from TB in children by increasing the number of children accessing diagnosis, treatment, and prevention for TB
- 12 countries
- **3 pillars:**
 - 1 Field implementation** of the 2022 WHO recommendations on paediatric TB
 - 2 Operational research** documenting feasibility, acceptability and validation of the 2022 WHO recommendations
 - 3 Advocacy** at national and international levels for updating of policies and implementation of the 2022 WHO recommendations, as well as for more R&D of diagnostic tests and medicines adapted to children.



Food insecurity, malnutrition and Tuberculosis



Maiduguri, Nigeria

- Inpatient therapeutic feeding center (ITFC)
Ambulatory feeding center (ATFC)
- All malnourished
- 100 to 500 beds
- Monthly admissions 300 to >2500
- Peak and low season



Caregiver and child, Maiduguri, (MSF)



ITFC clinician, Maiduguri (MSF)

Madarounfa and Dan Issa, Niger

- **Madarounfa hospital**
 - admits children under 5 years of age and is supported by MSF
 - Capacity: Off peak: 80 beds (including nutritional ward)
 - Peak of malnutrition: increase to 250 beds
 - **More than 400 monthly admissions in peak in 2024**
- **Ambulatory therapeutic feeding centre**



ITFC Madarounfa, credit (MSF)



Staff meeting, Madarounfa (MSF)

Preparation for implementation

- Implementer/support pediatrician
- Discussions with TB program managers and specialists
- Staff trainings
- Increase in HR (for follow up of increased TB cases)
- Algorithm paper form adaptation, printing, and follow up its usage
- CXR facilities assessment
- Registers from national TB programme



Clinician training, MSF Staff Madarounfa,
(Dr Oumarou Moussa-Mamane)

Who should be considered presumptive TB amongst children with malnutrition?



Nutrition Ward / Pediatric Ward

All hospitalized with acute malnutrition are considered presumptive TB

ATFC

Acute malnutrition and ANY of the following:

- Cough > 2 weeks
- Fever > 2 weeks
- Non-responder (static wgt or loss/unexplained lethargy)
- Close/Household contact with confirmed TB



ITFC / ATFC

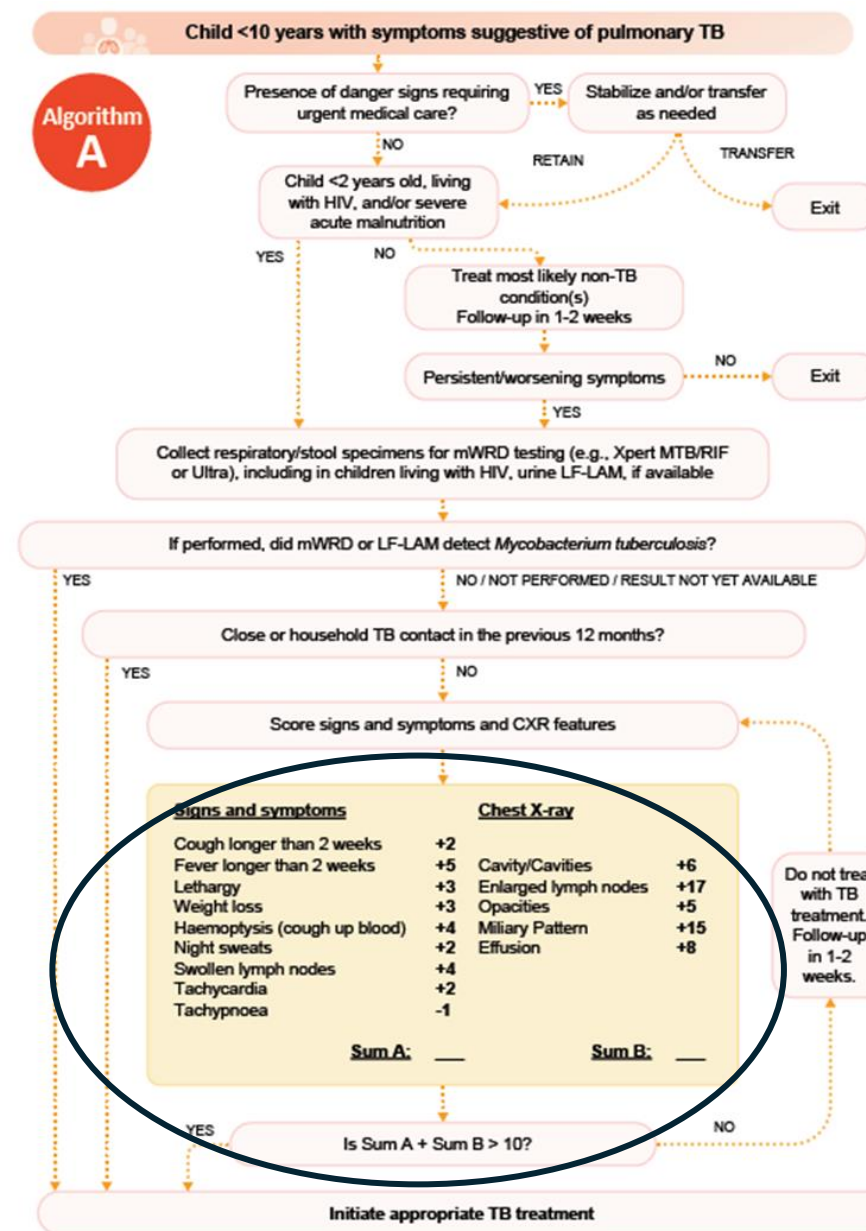
Acute malnutrition and ANY of the following:

- Cough \geq 2 weeks
- Fever \geq 1 week
- Non-responder (static wgt or loss/unexplained lethargy)
- Close/Household contact with confirmed TB



Timing of the TB symptom score for children with malnutrition

Timing of first scoring , among those with any algorithm score	Niger N= 323 n (%)	Nigeria N= 401 n (%)
• Day 1-3	312 (96.6)	175(43.6)
• Day 4-7	8 (2.5)	226 (56.4)



Clinical questions when scoring the algorithm

Kwashiorkor children not accounted for in WHO manual: How to score for weight loss if child has oedema, or is losing weight but this is appropriate and expected responding when responding to oedema treatment?

Malnutrition is a cause of weight loss, should you score all for weight loss in a context like this?

How to re-score a child who has put on weight but is still undernourished?

Score signs and symptoms

Signs and symptoms

Cough longer than 2 weeks	+5
Fever longer than 2 weeks	+10
Lethargy	+4
Weight loss	+5
Haemoptysis	+9
Night sweats	+6
Swollen lymph nodes	+7
Tachycardia	+4
Tachypnoea	+2

Sum: —

Malnutrition explains the lethargy, so should lethargy be considered in the score?

How to score tachycardia if the child's tachycardia can be otherwise explained by known chronic anemia, dehydration, shock..?

Clinical questions when scoring the algorithm, cont'd

How long from last episode of fever should you not score for fever?

Signs and symptoms

Cough longer than 2 weeks	+2
Fever longer than 2 weeks	+5
Lethargy	+3
Weight loss	+3
Haemoptysis (cough up blood)	+4
Night sweats	+2
Swollen lymph nodes	+4
Tachycardia	+2
Tachypnoea	-1

Sum A: —

Chest X-ray

Cavity/Cavities	+6
Enlarged lymph nodes	+17
Opacities	+5
Miliary Pattern	+15
Effusion	+8

Sum B: —

Should a CXR be repeated for a second scoring?

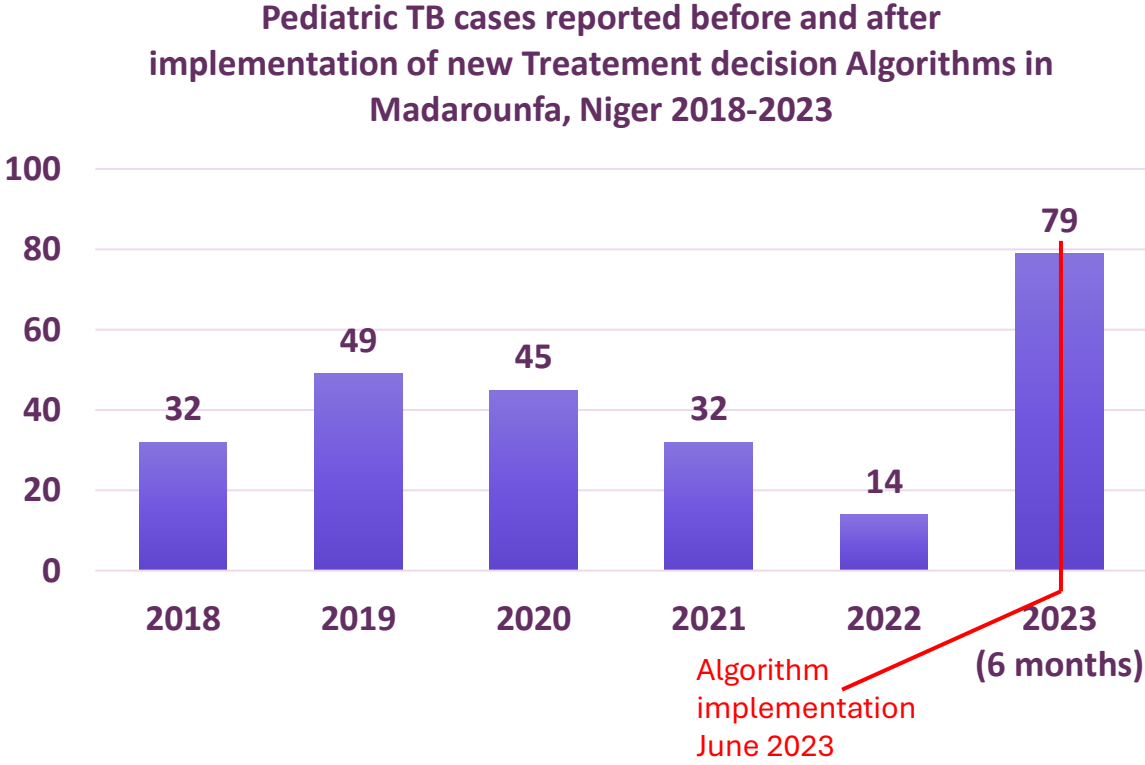


Challenges and Solutions

Challenge	Solution
HR and training demand, especially during peak season	Simplified forms and implemented frequent refresher trainings
Quality and timing of CXR given no CXR on-site. Repeated breakdown of x-ray machine	Algorithm B used when no x-ray available Identified external/private X-ray facility where patients are being taken to; project planning to add x-ray on site in 2025 (Nigeria)
Increased demand for TB medications = stock issues	Discussed with the State MoH to increase the supply and enabled gap shipment from the neighboring state



Trends in children with presumptive TB and on TB treatment before and after algorithm implementation



Conclusions

- Implementation of the algorithms in highly food-insecure contexts is feasible and resulted in more children on TB treatment
- Preparation is necessary to sustain the implementation
- Context-specific adjustments are needed

Next steps

- MSF supporting Nigeria MoH in implementing algorithms in more sites
- MSF TACTiC supporting algorithm implementation in other facilities across Niger and Nigeria
 - Supporting implementation of algorithms in more countries



Many thanks to our study participants,
research team, and partners



MSHP

RÉPUBLIQUE DE GUINÉE
Ministère de la Santé et de l'Hygiène
Publique



NATIONAL TUBERCULOSIS & LEPROSY
CONTROL PROGRAMME (NTBLCP)
Federal Ministry of Health

Join us for the following presentations:

TITLE OF SESSION AND PRESENTATION	DATE/TIME/ROOM/SPEAKER
<p>Interim results from a Médecins Sans Frontières study in 5 countries Oral abstract - Validation of treatment decision algorithms for the diagnosis of pulmonary TB in children</p>	<p>Wednesday Nov 13th 10:07 - 10:21 Nusantara 1 <i>Helena Huerga</i></p>
<p>Impact of new WHO Treatment Decision Algorithms in an MSF nutritional centre, Maiduguri, Nigeria Poster - TB in pregnancy and young children</p>	<p>Thursday Nov 14th 13:25-13:30 Mangupura <i>Muhammad Bashir Abdullahi</i></p>
<p>TB diagnosis in children with severe acute malnutrition using the 2022 WHO algorithms in nutrition insecure contexts Symposium - Children with severe acute malnutrition</p>	<p>Friday Nov 15th 09:25 - 09:39 Nusantara 3 <i>Jasmine Armour-Marshall</i></p>
<p>Results from a multi-country study of the diagnostic cascade using WHO treatment decision algorithms Oral abstract - Approaches for identifying TB in children</p>	<p>Friday Nov 15th 10:01-10:10 Hibiscus <i>Helena Huerga</i></p>
<p>Cross-cutting lessons from the implementation of treatment decision algorithms for children Oral abstract - Optimising finding TB in children</p>	<p>Friday Nov 15th 14:43-14:52 Frangipani <i>Jasmine Armour-Marshall</i></p>
<p>A multi-country qualitative evaluation of new paediatric treatment decision algorithms Oral abstract - Optimising finding TB in children</p>	<p>Friday Nov 15th 14:52 - 15:01 Frangipani <i>Sofia Payotte</i></p>
<p>Improving the diagnosis of TB in children with the implementation of new WHO algorithm in Maradi, Niger Oral abstract - Optimising finding TB in children</p>	<p>Friday Nov 15th 15:10 - 15:19 Frangipani <i>Dr. Oumarou Moussa-Mamane</i></p>

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TACTiC
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