

Uniting Innovation with Implementation: An Evidence Synthesis of Implementation Strategies to Increase the Uptake and Impact of Molecular WHO-Recommended Rapid TB Diagnostic Tests



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Background

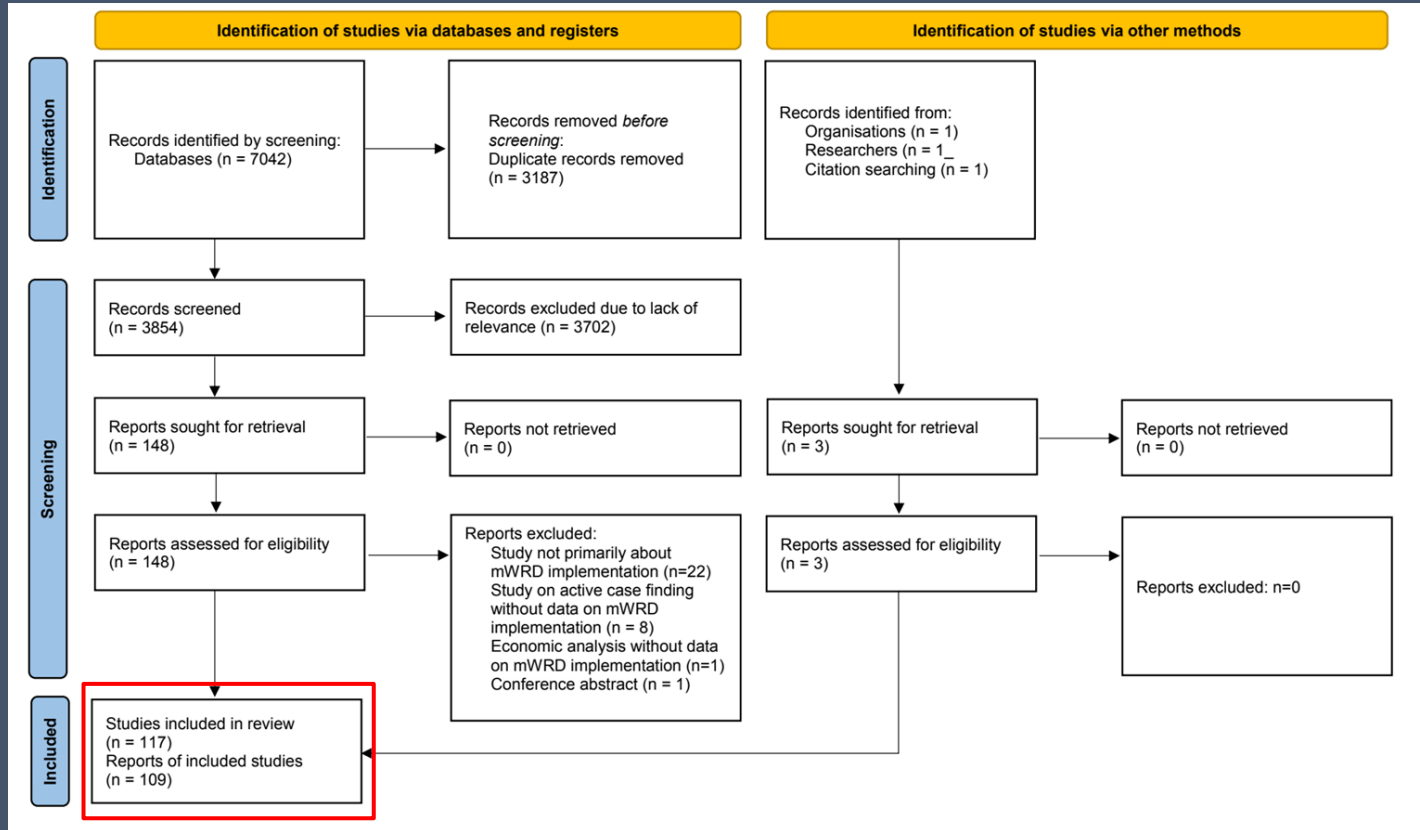


- Molecular WHO-recommended rapid diagnostic tests (mWRDs) for the diagnosis of TB and rifampin resistance were first endorsed in 2011 and are now recommended as the initial test for all persons being evaluated for TB.
- However scale-up and implementation has been limited: in 2021, only 38% of people newly diagnosed with TB received an mWRD as their initial test.
- **Aim:** we sought to evaluate how implementation strategies successfully addressed barriers to the use or impact of mWRDs

Methods

- Mixed methods systematic review
- **Inclusion criteria:** studies that used qualitative, quantitative, or mixed methods study designs to assess barriers, enablers, and implementation approaches
- **Searched the following databases:** MEDLINE, Embase, CINAHL, PsycInfo, Web of Science, WHO-ICTRP. Identified operational reports.
- Studies classified according to thickness (high, medium, or thin - based on depth of analysis and insights)
- Quality assessment: adapted tool based on Standards for Reporting Implementation Studies (StaRI)
- All abstracts, full-texts and data extraction undertaken by two review authors

Prisma flow diagram of study selection

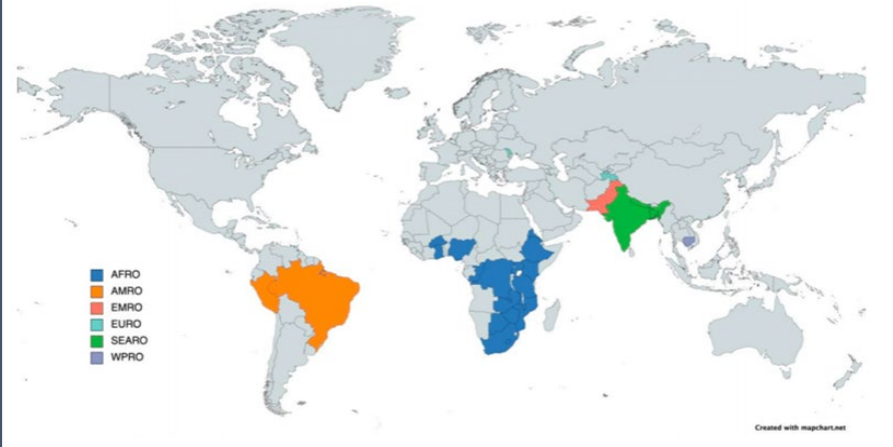


109 studies included: 54 high-thickness, 41 medium-thickness, and 14 thin

Included studies



Figure 2. Geographic representation of high-thickness studies



- Here will focus on the 54 high thickness studies
- RCTs, cohort studies, mixed methods, qualitative
- Almost all evaluated Xpert/Ultra aside from Truenat(1), TB-LAMP (1)
- Wide representation across WHO regions: >18 countries, public/private sector settings, key risk populations

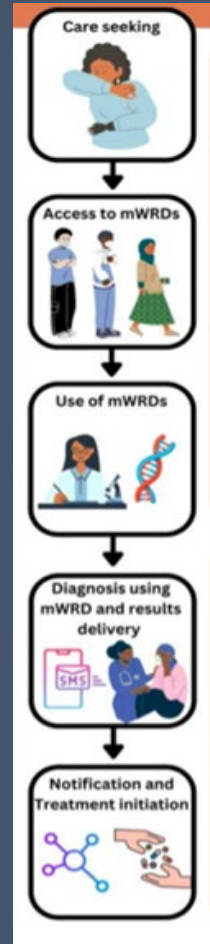
Barriers and enablers: highlights

Patient level: costs, education gaps, health system mistrust, stigma

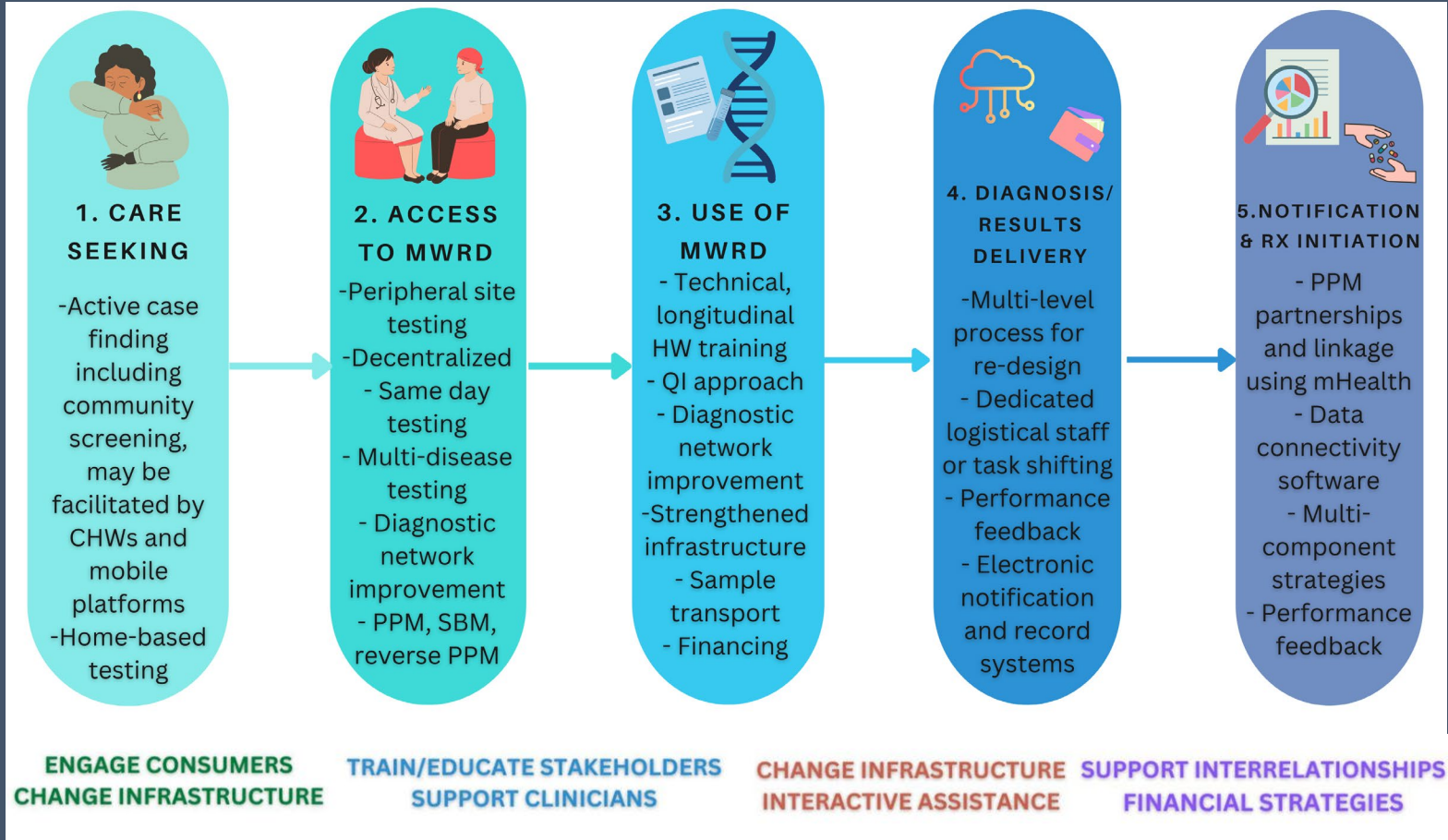
Provider level: knowledge and training gaps, overwhelm

Health facility level: technical issues, supply chain, infrastructure including equipment and maintenance, specimen transport

Data management and health systems level: medical record system, results delivery, costs, diagnostic network strengthening



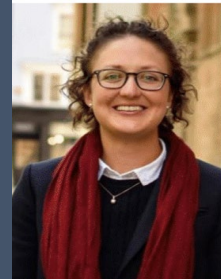
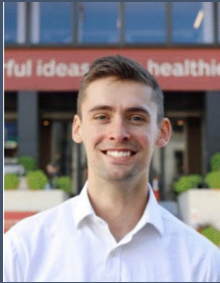
mWRD implementation solutions



Key review findings

- Multicomponent strategies should address barriers throughout cascade
- Person-centered approaches needed to reach presumptive TB patients who may or may not be seeking care
- Need to increase and sustain access to mWRDs as near-patient test
- Provider training/engagement to ensure mWRDs used as initial test
- Connectivity solutions including mHealth tools can strengthen linkage between diagnosis using mWRDs, results delivery & treatment initiation
- Diagnostic network improvement as part of health system strengthening

Thank you!



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