

Abstract

Purpose/Aims: Tuberculosis (TB) disease amplifies inequities in a society's healthcare system. Low resource countries and densely crowded settings (like prisons) are most affected. Despite Mozambique's effort for active case finding, only 35% of 2021 cases were bacteriologically confirmed, making new intervention methods essential. This study used the RE-AIM framework to evaluate a health screening using digital chest x-rays with computer aided detection (DCXR-CAD) in Mozambican prisons. The objective was to elucidate the barriers and supports to implementing active case finding for TB disease using DCXR-CAD. The data were collected from 26-AUG 2024 to 24-OCT-2024 in Maputo, Mozambique.

Methods: This study collected structured qualitative surveys from intervention staff, distributed electronically. The surveys were in Portuguese, with results translated into English. Analysis was conducted using rapid thematic analysis. Study protocols were approved by Emory's Institutional Review Board and Mozambique's National Bioethics Committee.

Results/Discussion: The results of the surveys found five dominant themes in the data: technology-enabled transformation of TB diagnosis, active case finding as a system-level intervention, emerging integration of care pathways, structural constraints limiting implementation, and workforce capacity as a determinant of sustainability.

Conclusion: The results showed a high level of acceptance toward active case finding using DCXR-CAD. Respondents demonstrated motivation for training/capacity building. The data confirmed how technology enabled TB diagnosis was supported by the team and led to rapid identification of potential cases. The intervention's prison-wide screening model offers a more holistic approach than prior screening protocols and paves the way for a new system of integrated care. Structural barriers to care remain: overcrowding and resource constraints for training staff. However, our findings highlighted the potential role for increased investment and utility of peer navigators in health screenings – offering an opportunity for capacity building, training opportunities, and education for residents.