

# Tuberculosis in Ethiopian prisons

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Valorization:  
practical implications of findings

In this section, we present the possible programmatic and policy implications of the key findings on TB control in prisons of resource-limited regions. The targeted audiences for this thesis can be researchers, TB service providers, program managers, policymakers, prisoners, and even the community.

A major challenge to the global TB control program is reducing the failure to detect and treat active TB cases early, particularly in resource-limited countries. Even though the lack of sensitive screening and diagnostic tools remain a major contributing factor to this failure, poor awareness and limited accessibility to the routinely available TB diagnostic services also contribute largely, especially among poor people and prisoners. This is particularly alarming in prisons of Sub-Saharan African countries where a shortage of trained healthcare workers and a poor infrastructure limit the use of the international recommended TB control strategies, while the lack of accurate data hinders the design and implementation of optimized and cost-effective interventions. The studies presented in this thesis provide crucial evidence that fills such gaps in Ethiopian prisons and potentially in other prisons of Sub-Saharan Africa.

The three observational studies described in chapters 2-4 show that there was a high prevalence of undiagnosed TB, and even those diagnosed were not effectively treated where patients who were released or transferred before treatment completion were not appropriately linked to health facilities. Furthermore, more than two-thirds (76%) of the prisoners had misconceptions about TB, particularly on the real cause of TB and possible consequences of non-adherence to TB treatment, which can have a potential implication in fuelling the spread of TB. These findings have significant implications for the TB control programs.

Primarily, they may serve as a catalyst to draw the attention from researchers, TB service providers, program managers, and policymakers to neglected prison settings. This has, for example, been demonstrated by some of the stakeholders in our study area (regional health bureaus) where they started discussions with non-governmental organizations once we had a workshop and communicated the findings. Given these identified gaps, TB programmers need to help design and implement simple, feasible and sustainable intervention models. The randomized trial presented in this thesis could be the best option for addressing issues of poor screening practices and access to care, but filling the gap of the lack of appropriate linkage and tracking of the patients released or transferred before treatment completion remains an important research question.

The results of our randomized controlled trial show that empowering and involving prisoners in TB awareness campaigns and symptom-based screening is highly effective in increasing TB case detection rate and reducing misconceptions about TB in Ethiopian prisons. Basically, TB awareness, access to care, and early case detection in prisons can successfully be improved by training and involving adequate numbers of prison healthcare workers in the TB control program. However, this is unattainable in a short period for resource-limited countries like Ethiopia. Our innovative intervention (which involves prisoners instead of health professionals) is, therefore, the best option to address the chronic

shortage of human resource in prisons of poor countries and control TB effectively. The intervention may ultimately be adapted in the prisons of other Sub-Saharan African countries where undiagnosed TB is highly prevalent and trained health professionals are scarce.

Our findings also have relevant socio-economic implications. Although cost-effectiveness was not thoroughly investigated, our intervention incurred minimal costs and will minimize wastage of resource if adapted. Our study findings advocate early case detection and treatment of TB, which improves the quality of life of patients, and reduce TB-related costs as well as the negative social consequences in the prisons, family, and the wider community.