

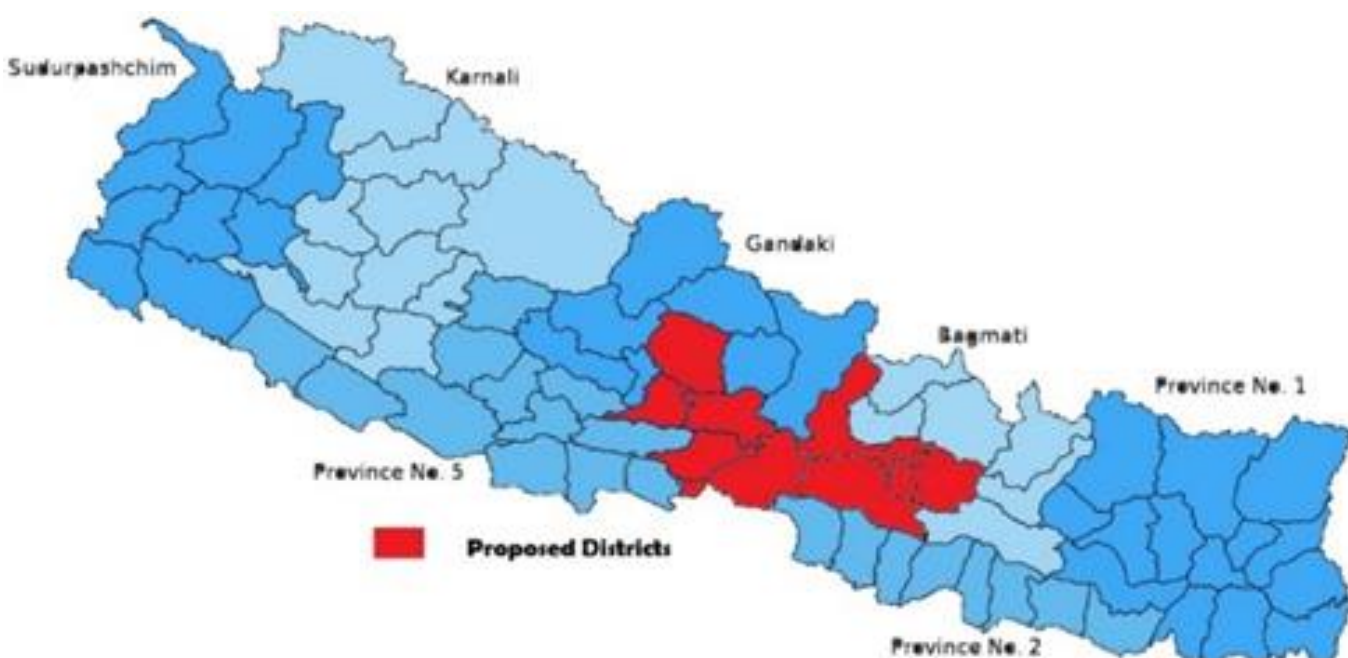
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3. The Global Fund, South East Asia Team
4. Save the Children, Country office

Introduction

National Tuberculosis Prevalence survey 2018-2019 showed that the prevalence of TB was 416/100,000, which is 1.8 times higher than previously estimated. More than 70% of the confirmed TB cases did not have cough ≥ 2 weeks or other symptoms as used for screening of TB during the survey. These cases were only identified using chest x-ray as screening tool. Screening for TB using cough of more than two weeks would have captured only 20.8% of the TB cases.

Map of Active TB case finding



“ **Active TB Case Finding can Minimizes The Barriers ; Faced By The People In The Community** ”



RESULTS

From April to June 2024, out of 15123 participants screened with d-CXR, 1102 (7.2%) participants were eligible for sputum examination. As a result, a total of 214 (19.4%) TB patients were diagnosed. Among them, 67 (31.3%) were bacteriologically positive and 147 (68.7%) diagnosed as bacteriologically negative. The yield rate from this intervention is 1.4% which is nearly four times higher than the national average 0.426.

Table 1: Yield and number need to screen in different communities and prison

Communities	Screened	Presumptive TB	PCD	PBC	TB cases	TB Yield	NNS
General community	708	89	8	2	10	1.0%	71
Hard to reach population	3879	418	67	33	100	3.0%	39
Migrants and slums (urban areas)	2205	177	24	11	35	2.0%	63
Prisons	8331	418	48	21	69	0.8%	121
Total	15123	1102	147	67	214	1.4%	62

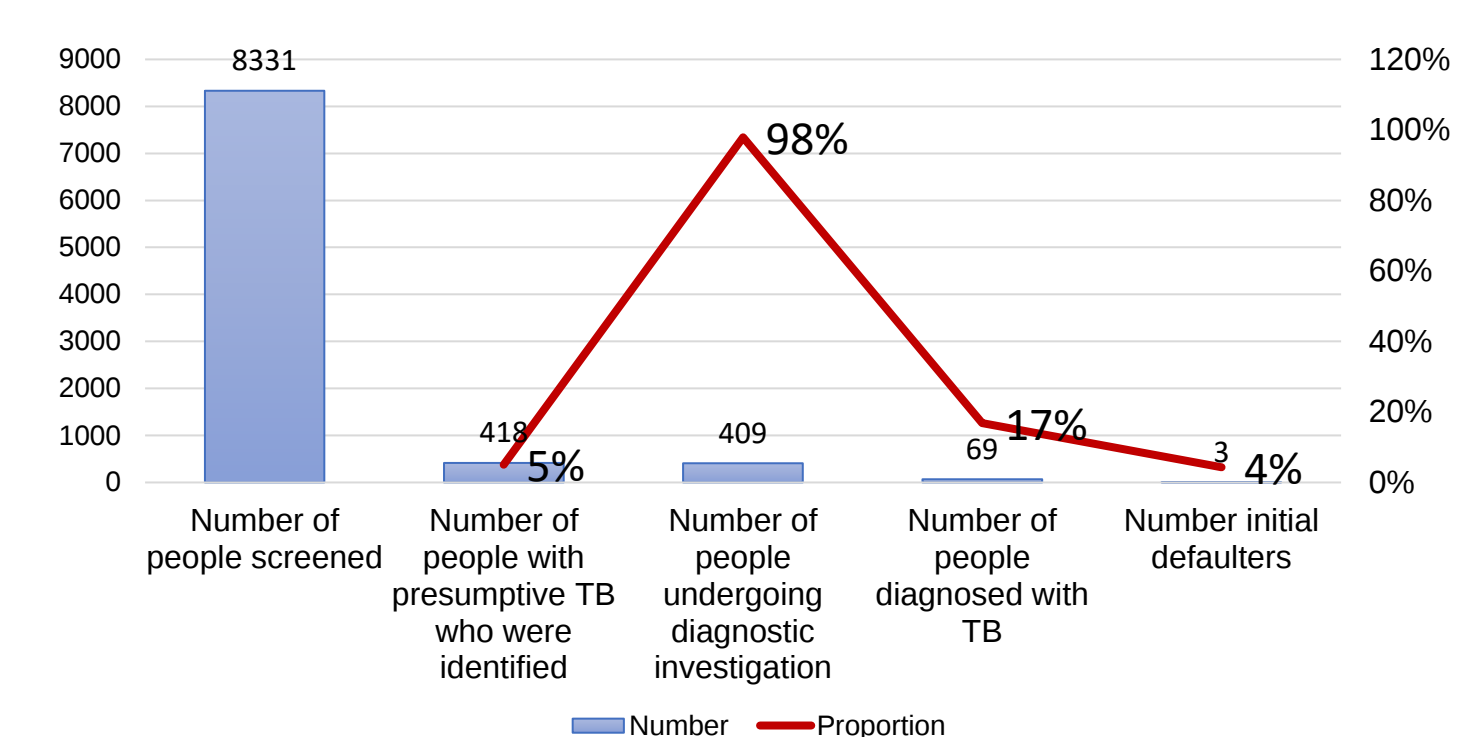


Figure 1: Aggregate TB care cascade in prison

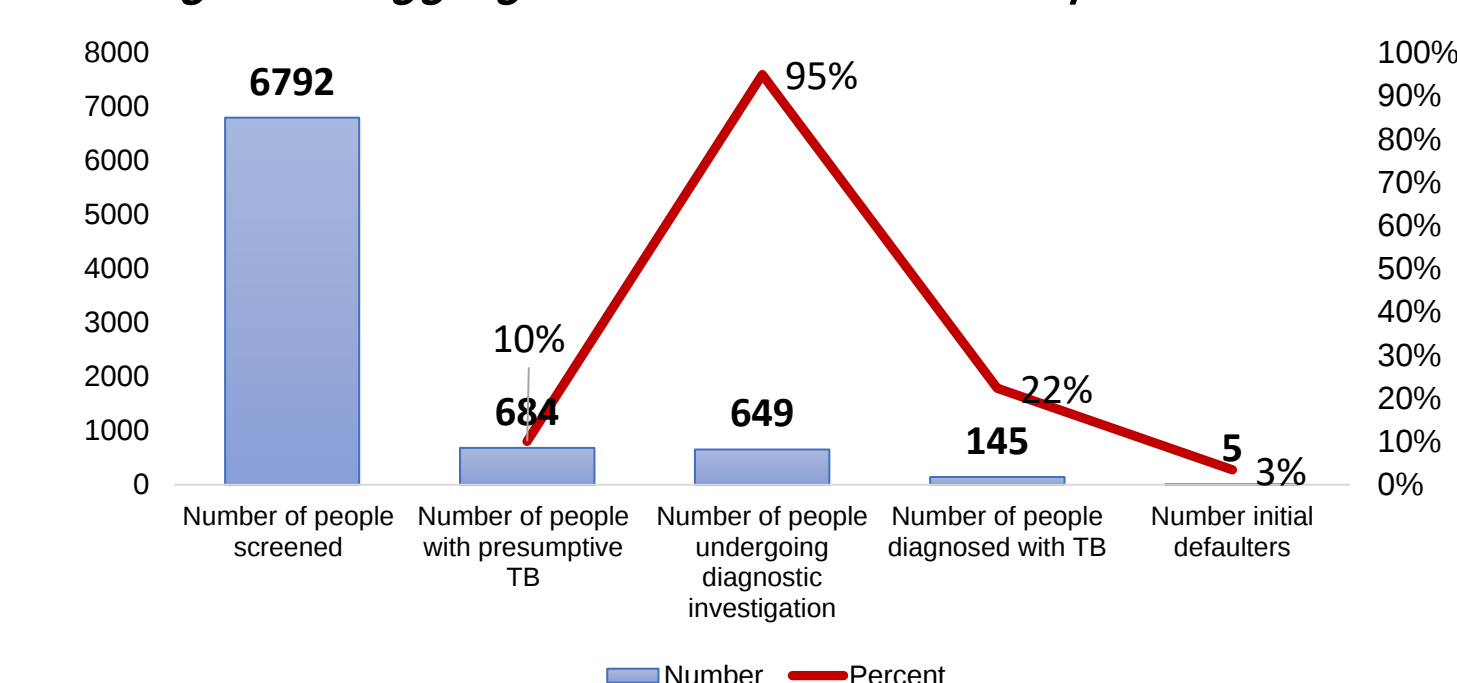


Figure 2: Aggregate TB care cascade in communities

Systematic TB screening with digital chest x-ray is effective for asymptomatic TB case for both PCD and PBC cases.



Getting ready for the chest x-ray in ACF camp

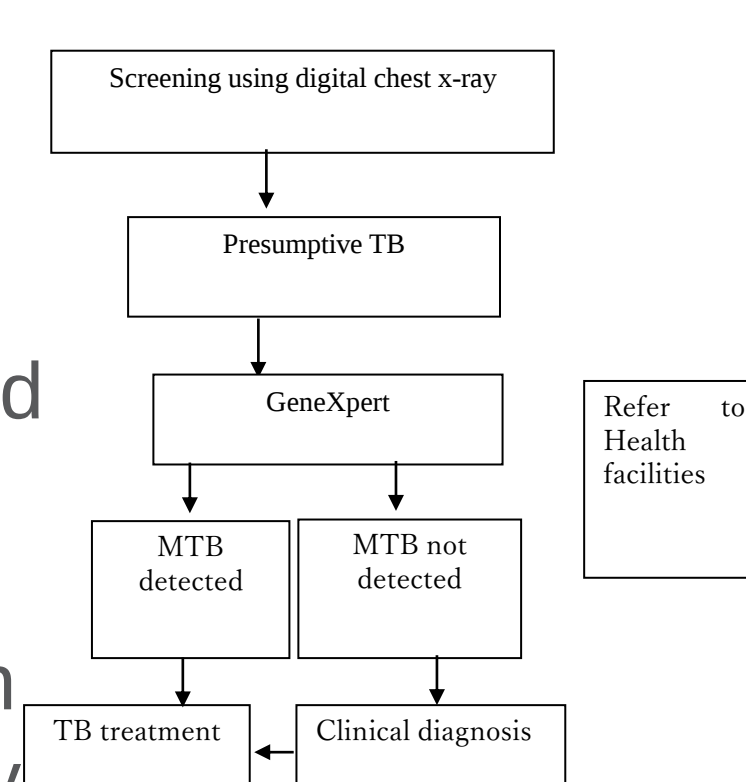
In spite of self stigma perceived in the community, high acceptability including high participation from females and senior citizens in the screening camp



Methods

The systematic TB screening with d-CXR was introduced in high TB burden districts of Bagmati and Gandaki province. TB screening using ultraportable digital X-ray equipment with artificial intelligence (AI) by a mobile team was conducted for the first time in vulnerable communities. Every participant above 15 years of age participating in the screening camp was eligible for x-ray taking. An experienced doctor was reading the CXR images with necessary reference to the AI. When the AI software suggested presumptive TB, the field team advised sputum examination by molecular diagnostics, GeneXpert. When d-CXR strongly suggested TB disease such as cavitary and infiltrate, clinical diagnosis was made by the doctors even with a bacteriologically negative result. TB patients were referred to the nearest DOTS centre for treatment within three days after the screening camp.

Algorithm for ACF



Conclusion

Systematic TB screening with digital chest X-ray in community and congregate settings is effective especially for asymptomatic TB patients, both bacteriologically (+) TB and bacteriologically (-) TB. In systematic TB screening, targeting groups with limited access to health services is key to maintain high yield rates, however strengthening counselling sessions is equally important to improve treatment adherence among TB diagnosed cases in early stage.

Acknowledgements

We are thankful to the National Tuberculosis Control Centre, Global Fund, Save the Children, provincial health directorates, health offices, Japan-Anti Tuberculosis Association, local municipalities and communities for their full support to implement the active TB case finding.