Community Case Study: Fighting TB at the Grassroots: A Case Study of Community-Centric Screening Among Orang Asli in Rengit, Malaysia

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Introduction

Tuberculosis has been one of the leading causes of death globally, with the rising incidence of TB deaths around 1.6 million people since 2019 until 2021(1,2). Tuberculosis poses great challenges when dealing with minorities of Aboriginal communities. In public health concerns, the incidence of TB cases is quite alarming and will affect community health, evidenced by the increasing number of TB deaths.

Case Report

From 2019 to 2024, the tuberculosis (TB) cases significantly increased among the Orang Asli in Rengit, Batu Pahat, evidenced by the district health statistics reporting two cases that resulted in death (1,2).This community project aims to screen for active and latent pulmonary tuberculosis among the Orang Asli. Early detection is crucial in preventing TB-related deaths and controlling the spread (3). However, health disparities among aboriginal faces a great challenges particularly in dealing with community resistance, language barrier, healthcare worker stigmatization and facilities in low resource settings (4). Hence, the unscreened minorities are left behind untreated (4,5).

The community TB screening program took place on November 11, 2024, at Dewan Terbuka, Kampung Bumiputera Dalam. The static screening included blood tests for Interferon Gamma Release Assay (IGRA), Mantoux Test screening, anonymous Rapid Tests for HIV and Hepatitis C, and Slit Skin Smear Tests for leprosy. House-to-house screenings involved 12 teams of healthcare professionals, community leaders, and representatives from the Department of Orang Asli Development (JAKOA). Symptomatic individuals must provide sputum samples for the acid-fast bacilli spot test. Subsequently, they were subjected to a Chest X-ray evaluation at a nearby health clinic on the same day with provided transport.
Out of a target population of 794 individuals, 294 participated in the screening (36.9%).

Table 1. The screening test final result

Screened Population	Frequency (%) n=294
Mantoux test	117 (39.7)
• Abnormal	17 (14.5)
Abnormal CXR	9 (52.9)
Normal CXR	1 (5.8)
Refused CXR	7 (41.1)
IGRA	28 (9.5)
• Negative	18 (64.2)
• Positive	10 (35.7)

Table 1 shows 17 cases of Mantoux Test screening had readings ≥ 10mm, nine chest X-rays reported as infective lung changes, and 10 cases had positive IGRA results. Four participants were diagnosed with active pulmonary TB, while 16 were identified with latent TB. The active TB cases were successfully counselled and started with the required treatment, whereas among 17 cases of Latent TB, four of them

had started with the treatment of AKURIT 2 for a three-month duration. The remaining were lost to contact and defaulted on follow-up.

Engaging with the indigenous population presents several challenges, including community resistance, stigmatization, communication barriers, and psychosocial factors, which complicate public health initiatives (6). Addressing these issues is vital for effective tuberculosis management in this community in order to curb the spread of tuberculosis among them. By breaking the communication barrier and stigmatization issue, the community-based approach will result in a great impact. However, in low-resource settings, the Mantoux test is a cost-effective screening method but results in a high turn rate of defaulters within the 72-hour time frame for Mantoux test reading. The IGRA test is expensive and specific and does not require multiple visits unless the result is positive, which requires further Latent TB treatment if the CXR showed no TB changes (4,7,8).

The next step will involve training the Orang Asli community to serve as our proxy layman educators for their community, a token giveaway for those who attend TB screenings, and monthly opportunistic TB screenings with Pasukan Bergerak Orang Asli. In primary care setting, MyChampion project for Rengit Orang Asli will be trained as part of strategy to create awareness on non-communicable disease and communicable disease as well. This program is composed of training for early screening of diabetic, hypertension, obesity and healthy nutrition, quit smoking program, Tuberculosis program and also dengue in a community friendly module. For the sustainability of this TB program, the second phase of mass TB screening will be done to target the remaining unscreened population within a 6-month interval to ensure extensive population coverage.

Keywords: Tuberculosis, Orang Asli, indigenous population, TB death

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