Risk-adjusted community based active tuberculosis case finding strategy in Central Ethiopia

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Background

The WHO recommends active case finding of tuberculosis (TB). This study evaluated 38 targeted screening of community-based household contacts (HHCs) of patients with contagious pulmonary tuberculosis (PTB) in Central Ethiopia.

Methods

The HHCs of patients with microbiologically confirmed PTB were screened for TB symptoms and risk factors of TB transmission. Symptomatic HHCs were subjected to secondary investigations. Antimicrobial resistance was investigated among study participants.

Results

Overall, 112 index patients with TB were included and 289 HHCs from 89 households were screened. MDR-TB was detected in 2.7% (n=3) of those index patients. The routine public health system process did not identify any TB suspects among HHCs. In total, 23.9% (n=69) of the HHCs reported ≥1 TB symptom and PTB was confirmed in 2.1% (n=6) of them. Reporting >1 TB symptom (RR 29.4, 95% CI 3.5-245.5, p<0.001) and night sweat (RR 27.1, 95% CI 3.2-226.6, p<0.001) were associated with the greatest relative risk. Regular alcohol consumption was identified as individual risk factor for TB among HHCs (p=0.022).

Conclusion and recommendation

The MDR-TB rate among our patients was higher than recently reported for Ethiopia. Enhanced contact tracing using a risk-adjusted approach seems feasible and increases the case detection rate among HHC of confirmed TB cases.