Finding multidrug resistance in previously treated tuberculosis patients in Cambodia: a mixed methods study of health worker and program staff views

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Background. In Cambodia, previously treated tuberculosis (TB) patients are a priority group for multidrug resistance (MDR) testing since their estimated prevalence is 8 times higher than in new patients. One study indicated that two thirds of smear positive previously treated TB patients had no drug susceptibility test results; reasons included sputum was not collected, did not reach the laboratory, or was culture negative. To identify areas for further intervention, this pilot study examines barriers and facilitators for MDR case finding in previously treated TB patients.

Methods. Routine TB case reports from 2010-2012 were analyzed to describe the epidemiology of previously treated patients across the 14 provinces that reported more than 1000 total TB cases annually.

Results. Previously treated patients as a proportion of all notifications in the 14 provinces ranged from 1% to 11%. Preliminary analysis of qualitative data suggests barriers across key steps to MDR detection (Figure). Recording, reporting, and monitoring were specifically cited as barriers contributing to multiple steps. Facilitators included permission to collect sputum without starting a retreatment regimen, eliciting patient history at multiple points during treatment, reporting results by phone, and Xpert MTB/RIF.

Limitations: Patients’ experience is conveyed by health workers and estimates of MDR-TB testing coverage are based on samples of smear positive retreatment patients in 2007 and 2011; may not be generalizable to all previously treated patients nationwide in 2012

Conclusions. Improving identification and testing of previously treated patients would contribute to MDR-TB case finding and permit appropriate treatment. Barriers suggest strategies to build on current interventions to improve MDR-TB case finding. To follow this pilot study, a larger sample and patient interviews could inform a subsequent trial to evaluate phased implementation of a selected intervention package.

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