

Abstract

# Evaluation of Multi Drug Resistant Tuberculosis Surveillance System, Yemen

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## Abstract

**Background:** Developing Multi Drug-resistant TB (MDR-TB) is a threat facing the National Tuberculosis Control Program (NTCP) in Yemen. Four sentinel Surveillance sites were established in 2014 to monitor the situation and guide control.

**Objective:** Assess the performance of MDR-TB Surveillance and provide recommendations.

**Methods:** We use the Center of Diseases Control (CDC) updated guideline for evaluating public health surveillance systems. In-depth interviews were conducted with six NTCP and 12 central and regional MDR-TB Centers managers/staff. We used 5-Likert scale to assess performance by attributes (e.g. usefulness, simplicity, flexibility) according to the following scoring system: Poor (<60%), average (60-80%), and good (>80). NTCP-modified WHO case definitions for treatment outcome was used where treatment success defined as completing treatment according to protocol with at least five consecutive negative smears from samples collected at least 30 days apart in the final 12 months of treatment.

**Results:** MDR-TB Surveillance System achieved good performance in usefulness, acceptability and data quality compared to average score in flexibility and simplicity; and poor score in stability. Detection rate was 25% in 2014 and increased to 32% in 2016 compared to the target of 40%. Enrollment decreased from 92% in 2014 to 69% in 2016 compared to 100% target. Treatment success reached 70% in 2016.

**Conclusions:** MDR-TB surveillance system was found to be useful, but more efforts is needed to improve stability through ensuring constant power supply for the laboratory to be able to perform drug sensitivity with gradual replacement of donor's funds by government. Although detection rate showed some increase in 2016, enrollment decreased due to unavailability of MDR-TB drugs and long waiting list. Scaling-up of MDR-TB services and removing access barriers are crucial to increase detection rate together with enhancing treatment availability to increase enrollment are recommended. Adapting WHO shorter regimen and inpatients management when needed will help to improve treatment success.

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