

## Description of Treatment Outcomes among Pulmonary Tuberculosis Patients in Bandung City in 2014

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### Abstract

**Background:** Pulmonary Tuberculosis (pulmonary TB) is an infectious lung disease which is still a major health problem in the world. In Indonesia, pulmonary TB treatment outcomes are monitored and assessed in Directly Observed Treatment Short Course (DOTS) as an indicator of national TB control program performance. Therefore, the study was conducted to determine the treatment outcomes among pulmonary TB patients in Bandung City.

**Methods:** This cross-sectional study was conducted using secondary data. The sample sizes were 1,598 pulmonary TB patients taken by total sampling with data collected from TB Registration database of Bandung city at Infectious Disease Control Unit, Bandung City Health Office (*Unit Kontrol Penyakit Menular; Dinas Kesehatan Kota Bandung*) from January to December 2014. The treatment outcomes were classified as successful (cured and treatment completed) and unsuccessful (failed, defaulted, and died).

**Results:** Out of the 1,598 TB patients, most of the respondents were male, aged 15–24 years old and from Public Health Center (*Pusat Kesehatan Masyarakat, Puskesmas*) and hospital. A total of 1,008 treatments (63.08%) were cured, 292 (18.27%) were completed, 47 (2.94%) were failed, 211 (13.21%) were defaulted, and 40 (2.50%) were died. Total of transferred outpatients were 134 and not considered as treatment outcome.

**Conclusions:** From the results, it can be concluded that 81.35% and 18.65% were considered as successful and unsuccessful outcome respectively, thus, did not achieve WHO target of 85%. Therefore, DOTS program implemented in Bandung City should be reviewed to improve success rate of the treatment outcome.

**Keywords:** Pulmonary tuberculosis, treatment outcome, type of healthcare

### Introduction

Tuberculosis (TB) is an infectious disease caused by TB bacteria (*Mycobacterium tuberculosis*) which is still a major health problem in the world, estimated 9.6 million new TB cases reported globally in 2014 by World Health Organization (WHO).<sup>1</sup> According to national TB prevalence survey in Indonesia conducted from 2013 to 2014, the burden of TB disease in the country is high which per 100,000 population, an estimated incidence rate and prevalence rate of 403 and 660 has been reported.<sup>1</sup> West Java meanwhile recorded the highest number of pulmonary TB, comprising 18% compared to other provinces in Indonesia. High TB case notification rate is also reported in 2013 by 102 per 100,000

population.<sup>2</sup>

The Directly Observed Treatment Short Course (DOTS) strategy, which allows patients to take its daily drugs under the observation of health professionals, has been adopted by the Ministry of Health of Indonesia since 1995. In its implementation, indicators such as minimum 70% of case detection rate (CDR), minimum 80% of conversion rate, and minimum 85% of cure rate have been set to monitor the achievement of the national TB control program.<sup>3</sup> Monitoring and evaluation of treatment outcomes of TB patients are an unseparated part of DOTS strategy in TB control programs. Treatment outcomes success rate according to WHO has been standardized at 85%.<sup>1</sup>

To date, a few studies from different

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