

**EFFECTIVENESS OF DIFFERENT TYPES OF DOT OBSERVERS
ON TREATMENT OUTCOME AMONG NEW SMEAR POSITIVE
PULMONARY TUBERCULOSIS PATIENTS
IN BANGKOK, THAILAND**

Mr. Sungchol Kim

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for the Degree of Master of Public Health in Health Systems Development**

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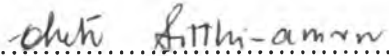
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By : Mr. Sungchol Kim


Program : Health Systems Development


Thesis Advisor : Robert Sedgwick Chapman, M.D., M.P.H.


Accepted by the College of Public Health, Chulalongkorn University, Bangkok Thailand in Partial Fulfillment of the Requirements for the Master's Degree

..... Dean of The College of Public Health
(Professor Chitr Sitthi-amorn, M.D., M.Sc., Ph.D.)

THESIS COMMITTEE

..... Chairperson
(Assistant Professor Marc Van der Putten, Ph.D.)

..... Thesis Advisor
(Robert Sedgwick Chapman, M.D., M.P.H.)

..... Member
(Narin Hiransuthikul, M.D., M.P.H.)

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A quantitative retrospective analytical study of effectiveness of different types of DOT observers on treatment outcome among new smear positive pulmonary tuberculosis patients was carried out in Bangkok chest clinic of TB cluster, Ministry of Public Health, and Public health centers 7,16, and 23 in Region one under Bangkok Metropolitan Administration, from 6th-30th February 2005. The aim was to identify the effectiveness of different types of DOT observers on treatment outcome among new smear positive pulmonary tuberculosis patients in Bangkok, controlling for confounding factors such as the socio-economic and demographic factors of patients and other health service-related factors that affect the treatment success and treatment default. Medical records of 518 TB patients who were treated under different types of DOT observers (health personnel, family members and self-administration (Non-DOT)) during the period of October 2002 through September 2004 were investigated using a standardized checklist.

In bi-variable analysis, a higher treatment success rate was observed among health personnel supervised DOT groups (87.4%) than family member supervised DOT group (68.9%) and self-administration groups (70.2%) (p -value <0.001), and the default rate was 6.6%, 18.9% and 21.1%, respectively (p -value <0.001). More than two-thirds of TB patients (86%) were in an economically productive age group. Most of them were male (69.7%), and most were farmers/laborers (28.8%) or unemployed (23.9%). Health service-related characteristics (such as drug supply interval, drug formulation and DOT duration) and physical condition-related factors (such as the initial AFB status, sputum status at the end of 2nd month and side effects) also showed significant associations with treatment success or default. In multivariable logistic regression analysis, type of DOT observer, side effects, sputum conversion status, DOT duration, and occupation still remained significantly related with treatment success, and type of DOT observer, sputum conversion status at the end of intensive phase of treatment, and occupation of patients still remained as significant factors related with default. Through this study, it is suggested that policy makers and service providers should strengthen the family-based DOTS strategy. Drug formulation and DOT duration should also be considered in order to improve the treatment outcome.

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Sungchol Kim
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ABBREVIATIONS

DOTS	Directly Observed Treatment of Short course chemotherapy
NTP	National Tuberculosis control Program
TB	Tuberculosis
WHO	The world Health Organization
SCC	Short-Course Chemotherapy
AIDS	Acquired Immunodeficiency Syndrome
DOT	Directly Observed Therapy
HIV	Human Immunodeficiency Virus
MDRTB	Multi-Drug Resistant-Tuberculosis
BMA	Bangkok Metropolitan Administration