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Directly Observed Treatment Short – Course (DOTS) Strategy in
Selected Provinces in Western Visayas, Philippines
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The Relationships Between Treatment Partners' Characteristics with Treatment Outcomes of New Sputum Positive TB Cases under Directly Observed Treatment Short – Course (DOTS) Strategy in Selected Provinces in Western Visayas, Philippines¹

by

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ABSTRACT

BACKGROUND: DOTS has been proven to be an affective case-holding strategy as evidenced by the dramatic improvement of TB cure rates to more than 85% in China, Vietnam and Tanzania. In 1996, the Health Secretary issued AO No. 24, recommending the use of DOTS as a strategy to improve the treatment compliance of TB cases in the Philippines. There have been no studies conducted regarding the roles of treatment partners and their relationships with the treatment outcomes of new sputum smear positive TB cases under DOTS since the strategy was introduced.

METHODS: This was descriptive analytic type of study. Areas – Guimaraas, Capiz and Negros Occidental Provinces. Variables – treatment outcomes (cured or treatment completed); treatment partners' characteristics – age, sex, marital status, educational attainment, knowledge and attitude scores. Only those NTP records with complete data entries from January 1998 to December 1999 were reviewed. Data collection tools used were data abstraction form and a structured interview schedule. EPI-INFO ver 6.4 (CDC) was used for data entry. Descriptive statistics, T-test and Chi-Square Tast were employed for analysis.

RESULTS: One hundred forty three (143) records were reviewed and analysed. 125 (87.4%) of the TB cases were "cured" ad 18 (12.6%) "treatment completed". 118 (82.5%) of the treatment partners were BHWs and 25 (17.5%) were midwives. Midwives had higher mean knowledge score (13.360) than BHWs (11.585) $p<0.05$. BHWs had higher mean attitude/ interpersonal skills score (43.678) than midwives (41.000) $p<0.05$. There was a 1.3 chance of being "cured" having had BHW as the treatment partner (RR=1.27, 95%CI 0.94, 1.49, $p>0.05$).

CONCLUSIONS: Strengthening and improving the competency skills of BHWs and midwives will greatly improve the treatment compliance and TB cure rate, quality of the NTP service delivery. They will serve as catalysts and prompters in improving the knowledge, change the attitudes and health-related practices of TB cases and the community. TB, being one of the priority programs of the country under the health sector reform agenda, the opportunities and strengths will provide immediate and long-term solutions to this public health problem. If achieved, economic cost of TB will be reduced.

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Introduction

Tuberculosis ranks fifth as the leading cause of mortality with a rate of 39.8 per 100,000 and sixth cause of morbidity with a rate of 244.5 per 100,00 population in the Philippines.

The Department of Health (DOH) implemented the National Tuberculosis Control Program (NTP) nationwide in 1978. In 1987, after the establishments of sputum microscopy in all rural health units and the introduction of short – course chemotherapy (SCC), the number of TB cases increased tremendously. Five years thereafter, there were about 160, 000 to 196,000 cases discovered annually.

In accordance with the Local Government Code (LGC) of 1991, the health services including the NTP were devolved to the Local Government Units. An External Evaluation was done in 1993, which revealed that the major programmatic constraint was the poor treatment compliance. A TB patient had been observed to prematurely stop the intake of his medications. For this reason, NTP has shifted its focus in improving the case – holding component of the program.

There are effective case – holding strategies being implemented in other countries that were thought of to be equally effective if implemented in the Philippines. One of them is a strategy called “*Directly Observed Treatment Short – Course*” or the DOTS. This was introduced during the late ‘80s in many countries such as China, Vietnam, US and Tanzania. This strategy dramatically improved the cure rate of TB patients to more than 85%.

In 1996, the Secretary of Health issued Administrative Order No. 24 series 1996 recommending the use of DOTS or locally called “*Tutok Gamutan*” as a strategy to control tuberculosis in the Philippines. The DOTS strategy is aimed at improving treatment compliance of TB patients, the key factor in the cure of TB. As of today, the DOTS have been recognized as the ultimate answer to our long time public health problem, i.e., tuberculosis.

The treatment partner is one of the components of DOTS strategy. The treatment partner usually a community health worker is an important link between patient and professional health service provider. They are tasked to supervise the treatment of smear positive TB cases at least during the intensive phase (first two months).

The significant role of treatment partners and their relationships with the treatment outcomes of new sputum positive TB cases placed under DOTS treatment has not been explored. It was in this premise that we have decided to undertake this study.

Objective

To determine the relationships between treatment partners’ characteristics with treatment outcomes on new sputum positive TB cases under DOTS strategy

from January 1998 to December 1999 in selected provinces in Western Visayas, Philippines.

Methodology

Study Areas: Guimaras Province; Roxas City, Capiz; and La Carlota City, Negros Occidental

General Study Design: This was a cross-sectional analytic study.

Variables:

Treatment Outcomes:

“Cured” – a new sputum – smear positive TB cases who had completed the six months duration of treatment and had two or more negative sputum smear results during the smear follow- ups either towards the end of the treatment, end of 4th or 5th month or during the 6th month, OR

“Treatment Completed” – a smear positive patient TB patient who have taken the drugs for at least 6 months or 180 days with at least one negative sputum result at the end of the 6th month)

Treatment Partners’ Characteristics:

Age, sex, marital status, educational attainment, knowledge and attitude scores.

Respondents:

The 1998 and 1999 NTP records (treatment cards, NTP TB registry and NTP laboratory register) of the study areas were reviewed. Respondents were included based on the completeness of their records, results of sputum examinations, treatment outcomes (cured or treatment completed), types of treatment partners (BHW and midwife) and their availability during the scheduled face- to- face interview.

Data Collection Tool:

Two types of data collection tools were used.

First, a data abstraction form was used to record information about the socio- demographic characteristics, clinical history and sputum examination results of TB cases.

Second, a separate structured interview schedule was used both for the TB patients and their corresponding treatment partners, consisting of questions related to their knowledge and perception about the disease and DOTS; and attitude and interpersonal relations.

Data Analysis:

Data collected from the records and the respondents were analyzed using descriptive statistics, T-test and Chi- Square Test using Epi-Info ver. 6.

Results

After the records review and data processing, a total of 143 records of TB patients and their corresponding treatment partners were included in the analysis.

As to treatment outcomes, 125 (87.4%) TB cases were labeled as “cured” and the rest, 18 (12.6%) as “treatment completed”. With regards to the types of treatment partners, 118 (82.5%) were barangay health workers (BHW) and the rest, 17.5% (25) were midwives.

No significant differences were noted between BHW and midwives as to their age, sex, marital status and educational attainment.

Midwives had higher mean knowledge score (13.360) than BHW (11.585) ($p=0.000214$). On the other hand, BHW had higher mean attitude/ interpersonal skills score (43.678) than midwives (41.000) ($p=0.003671$).

With regards to the relationships of treatment partners with treatment outcomes of TB cases, there was a 1.2 chance of being “cured” having had BHW as the treatment partner (RR=1.2, 95% CI RR 0.94, 1.49, $p < 0.1$).

Conclusions

As one of the five components of DOTS strategy, strengthening and improving the competency skills of treatment partners specifically BHW will greatly improve the treatment compliance and the TB cure rate.

Recognizing their role as TB partner will help improve the quality of the NTP service delivery from the municipal health office down to the barangay health units. The BHW shall be the catalyst and prompters to improve the DOTS program implementation in the countryside. Being looked up as role models in the barangay, they would be able to enhance and improve the knowledge, change the attitudes and health – related practices of TB patients and the community as well. If we could achieve this, the economic cost of health care for TB will be reduced.

Tuberculosis, being one of the priority programs of the DOH under the health sector reform agenda, maximum utilization of these health workers, the opportunities and strengths will provide immediate and long – term solutions to this public health program.