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The effectiveness of integrated health professional organization collaboration in the treatment of pulmonary tuberculosis: A qualitative study

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Abstract

Background: Tuberculosis (TB) is an infectious disease, the high incidence of tuberculosis and its impact have caused the world to pay special attention, one of which is through the target of the third issue of the sustainable development goals (SDGs), namely tackling the TB epidemic in 2030. Efforts to prevent and reduce TB incidence in Indonesia through to find, treat, and cure TB program. Approaches to finding, diagnosing, treating, and curing TB patients and stopping transmission in the community. The treatment is being carried out actively, massively, and intensively, but the problem-solving has not yet been completed, innovation is needed through the collaboration of integrated health professional organizations, to anticipate the treatment of TB independently, in the service units of private hospitals, clinics and doctors' independent practice places. This innovation is to increase the new case detection rate, and the tracking of initial lost to follow up patients.

Purpose: To analyze the effectiveness of integrated health professional organization collaboration in the treatment of pulmonary tuberculosis

Method: Qualitative research with descriptive and exploratory design. The source of data and information is informants from the health profession determined by purposive sampling. In-depth interview and focus group discussion interview methods. Informants are representative members of each health profession organization appointed by the organization's leadership.

Results: Health professional organizations are committed to and contribute to the well-organized treatment of TB. Integrated activity programs, increasing the discovery of new case detection rates, identification of drug-resistant pulmonary tuberculosis (DR-PTB) and drug-sensitive pulmonary tuberculosis (DS-PTB), and active monitoring of patients initially lost to follow-up, as well as preventing independent case handling.

Conclusion: The collaboration of health professional organizations is very effective in helping the government handle Tuberculosis, has a commitment to increase the new case detection rate, identification of drug-resistant pulmonary tuberculosis (DR-PTB) and drug-sensitive pulmonary tuberculosis (DS-PTB), and actively monitor patients who are initially Lost to follow up, which is carried out in an integrated manner.

Keywords: Collaboration; Professional Organizations; Pulmonary Tuberculosis; Treatment.

INTRODUCTION

The World Health Organization (WHO) reported that Indonesia occupies the third position with the highest cases of Tuberculosis (TB) in the world. While the first and second positions are currently India and China. If you look at WHO data in 2019, the estimated

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number of TB cases in Indonesia is 845,000 people. This number increased from the previous 843,000 people. This places Indonesia as one of the countries contributing 60% of all TB cases in the world. Data from the World Health Organization (WHO) released

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on November 7, 2023 still places Indonesia in the top two Tuberculosis (TB) cases in the world. Based on data from the Indonesian Ministry of Health, the total number of Tuberculosis (TB) cases in 2023 was 658,543 cases as of November 3, 2023 (World Health Organization, 2023).

Based on the incidence of tuberculosis of 969,000 cases per year, there were 443,235 TB cases (53.8%) in 2021; or there are still 46.2% who have not been notified; both unreached, undetected and unreported. The estimated Multidrug-resistant tuberculosis and rifampicin-resistant tuberculosis (MDR/RR-TB) cases in 2021 are 28,000 or 10 per 100,000; when compared to 2020 there is an increase of 17% from 24,000 and the rate per 100,000 population is 15%; The discovery of 8,296 cases of drug-resistant pulmonary tuberculosis (DR-PTB) with a coverage of 33.5%. Various breakthroughs have been made, including the implementation of the TB movement (Find TB, Treat, and Cure), the discovery of tuberculosis cases actively, massively, and intensively, the implementation of the healthy Indonesia with a family approach program, the involvement of cross-sectors of the Government and all levels of society, including the private sector and the business world (Ministry of Health of the Republic of Indonesia, 2021). Anti-tuberculosis drugs consist of 2 phases, namely the intensive phase in the first two months which aims to inactivate TB germs/bacteria, and followed by the next four months advanced phase which aims to kill TB germs/bacteria. Tuberculosis (TB) screening is not systematically integrated into primary health facilities. To find people with suspected tuberculosis (TB), the main goal is to screen people who have been in close contact with active TB patients a to find missing cases of Tuberculosis (TB) will require contextual adaptation of systematic screening to tuberculosis (TB) programs with local needs and capacities and strengthening health systems (Zulu et al., 2022).

The problem of handling Tuberculosis (TB) in Indonesia in absolute notification of the number of tuberculosis cases in 2021, there are 443,235; 434,967 cases of drug-sensitive pulmonary tuberculosis (DS-PTB) and 8,268 cases of drug-resistant pulmonary tuberculosis (DR-PTB). Tuberculosis (TB) cases were reported through the

application of several sources, namely the Tuberculosis Information System (TBIS) with 434,258 cases of drug-sensitive tuberculosis and 8,268 cases of drug-resistant tuberculosis. Optimization of Tuberculosis Case Discovery in hospitals is 315, integration between Hospital Management System Integration and Tuberculosis Information System is 314, and through WIFI TB is 80 cases. Notification of the discovery of tuberculosis cases in 2019-2020 decreased by 20.5% while tuberculosis cases in 2020-2021 increased by 6.8% (Ministry of Health of the Republic of Indonesia, 2021). Major problems that cause therapy failure in Tuberculosis (TB) patients: socio-demographic and economic problems, knowledge and perception, and the effects of TB treatment. There are allegations of TB treatment in private hospitals, private clinics, and independent practices that are not recorded or not reported in an integrated manner.

Previous research has found the context and perspective of integration, first is the linkage of referrals, collaboration, and awareness creation in the community, collaboration in monitoring and evaluation of integration, transfer of knowledge and skills, and collaboration to improve case detection and treatment initiation (Amare et al., 2023). Previous studies have also found that collaborative training programs between professionals can be used to monitor medication in patients in the context of treatment failure (Farley et al., 2021). Delays in handling or detecting TB cases will worsen the condition of patients, and integrated treatment is needed to speed up case discovery (Feyisa et al., 2022). The results of his research explain that the problem of handling TB is related to poverty and low community income, then the limitation of diagnostic test kits in health facilities can slow down the treatment (Andom et al., 2023). Slow TB handling is caused by limited accessibility, poor health information transfer systems in the public and private sectors, and lack of availability of funds for the discovery of new cases in low-income countries (Pande et al., 2020). The treatment of tuberculosis has experienced many problems, but referring to previous research, it can be stated that integrated collaborative services are one of the keys to success.

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Field problems related to the investigation of TB suspect contacts have encountered obstacles, during the Covid-19 pandemic, there are regulations restricting time mobilization and physical distancing it has an impact on decreasing the rate of public visits to health service facilities significantly. then, there is still a public stigma about TB disease (Directorate General of Prevention, 2023). Initiation of the development of integrated coaching mechanisms and concepts to provide assistance and capacity building to health workers. Optimizing the discovery of tuberculosis cases as an active surveillance effort in hospitals, both government/private, clinical practices and doctors' independent practices. Initiation of the development of a reward/reward mechanism with health professional organizations. There has been no integrated revitalization of the coalition of Indonesian Professional Organizations in Tuberculosis Control at the central to regional levels. Tracking and discovery of cases through collaboration with professional organizations to increase the New Case Detection Rate and Tracking of initial Lost to Follow-up patients.

The problem of handling TB in Bima City is the increase in cases every year, the low discovery of new cases, the existence of cases of non-treatment or withdrawal from taking medicine, the stigmatization among the community, and the still negative perception of TB disease, this condition has become a phenomenon in handling cases. Regarding the handling of TB cases, many efforts have been made by the government, but this problem still occurs, so this study needs to conduct a study related to the effectiveness of problem-solving collaboration in handling cases. This study aims to analyze the effectiveness of the collaboration of health professional organizations in the treatment of TB.

RESEARCH METHOD

This study is a qualitative study with an exploratory descriptive approach. The data sources were 10 people and the research information was informants from health professional organizations in Bima City in 2023 consisting of Informants 1 and 2 from the Indonesian Doctors Association profession, informants 3 and 4 from the Indonesian National Nurses Association, 5 and 6 from the Indonesian

Public Health Experts Association, informants 7 and 8 from the Indonesian Midwives Association, informant 9 from the Indonesian Health Laboratory Technology Experts Association and informant 10 from the Indonesian Pharmacists Association. Data collection was carried out using interview methods, in-depth interviews and Focus Group Discussions (FGD). Interviews and FGDs used structured thematic interview guidelines (guidelines) that had been prepared by the researcher. The first stage: interviews were conducted with each informant, followed by the second stage: focus group discussions.

This research has received approval and recommendations from the Research Ethics Committee of the Faculty of Health, Qamarul Huda Badaruddin University, with the number: Ethical clearance No. 183 /EC/FKs-UNIQHBA/YPpQH/XI/2023, dated November 9, 2023.

RESEARCH RESULT

(Informants 1 and 2):

"The professional collaboration coalition formed aims to make joint efforts in handling TB, forming a joint commitment so that case handling is carried out in a well-integrated manner. Every time there are symptoms and signs that are suspected and encountered, an investigation will be carried out to trace close contacts, reported and inspections will be carried out based on the region or based on the work area of the health service facility unit. Professional collaboration was formed to increase the New Case Detection Rate and Tracking of initial Lost to Follow Up patients".

(Informants 3 and 4):

"All professions are committed to handling TB disease with comprehensive and integrated handling, namely finding TB to be cured. Every suspected or suspect case will be reported for region-based tracking and examination based on the area of the work unit of the health service facility".

(Informants 5 and 6):

"The handling of TB cases must be carried out at the Puskesmas using program drugs, there is no independent handling, either in private hospitals,

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clinics or in the independent practice of doctors, if there are case findings, referrals will be made to the Puskesmas to get treatment according to the TB disease treatment program".

(Informants 7 and 8):

"TB disease is still stigmatized and there is still a negative perception. People are still worried about being detected or diagnosed with TB. People who are detected positive (+) TB then self-isolate because they feel they will spread the disease to others. Then if it is known to other communities, there is stigmatization. This condition is one of the main obstacles in handling TB cases".

(Informant 9):

"Information communication and education through counseling are always carried out at all levels of society"

(Informant 10):

"Lost to Follow-up or Failure and absenteeism occur due to three things, namely drug-sensitive pulmonary tuberculosis (DS-PTB), drug-resistant pulmonary tuberculosis (DR-PTB), urbanization/moving out of the area. PHC programmers who handle tuberculosis, always do identification, then follow up according to the problem".

Based on the results of the focus group discussion (FGD), which was carried out with the informants, agreed on several points that must be done, as follows:

"Every activity of health professional organizations, together with all its staff, is obliged to campaign for Tuberculosis disease-free, every time they find signs and symptoms so that they are reported and identified immediately by the service unit for laboratory examination, and receive follow-up treatment".

"All tuberculosis cases must be handled and treated through the TB program of the Health Office and prohibit independent handling. Every suspect must be

reported and examined by the TB program holder in each PHC service unit and hospital".

"Handling tuberculosis requires an approach from all parties, and requires a joint commitment at all levels of society to combat infectious diseases, the local wisdom approach is the top priority in handling".

"The involvement of religious leaders and traditional tokoh based on community groups through religious institutions and customary institutions, to form a coalition of healthy community associations in helping to minimize stigmatization in society".

"Empowerment of religious institutions and customary institutions as community-based surveillance, to assist in the discovery of early detection in the community".

"Monitoring is needed to notify Medication Alerts and Supervisory -net-based, as a control control between program holders and family-based Medication Alerts and Supervisory".

"To reduce treatment failure and avoid absenteeism and withdrawal from taking medication, it is necessary to optimize the Healthy Indonesia Program with a Family Approach more intensively.

"Health professional organizations, carry out community service by conducting counseling about tuberculosis and its treatment, in public places, including religious schools, Islamic boarding schools, and schools to conduct screening".

"The health profession coalition needs operational funds to support the implementation of monitoring and surveillance activities".

DISCUSSION

Infectious diseases in Indonesia are still a public health problem that is the cause and can cause high levels of pain, death, and disability, so it is necessary to make efforts to implement countermeasures through effective and efficient prevention, control, and eradication efforts. Infectious diseases are diseases

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that can be transmitted to humans or from humans to humans caused by biological agents, including viruses, bacteria, fungi and parasites. Infectious Disease Management is a health effort that prioritizes promotive and preventive aspects aim at reducing and preventing the rate of illness, disability, and death, and limiting the transmission and spread of disease so that it does not spread between regions and between countries and has the potential to cause extraordinary events/outbreaks. Public Health Officials are Civil Servants in the health environment who have duties and authorities in the field of infectious disease control and all health workers are required to carry out promotive and preventive efforts (Ministry of Health of the Republic of Indonesia, 2014). The collaboration of health professional organizations is an innovation in the implementation of government regulations in an effort to accelerate the control of tuberculosis.

Based on the Minister of Health Regulation concerning TB Control, it is stated that the central government and local governments are obliged to ensure the availability of TB control budgets. Then in the explanation, it was stated that Anti-Tuberculosis Drugs (ATDs) are provided by the government and given to patients for free. Hospital service facilities are required to establish a DOTS (Directly Observed Treatment Short-course) Team responsible for implementing the TB Control program, and health service facilities are required to record and report on every TB disease incident. The recording and reporting of TB patients for clinics and individual practice doctors is submitted to the local health center. Dalam rangka mendukung pelaksanaan kegiatan penyelenggaraan program Penanggulangan TB, maka diperlukan data dan informasi yang jelas dan dikelola dalam sistem informasi (Ministry of Health of the Republic of Indonesia, 2016). A coalition of health profession organizations needs to be carried out in order to create joint efforts in overcoming Tuberculosis.

Elimination of tuberculosis disease is the continuous reduction of tuberculosis cases in order to reduce the number of diseases as low as possible so that it does not become a health problem that results in pain, disability and death. TB control is all health

efforts that prioritize promotive and preventive aspects without having to ignore curative and rehabilitative aspects, to protect public health, reduce the rate of illness, disability or death, cut transmission, prevent TB drug resistance, and reduce the negative impact caused by TB (President of the Republic of Indonesia, 2021). Innovation is needed to help the government in its efforts to improve and improve the status of public health.

The national tuberculosis control program, namely eliminating tuberculosis by 2030 and Indonesia free from tuberculosis by 2050, needs to be implemented to overcome tuberculosis in the workplace. To prevent and control the occurrence of tuberculosis in the workplace which is part of the occupational safety and health efforts to control tuberculosis. The workplace is any room or field, closed or open, moving or fixed, where workers work or which is often entered by workers for a business and there are sources or sources of danger including all rooms, fields, yards, and their surroundings which are part of or related to the Workplace (Ministry of Manpower of the Republic of Indonesia, 2022). The coalition of health professional organizations is a form of joint commitment of all parties who have the ability and competence to carry out promotive and preventive efforts in the context of the succession of accelerating tuberculosis control.

The previous study explained that the handling of TB cases prioritized good screening, and found a high mortality rate because there was a comorbid disease in TB (Asare-Baah et al., 2023). The study also explained that TB treatment is prioritized for children and adolescents, cooperation with related cross-sectoral (Moore et al., 2022). A study conducted in Pakistan explained that the handling of pulmonary TB cases can be done by applying household contact screening, this method is considered more effective in the discovery of pulmonary TB cases due to transmission and the potential to occur in close contact (Jamil et al., 2023). This study explains that TB disease which is an infectious disease must be stopped immediately at all age levels, and close contact screening activities are carried out conventionally, this study emphasizes the discovery of new cases through collaborative innovation of

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health professional organizations as a form of shared responsibility to eradicate infectious diseases, meaning agreeing with the results of previous research to stop infectious diseases, especially TB disease because it can Transmit Anyone.

The results of a study conducted in China explain that diagnostic delays among adolescents/students domiciled in rural areas, an integrated strategy is needed and emphasis is placed on comprehensive treatment so that a good system is needed for TB prevention and control, and the need to improve school environmental sanitation (Zhang et al., 2023). The findings show that the improvement in the technical efficiency of the TB program. Good resources will result in better performance, it is important to develop capacity in TB program governance and management and increase trainin¹⁴ health service providers to be more competent and stronger prevention policies. Policymakers should design models for the integration of TB treatment under health insurance schemes or free services (Atake, 2023). A coalition of health professional organizations was formed to be able to detect early in the field which is active, massive, and intensive, so that it can accelerate the discovery of cases.

Research conducted in Ethiopia, explains that the main challenges of TB services are limited access to services and treatment practices, inadequate resources, structural deficits, and lack of access to community services. Therefore, in order for TB control and prevention to be successful, it is necessary to carry out mobile screening and involve all parties who play an important role in society to improve case findings and treatment compliance (Getnet et al., 2017). The results of this study reinforce previous research on the need for fast and appropriate innovation to stop infectious diseases to avoid delays in handling TB cases. Handling challenges in TB prevention and control are caused by high population mobility, poverty, population density, and misperception of TB. This condition requires a good strategy to increase public knowledge and overcome challenges through TB prevention planning with health service capacity building at the secondary level (Johnson-Peretz et al., 2023). This research is linear with previous research, case tracking is carried out

continuously, and all people are to conduct examinations if there are symptoms and signs found among the community.

The results of the study stated that, in the female group, the success rate of treatment was higher than in men, this condition was caused by drug side effects and drug resistance (Makabayi-Mugabe et al., 2023). Previous studies have explained that many phenomena occur in handling TB cases. This study has the same basic concept as previous studies. For the handling of tuberculosis, innovation and commitment from all parties are needed, especially the commitment of the government, politicians, professional organizations, and academics to solve various infectious disease problems. The results of the study found that there was a gap in TB handling behavior between rural and urban areas. The high dropout rate in rural areas is caused by poor handling and lack of information. Health services need to be improved to be able to control TB cases (Ayala et al., 2023). The results of a study conducted in Mongolia explained that TB treatment has a high risk of post-treatment, post-treatment side effects in the form of lung injury so most patients are disturbed after recovering from TB, but suffer from other diseases, so it is necessary to think about further treatment efforts (Jing et al., 2023). This study also agrees with previous research that cooperation and involvement of all parties is needed to combat TB and break the chain of transmission.

A study conducted in India explains the burden of increasing drug-resistant pulmonary tuberculosis (DR-PTB), so special strategies are needed to overcome recurrence in TB patients over a long period of time, this condition requires post-treatment prophylaxis and treatment (Giridharan et al., 2023). The results of his research explain that treatment failure is caused by comorbidities in TB patients, health workers must screen each diagnosis properly in patients in order to receive good treatment (Rupani, 2023). The results of th² study conducted by previous research responded to the dangers of self-medication and non-compliance with TB management protocols. It emphasizes the importance of patient education, awareness programs, and regular follow-ups to ensure medication adherence and detect the

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occurrence of complications. The case also reveals gaps in DOTS (Directly Observed Treatment, Short-Course) programs, including the need to improve surveillance, and a multidisciplinary approach. The ease of purchase of over-the-counter anti-tuberculosis drugs in Nepal contributes to prolonged self-medication for patients, highlighting concerns. Complications arising from self-medication are a concern, the a need to increase awareness, intervention, and education of patients in TB management. Improving patient education to understand the risks of self-medication, and integrating ophthalmological evaluation into standard management is essential for better TB control in Nepal (Achhami et al., 2023). This study has the same concept as the previous study, TB must be treated immediately, so as not to be at risk of complications, so it takes a long time to recover health.

The results of his research explain that before starting treatment for families and TB patients, it is important to educate them so that they have knowledge and understanding of treatment and drug side effects as well as the duration of treatment (Iruedo & Pather, 2023). The results of his research explain the importance of training health workers with companions of patients taking TB drugs so that there is collaboration in the treatment, assistants can understand well about drug reactions so that they can supervise patients (Farley et al., 2021). The results of the study explained, that our nursing care program intervention was significantly related to a decrease in incidence and 28-day hospital readmission rates due to pulmonary TB. In addition, patients who receive nursing care programs not only improve their knowledge and behavior, are able to perform their self-care and have knowledge retention for 28 days post-discharge. The research recommendation is the implementation of a treatment program in the initial treatment of new TB patients (Sunpapoa et al., 2023).

The results of the study found that there is a misunderstanding among the public about routine immunization in children, the coverage is low, and education is needed to increase awareness of the benefits of vaccination in children under two years old to increase immunity to TB disease (Adedire & Akinkunmi, 2020). This study aims to be the same as

the previous study, if TB with complications is found, isolation should be carried out and treatment should be hospitalized to speed up recovery, and if there is a case discovery in children, immunization status and immunization problems should be carried out including vaccine quality and evaluation of how to vaccinate.

The results of his study concluded that the diagnosis of tuberculosis can be improved through the decentralization of effective laboratory services at the health facility level, and the completion of treatment can be improved by providing food and other forms of social support to patients (Andom et al., 2023). The results of his study found that the TB-LAMP method in Cameroon was well done, and the TB-LAMP was used as an early rapid diagnostic test recommended by WHO for all people with signs and symptoms of tuberculosis. This method will help other countries to do more efficient diagnostics faster (Donkeng-Donfack et al., 2022). The results of the study explained that tuberculosis has become a rare disease in Switzerland, and resistance to the main drug rifampicin remains rare among previously untreated patients. Twenty-eight percent of tuberculosis cases exclusively concern extra-pulmonary manifestations, therefore normal chest radiography or negative cultures of respiratory samples do not definitively exclude tuberculosis. In Switzerland, the most important risk groups for tuberculosis, both drug-susceptible and resistant, are migrants from the Horn of Africa, but also from Southeastern and Southwestern Europe. A careful history of migration and prior treatment with anti-tuberculosis medications are essential for the choice of a proper treatment regimen (Altpeter, & Schmidt, 2021).

The results of his research found that there are still differences in health services in rural and urban areas, it is necessary to have good knowledge and understanding of the symptoms of tuberculosis, and prevention and control of tuberculosis in the community (Zharif et al., 2023). The results of the study found that the number of confirmed TB cases and reported deaths globally decreased. The trend line shows that the funds needed are increasing, indicating that the TB eradication plan can be

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addressed well soon (Meskini et al., 2023).⁴ The results of the study explain that there are still drug-resistant pulmonary tuberculosis (DR-PTB) and drug-sensitive pulmonary tuberculosis (DS-PTB), but from these findings, improvements and drug combinations are still carried out to reduce the level of sensitivity and resistance in patients (Chaiyachat et al., 2023). This study has the same concept, namely the need for good monitoring related to the implementation of treatment, whether the patient who is undergoing treatment has problems with the medication taken, or whether there are negative effects of the treatment. The community needs to be educated so that they have good knowledge and understanding of the disease and treatment of Tuberculosis.

CONCLUSION AND SUGGESTIONS

Health professional organizations are very effective in assisting the government in handling Tuberculosis, have a high commitment to efforts to increase the new case detection rate, play an active role in identifying TB patients with drug-resistant pulmonary tuberculosis (DR-PTB) and drug-sensitive pulmonary tuberculosis (DS-PTB). To further optimize treatment and supervision, and actively monitor initial Lost to Follow Up patients, which is carried out in an integrated and organized manner. It is suggested to the coalition of professional organizations to improve organizational performance in efforts to handle TB, and expand networks with all government and non-government agencies to get support from all parties in efforts to prevent and reduce Tuberculosis.

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