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ANALYSIS OF PROGRAM ISSUES ON TUBERCULOSIS PREVENTION THERAPY

Vidyana Aulia Rahma, Muhammad Atoillah Isfandiari, Eny Qurniyawati
Department of Epidemiology, Faculty of Public Health, Universitas Airlangga, Mulyorejo, Surabaya, East Java 60115, Indonesia
*muhammad-ai@fkm.unair.ac.id

ABSTRACT

Tuberculosis remains a significant problem in Madiun. There are several issues in the TB program, particularly in the low coverage of Tuberculosis Prevention Therapy (TPT). Besides the low coverage of TPT, there are also significant gaps in the delivery of TPT at several health facilities. Based on the analysis of the issues related to the low coverage of the TPT program, not all health facilities have implemented TPT. Objective: Identifying priorities of problems until providing alternative solutions to problem solving. Method: This study is a qualitative, descriptive observational study. The population consists of all program managers at the Madiun City Health Agency, with seven individuals selected as samples. Problem identification was conducted through in-depth interviews. Prioritization of problems was achieved using the Urgency, Seriousness, and Growth (USG) methods. The prioritization of problems was analyzed using a fishbone diagram to determine the root cause of the issues. Results: Identified the priority problem as the low coverage of TPT due to various factors grouped into Man, Process, Material, and Market. Conslusions: Based on the analysis of priority issues using the USG method, the results show that the achievement of Tuberculosis Prevention Therapy is still low and has not reached the target. The analysis of the root causes of the problem using the fishbone method reveals that the limited number of personnel results in double job burdens, the preference of medication adherence monitor for family over cadres, and the difficulty inviting cadres for socialization.

Keywords: fishbone; madiun city; priority problems; tuberculosis preventive therapy

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INTRODUCTION

Tuberculosis (TB) is a contagious disease caused by Mycobacterium tuberculosis that can affect the lungs and other organs. Nearly one-quarter of the global population is infected with Mycobacterium tuberculosis, with approximately 89% of TB cases occurring in adults and 11% in children. The primary source of TB transmission is active pulmonary TB patients (Kemenkes RI, 2020a). TB remains a significant public health issue due to its high morbidity, mortality, and significant impact on human resources. Living with an active TB patient is the highest risk factor for infection with Mycobacterium tuberculosis and can lead to latent TB, which can develop into active TB (Safitri et al., 2023). One of the key objectives of the World Health Organizations (WHO) strategy to end TB by 2025 is to implement Tuberculosis Prevention Therapy (TPT) among the general population to reduce TB incidence by 50%. TPT is effective and safe for treating latent TB infections in individuals with HIV (ODHIV) and thereby preventing the development of active TB infections. Currently, WHO

recommends the TPT regiments of 6H or 9H: Daily monotherapy with isoniazid for 6 or 9 months, 3HP: Weekly rifapentine plus isoniazid for 3 months, 3HR: Daily isoniazid plus rifampicin for 3 months, 1 HP: Daily rifapentine plus isoniazid for 1 month, 4R: Daily rifampicin for 4 months. These regimens aim to prevent the progression of latent TB infections to active TB infections, thereby reducing the overall incidence of TB (Kasibante et al., 2020).

Globally, the number of individuals receiving Tuberculosis Prevention Therapy (TPT) has increased annually from 1 million in 2015 to 3.2 million in 2021, reaching a total of 12.5 million individuals. However, this still falls short of the target of 30 million individuals by 2022 (World Health Organization, 2022a). The majority of individuals receiving TPT are individuals with HIV (ODHIV), who have achieved their sub-target in 2020 and exceeded it in 2021, with a total of 10.3 million individuals (World Health Organization, 2022b). Nevertheless, as of now, only 42% of individuals with HIV have received TPT. Barriers to implementing TPT include concerns about compliance, default, toxicity of medications, and the emergence of drug resistance (WHO, 2015). Indonesia is the second-highest TB-burdened country after India, prompting continued national TB control efforts through intensified, accelerated, expanded, and innovative programs. According to the 2021 Indonesia Health Profile, the number of TB cases found was 397,377, which increased compared to the 351,936 cases found in 2020. The highest number of cases was reported from provinces with large populations, such as West Java, East Java, and Central Java. TB cases in these three provinces contributed to 44% of the total TB cases in Indonesia (Kemenkes RI, 2022b).

Coverage of Tuberculosis Prevention Therapy (TPT) is considered the primary indicator for evaluating and assessing the implementation of TPT. According to the Technical Guidelines for Managing Latent Tuberculosis Infection (ILTB) in 2020, the target for TPT administration is not only limited to household contacts under 5 years old, individuals with HIV (ODHIV), and specific populations, but also includes all ages and other high-risk groups as an effort to prevent TB illness, break the TB transmission chain, and achieve TB elimination by 2030 (Kemenkes RI, 2022a). Tuberculosis remains a significant problem in Madiun. There are several issues in the TB program, particularly in the low coverage of Tuberculosis Prevention Therapy (TPT). Since 2020, TB cases have been recorded and reported through the Tuberculosis Information System (SITB). However, as of now, there are still discrepancies in the number of cases inputted in SITB compared to those manually recorded at health facilities. Additionally, active case finding through TB contact investigation has not been maximized. Similarly, the Medication Compliance Monitoring (PMO) is still internal, with healthcare workers choosing their own family members over village health cadres.

Besides the low coverage of Tuberculosis Prevention Therapy (TPT), there are also significant gaps in the delivery of TPT at several health facilities. Based on the analysis of the issues related to the low coverage of the TPT program, not all health facilities have implemented TPT. The commitment of health workers to administer TPT is still suboptimal, and the acceptance of TPT by the target population is low, with the public generally lacking understanding and thus rejecting TPT. Ideally, the Tuberculosis Prevention Therapy program should be well-received by the public, particularly among household contacts of TB patients. In reality, most of the public rejects TPT, as evidenced by the discrepancies in the success of TPT delivery to each recipient. The primary objective of this research is to identify problems, determine the priority of problems using the Urgency, Seriousness, and Growth (USG) method, identify the root cause of the problems using the fishbone diagram, and develop alternative solutions for the issues present in the Madiun Health Agency.

METHOD

This study is a qualitative, descriptive observational study conducted at the Madiun City Health Agency during July-August of 2023. Secondary data were obtained from the Madiun City Health Agency's Profile. The dependent variable in this study is Tuberculosis, while the independent variables are health priorities, root causes of problems, and alternative solutions. Data collection for this study was conducted through in-depth interviews using questionnaires with all program holders at the Madiun City Health Agency. After identifying several health issues, the Urgency, Seriousness, and Growth method was used to determine the priority of these issues. The identified priority issues were then analyzed to determine their root causes using a fishbone diagram, and alternative solutions were developed. The data presentation in this study used tables and narrative text.

RESULTS

Health Problem Identification

Health problem identification is a method to understand the core of the problem, its causes, and the appropriate solution to improve or resolve the issue. The list of health problems obtained:

1. Low coverage of Tuberculosis Prevention Therapy (TPT) and failure to meet the target
2. Unmet target for TB cases among children
3. Low cure rate for Drug-Resistant Tuberculosis patients

Determining Priorities and Root Causes of Health Problems

After identifying several health problems, the next step is to determine the priorities of these problems. The determination of health problem priorities is based on the results of discussions with Tuberculosis Program Managers at the Infectious and Non-Infectious Disease Prevention and Control Section using the Urgency, Seriousness, Growth (USG) method according to the problems found (Table 1). Then, the root causes of the problems are sought using a fishbone diagram (Figure 1).

Alternative Solutions

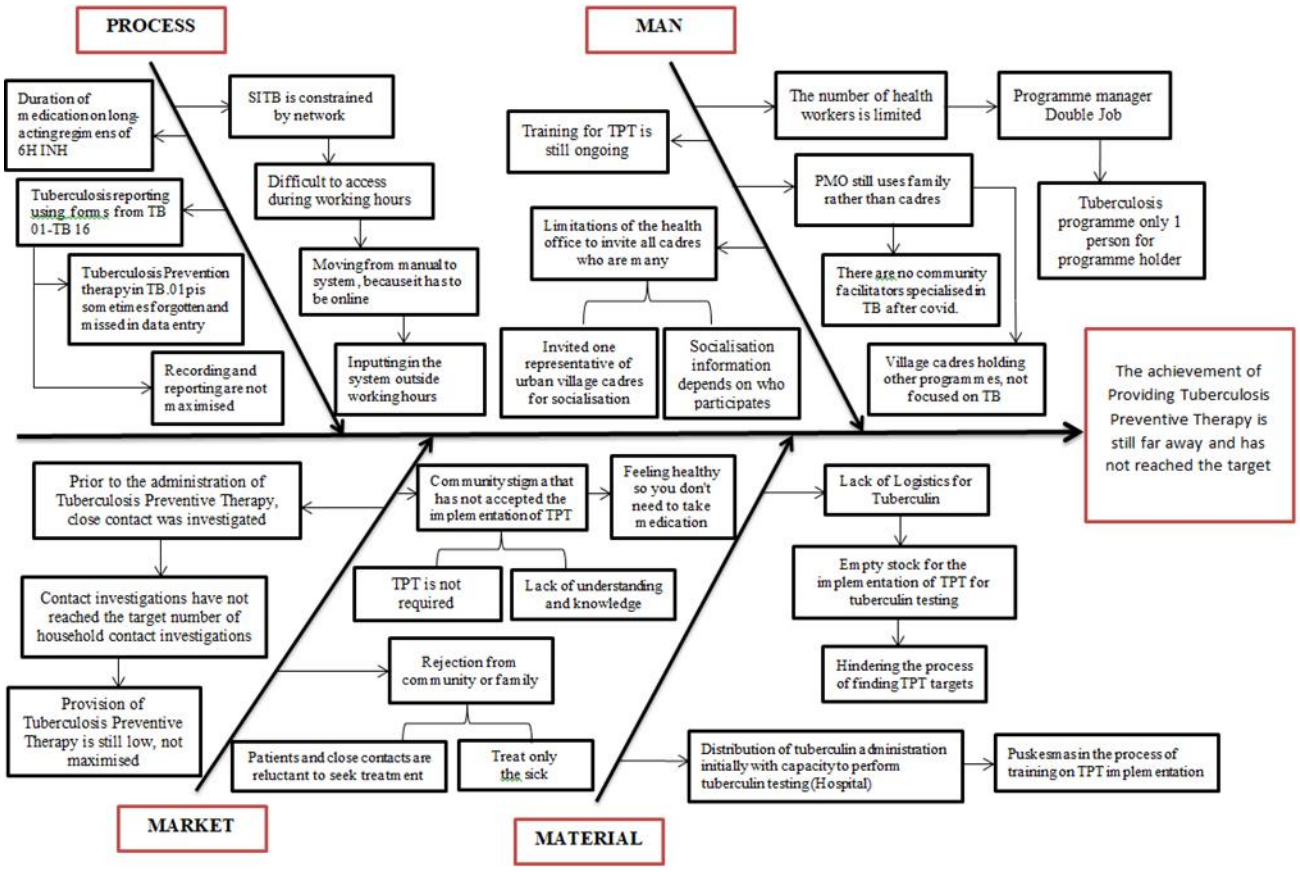
The alternative solutions obtained are:

1. For example, at one health center, there are five village areas (5 village health workers). The TB program holder is only one of the five health workers (coordinator), but it is necessary that all health workers in the village areas also understand the TB program, not just relying on one program holder. They should disseminate their knowledge to all health workers in their areas so that they can assist in the management process.
2. There are several types of training, and if possible, those assigned to attend can be rotated or alternated so that all are exposed to the knowledge, because if not rotated, they must be able to disseminate or share their knowledge with those who did not attend, so that all can have the same knowledge.
3. For health facilities, time must be allocated for data entry. For example, health center services can be provided until the afternoon, and then time must be allocated for data entry.
4. Logistics requests must be well-planned, so that requests to the central office are based on the needs that exist at the health facility, to avoid discrepancies between needs and requests.

For the public, coordination with health promotion and community education activities is necessary. These activities should involve multiple programs, not just relying on the TB program manager, as there are health educators who can participate in the improvement of public knowledge, so it is not solely the responsibility of the program manager.

Table 1.
Determining Priority Health Problems Using the Urgency, Seriousness, Growth (USG) Method

Problems	Score			Total Score	Rank
	Urgency	Seriousness	Growth		
Achievements in the provision of tuberculosis preventive therapy that have not reached the target	10	10	10	30	I
Tuberculosis in Children that has not yet reached the target	8	10	8	26	II
Low cure rates for people with drug-resistant tuberculosis	8	10	8	26	III



DISCUSSION

Health Problem Identification

Based on in-depth interviews conducted with program managers and a review of documents, three health problems were identified in the Tuberculosis program at the Madiun City Health Agency. The identification of health problems was done through in-depth interviews and document studies. According to data and information obtained from 2020, 2021, 2022, and 2023 (ongoing), it was found that the coverage of Tuberculosis Prevention Therapy (TPT) is still very low and has not yet reached the target.

Determining Priorities and Root Causes of Health Problems

The determination of priorities was done using the Urgency, Seriousness, Growth (USG) method, which identified the priority problem as the low coverage of Tuberculosis Prevention

Therapy (TPT) due to various factors grouped into Man, Process, Material, and Market. Based on the data obtained, in 2020, the target was 11% with a total of 166, but the actual coverage was only 8 people. In 2021, the target was 29% with a total of 443, but the actual coverage was zero. In 2022, the target was 48% with a total of 741, but the actual coverage was 35 people. And in 2023, currently underway, the target is 58% with a total of 884, but the actual coverage is currently 28 people. Looking at the data, it is clear that the target increases every year, with the number of cases increasing, and the coverage of TPT cases must meet the predetermined target. Several factors contributing to the prioritization of the problem of low coverage of Tuberculosis Prevention Therapy (TPT) include:

1. Man
   The availability of resources is crucial for achieving the set goals by individuals or humans (Bintang Pratama, 2022). In accordance with the Ministry of Health Regulation (Permenkes) No. 67 of 2016 on Tuberculosis Control, each provincial and municipal health agency must establish a unit responsible for managing TB control programs (Permenkes, 2016). In the aspect of Man, the limited number of healthcare workers results in double workload, medication adherence monitor prefers family members over cadres, limited invitations for cadres to conduct socialization, and cadres handling multiple programs, making them unfocused. The main challenge faced by healthcare workers in identifying suspected TB cases is the double workload that must be carried out by TB program managers, making it difficult for them to focus on their tasks. This is supported by research (Latifah et al., 2018) that TB program managers who handle multiple tasks affect the performance of TB program workers at health centers.
2. Process
   The process referred to is what happens during the program's implementation and what program managers related to TB experience. Based on the results obtained from the interviews, the Tuberculosis Information System (SITB) online often experiences network issues, making it difficult to access during working hours because it is accessed nationally. Therefore, data entry is inputted after working hours, which sometimes results in delays due to fatigue, and the manual data is often delayed in being transferred to Tuberculosis Information System. The TB reporting form is very extensive, including TB 01-TB 16, and for TPT, TB.01p is often forgotten and overlooked in entering data, resulting in suboptimal systematic recording and reporting. There is a gap between the number of TPT administered recorded manually and systematically through Tuberculosis Information System. TB prevention does not only focus on finding and treating patients but also includes efforts to address social factors and other disease determinants. Although efforts are made to actively find TB patients and provide preventive TB therapy, the government must ensure that economic expansion continues (Chakaya et al., 2021).
3. Material
   Equipment or resources are a source of support that can help achieve goals successfully (Minardo, 2014). The material referred to in this study is the availability of facilities and infrastructure to support the process of tuberculosis control. Tuberculosis control is implemented in accordance with the principles of decentralization within the framework of regional autonomy, with regencies/cities as the focal point of program management, which includes planning, implementation, monitoring, and evaluation, as well as ensuring the availability of resources (funds, personnel, equipment, and infrastructure). Based on the results obtained from the interviews, it was found that there are still logistical issues with tuberculin, empty stocks for the implementation of TPT in tuberculin testing, which hinder the process of finding TPT targets. Additionally, the distribution of tuberculin has

not been uniform across all health centers due to these logistical constraints, which also affect healthcare facilities.

4. Market
   The market refers to the target audience for the dissemination of information generated from tuberculosis control activities. The role of the community in the effort to prevent and control Tuberculosis can contribute to achieving program targets. The community needs to be actively involved in activities according to their conditions and capabilities, as Tuberculosis can be controlled together.

Based on the interview results, it was found that community stigma has not accepted TPT and considers it unnecessary because they still feel healthy and do not need to take medication. Additionally, there is very limited knowledge and understanding of the tuberculosis control process. The rejection of TPT is caused by patients and close contacts who do not want to seek treatment and those who are sick but not those who are healthy. During contact investigations, the coverage is not optimal because the target number of household contacts has not been reached. To increase the number of people with tuberculosis symptoms who access or are willing to visit healthcare services, it is necessary to have interventions that encourage them to be diagnosed and reported by creating referral networks to existing tuberculosis healthcare facilities or through medication adherence monitor so that patients with TB symptoms continue to visit healthcare facilities (Kemenkes RI, 2020b).

CONCLUSION

Based on the analysis of priority issues using the USG method, the results show that the achievement of Tuberculosis Prevention Therapy is still low and has not reached the target. The analysis of the root causes of the problem using the fishbone method reveals that the limited number of personnel results in double job burdens, the preference of medication adherence monitor for family over cadres, the difficulty in inviting cadres for socialization, and the cadres involvement in multiple programs, leading to a lack of focus. The numerous TB forms, form TB 01 to TB 16, and the frequent oversight of TB 01p data entry in TPT reporting hinder the systematic recording and reporting process. The lack of logistics for tuberculin and empty stock for TPT implementation during tuberculin examinations hinders the target seeking process. Public stigma, where people do not accept TPT and consider it unnecessary because they feel healthy, also hinders the process. Additionally, minimal knowledge and understanding in tuberculosis prevention and control processes are major issues. The investigation of contacts has not been maximized, as the target number of household contacts investigated has not been reached. The alternative solutions obtained are necessary that all health workers in the village areas also understand the TB program, not just relying on one program holder, they must be able to disseminate or share their knowledge with those who did not attend, so that all can have the same knowledge. For health facilities, time must be allocated for data entry, and logistics requests must be well-planned.

REFERENCES

Bintang Pratama, A. (2022). Pengaruh Kualitas Pelayanan Dan Promosi Terhadap Kepuasan Pelanggan Pada Pt. Indomarco Prismatama Cabang Kemiri Raya Kota Tangerang Selatan. Indonesian Journal of Economy Business, Entrepreneuship and Finance, 2(1), 49–64. https://doi.org/10.53067/ijebef

Chakaya, J., Khan, M., Ntoumi, F., Aklillu, E., Fatima, R., Mwaba, P., Kapata, N., Mfinanga, S., Hasnain, S. E., Katoto, P. D. M. C., Bulabula, A. N. H., Sam-Agudu, N. A., Nachega, J. B., Tiberi, S., McHugh, T. D., Abubakar, I., & Zumla, A. (2021). Global Tuberculosis Report 2020 – Reflections on the Global TB burden, treatment and

prevention efforts. International Journal of Infectious Diseases, 113, S7–S12. https://doi.org/10.1016/j.ijid.2021.02.107

Kasibante, J., Rutakingirwa, M. K., Kagimu, E., Ssebambulidde, K., Ellis, J., Tugume, L., Mpoza, E., Cresswell, F., & Meya, D. B. (2020). Tuberculosis preventive therapy (TPT) to prevent tuberculosis co-infection among adults with HIV-associated cryptococcal meningitis: A clinician's perspective. Journal of Clinical Tuberculosis and Other Mycobacterial Diseases, 20, 100180. https://doi.org/10.1016/j.jctube.2020.100180

Kemenkes RI. (2020a). Lembar Balik Terapi Pencegahan Tuberkulosis. https://tbindonesia.or.id/wp-content/uploads/2020/10/Lembar-Balik-Pemberian-Terapi-Pencegahan-Tuberkulosis_Fix_convert.pdf

Kemenkes RI. (2020b). Strategi Nasional Penanggulangan Tuberkulosis di Indonesia 2020-2024. Pertemuan Konsolidasi Nasional Penyusunan STRANAS TB, 216. https://tbindonesia.or.id/wp-content/uploads/2021/06/NSP-TB-2020-2024-Ind_Final_-BAHASA.pdf

Kemenkes RI. (2022a). Laporan Program Penanggulangan Tuberkulosis. In Kementerian Kesehatan Republik indonesia. https://tbindonesia.or.id/pustaka_tbc/laporan-tahunan-program-tbc-2021/

Kemenkes RI. (2022b). Profil Kesehatan Indonesia 2021. In Pusdatin.Kemenkes.Go.Id.

Latifah, M., Rahayu, S. R., & Indrawati, F. (2018). Correlated Factors on Performance of Tuberculosis Program Officers at Community Health Clinic in Increasing the Finding of New AFB Smear-Positive Cases. Unnes Journal of Public Health, 7(1), 7–14. https://doi.org/10.15294/ujph.v7i1.16705

Minardo, J. (2014). 2014-Pro-Analisis determinan motivasi petugas TB dalam penemuan kasus di Kab. 253–261.

Permenkes. (2016). Penanggulangan Tuberkulosis. 163. https://tbindonesia.or.id/pustaka_tbc/peraturan-menteri-kesehatan-republik-indonesia-nomor-67-tahun-2016-tentang-penanggulangan-tuberkulosis/

Safitri, I. N., Martini, M., Adi, M. S., & Wurjanto, M. A. (2023). Faktor yang Berhubungan dengan Penerimaan Terapi Pencegahan TB di Kabupaten Tegal. Jurnal Riset Kesehatan Masyarakat, 3(4), 212–220. https://doi.org/10.14710/jrkm.2023.20670

WHO. (2015). Implementing The End TB Strategy. Antimicrobial Agents and Chemotherapy, 58(12), 7250–7257. https://www.cambridge.org/core/product/identifier/CBO9781107415324A009/type/book_part%0Ahttp://arxiv.org/abs/1011.1669%0Ahttp://dx.doi.org/10.1088/1751-8113/44/8/085201%0Ahttp://www.ncbi.nlm.nih.gov/pubmed/25246403%0Ahttp://www.pubmedcentral.nih.gov/artic

World Health Organization. (2022a). Global Tuberculosis Report (TB Prevention). https://www.who.int/teams/global-tuberculosis-programme/tb-reports/global-tuberculosis-report-2022/tb-prevention

World Health Organization. (2022b). Laporan Tuberkulosis Global. https://www.who.int/teams/global-tuberculosis-programme/tb-reports/global-tuberculosis-report-2022.