# Implementation of Pulmonary TB Case Finding on the Tuberculosis Control Program at the Karangmalang Primary Healthcare Center Semarang City

## Siti Lutfiyah Ulfa[1✉], Muhamad Zakki Saefurrohim[2]

[1]Public Health, Universitas Negeri Semarang
[2]Department of Epidemiology, Faculty of Public Health, Universitas Mulawarman

## Abstrak

Angka penemuan kasus (CDR) Tuberkulosis di Puskesmas Karangmalang dari tahun 2016 hingga tahun 2018 selalu menjadi yang terendah di Kota Semarang. Rendahnya angka penemuan kasus dapat diartikan dengan rendahnya kinerja para pelaksana dalam pelaksanaan penemuan kasus TB Paru di Puskesmas Karangmalang. Penelitian ini bertujuan untuk mengetahui implementasi penemuan kasus TB Paru di Puskesmas Karangmalang. Metode: Penelitian ini menggunakan desain kualitatif dengan jenis penelitian studi kasus. Informan dipilih secara purposive sampling yang terdri dari 5 informan utama dan 4 informan triangulasi. Pengambilan data menggunakan wawancara mendalam kemudian data dianalisis data dan disajikan dalam bentuk narasi. Hasil: Hasil penelitian menunjukkan bahwa standar dan sasaran kebijakan jelas, kesiapan sumberdaya baik, kuantitas kader TB kurang, komunikasi dan koordinasi antar organisasi baik, penyebaran informasi terkait Tuberkulosis kepada masyarakat kurang, belum adanya SOP penemuan kasus TB Paru, pemahaman dan kinerja para pelaksana masih kurang, dan peran serta masyarakat perlu ditingkatkan.

**Kata Kunci:** Penanggulangan TB, Penemuan Kasus TB Paru, Implementasi

## *Abstract*

*CDR of Tuberculosis at Karangmalang Primary Health Care from 2016 to 2018 was has always been the lowest in Semarang City. The low CDR can be interpreted by the low performance of the implementers in implementation Pulmonary TB case discovery at Karangmalang PHC. This research aimed to knew the implementation of Pulmonary TB case discovery at Karangmalang PHC. Methods: This research used qualitative design with research type is case study. The informants were selected by purposive sampling were consisted of 5 main informants and 4 triangulation informants. Data were collected using in-depth interviews and then the data were analyzed and presented in narrative form.Results: The results showed that standards and targets of policy were clear, resource readiness was good, the quantity of TB cadres was lacking, communication and coordination between organizations was good, the dissemination of information related to tuberculosis to the community was lacking, there was no SOP for Pulmonary TB case detection, the understanding and performance of the implementers was still lacking, and community participation needs to be increased.*

*Keywords: TB Control, Pulmonary TB Case Discovery, Implementation*

**19 |** The 3rd Mulawarman International Conference on Tropical Medicine and Public Health
E-ISSN: xxx-xxx
Universitas Mulawarman, Samarinda, November 22, 2024

## INTRODUCTION

Tuberculosis (TB) is a direct infectious disease caused by germs Mycobacterium tuberculosis, this disease mostly affects the lungs (Pitaloka, 2020). Tuberculosis is still a public health problem that causes high pain, disability, and death, so it is necessary to make countermeasures. Tuberculosis control is carried out using strategies Directly Observed Treatment Short-course (DOTS) which is carried out in all Health Service Units (UPK) including health centers. One of the main strategies in the fight against Tuberculosis is the discovery of Tuberculosis cases. The discovery of TB cases is the first step in the TB Control Program (P2TB) activities. By maximizing the early detection of TB cases, it will be able to reduce pain and death due to TB, as well as TB transmission in the community and at the same time is the most effective TB transmission prevention activity in the community (Faradis, 2018)

The number of new cases of positive TB BTA (Case Detection Rate = CDR) in the Karangmalang Health Center from 2016 by 5.4% (7 cases), in 2017 by 9.4% (9 cases), until 2018 by 5.4% (5 cases), making the Karangmalang Health Center as the health center with the lowest case discovery in Semarang City. The number of new cases found (Case Detection Rate = CDR) is the number of all new TB cases found and treated compared to the estimated number of TB cases in the region. The CDR of the Karangmalang Health Center in 2019 was 48.6%, namely 18 new cases out of 37 new cases estimated. This figure still has not reached the target of 75%

coverage of Semarang City. Meanwhile, the success rate of BTA TB treatment was positive (Treatment Success Rate = TSR) at the Karangmalang Health Center in 2018 by 77.8% which is still below the national indicator target (Semarang City Health Office, 2019).

Similar research was conducted by Zarwita (2019) with the title Analysis of the Implementation of the Discovery of Pulmonary TB Cases in the Pulmonary TB Control Program at the Balai Tuesday Health Center. The difference is the difference in time, place, and research variables. This study uses variables from the implementation theory of Donald Van Meter and Carl Van Horn, while Zarwita uses input, process, and output variables. In addition, Zarwita's research was conducted at the Balai Tuesday Health Center in South Pesisir Regency, while this research was conducted at the Karangmalang Health Center in Semarang City. This study aims to determine the implementation of the discovery of pulmonary TB cases at the Karangmalang Health Center, Semarang City, especially in matters related to policy standards and targets, resources, communication between related organizations and implementation activities, characteristics of implementing agencies/bodies, attitudes of implementers, and environmental conditions.

## METHOD

The type of research used in this study uses a qualitative research design with a case study type of research. This study uses a descriptive approach to explain

**20 |** The 3rd Mulawarman International Conference on Tropical Medicine and Public Health
E-ISSN: xxx-xxx
Universitas Mulawarman, Samarinda, November 22, 2024

and describe (in the form of words) the implementation of the discovery of pulmonary TB cases at the Karangmalang Health Center so that the results of the research can be presented in depth. This research was conducted from June to July 2020 at the Karangmalang Health Center, Semarang City. The variables studied include (1) policy standards and objectives including clarity of program standards and targets in the implementation of the discovery of pulmonary TB cases, (2) resources refer to the availability of sufficient human resources, facilities and infrastructure as well as sources of funds/finance in the implementation of the discovery of pulmonary TB cases, (3) communication between related organizations and implementation activities including coordination between implementers and clarity of messages conveyed in the implementation of the discovery of pulmonary TB cases, (4) the characteristics of the implementing agency/body refer to the internal characteristics of the bureaucracy including the support of the organizational structure and the clarity of the working mechanism with the SOP for the discovery of TB cases, (5) the attitude of the implementers including the response, cognition, and intensity of the implementers in the implementation of the discovery of TB cases, and (6) environmental conditions which include support from the external environment for the implementation of the discovery of pulmonary TB cases at the Karangmalang Health Center.

The informants in this study consist of the main informant and the triangulation informant which is determined by purposive sampling, that is, the subject is taken based on a certain purpose, and the researcher considers that the informant taken has the necessary information for the research to be conducted. The main informants of this study were 2 TB 'Aisyiyah cadres, 2 health workers and a TB program holder at the Karangmalang Health Center, while the triangulation informants for data validity consisted of the Head of the Karangmalang Health Center, the P2P Field Staff or the Pulmonary TB Program Manager of the Semarang City Health Office, and 2 new patients with Pulmonary TB who were in the work area of the Karngmalang Health Center.

The data that has been obtained is then processed and analyzed using the Miles and Huberman concept including data reduction, presentation, and conclusion drawn. In the data reduction stage, the researcher made interview transcripts and categorized them according to the variables and focus of the research. The data that has been categorized is then presented in the form of an easy-to-understand description. The last stage is the drawing of conclusions from each variable studied with a brief statement. This research has ethical clearance with the number 079/KEPK/EC/2020.

**RESULT AND DISCUSSION**

The working area of the Karangmalang Health Center consists of 4 villages including Karangmalang Village, Bubakan, Polaman, and Purwosari Village with The population reached 12,963 people. The characteristics of the area are in the form of villages, as many as 8,397 residents

**21 |** The 3rd Mulawarman International Conference on Tropical Medicine and Public Health
E-ISSN: xxx-xxx
Universitas Mulawarman, Samarinda, November 22, 2024

make a living as farmers and as many as 198 houses of residents who still use wood/boards (BPS Semarang City, 2019). The working area of the Karangmalang Health Center has one Islamic boarding school, namely the Askhabul Kahfi Polaman Islamic Boarding School. This Islamic boarding school has 5 formal education, namely: Askhabul Kahfi Integrated Junior High School and Vocational School, MTs Takhasus and MA Askhabul Kahfi, and Ma'had Aly Askhabul Kahfi College. The informants in this study amounted to 9 people consisting of 5 main informants and 4 triangulation informants. The main informants in this study are as follows.

**Table 1.** Characteristics Informants

| No. | Informant | Age (years) | Last Education | Position/Information |
|---|---|---|---|---|
| 1 | IU.1 (Principal Informant 1) | 34 | D3 Nursing | TB Programmer of Karangmalang Health Center |
| 2 | IU.2 (Main Informant 2) | 28 | S1 Nursing + Nurses | Gasurkes Karangmalang Health Center |
| 3 | IU.3 (Principal Informant 3) | 25 | S1 Nursing Profession | Gasurkes Karangmalang Health Center |
| 4 | IU.4 (Main Informant 4) | 46 | JUNIOR | 'Aisyiyah Cadre of Polaman Village |
| 5 | IU.5 (Main Informant 5) | 42 | SMK | 'Aisyiyah Cadre of Purwosari Village |
| 6 | IT.1 (Triangulation Informant 1) | 49 | S1 Medical Profession | Head of Karangmalang Health Center |
| 7 | IT.2 (Triangulation Informant 2) | 44 | S2 Promkes | P2P Staff or Pulmonary TB Program Manager of the Semarang City Health Office |
| 8 | IT.3 (Triangulation Informant 3) | 32 | SMK | Families of BTA+ Pulmonary TB Patients |
| 9 | IT.4 (Triangulation Informant 4) | 65 | SD | BTA+ Pulmonary TB Patients |

The informants in this study come from diverse backgrounds, including healthcare professionals, community cadres, and individuals affected by pulmonary TB. Their ages range from 25 to 65 years, with varying levels of education from elementary school to a master's degree. Some work as TB program managers and healthcare workers, while others serve as community volunteers or have direct experience with TB, either as patients or family members. This diverse representation provides a comprehensive perspective on TB management and its impact on different stakeholders.

The discovery of pulmonary tuberculosis cases is one of the main activities in the Pulmonary Tuberculosis Control Program. The Tuberculosis Control Program or what can be called P2TB at the Karangmalang Health Center has been running for quite a long time. However, until now, the number of discovery and success of case treatment is still low. The TB case discovery activities held at the Karangmalang Health Center include mobile counseling, contact investigations, sputum collection, and mini workshops. These activities still do not cover all TB case discovery activities based on the

**22 |** The 3rd Mulawarman International Conference on Tropical Medicine and Public Health
E-ISSN: xxx-xxx
Universitas Mulawarman, Samarinda, November 22, 2024

Tuberculosis Control Program where TB case discovery activities include network and service collaboration, contact investigations, discovery in special and at-risk places, periodic and community-based discovery, and mass screening (Minister of Health of the Republic of Indonesia, 2016). The success of a policy is inseparable from the ability of the implementer to carry out the policy. Therefore, to find out the extent of the implementation of the discovery of pulmonary TB cases at the Karangmalang Health Center, it can be measured through several variables of Van Meter and Van Horn Theory.

The first variable in this study is policy standards and goals. Performance is measured by the achievement of programs that are in accordance with standards and objectives (Sani, 2018). Therefore, implementers must understand well what are the standards and goals of a policy. The implementation of the program will fail if the implementer does not understand the standards and objectives of the program (Djiko, 2018). The implementers of the TB program at the Karangmalang Health Center should understand the standards and goals to be achieved from the implementation of TB case discovery. The implementers of the TB program at the Karangmalang Health Center actively discover TB cases by conducting case investigations and contact investigations, while the passive discovery of TB cases is carried out by counseling at health facilities when TB patients come. However, the program implementers still have not carried out discoveries in special places such as schools and Islamic boarding schools, active family- and community-based

discoveries such as cough monitoring, and mass screening specifically aimed at health facilities with low case detection (Minister of Health of the Republic of Indonesia, 2016).

The last variable is environmental conditions. Environmental conditions have an important relationship with the wishes and the organization/implementing body. The welfare of the external environment also encourages the success that has been determined. The external environment in this case includes the social environment, political environment, and economic environment. An unconducive environment, both social, political, and economic, can be the culprit of the failure of policy implementation performance. Therefore, efforts to implement policies must also pay attention to the conduciveness of external environmental conditions (Djiko, 2018).

The social environment that affects the successful implementation of the discovery of pulmonary TB cases at the Karangmalang Health Center is the participation of the community in helping the tracking and discovery of TB suspects. According to the program holder, the community is cooperative if there is a notification of information about Tuberculosis disease. Meanwhile, TB patients admitted that there were no neighbors or communities who were excluded. This means that there is no bad stigma experienced by TB patients. This is in accordance with what is stated in the Minister of Health Regulation of the Republic of Indonesia No. 67 of 2016 which states that one form of community participation in supporting the prevention of

**23 |** The 3rd Mulawarman International Conference on Tropical Medicine and Public Health
E-ISSN: xxx-xxx
Universitas Mulawarman, Samarinda, November 22, 2024

Tuberculosis by not fostering negative stigma in the community and cooperatively helping to trace close contacts of patients.

## CONCLUSION

Based on the results of the research and discussion, it can be concluded that the standards and targets for finding TB cases are clearly listed in the TB patient discovery module set by the Ministry of Health. However, in its implementation, the implementers did not carry out several activities such as the discovery of cases in special and at-risk places, cough monitoring, and mass screening. The readiness of resources has been sufficient, but the number of field officers and the participation of TB cadres in the discovery of pulmonary TB cases is still lacking. Communication and coordination within the health center and with the health office have been good. The characteristics of the implementing agencies/bodies in the implementation of the discovery of TB cases at the Karangmalang Health Center are still lacking. There is no SOP for the discovery of pulmonary TB cases at the Karangmalang Health Center. The organization of the TB Team is also not written structurally. The attitude of the implementers in the implementation of the discovery of pulmonary TB cases at the Karangmalang Health Center is still not optimal. Environmental conditions in supporting the implementation of the discovery of pulmonary TB cases at the Karangmalang Health Center are good.

## REFERENCES

Ali, M. M. 2018. Primary Health Care Policy Implementation Performance in Bangladesh: Affecting Factors. Journal of Public Administration and Governance, 8(1), 317–352.

BPS Semarang City. 2019. Mijen District in 2019 Figures. Semarang: BPS Semarang City.

Budhiyanto, Rianto, B., & Djanat, V. 2019. Implementation of Monitoring and Control Procedure Policies in Mangrove Zone of Wonorejo District: a Case Study of Surabaya Mayor Regulation #65 of 2011. RJOAS (Russian Journal of Agricultural and Socio-Economic Sciences, 85(1), 480–489.

Semarang City Health Office. 2019. Semarang City Health Profile 2018. Semarang: Semarang City Health Office.

Djiko, R., & Tangkau, C. H. S. 2018. Implementation of the National Health Insurance Policy in North Halmahera Regency. 109–120.

Faradis, N. A., & Indarjo, S. 2018. Implementation of the Policy of the Minister of Health Number 67 of 2016 concerning Tuberculosis Control. HIGEIA (Journal of Public Health Research and Development), 2(2), 307–319.

Handayani, S., Manglapy, Y. M., & Rimawati, E. 2018. Active Case Finding TB Training for Infectious Disease Health Surveillance Officers (Gasurkes). Abdimasku: Journal of Community Service, 1(2), 67–70.

Haryati, R. A. 2019. Analysis of the Implementation of Employee Training and Development Programs: A Case Study on PT Visi Sukses Bersama Jakarta. Widya Cipta - Journal of Secretary and Management, 3(1), 91–98.

Indriyani, N., Istiqomah, N., & Anwar, M. C. 2016. The Relationship between

**24 |** The 3rd Mulawarman International Conference on Tropical Medicine and Public Health
E-ISSN: xxx-xxx
Universitas Mulawarman, Samarinda, November 22, 2024

Residential House Humidity Levels and the Incidence of Pulmonary Tuberculosis in Tulis District, Batang Regency. Unnes Journal of Public Health, 5(3), 214–220.

Irawati, R., & Hardiastuti, E. B. W. 2016. Designing a Standard Operating Procedure (SOP) for the Raw Material Purchase Process, Production and Packaging Process in the Food Service Industry (Case Study on PT. KSM Catering & Bakery Batam). Journal of Accounting, Economics and Business Management, 4(2), 187–186.

Iswari, A. P., & Porusia, M. 2018. Performance Factors of Community TB-HIV Care 'Aisyiyah Cadres on the Discovery of TB Suspects in Surakarta. URECOL, 24–33.

We, Setiawati, B., & Suwandi. 2018. The Implementation of Teacher Certification Policy is seen from the Aspect of Implementor Tendency at SMA Negeri 2 Tanjung Tabalong Regency. JAPB, 4(1), 393-409.

Marjaya, I., & Pasaribu, F. 2019. The Influence of Leadership, Motivation, and Training on Employee Performance. Scientific Journal of Master of Management, 2(1), 129–147.

Minister of Health of the Republic of Indonesia. 2011. Permenkes RI No. 1077 of 2011 concerning Guidelines for Air Sanitation in Residential Spaces. Jakarta: Minister of Health of the Republic of Indonesia.

Minardo, J., Sriatmi, A., & Arso, S. P. 2015. Analysis of Motivational Determinants of Pulmonary Tuberculosis Officers in Case Discovery in Semarang Regency (Case Study in Several Health Centers). Indonesian Journal of Health Management, 3(1), 1–10.

Ratnasari, N. Y., Marni, & Husna, P. H. 2019. Knowledge, Behavior, and Role of Health Cadres in The Early Detection of New Tuberculosis Case in Wonogiri. Journal of Public Health, 15(2), 235–240.

Rustam, Sahibo, S. A., & Pariyati. 2018. Implementation of Water Distribution Management Policy to Increase Paddy Rice Production in Malonas Irrigation Area, Dampelas District, Donggala Regency. Collaborative Journal of Science, 1(1), 1438–1449.

Sani, N., & Idris, A. R. 2018. Implementation of Linus Programme Based On The Model of Van Meter And Van Horn. MOJES (The Malaysian Online Journal of Educational Science), 1(2), 25–36.

Sulistiani, A. S. 2016. Standard Operating Procedures (SOP) for Population Administration in Improving the Effectiveness of Public Services in Sambutan District. eJournal of Government Science, 4(1), 53–63.

Mayor of Semarang. 2017. Semarang Regulation No. 39 of 2017 concerning the Regional Action Plan for Tuberculosis Control in Semarang City for 2017-2021. Semarang: Mayor of Semarang.

Widjanarko, B., Gompelman, M., Dijkers, M., & van der Werf, M. J. 2009. Factors that Influence Treatment Adherence of Tuberculosis Patients Living in Java, Indonesia. Patient Preference and Adherence, 3, 231–238.

Zarwita, D., Rasyid, R., & Abdiana. 2019. Analysis of the Implementation of the Discovery of Pulmonary TB Patients in the Pulmonary TB Control Program at the Balai Tuesday Health Center. Andalas Health Journal, 8(3),

**25 |** The 3rd Mulawarman International Conference on Tropical Medicine and Public Health
E-ISSN: xxx-xxx
Universitas Mulawarman, Samarinda, November 22, 2024