

# ANALYSIS OF THE ROLE OF MONITORING DRUG SWALLOWING (PMO) IN PULMONARY TUBERCULOSIS PATIENTS AT THE MATTIROBULU COMMUNITY HEALTH CENTER, PINRANG REGENCY

Putri Pratiwi<sup>1</sup>, Nurul Qalbi Talib<sup>2</sup>, Rosdiana<sup>3</sup>

<sup>1-3</sup>Health Administration Study Program, Fatima Parepare Health Sciences College

Email: putripratiwi560@gmail.com

## ABSTRACT

Tuberculosis is a chronic infectious disease caused by the bacteria *Mycobacterium tuberculosis*. This bacteria is rod-shaped and acid-resistant, so it is often known as Acid-Resistant Bacillus (BTA). Mattiobulu Community Health Center is one of the community health centers with the highest number of lung tuberculosis cases in Pinrang Regency, and Mattiobulu Community Health Center has implemented the DOTS (Direct Observed Treatment Short-course) strategy in its efforts to control tuberculosis. This study aims to analyze the role of drug swallowing supervisors (PMO) in pulmonary tuberculosis patients at the Mattiobulu Community Health Center, Pinrang Regency. Research data collection was carried out over a period of one month, starting in November 2023, using qualitative research methods through observation, document review, and in-depth interviews with 11 informants. The results of this study show that the role of the PMO at the Mattiobulu Community Health Center during the treatment period is that the PMO helps patients prepare and remind patients to take their medication, provides motivation and encouragement to patients to take their medication every day, reminds them when to take their medication, and checks their sputum (phlegm), as well as the role of the PMO in educating patients and families about tuberculosis. The PMO also tells patients what they should and shouldn't do, such as wearing a mask and covering their mouth when coughing. PMO is needed to ensure regularity of treatment, which will determine the success of treatment or vice versa. It is hoped that community health centers can tell PMOs more about tuberculosis as they carry out their duties.

Keywords: Role of PMO, Tuberculosis, Treatment Success

## INTRODUCTION

Tuberculosis is a health problem in the world, has become the highest of the 10 diseases throughout the world, and is a disease that causes death. Health development has been outlined in the SDGS (Sustainable Development Goals), with a target of ending infectious diseases by 2030, one of which is tuberculosis (World Health Organization, 2020). Since 2013, the number of tuberculosis cases has increased in many countries. India and Indonesia are the countries with the highest number of pulmonary tuberculosis cases in the world, with India ranking first in the world based on estimated cases per year, respectively. These include India (26%), Indonesia (8.5%), China (8.4%), the Philippines (6.0%), Pakistan (5.7%), Nigeria (4.4%), Bangladesh (3.6%), and South Africa (3.6%) (World Health Organization, 2020).

Based on data from the 2018 Global Tuberculosis Report, in Indonesia in 2017, there were 842,000 new cases of tuberculosis, which is 319 cases per 100,000 population, and 44 cases per 100,000 population died, including those who had HIV-positive tuberculosis. In 2019, South Sulawesi Province had 19,568 cases of pulmonary TB, with Pinrang Regency included in the top ten regions in South Sulawesi with 684 cases of pulmonary TB. With the increase in tuberculosis cases in the early 1990s, WHO and IUATLD developed a tuberculosis control strategy known as DOTS (Directly Observed Treatment Short Course). This strategy consists of five main components: commitment from politicians with increased and sustainable funding; case finding using quality-

assured microscopic sputum examination; standard treatment through supervision and support for patients; an effective OAT management and availability system; as well as a recording and reporting monitoring system. who are able to provide assessments of patient treatment results and program performance (Indonesian Ministry of Health, 2011).

In the tuberculosis control program, medication monitoring (PMO) is part of the DOTS strategy. DOTS is a short course of treatment and requires close supervision from a PMO (Drug Ingestion Monitor), which is an important part of this strategy. Tuberculosis treatment in the past took a long time, about one year, to complete. Currently, tuberculosis treatment only requires six months to cure. To complete the treatment process, which shows the patient's recovery through repeated microscopic examination, perseverance and understanding are needed from the sufferer and his family. So, according to national pulmonary tuberculosis control, every tuberculosis sufferer must have a companion as a drug ingestion supervisor (PMO). This is done to ensure the health of sufferers and prevent drug resistance in them (Indonesian Ministry of Health, 2011).

The duties of a PMO are: a. supervise tuberculosis patients to swallow medication regularly until completion of treatment; b. provide encouragement to patients to want to seek treatment regularly; c. remind patients to check their sputum at the specified time; d. provide education to family members of tuberculosis patients who have symptoms suspicious of tuberculosis to immediately go to the health service unit. It is best if the PMO is a health worker, for example, a village midwife, nurse, worker, sanitarian, immunization specialist, etc. If there are no health workers, PMO can come from health cadres, teachers, members of PPTI, PKK, or other community figures or family members (Kemenkes RI, 2016).

Monitoring medication taking also has a high influence on the success of treatment for pulmonary tuberculosis because the PMO determines whether or not the medication has been recommended for pulmonary tuberculosis sufferers to take, thus also determining whether or not the patient is cured of pulmonary tuberculosis (Syakur et al., 2019). Research conducted by Jufriзал et al. (2016) showed a significant relationship between PMO (drug swallowing monitoring) and the success rate of treatment for pulmonary tuberculosis sufferers, and research conducted by Yuda & Utoyo (2018) stated that there was a relationship There is a significant relationship between the role of PMO and the successful treatment of pulmonary tuberculosis patients. Based on the research conducted, it was found that 93.75% of PMO supported the treatment process, and 93.5% of TB treatment results were cured. Based on the description above, researchers are interested in conducting research on analyzing the role of drug swallowing supervisors (PMO) in pulmonary tuberculosis patients at the Mattirobulu Community Health Center, Pinrang Regency.

## RESEARCH METHODS

This research was conducted at the Mattirobulu Community Health Center, Pinrang Regency. Research began in October–November 2023. The research used qualitative research methods, using primary and secondary data. Primary data was obtained through in-depth interviews and observations. Secondary data was obtained by reviewing existing documents (Moleong, 2010). This research was conducted at the Mattirobulu Community Health Center, Pinrang Regency, because it is one of the community health centers that has the highest cases of pulmonary tuberculosis in Pinrang Regency and has implemented the DOTS strategy for controlling pulmonary tuberculosis. In the selection of informants, they are selected based on the principle of appropriateness, namely that informants are selected because they have knowledge related to the research topic and are also responsible for carrying out activities, as well as the principle of adequacy, namely that informants are selected because they are able to describe and provide information related to the research topic (Notoatmojo, 2012).

## RESULTS AND DISCUSSION

Table Of Informant Characteristics

| Informant Code | Gender | Age | Last Education | Occupation | Information    |
|----------------|--------|-----|----------------|------------|----------------|
| A1             | Female | 58  | S1             | PNS        | Program Holder |
| B1             | Female | 30  | S1             | IRT        | PMO            |
| B2             | Female | 37  | SMA            | PNS        | PMO            |
| B3             | Male   | 53  | SMP            | Farmer     | PMO            |
| B4             | Female | 25  | S1             | PNS        | PMO            |
| B5             | Male   | 61  | SD             | Farmer     | PMO            |
| B6             | Male   | 45  | SMA            | Farmer     | PMO            |
| B7             | Female | 37  | S1             | PNS        | PMO            |
| C1             | Female | 51  | SMP            | IRT        | Patient        |
| C2             | Male   | 59  | SMP            | Farmer     | Patient        |
| C3             | Male   | 69  | SD             | Farmer     | Patient        |

Source: Primary Data 2023

### **The role of the PMO in supervising patients swallowing medication regularly until the completion of treatment**

The treatment guidelines recommended Ministry of Health of the Republic of Indonesia Number 67, 2017 are: aims to cure the majority of new tuberculosis patients without causing the emergence of drug-resistant germs. To achieve this goal, it is very important for patients to swallow all the medication given as directed, with direct supervision by a medication monitor (PMO). PMO is determined by a joint decision between the patient and health workers. The PMO should be close to the patient (living in the same house or close to the patient's house) so that treatment supervision is more regular and the patient can be monitored every day. The drug swallowing supervisor (PMO) must monitor each patient's drug intake to ensure that the OAT the patient swallows is the right drug, at the right dose, and at the right interval. PMO supervisors must also be trained, acceptable, and selected with the patient.

Research conducted by Inaya and Sagita (2020) shows that there is a significant relationship between the role of the PMO and the success of treating TB patients in Kupang City. He stated that the better the role of the PMO, the higher the success of pulmonary TB treatment. Research conducted by Jufrizal et al. (2016) shows a relationship between the role of PMO and the success rate of pulmonary TB treatment. He also said that the role of a good PMO will increase the success of treatment for pulmonary TB sufferers. The role of the family is very important in the success of treatment in pulmonary TB sufferers, whether the success of BTA examination factors, weight gain, or completeness of taking medication.

The role of PMO is very important for the success of treatment because sufferers who undergo long treatment may get bored of having to take medication every day. As a result, there is a possibility of drug withdrawal or forgetting to take medication due to despair because the disease is not being cured, so the role of the PMO is needed to supervise patients or remind patients to take their medication regularly (Napitupulu & Harahap, 2020).

The results of research carried out in the working area of the Mattirobulu District Health Center. Pinrang

showed that the PMO's role was good in supervising patients to consume their medication regularly. This was the result of in-depth interviews with informants, where they said that they witnessed patients swallowing medication, were always willing to accompany the patient during their treatment, and believed that tuberculosis could recover if you take the medicine regularly.

### **The Role of the PMO in Encouraging Patients to Seek Treatment Regularly**

The role of PMO is very important for the success of treatment because sufferers may get bored of having to take medication every day during long treatment. As a result, there is a risk of dropping out of medication or forgetting to take medication because of despair that the disease will not be cured. The role of PMO is expected to reduce drug withdrawal because subsequent treatment requires a longer time. In curing pulmonary TB, the role of the family as PMO is very important to provide encouragement and support to the patient. Pulmonary TB patients can receive full support and motivation from family members to make them adhere to taking their medication regularly. The family must actively support the patient during treatment so that they recover (Rina, 2019). Family supporting factors provide encouragement and support to the patient, bringing a positive influence on the patient.

Based on research conducted (Febriana, 2018), the results show that the family functions as a PMO to encourage patients to undergo the best possible treatment. Pulmonary TB patients are encouraged to recover because of regular treatment and the great desire of their families and patients for their recovery. As a Medication Swallowing Supervisor (PMO), the family can help the patient's behavior during the treatment process, the regularity of treatment, and the desire to recover. Research conducted by (Herawati et al., 2020) shows that there is a relationship between family support and medication adherence in pulmonary TB patients. The family plays a very important role in providing social support to patients, which is divided into four functions: structural, functional, emotional, and mixed. . This shows that family support that provides support to their families suffering from pulmonary TB has a strong positive effect.

Based on research results, PMO always provides support to patients to seek treatment regularly. During treatment, the patient has a desire or encouragement from within himself to be able to recover, even though during treatment there are patients who have fever, nausea, or vomiting caused by side effects of OAT, and the patient has the responsibility to support his family by taking medication regularly so that he recovers quickly and can return to work as before. Patients also have a responsibility to look after their families, and they want to avoid spreading the disease to other family members. As well as the demand from the PMO to seek treatment regularly, thus making TB sufferers encouraged or motivated to seek treatment, which results in TB sufferers being successful in their treatment. Apart from motivation from the PMO, motivation from health workers also plays a role in ensuring that TB sufferers regularly control treatment at the Community Health Center.

From the results of interviews with informants, apart from the importance of motivation from health workers, the family is also very important for patients to be successful in treating patients. This is because the family always spends more time with the patient, encouraging them to seek treatment in stages, and the family can also provide moral and material support to the patient during the patient's treatment.

### **The PMO's role in reminding patients to re-examine at a specified time**

According to Sitorus et al. (2017), to speed up the patient's recovery, the patient must be accompanied by a PMO or other family member during the re-examination. The PMO has an important role in carrying out patient sputum re-examination activities. Actions that can be taken by the PMO include alerting sufferers and ac-

accompanying them to health facilities to undergo re-examination of sputum. It is very important to re-examine the sputum. Because at least two complete re-examinations during the treatment period are needed to determine the patient's recovery, Microscopic sputum re-examination is used to track the progress and results of treatment in adults.

Based on research conducted by Angraeni et al. (2023), it shows that the role of the PMO is very good, namely related to the role of the PMO in supervising patients in taking medication, providing motivation and encouragement to patients to seek treatment regularly, and reminding patients to carry out phlegm examinations. repeat according to a predetermined schedule. Research conducted by Tindatu et al. (2020), found that PMOs do many things, such as monitor patient compliance with their medication, notify them when their medication is about to run out, and take them to the Community Health Center to get pulmonary TB medication.

The results of in-depth interviews with informants showed that the PMO's role in helping or accompanying patients in taking OAT and accompanying patients during sputum examinations was optimal. The results of this interview show that the PMO always helps or accompanies patients. The family, as PMO, will remind the patient to re-examine the sputum in accordance with the recommendations given by the health facility, both the Community Health Center and the hospital. The patient's activities and busyness, as well as physical and health conditions, can cause the examination schedule to be forgotten. Therefore, the PMO must remind you about re-examination so that the treatment process is in accordance with the treatment rules for TB patients.

### **The Role of PMO in Providing Education to Families of Tuberculosis Patients**

A drug swallowing supervisor who is not a health worker must receive technical and management training to help treat patients, provide education, supervise patients swallowing drugs, and try to control risk factors to prevent drug resistance. They must also ensure that all medicines have been swallowed by the patient according to the prescribed dosage (Regional Minister of Health Regulation No. 67, 2016). A PMO must know about tuberculosis: its causes, how it is transmitted, its symptoms, prevention, people's wrong assumptions about tuberculosis (not hereditary or a curse), and the side effects of OAT. This information must be provided to patients and families of patients selected as PMO (Indonesian Ministry of Health, 2011).

The results of research conducted by Sondang et al. (2021) researchers found that at the Kauditan Community Health Center, counseling was provided individually through banners placed in the program holder's room. However, providing leaflets, manuals, and feedback sheets to patients and PMOs should be added to increase patient and PMO knowledge.

The results of in-depth interviews with informants showed that the PMO's knowledge as an educator was good; this can be seen from the PMO's knowledge about TB disease, which includes how it is transmitted, symptoms, and causes of TB disease. The knowledge possessed by a PMO is generated by health workers who diligently provide information to patients and PMOs about tuberculosis, which is done by carrying out counseling and making regular home visits to TB patients. PMOs can increase their knowledge about the role of a PMO with education provided by health workers. Education is one way to increase a person's knowledge, attitudes, and actions from initially not knowing to becoming knowledgeable about something, with the aim of ensuring that the person has good behavior in their treatment.

### **CONCLUSION**

1. The role of the PMO in supervising tuberculosis patients so that they take medication regularly is maximized, where the PMO prepares and reminds patients to take their medication.

2. The role of the PMO in encouraging patients to want to seek treatment regularly is good; where the PMO provides motivation or encouragement for patients to take their medication every day, sometimes patients feel bored by taking medication every day.
3. The role of the PMO in reminding patients to check their phlegm at the specified time is maximized by accompanying the patient, reminding them when they are scheduled to take medication, and checking their sputum (phlegm).
4. The role of the PMO in providing education to family members of tuberculosis patients is good, where the PMO provides information to other family members about tuberculosis that is obtained from health workers, and the PMO also always reminds patients of what they should and should not do. patient.
5. It is hoped that a PMO that understands the role, main duties, and functions of pulmonary tuberculosis sufferers will have an impact on patient compliance in undergoing treatment, which will influence the cure of pulmonary tuberculosis.

## SUGGESTION

1. For Pulmonary TB Patients: Pulmonary TB patients must continue to gain knowledge about the tuberculosis treatment process so that they understand the function and benefits of treatment. They can gain this knowledge by asking health workers and obtaining other information, such as print and electronic media.
2. For the Community: To increase their knowledge and awareness about pulmonary tuberculosis, the community must support the pulmonary tuberculosis treatment program and encourage pulmonary tuberculosis patients to continue undergoing treatment until they reach the desired level of cure.
3. For Further Researchers: The research results can be used as a reference for wider research. For example, economic factors, environmental factors, culture, and all other factors can contribute to the successful treatment of pulmonary TB patients.

## REFERENCES

- Anggraeni, I., Wahyudin, D., & Purnama, D. (2023). HUBUNGAN PERAN PENGAWAS MINUM OBAT (PMO) DENGAN KEPATUHAN MINUM OBAT PADA PASIEN TUBERCULOSIS PARU DI WILAYAH KERJA UPTD PUSKESMAS GUNUNGGURUH KABUPATEN SUKABUMI. *Jurnal Kesehatan Tambusai*, 4(4), 4834-4844.
- Febrina, W. (2018). Analisis peran keluarga sebagai pengawas minum obat (PMO) pasien tb paru. *Human Care Journal*, 3(2), 118-129.
- Herawati, C., Abdurakhman, R. N., & Rundamintasih, N. (2020). Peran Dukungan Keluarga, Petugas Kesehatan dan Perceived Stigma dalam Meningkatkan Kepatuhan Minum Obat pada Penderita Tuberculosis Paru. *Jurnal Kesehatan Masyarakat Indonesia*, 15(1), 19. <https://doi.org/10.26714/jkmi.15.1.2020.19-23>
- Inaya, F., & Sagita, S. (2020). Hubungan peran pengawas menelan obat terhadap keberhasilan pengobatan pasien Tuberculosis paru Di Kota Kupang. *Cendana Medical Journal (CMJ)*, 206–213. <http://ejournal.undana.ac.id/CMJ/article/view/3490>
- Jufrizal, Hermansyah, & Mulyadi. (2016). Peran Keluarga Sebagai Pengawas Minum Obat (PMO) Dengan Tingkat Keberhasilan Pengobatan Penderita Tuberculosis Paru The Family Role As Tuberculosis Treatment

- Observer with Tuberculosis Treatment Success Level of Pulmonary Tuberculosis Patients Global Tu. *Jurnal Ilmu Keperawatan*, 1(4), 25–36.
- Kemenkes RI. (2011). *Pedoman Nasional Pengendalian Tuberkulosis-Keputusan Menteri Kesehatan Republik Indonesia Nomor 364*. Kementerian Kesehatan Republik Indonesia, Pengendalian Tuberkulosis, 110.
- Kemenkes RI. (2014). *Pedoman Nasional Pengendalian Tuberkulosis*, Jakarta : Direktorat Jenderal P2PL
- Kemenkes RI. (2018). Tuberkulosis ( TB ). *Tuberkulosis*, 1(april), 2018. [www.kemendes.go.id](http://www.kemendes.go.id)
- Moleong L.J. 2010. *Metodologi Penelitian Kualitatif*. Bandung : Remaja Rosdakarya.
- Napitupulu, M., & Harahap, L. F. (2020). Hubungan peran pengawas menelan obat (PMO) dengan keberhasilan minum obat pasien Tuberkulosis paru Di wilayah kerja puskesmas Ulak Tano. *Jurnal Komunitas Kesehatan Masyarakat*, 2(1), 41–47. <https://uit.e-journal.id/JKKM/article/view/750>
- Notoatmodjo, S. (2012). *Ilmu Perilaku Kesehatan*. Jakarta:Rineka Cipta.
- Peraturan Menteri Kesehatan Republik Indonesia Nomor 67 Tahun 2016 Penanggulangan Tuberkulosis. 17 Januari 2017. *Berita Negara Republik Indonesia Tahun 2017 Nomor 122*.
- Rina (2019). Gambaran pengawas minum obat pasa pasien TB paru di RSUD Kardinah Tegal. Karya tulis ilmiah, Politeknik harapan bersama kota Tegal: Tegal.
- Sitorus, B., Fatmawati, & Rahmaniah, S. E. (2017). Peran Pengawas Menelan Obat (PMO) Terhadap Pengobatan Penderita Tuberkulosa Diwilayah Kerja Unit Pengobatan Penyakit Paru-Paru (UP4) Pontianak. *Jurnal Ilmiah Ilmu Sosial Dan Ilmu Politik Universitas Tanjungpura*, 3, 1–21.
- Sondang, B., Asrifuddin, A., & Kaunang, W. P. (2021). Analisis Peran Pengawas Menelan Obat (Pmo) Terhadap Kepatuhan Menelan Obat Anti Tuberkulosis Pada Penderita Tuberkulosis Paru Di Puskesmas Kauditan Kabupaten Minahasa Utara. *KESMAS: Jurnal Kesehatan Masyarakat Universitas Sam Ratulangi*, 10(4).
- Syakur, R., Usman, J., & Asying, H. (2019). Faktor Yang Berhubungan Dengan Kejadian Tuberkulosis ( Tbc ) Di Balai Besar Kesehatan Paru Masyarakat Kota Makassar Factors Associated With The Incidence of Pulmonary Tuberculosis In Great Hall Of Community Lung Of Health Makassar. *Jurnal Komunitas Kesehatan Masyarakat*, 1(1), 17–24.
- Tindatu, H. F., Maramis, F. R., & Wowor, R. (2020). Analisis Peran Pengawas Menelan Obat Dalam Kesembuhan Pasien TB Di Puskesmas Bitung Barat Kota Bitung Tahun 2020. *KESMAS: Jurnal Kesehatan Masyarakat Universitas Sam Ratulangi*, 9(7).
- World Health Organization. (2020). *GLOBAB TUBERCULOSIS REPORT 2020*. <https://doi.org/https://www.who.int/publications/i/item/9789240013131>
- Yuda, T., & Utoyo, B. (2018). The Role Of Drugs Supervisor Toward The Treatment Results Of Pulmonary Tuberculosis Patients At Gombang Community Health Center. *XI(Ii)*, 393–398.