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Evaluation of the Pulmonary Tuberculosis Program at the Demta Health Center, Jayapura Regency

Marlin Marselita Nasadit[1], Sarce Makaba[2], Hasmi[3]*, Muh. Akbar Nurdin[4], Rosmin M Tingginehe[5], Arius Togodly[6]
[1]Master of Public Health Study Program, Faculty of Public Health, Cenderawasih University of Jayapura,
[2,3,4,5,6]Department of Master of Public Health Program, Faculty of Public Health, Cenderawasih University of Jayapura
Corresponding Author: Hasmi, hasmiuncen@yahoo.co.id

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ABSTRACT

This study aims to evaluate the implementation of the Pulmonary TB program at the Demta Health Center. A type of qualitative research with a case study design. A total of 12 informants were taken using purposive sampling techniques. Data was collected through in-depth interviews, observations, and documentation, the data was analyzed thematically. The results of the study show that input components such as health workers, budget, and infrastructure are still not optimal. Component of the process, there are obstacles in planning, implementation, and monitoring-evaluation. The output components, suspect screening rate, treatment success rate, cure rate, recovery rate, have not met the national target. Reinforcement is needed in all system components to make the program more effective.

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INTRODUCTION

In 2023 the total number of people infected with TB is expected to increase to around 10.8 million. The disease affects people in 30 countries with high cases, India (26%), Indonesia (10%), China (6.8%) and Pakistan (6.3%) together contributing 56% of the global TB burden. According to the report, 55% of people with TB are men, 33% are women, and 12% are children and young adolescents.(World Health Organization, 2023)

The trend of TB cases in Indonesia is increasing. In 2021, there were 443,235 TB cases. Then the cases increased in 2022, which was 724,309 cases. The next TB case finding in 2023 increased by 820,789 cases(Ministry of Health, 2024).

Achieving the target of reducing deaths due to TB faces many challenges such as drug resistance, TB and HIV co-infection, lack of medical equipment, and lack of funding and political commitment for TB control.(Ayenew et al., 2024). The national target for TB in Presidential Regulation (Perpres) No. 67 of 2021 is to reduce the incidence of TB to 65 cases per 100,000 population and the death rate to 6 people per 100,000 population.(Presidential Decree, 2021).

Since being declared a global emergency by WHO, resources have begun to be allocated to short-term, directly supervised treatment programs to control the spread of TB in a cost-efficient manner.(Inayah & Wahyono, 2019)

Efforts to treat TB cases in the community in order to improve public health are one of the roles that need to be strengthened, through education to cadres (Rejeki et al., 2019). The main indicators are used in assessing the achievement of the national strategy to control TB at the district/city, provincial and central levels. These indicators include prevalence, mortality, case discovery and treatment success (Parera et al., 2020). The main elements in health administration include inputs, processes, outputs, targets, and impacts (Ratnasari et al., 2021a) Papua Province in 2024 the implementation of case discovery does not meet the target achievement, only 49% is achieved, the percentage of pulmonary tuberculosis patients who have completed their treatment and recovered is 70%. However, TB prevention therapy in Papua Province in 2024 is still very low, reaching only 7.7%. (Data from the Jayapura Provincial Health Office, 2024).

In 2024, Jayapura Regency has recorded a total of 11,674 (99%) suspected discovery cases and 1,714 (71%) new cases of TB and the number of positive ARB TB cases as many as 485 (42%)cases (Data from the Regency Health Office.Jayapura).

In 2022, the Demta Health Center is a health center with a total of 78 (18%) suspect discovery cases and 16 (30%) cases of new TB cases and 10 (40%) positive TB cases, in 2023 the number of suspect discovery cases is 76 (19%) people and the numberof all new cases of TB is 22 (44%) cases and the number of positive Acid-Resistant Bacilli (ARB) TB cases is 10 (42%)cases, in 2024, the number of suspect discoveries is 151 (22%) people, the number of all new cases of TB is 14 (29%) cases, and the number of positive ARB TB cases is 7 (29%)cases. The high number of cases is very likely to significantly increase the incidence of TB in the future (Demta Health Center Data 2024).

THEORETICAL REVIEW

Meta Synthesis (Review of Previous Research)

Research onEvaluation of the Pulmonary TB Program was once carried out bySiti Patria Hutami in 2018in the Gumawang Health Center Working Area, East OKU Regency. The results are thatthat the management of the pulmonary tuberculosis program with the DOTS strategy has not been running optimally. The cause is because the quality of implementing officers is still lacking in efforts to find pulmonary TB cases and the lack of socialization to the community. Similar research has been conductedat Bandarharjo Health Center, Semarang City. The results showed that TB cases at Bandarharjo Health Center were not optimal. New discoveries were made passively, but there had been no early detection or mass screening in at-risk or vulnerable groups. Bandarhajo Health Center had planned and supervised the TB program well. It had sufficient manpower input, but medical personnel had dual duties and only received training once a year. The funds provided were still small, and the standard operating procedures (SOP) of the regulations had been adjusted to existing guidelines.

Evaluation of the Implementation of the Pulmonary TB Program was also carried out at the Ie Mirah Health Center, Babahrot District, Southwest Aceh Regency in 2020 and the results were that the input components were still lacking, the process components still had activities that were not optimal, the output components had not met the national TB target in the TB control program at the Ie Mirah Health Center.(Marhamah et al, 2022)

A similar study was conducted byDesi Nurfita, Nur Syarianingsih Syam in 2023. The results of the input variables, SITB employees or SITB users at the Health Center have participated in SITB training, with a total of three people from SITB managers, pharmacy, and laboratory.

Framework

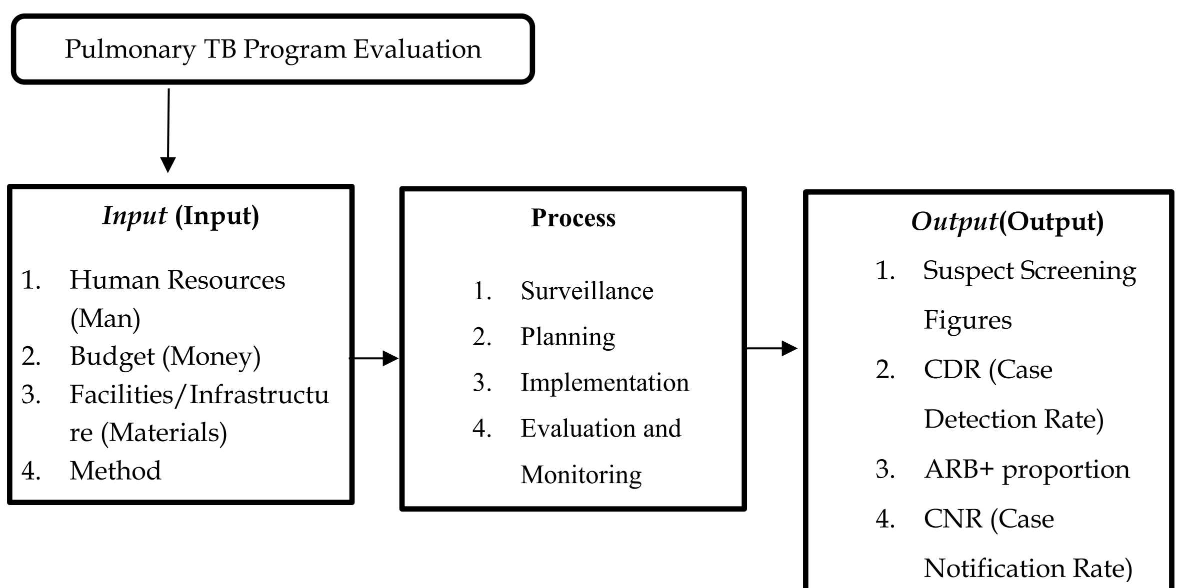

Figure 1. Conceptual Framework

METHODOLOGY

This type of research is qualitative research with a case study design. Qualitative research aims to uncover information and a deep understanding of the problem process and meaning by describing a problem (Hasmi, 2016).A total of 12 informants were taken using the purposive sampling technique with the criteria that the informants understood and had experience working in the pulmonary TB program for more than 2 years and were willing to become informants. Data collection with in-depth interviews and triangulation of sources and data. Data analysis with thematic analysis.

RESEARCH RESULTS

Input

Human Resources

Based on the results of interviews with 4 informants, the following are interview excerpts:

"*in terms of Human Resources it is sufficient. However, "For us at the Demta Health Center, so far there have been no TB cadres so patients are still accompanied directly by officers and also their families in supervising the taking of medication" (I1)*

"*So far, there has been no special training regarding the TB program.*"(I3)

"If the regular training is carried out by the Department, it is like OJT (On The Job Training), but there has never been training from the Ministry of Health center." (I4)

"Regarding the last training I attended 10 years ago and until now there has been no new training regarding TB." (5)

"There must be cadres as active field officers." (I6).

Interpretation of the informant's statement is that the number of health workers in the TB program at the Demta Health Center is sufficient. However, some health workers have to do multiple tasks, including screening, contact investigation, case monitoring, and recording and reporting. According to the third, fourth and sixth informants, they have never attended official training from the Ministry of Health, they only attended OJT (On the Job Training) provided by the Health Office. In addition, the first and third informants confirmed that there were no special TB cadres either, so supervision was only carried out by the patient's family in the drug intake supervisor (PMO) from officers and families. This shows that even though human resources are available, optimization of the TB program still requires TB cadres for the success of the program to be more effective.

TB Program Budget at Demta Health Center

Based on the results of interviews with 4 informants who are the Head of Demta Health Center, BOK Treasurer, PJ TB Program of the Health Center, Laboratory Officer, TB Supervisor of the Health Service regarding the budget for the TB program at Demta Health Center. (I1, I2, I3, I6) the following is an excerpt from the interview:

"*For direct funding from the non-physical APBN, the DPA already includes a budget for BOK. Then friends also get assistance from Gapai specifically for sample delivery. So so far the budget for TB is still safe. For the Demta health center, the budget for this TB program is sufficient*

"*The BOK budget comes from the government and already exists, stipulated in the RKA.*" *(I2)*

"*Yes, there are obstacles in funding for TB control programs, especially in the aspect of TB case finding. Such as limited operational funds for contact investigations, mass screening, or home visits. So that the achievements we have achieved are very low and do not match the achievements determined by the service, so additional funds are needed.*" *(I3)*

"*Well, for the budget from the government itself, it is in the DAU. We also partner with Gapai and Doctor Sher. Gapai, starting this year, has helped us support TB cadres, so cadres conduct contact investigations until the examination is supported by Gapai. But there is also Doctor Sher who helps provide PMT for TB SO patients, indeed not in all health centers, only in several health centers, but that is enough*" *(I6)*

The source of funds for the TB Program is allocated to each TB activity according to the planning that has been made. informants (I2, I5, I6) The following are the interview results:

"*In the TB program according to the plan that we fund, namely contact survey screening is carried out 3-4 times a year, monitoring of taking special medication for patients who have difficulty coming for treatment or taking their own medication*" *(I2)*

"*We have a sputum sample that was tested. From this Health Center, it was sent to the Nimbokrang Health Center for TCM examination.*" *(I5)*

"*We at the Department usually carry out supervision to see that recording and reporting at the health center is in terms of funds.*" *(I6)*

Interpretation of the informant's statement is that all informants stated that funding for the TB program at the Demta Health Center sourced from the Health Operational Assistance (BOK), partners with Gapai and Doctor Sher was considered sufficient to run the program. However, the third informant stated that there were obstacles in funding for the TB control program in terms of limited operational funds. limited to contact investigation, mass screening, or home visits. So that the achievements we have achieved are very low and do not match the achievements determined by the agency, then additional funds are needed. This shows that although current funding is sufficient for basic operations, additional allocations are needed to improve facilities and the effectiveness of the TB program.

Facilities/Infrastructure in the TB Program at Demta Health Center

Based on the results of interviews with 4 informants, namely the Head of Demta Health Center, PJ TBC Program, TBC Supervisor of the Health Service

regarding facilities/infrastructure in the TBC program at Demta Health Center. (I1, I3, I5, I6) the following is an excerpt from the interview:

"*The current condition for a special waiting room for TB patients does not exist and is still one with general patients who are at high risk to other patients, we do need to develop the building, next we at the Demta Health Center do not have TCM equipment so all samples are usually delivered to the Nimbokrang Health Center. If the logistics of medicine are not a problem because they are always available*" *(I1)*

"*We also have limited TCM equipment which is not available at the health center*" *(I3)*

"*TB has 2 TCMs with Follow Up, if TCM is indeed an obstacle we have to take it to the Nimbokrang Health Center because there is no TCM equipment available. But for Follow Up we are ready because we have one microscope for TB follow up examination*". *(I5)*

"Actually not. But we in Jayapura district have 3 TCM devices, namely in Sentani Health Center, Nimbokrang Health Center and Youwari Hospital. Well for Demta, the network is to Nimbokrang, actually all health centers can have TCM devices but the device is very expensive, the price alone is 1.5M, so indeed we also have support from the Ministry of Health, not from the local government itself". (I6)

Interpretation of the informant's statement is that the facilities and infrastructure in the TB program at the Demta Health Center are still inadequate. All informants stated that the Molecular Rapid Test (TCM) tool was not yet available because the supply of the tool came directly from the Ministry of Health and may be gradual. In addition, this health center also does not have a special waiting room for TB patients, as well as other supporting facilities, even though TB is contagious and ideally requires a separate room. Meanwhile, the availability of TB drugs is considered always sufficient, and has never been empty.

Process of Pulmonary TB Program Evaluation

In the process component, the Pulmonary TB program at the Demta Health Center has a plan that includes strengthening the capacity of health workers through training conducted by the Health Office, as well as the procurement of medical devices, although some important devices such as TCM are not yet available. The target achievement of the program is 90-95% case detection and treatment, but until now this target has not been achieved. In its implementation, screening activities have been carried out in the work area of the Health Center and contact investigations are also ongoing. However, community education has not been carried out actively and is only limited to when patients come directly to health facilities or when we go to the field to the integrated health post, which has an impact on low awareness and early detection in the community. Recording and reporting of cases is done online through the SITB application but often experiences obstacles in the reporting system also due to inadequate internet networks but there is also manual reporting as supporting records. For monitoring and evaluation, monitoring is

carried out through case data analysis, and if an increase in cases is found, the case finding strategy will be increased. Patients who experience lost follow-up are also contacted again or visited directly at home to ensure the continuation of treatment.

Based on the interview results, the informant stated that:
TB Program Planning at Demta Health Center

Based on the results of interviews with 4 informants who are the Head of Demta Health Center, BOK Treasurer, PJ TB Program of Demta Health Center, TB Supervisor of the Health Service regarding Planning for the TB program at Demta Health Center. (I1, I2 I3, I6) the following is an excerpt from the interview:

> "*For the planning of this program, what must be done is strengthening the human resources of health workers, especially all nurses at the Demta Health Center must take part in TB program training so that all nurses can know the correct TB management so that at any time if the TB PJ changes, the others must be ready. Well, that's just planning for the future. And if possible, we health workers should not be relaxed in controlling TB, meaning we don't just distribute the pots but we also pick up the pots that already contain sputum.*" *(I1)*

> "*For the planning so far, we have coordinated with the TB program team first, adjusted to the coverage data and analysis of achievements last year, so if there is an increase, we budget more than last year. But if the coverage is less, we reduce it for other programs. And we detail all of that in the form of RUK (Proposed Activity Plan and RPK (Activity Implementation Plan) at the health center*". *(I2)*

> "*For future planning, if possible, we must have our own TCM equipment so that the implementation of programs such as sputum examination can be done quickly without having to waste time going to the Nimbokrang Health Center. For the TB control method that we have done, the first is suspect screening, sputum collection, TB Mantoux test examination, usually we inject it into the skin for special child patients, so we can find out whether they are infected with TB bacteria or not. In addition, we also check for enlarged lymph nodes in the neck*". *(I3)*

> "*Yes, usually in our planning, in TB there are several indicators, so usually for friends who are responsible for TB in the health center, if we want OJT (On the Job Training) or supervision, usually I contact them if we want to come on a certain date, are they available or not, well if they can, we come on the date that is mutually agreed upon, then we come, well there we will start from recording, reporting, to how he and the patient can be discussed when we go to the health center.*" *(I6)*

Interpretation of the informant's statement is that the planning of the TB program at the Demta Health Center is focused on strengthening health workers, fulfilling facilities and infrastructure, and sustainable case management. The first informant emphasized that strengthening human resource capacity evenly and

increasing responsibility and proactivity in TB control operations. Meanwhile, the informant stated that TB program planning is carried out systematically and based on data, with a flexible approach to budget allocation according to the previous year's performance. There is also a third informant who stated that the limited diagnostic facilities are an obstacle to service, and planning is directed at strengthening facilities so that it is necessary to procure Molecular Rapid Test (TCM) equipment, to support early detection and rapid treatment. The sixth informant stated that direct field supervision and training are important to ensure the quality of TB program implementation at the health center level. This shows that more comprehensive planning is needed so that the TB program can run more optimally.

Implementation of Pulmonary TB Program at Demta Health Center

Based on the results of interviews with 5 informants who are the Head of Demta Health Center, PJ TB Program of Demta Health Center, TB Assistant, Laboratory Officer, TB Supervisor of the Health Service regarding the implementation of the TB program at Demta Health Center. (I1, I3, I4, I5, I6) the following is an excerpt from the interview:

"*Ee for the implementation of the main TB program now we are intensifying the screening of sputum examination. The sputum examination that we take is not only for suspected people with symptoms but Ee almost all if possible we do the examination for sputum collection. Ee sputum collection is for all groups of society that we take even for children we also intensify the Mantoux test examination* ". *(I1)*

"*Good for the TB service flow, usually conducting counseling after counseling, we conduct suspect screening, after screening we conduct examinations in the lab or TCM after the examination, the aim is to determine the diagnosis after the results if the patient does have TB germs in the lungs or rifsen or rifres we carry out short-term treatment for 2 months and the advanced stage for 4 months so all 6 months. There is also an evaluation of sputum re-examination or follow-up, usually the examination is in the 2nd month, 5th month, 6th month if all the examinations are complete, the results are all negative, then it can be declared cured. We also have supervision of taking medication every month and also give responsibility to the patient's family as PMO (Drug Swallowing Supervisor)*". *(I3)*

"*When patients come to the health center with complaints of coughing symptoms ≥ 2 weeks, coughing up phlegm, and fever, we immediately fill out their form or medical record card and direct them for sputum examination. After that, the sputum will be sent to the referral health center at the Nimbokrang health center for TCM examination because we in Demta do not have the tool yet. Usually we also conduct a home survey for family members who have contact with the patient.*" *(I4)*

"*The first patient from the TB polyclinic was directed to the Lab. Upon arrival at the lab, the patient was given a TB pot, there were two pots that were given a label or the patient's name. The pot was to collect sputum the next morning, namely at 06.00 and at 09.00 after they collected the sputum. They returned at 09.30 for the sputum to be given to the lab officer, after which the lab officer gave*

a different code or label to be sent to the Nimbokrang Health Center because in our village there is no TCM examination tool, well that's for the TCM examination.

And if for the follow-up examination or examination during the Ee treatment period, the patient is given a mucus collection pot, we immediately conduct the examination at the leb for the examination at the leb at the latest two days to issue the results. Because the first day we dry, color and evaluate under the microscope and the second day we issue the results. "(I5)

"Ee, so far, investigations or further screening to find suspects have been carried out by friends at health facilities, right? Actually, we plan to participate in the health facility screening schedule this year because apart from helping them, we can also work together with officers to see whether the SOP procedures are in accordance with the flow or not. Well, that's our plan to start this year." (I6)

Interpretation of the informant's statement is that the first informant stated that the implementation of the Pulmonary TB program at the Demta Health Center emphasized that the implementation of the TB program is now focused on active screening through sputum examination, which is carried out widely in the community, including children. However, sputum examination remains a priority if possible, indicating that health facilities have a flexible approach but are still based on the effectiveness of TB detection. The third informant added that the TB service flow at health facilities is systematic and in accordance with national standards. The process starts from counseling, then screening of suspects, laboratory examinations, to treatment and evaluation of results. Family involvement as PMO (Drug Supervision) is important for social support in TB treatment and reducing the risk of drug discontinuation. The fourth informant added that the procedure at the Demta Health Center includes early detection of TB based on typical symptoms, taking and referring sputum samples for TCM examination, and tracing family contacts. The limitations of equipment at the Demta Health Center are overcome by a referral system to more complete facilities. The fifth informant added that the sputum examination process at the Demta Health Center was carried out in a structured manner, with a TCM referral system to Nimbokrang for initial diagnosis, and local microscopic examination for follow-up. The limitations of the equipment were overcome through cooperation between facilities. The fifth informant added that there was an initiative to increase cross-party involvement in the TB control program. The plan to go directly to the field shows a commitment to improving the quality of services and supervision of the implementation of TB screening to comply with applicable SOPs. However, the infrastructure is inadequate, especially in terms of diagnostic tools (TCM), Coordination and cross-sector involvement have not been optimal, Screening in children is not comprehensive, depending on the child's ability to produce phlegm.

Recording and Reporting of Pulmonary TB Program at Demta Health Center

Based on the results of interviews with 5 informants who are the Head of Demta Health Center, PJ TB Program of Demta Health Center, TB Assistant, Laboratory Officer, TB Supervisor of the Health Service regarding recording and

reporting on the TB program in Demta. (I1, I3, I4, I5, I6) the following is an excerpt from the interview:

"Filling out manual and online reports in SITB".(I1)
"For now, TB recording and reporting are not constrained because reporting is done through the SITB application, but usually there are occasional internet network constraints, if there are none, we look for a place with a good internet network, such as Nimbokrang, then that's where we do the input and reporting. And for manual reporting, there are also no constraints." (I3)

"*For our records, we still use the TB register book or what we often call register book 01 which includes all patient identities, TB type, treatment category, treatment start date, sputum examination results, types of drugs given to the name of the PMO from the family. And we have also reported through the online SITB*". *(I4)*

"*Yes, we have conducted SITB to do reporting. SITB is some from TB officers and some from the Laboratory and we have implemented it and for us in the Lab every month we deliver it, we have entered the names of the patients we will bring*". *(I5)*

"*Usually online reporting is in the SITB application but the problem is if the Demta Health Center is slow to input in SITB, it means here it is zero. For example, if the Demta Health Center tends to pile up, for example in January it has a new input in February, even though if it is input in January. At the beginning of February we pulled the data, it was readable. But if he works piling up, even though at the end of the year there will be some, but in several meetings or monitoring and evaluations if we pull the Demta data, it is not readable because he has not input it. So from me, the problem is with the officers themselves who are not regular in inputting TB reports*". *(I6)*

Interpretation of the informant's statement is that the recording and reporting system for the Pulmonary TB program at the Demta Health Center is carried out online and manually. The first informant stated that recording and reporting are carried out online and still use manual methods. The third informant stated that the implementation of recording and reporting of the TB program at the Demta Health Center basically runs smoothly, both manually and online through the SITB application. However, technical obstacles in the form of internet network disruptions sometimes occur. To overcome this, officers will look for a location with a better network, such as the Nimbokrang Health Center, so that the data input process can still be carried out. Manual reporting itself does not experience any obstacles. The fourth informant stated that we are also still using manual recording through the TB register book (Register 01) which contains complete data on TB patients. In addition to manual recording, reporting has also been done online through the SITB application, indicating that the reporting system is running in parallel and comprehensively. The fifth informant stated that the Health Center has implemented online TB reporting

through the SITB application, which is carried out by two parties: TB officers and laboratory officers. The fifth informant stated that online TB reporting through the SITB application has indeed been implemented. However, although TB reporting at the Demta Health Center has used the SITB system actively and in a structured manner, there are still technical challenges (internet network) and HR challenges (delays in data input by officers) that can impact the validity and timeliness of reports, especially during the program monitoring and evaluation process.

Evaluation and Monitoring of Demta Health Center's TB Program

Based on the results of interviews with 4 informants who are the Head of Demta Health Center, PJ of the Health Center's TB Program, TB Assistant, TB Supervisor of the Health Service regarding Evaluation and Monitoring of the TB program at Demta Health Center. (I1, I3,, I6) the following is an excerpt from the interview:

> "*Usually we do direct home visits. And for program evaluations, we usually do a minilok (miniworkshop) every quarter, where each program will convey the achievements that have been worked on, and there is also monitoring and evaluation from the office once a year.*" *(I1)*

> "*We usually carry out the monitoring and evaluation system periodically, such as routine monthly reporting using SITB, usually there is also field supervision from the Health Office to see the direct implementation of the TB program, we officers also make home visits to monitor patients and monitor the logistics of drugs and consumables to ensure availability so that they do not run out. The evaluation is carried out every quarter through cross-sectoral meetings at the health center and there are main indicators used referring to the Minister of Health and WHO, namely the national target must be ≥ 90%. It's just that our target so far has not reached the national target and the difficulty in accessing TB services at the health center is because of the long distance and transportation such as taking expensive motorcycle taxis which has an impact on the economy so that this makes it difficult for patients to get services. The solution we apply is through the DOST (Directly Observad Treatment Shortcourse) handling strategy so we health workers who go directly to the patient's homes but do not continue to supervise the PMO directly so that this TB program continues to run effectively.* ". *(I3)*
> "*Usually we do monitoring and evaluation once a year. Usually we gather all TB officers, TB assistants, doctors, analysts, heads of health centers, then we display the results of the program for that year, usually there are.*" *(I6)*

Interpretation of the informant's statement is that the first informant said that it includes direct home visits as part of monitoring and handling efforts. Program evaluation is carried out quarterly through mini-workshop activities (minilok) to convey program achievements, and monitoring-evaluation (monev) by the health office is carried out once a year. The third informant stated that the TB program monitoring and evaluation (monev) system is carried out periodically. The evaluation refers to the national indicators from the Minister of

Health and WHO, namely detection coverage ≥ 90%, but this target has not been achieved in the area. One of the main obstacles is also the difficult access for patients to the health center due to the long distance and expensive transportation costs, which causes patients to drop out of treatment. As a solution, the health center implements the DOST (Directly Observed Treatment Shortcourse) strategy with health workers making regular home visits to directly monitor treatment, although not every day, in order to maintain the sustainability of the TB program. The sixth informant stated that monitoring and evaluation (monev) of the TB program was carried out once a year by involving all related parties such as TB officers, TB assistants, doctors, analysts, and heads of health centers. In the meeting, the results of the program's achievements for one year were presented. Although the evaluation and monitoring system is running, the challenge in tracking patients who do not continue treatment is still an obstacle. Therefore, further strategies are needed to improve patient compliance and the effectiveness of TB case monitoring at the Demta Health Center.

DISCUSSION

Input on Pulmonary TB Program Evaluation

Human resources (HR) or health center personnel specifically for Pulmonary TB at the Demta Health Center consist of doctors, nurses as TB officers, and those in charge of TB PJ. This is in accordance with the TB control guidelines (Marhamah et al, 2022). However, in the management of TB for case monitoring, there are no TB cadres available at the Demta Health Center. This causes existing health workers to have to do various tasks, ranging from screening, contact investigation, case monitoring, to recording and reporting. This can affect the effectiveness of the TB program, because the high workload can reduce focus and quality of service.

MatterThis is in line with research conducted by (Putri et al., 2020) which stated that the health workers implementing the TB program at the Bandarhajo Health Center were sufficient, but there were still health workers who did double tasks or double jobs with other programs (Putri et al., 2020).

The availability of sufficient human resources both in quantity and quality will increase the target of program success (Chomaerah S, 2020). Training and competency of health workers such as OJT (On The Job Training) training conducted by the Jayapura Regency Health Office is often carried out but official training from the Ministry of Health has never been carried out. According to the TB control guidelines, training is important to improve the attitudes, cognitive abilities, and skills of officers with the aim of improving their abilities and performance (Hariswan, 2021).

Budget/Funding

Funding for the Pulmonary TB program at the Demta Health Center comes from the APBN, which is channeled through the Health Operational Assistance (BOK) and is considered sufficient to run basic programs. However, to increase activities such as Epidemiological Investigations (PE) and active surveillance, additional funds are needed. Active surveillance activities, such as

case chasing and contact investigation, require additional resources that are not always covered in the routine budget. This is in line with research conducted by (Marhamah et al, 2022) which states that the budget that has been received by the Ie Mirah Health Center is still insufficient to fulfill the implementation of P2TB program activities, not all activities can be covered by these funds,

According to the Indonesian Ministry of Health in 2021, the sources of funds for implementing the TB Control Program (P2TB) health program consist of the APBN, Regency/City APBD, Provincial APBD, BOK, Foreign Aid, National and Regional Aid (Ministry of Health, 2021). National and regional budgets are allocated to finance government operations and determine development priorities to achieve program objectives. Funding for facilities and infrastructure, logistics, training, and additional activities are examples of the types of funding needed by primary health facilities (Burhan et al, 2015).

Good budget management allows the implementation of program activities according to the needs and targets set. Therefore, flexibility in budget allocation is needed to adjust to specific needs, such as increasing surveillance activities and providing additional facilities (Yanti et al., 2021)

Facilities and Infrastructure

Facilities and infrastructure at the Demta Health Center still face several obstacles. The Molecular Rapid Test (TCM) tool is not yet available, limited laboratory space is not yet adequate because the examination of TB samples is combined with the examination of samples from other diseases. In addition, there is no special waiting room for TB patients which can have an impact on other patients because it is not optimal. The availability of TB drugs is always there and never empty. This is in line with research conducted by (Deswinda et al., 2019) which states that the facilities and infrastructure for the P2TB program at the Sijunjung Regency Health Center are still lacking and inadequate, such as the absence of a room for sputum and a laboratory room that does not meet standards. This is also in line with research conducted by (Sulistyoningtyas et al, 2022) that the Putri Ayu Health Center still does not have a Molecular Rapid Test (TCM) tool for checking sputum. Sputum examination is carried out by sending samples to other health centers that already have TCM equipment, and the Putri Ayu Health Center usually sends its samples to the Simpang Kawat Health Center and also Simpang IV Sipin for examination (Sulistyoningtyas et al, 2022).

According to (Hariswan, 2021), other important components in supporting the implementation of tuberculosis control also include:

1) Logistics Needs
2) Tuberculosis service room (DOTS Unit)
3) Other facilities (Sputum collection area, Laboratory and waste disposal, etc.) (Hariswan, 2021).

The results of Hasibuan's study show that the availability of easily accessible health facilities has a significant effect on the detection of TB cases (Hasibuan et al., 2022).

Process of Pulmonary TB Program Evaluation

Planning for the evaluation of the Pulmonary Tuberculosis (TB) program at the Demta Health Center is focused on three main aspects, namely strengthening health workers, providing facilities and infrastructure, and preparing sustainable case management through monitoring and evaluation (monev) activities.

According to Terry in Zulaikha & Syakurah (2023), planning is organizing actions to be taken in the future by considering the resources available to achieve predetermined goals, so that resources can be optimized to achieve these goals (Zulaikha, 2023).

The implementation of the Pulmonary TB program at the Demta Health Center has included important steps in early detection and prevention of the spread of TB in the community. The strategy of active case finding through screening and contact investigation is an integral part of the program implementation, as also explained in the National Guidelines for Tuberculosis Control (Ministry of Health, 2021) which emphasizes the importance of early detection with an active approach (active case finding) to break the chain of TB transmission.

Research by Astuti (2020) in the evaluation of the TB program at the Tanah Kalikedinding Health Center in Surabaya also stated that the implementation that includes contact investigation and patient education is an effective strategy in increasing community awareness and involvement in TB control. In addition, a study by Naibaho et al. (2022) found that the implementation of active screening activities in the field tends to be more effective in reaching vulnerable populations than simply waiting for visits to health facilities.

This is also in line with research conducted by (Putri, 2021) which states that in case management, health promotion, TB surveillance, risk factor control, TB case finding, immunity and preventive drug administration at the Sigambal Health Center have been implemented, it's just that there are some activities that have not been implemented optimally, for example in health promotion activities (Putri, 2021).

The recording and reporting system for the Pulmonary TB program at the Demta Health Center has been computerized and connected through the Tuberculosis Information System (SITB) application. Although the use of the Tuberculosis Information System (SITB) has been implemented, in the online reporting system, manual recording is still maintained. This shows an effort to ensure the continuity and accuracy of data, especially as an anticipatory step against technical constraints such as network or system disruptions.

This dual system is a common transition strategy in strengthening health information systems. According to the National Guidelines for Tuberculosis Control, recording and reporting of TB programs should ideally be done digitally using SITB so that data can be integrated nationally, but manual recording is still allowed as a backup and validation of data in the field (Ministry of Health, 2021).

This is in line with research conducted by (Sulistyoningtyas et al, 2022) which states that collecting patient data and Tuberculosis cases at the Putri Ayu Health Center uses the SITB (Tuberculosis Information System) system, which is a tool provided by the Ministry of Health. After that, offline data collection was carried out using the TB 01-TB 16 form for TB patients, the TB registration book

used by the Health Center to collect TB patient data every month, and TB medical records containing data and patient treatment history at the health center (Sulistyoningtyas et al, 2022).

This is in line with other research conducted by (Noveyani & Martini, 2020) which states that the completeness of recording and reporting at the Tanah Kalikedinding Health Center is supported by a tuberculosis reporting system that uses an electronic system and is reported online called SITT (Integrated Tuberculosis Information System), so that it can minimize the occurrence of lost reports, duplicate recordings and is more efficient & effective so that feedback from the health office is received faster (Noveyani & Martini, 2020).

The implementation of monitoring and evaluation (monev) of the Pulmonary TB program at the Demta Health Center has been running routinely. Minilok evaluations are carried out every quarter and monev is carried out once a year by the Jayapura District Health Office, with a focus on data analysis to assess the effectiveness of case finding.

Monitoring and evaluation are routine stages in the organizational management cycle (Zulaikha, 2023). This is in line with research conducted by (Supriyanti et al., 2024) stating that monitoring and evaluation activities of the Tuberculosis program in Indonesia are crucial components in the government's efforts to control this disease. Through the National Strategic Plan, the Ministry of Health has established the TB Prevention and Control Program (P2TB) which integrates promotive, preventive, curative, and rehabilitative approaches. The monitoring and evaluation system involves collecting data from various sources including reports from health facilities and the Tuberculosis Information System (SITB), with a focus on performance indicators such as treatment success rates and case detection coverage (Supriyanti et al., 2024).

One component of monitoring and evaluation is recording and reporting. Reporting can contain the achievements of activities and indicators of national TB control, namely the discovery of new positive ARB patients (Case Detection Rate = CDR) and treatment success rates (Success Rate = SR), as well as other process indicators (Zulaikha, 2023).

Output on TB Program Evaluation

Suspect Screening Figures

This figure is used to determine patient discovery efforts in a particular area by paying attention to trends over time (Putri, 2021).

From the data obtained, it is known that the target for screening TB suspects at the Demta Health Center in 2023 was 3,427 people, but only 110 TB suspects (22%) were successfully screened. This achievement has not yet reached the Health Center's target of 100%. This reflects the performance of the case screening process which is not yet optimal. TB suspect screening activities are part of active screening efforts (active case finding) and early detection, which are important components in reducing the incidence of TB in the community (Ministry of Health, 2021).

Research conducted by (Putri, 2021) stated that the Suspect Screening Rate at the Sigambal Health Center stated that the number of Suspect Screening Rates

of patients whose sputum was examined at the Sigambal Health Center, both positive and negative, had decreased so that it had not met the Sigambal Health Center's target. The decline that occurred requires further handling, the need for house-to-house screening can help increase the number of suspect screenings in order to optimize the TB control process in Indonesia, especially in the Sigambal Health Center work area (Putri, 2021).

Treatment Success Rate

The indicator used as an evaluation of treatment is the treatment success rate (Treatment Success Rate). The treatment success rate is formed from the cure rate and complete treatment (Putri et al., 2020). Based on data from the Demta Health Center, the success rate of the TB program treatment at the Demta Health Center was 77% of the target of 100%, which means it has not reached the health center's target or the national level. From the results of informant interviews, this is because there are still many TB patients who are lost follow-up and do not continue taking medication because they say they are cured.

This is in line with research conducted by (Putri et al., 2020) which stated that the treatment success rate at the Bandarharjo Health Center was 72.36%, although it has increased in the last 3 years, this achievement is still below the national target of 90%. Case handling/case management activities at the Bandarharjo Health Center, among others, are caused by many factors, especially in TB patients, namely the lack of understanding of suspected TB regarding how to remove phlegm, TB patients who are reluctant to take medication because they feel they do not have TB, TB patients who feel they have recovered, TB patients stop treatment because after taking the medicine they feel excessively nauseous, TB patients still believe in herbal medicines, there is already a PMO carried out by Health Workers, but according to the results of the study with TB patients, they have not felt that there is anyone monitoring (Putri et al., 2020).

Number Healing

The indicator used as an evaluation of treatment is the cure rate. The cure rate is formed from the number of completed treatments (Putri et al., 2020). Based on data from the Demta Health Center, the cure rate for the TB program treatment at the Demta Health Center is not yet known from the target of 100%, which means it has not reached the target of the health center or the national level. From the results of informant interviews, this is because there are still many TB patients who are lost follow-up and do not continue taking medication because they say they are cured.

CONCLUSION

1) The input component of the TBC program is still not optimal. The availability of human resources in quantity is sufficient, but there are no TB or PMO Cadres yet. The available articles of association come from the State Budget, BOK, Gapai and Doctor Sher but have not yet supported active screening and tracking activities for LTFU patients. Facilities and infrastructure such as TCM equipment and isolation waiting rooms for TB patients are not yet available.

2) The process of implementing the TB program is still not running optimally. Planning is not fully based on the previous year's achievement data. The implementation of the program is still passive without community-based education. Recording is still carried out manually and digitally at the same time due to the limitations of human resource skills and also the inadequate internet network in the program reporting system. Minilok (Miniworkshop) has been carried out routinely every three months at the Demta Health Center and monitoring and evaluation have also been carried out routinely by the Health Office once a year, but tracking patients who have dropped out of medication is still a big challenge due to the long distance of infrastructure and inadequate economic costs.
3) The output of the TB program shows that case discovery and treatment success have not met the national target. The detection of suspects only reached 22%, the TSR (Treatment success rate) treatment success rate was 77%, and the CR (Cure Rate) recovery rate was not yet known.

RECOMMENDATION

The health center should recruit personnel and train TB cadres from the local community as Medication Supervisors to accompany patients, improve treatment compliance, and assist in patient tracking. Request a Molecular Rapid Test, kit to the Health Office Take an active approach through home visits, community-based education. Review your program more frequently (e.g., monthly) to adjust your strategy based on the latest data and provide feedback directly to the implementation team.

FURTHER STUDY

In order to carry out further research with a quantitative design or mixed method, with a larger sample.

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