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Implementation of The Pulmonary Tuberculosis Control Program at Sikumana Public Health Center

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Abstract

Introduction: According to the East Nusa Tenggara Provincial Health Office, Kupang City is the city with the highest contribution to pulmonary TB cases in 2021 with 491 cases and the Sikumana Health Center is the Public Health Center with the highest TB cases with 88 cases, patient recovery rate of 68.2%, and not reached the national target of 100%. The purpose of this study was to analyze the implementation of the pulmonary TB control program at the Sikumana Health Center.

Methods : Research study was qualitative research using in-depth interview techniques. The number of informants were 11 informants. This research was conducted at the Sikumana Health Center, District Maulafa, City of Kupang from February to April 2023.

Results: In the input aspect, funds program, human resources are sufficient, and the facilities in implementing the TB program are incomplete. In the process aspect, the planning and implementation stages have been going according to the proposed activity plan, but in the monitoring and supervision activities it is still lacking because it is administrative based on recording and reporting only. In the output aspect, the coverage of case detection in 2022 is 58.5%, the notification rate for all cases is 22.8%, the treatment success rate is 94.2%, and the cure rate is 98.2%.

Conclusion: Pulmonary Tuberculosis program implementation in Sikumana Health Center doesn't implemented successfully because of process and input problem such as facilities and human resources. There should be regular training for TB program implementing officers, a special room for sputum collection, and routine supervision to the laboratory.

Keywords: Implementation, Program, Pulmonary Tuberculosis

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Introduction

Pulmonary Tuberculosis (pulmonary TB) is a contagious infectious disease caused by the bacterium Mycobacterium tuberculosis. The source of disease transmission in smear-positive tuberculosis patients is through splashes of saliva or phlegm they secrete [(1)].

Based of the World Health Organization (WHO)'s data in 2021, it is estimated that there are about 10.6 million cases of TB, an increase of around 600,000 cases from 2020 which is estimated to be 10 million cases in the world. From the 10.6 million cases, there were 6.4 million (60.3%) people who had been reported and were undergoing treatment and 4.2 million (39.7%) others had not been found and reported [(2)].

Indonesia is 3rd ranked country after India and China as a country with the highest TB incidence in the world. Based on the Global TB Report in 2021, it is estimated that there are 824,000 TB cases in Indonesia and 93,000 deaths per year or the equivalent of 11 deaths per hour. However, there were only 393,323 (48%) TB patients who were found, treated, and reported to the national information system and around 52% of TB cases had not been found or had been found but had not been reported. (2)

Based on the 2019 Health Profile of the Republic of Indonesia, the Province of East Nusa Tenggara (NTT) ranks 17th out of 34 provinces with a total of 7,542 TB cases. (3) According to the East Nusa Tenggara Provincial Health Office, there were 5,361 cases of pulmonary TB in 2020, while in 2021 there were 5,184 cases. (4)

Kupang City is the second city with the highest contributor to pulmonary TB cases in NTT Province with 489 cases in 2020 and spread across 11 working areas of health centers in Kupang City. (5) In 2021, there were 285 positive cases of smear-positive pulmonary TB in the Kupang City health work area. The total number of TB cases was 491 cases, with the highest number of suspected cases with 147 people, number of all TB cases was 88 cases and the number of positive smear TB cases was 59 cases at Sikumana Health Center in 2021. (6)

The initial survey conducted showed the most common pattern of 10 diseases at the Puskesmas Sikumana in 2022, one of them is pulmonary TB. The CNR of all TB cases in Kupang City in 2021 is 491 per 100,000 population, which has increased from the previous year, which was 440 per 100,000 population. In 2021, the success rate for TB treatment at the Sikumana Health Center is 57.3% and has not reached the national target of 90% and the cure rate for pulmonary TB at the Sikumana Health Center is 54.2% and has not reached the target set at 90%. The number of suspected pulmonary TB in 2021 was 187 people, while 86 people were being treated, while in 2022 until November the number of suspected pulmonary TB was 313 and 134 people being treated. There were no previous study related to implementation of pulmonary tuberculosis control program at the Sikumana Health Center. Based on the background described above, the authors aims to analyze the implementation of the pulmonary TB control program at the Sikumana Health Center.

Methods

Research method was qualitative research with a case study approach. The research was conducted at the Sikumana Health Center, Maulafa District, Kupang City from February -April 2023. There were 4 main informants and 2 triagulation informants who will be the source of information. The main informants were Head of the Health Center, TB Program Managers, Doctors and Laboratory Officers. The triangulation informants were Drugs Supervisors and Pulmonary TB Patients. Selection of informants was done by purposive sampling by selecting informants who were considered to have sufficient knowledge of the object of research. In checking the validity of the data, the researcher will test the credibility and reliability of the data using the source triangulation method and using reference materials. Researchers will use 4 triangulation informants to test the validity of the data, namely, the Head of the Sikumana Public Health Center, a TB program manager, a doctor, and a laboratory officers. From a review of the implementation of tuberculosis control program activities, the approach used to obtain information is to use a systems approach as a health service effort. The components contained in the first system approach, input, namely the collection of parts contained in the system and are needed for the functioning of the system. Second, the process is a collection of elements contained in the system and which functions to convert inputs into planned outputs. Third, output, which is a collection of elements resulting from ongoing processes in the system that will be utilized by the community. (7) Observation, documentation, and in-depth interviews were used to collect data in this study. The research instrument is the researcher herself. There are three stages

in the data analysis process, namely: reduction, presentation, and drawing conclusions based on in-depth interviews, observation, and documentation.

Tabel 1. Main Informant (MI)

No	Informant	Ages	Position	Last Education
1.	MI 1	43	Head of Community Health Center	Master of Public Health
2.	MI 2	32	Program Manager Tuberculosis	Associate's degree of nurse
3.	MI 3	59	Former Program Manager Tuberculosis	Bachelor of Nursing
4.	MI 4	28	General Poly Doctor	Bachelor of Medicine
5.	MI 5	40	Laboratory Officer	Bachelor of Health Analyst

Tabel 2. Triagulation Informant (TI)

1.	TI 1	21	Patients with Pulmonary TB	Senior High School
2.	TI 2	43	Patients with Pulmonary TB	Elementary school
3.	TI 3	70	Patients with Pulmonary TB	Elementary school
4.	TI 4	32	Drugs Supervisor	Senior High School
5.	TI 5	35	Drugs Supervisor	Junior High School
6.	TI 6	17	Drugs Supervisor	Senior High School

Results

Characteristics of Informants

The informant characteristics shown at **table 1.** The oldest informant is aged 70 years old and the youngest is 17 years old, the last education. The highest is at the S1 level and the lowest is at the last education elementary school level.

Pulmonary Tuberculosis Program Analysis

1) Inputs

Human Resources

The Sikumana Health Center has 1 nurse as a program manager who is responsible for implementing P2TB. In carrying out the program, 1 laboratory worker and 1 doctor are assisted in the general poly section. In addition to carrying out case finding, health workers are also assisted by cadres in each sub-district, totaling 1 cadre in 1 sub-district. This is supported by the results of interviews with informants:

"The program manager is only one person assisted by doctors and lab staff for examinations. Program managers are usually nurses, why do they always take the basics from nurses because nurses usually learn about disease, so they take nurses more because of that basis" (MI 3).

"...if we have cadres for each sub-district, it's 1 to 2 people depending on the size of the area, and that's what I choose" (MI 3)

Meanwhile, training for health workers for officers implementing the TB program at the Sikumana Health Center was erratic. Training depends on the service and is carried out at most 2 to 3 times a year. This is evidenced from the results of the interviews as follows:

"The training depends on the service, because it is the service that organizes it. Done annually, 1 year can be 2 to 3 times from the Provincial health office" (MI 1)

"Training on TB control, management and TOSS once for many years is like that. From 2020 to 2022 there were still be a

pandemic, so almost every day we will have webinars about TB going on" (MI 3)

Funding

The results showed that the funds for the implementation of the pulmonary TB control program at the Sikumana Health Center were sourced from the Health Operational Assistance (BOK) and the General Allocation Fund (DAU). This is evidenced from the results of interviews with two informants as follows:

"Funds usually from the service. There are DAU and BOK funds. DAU funds are for screening but that's very small, BOK funds are also almost the same as DAU funds for operations and also screening and case finding, at least not as small as DAU funds" (MI 3)

"The funds come from the agency, out to field activities it can be from BOK or DAU" (MI 1)

Funds are given every year and the receipt of funds is smooth. However, the budgeted funds are small so that the available funds are adjusted to the activities to be carried out. This is evidenced from the results of the interviews as follows:

"For 2022, it's not enough. For treatment, it's free from the government, but the operational funds for finding cases for transportation are not enough. The funds are given every year and the receipt is quite smooth" (MI 2).

"Usually it's small, especially if it's from the DAU. BOK is usually around 1 to 2 million per year. If we say it's not enough, it's definitely not enough e. But that's if we prioritize that we have personal interests, but that's because of common interests, the interests of many people, how do we find and solve problems, that's considered sufficient" (MI 3)

Facilities and infrastructure

The results of the study showed that the facilities at the Sikumana Health Center in supporting the implementation of the TB program were incomplete, namely there was no sputum collection room available. This is evidenced from the results of the interviews as follows:

"For TCM it is enough. Facilities and infrastructure are also sufficient. We don't have a sputum collection room yet, but for sputum collection it is outside the room in a corner on the side of the building, usually patients collect their sputum at home" (MI 5)

"Well, in my opinion it is quite available, later for infrastructure facilities it can be checked in the laboratory. For a special room for the laboratory only, but specifically for sputum we have just set it behind it so there is no laboratory yet" (MI 1)

2) Process

Planning

Tuberculosis program planning at the Sikumana Health Center is incorporated into the overall Health Center planning process by a special team of activity planners at the Health Center by summarizing the available data, namely the problem of TB incidence found in each implementation of its activities. The TB program planning team includes a quality team, doctors, laboratory staff, heads of administration, pharmacists, program managers and health information system planners. This is evidenced from the results of the interviews as follows:

"For planning, the person in charge of the TB program and all planning teams. In this puskesmas there is a special puskesmas planning team. So he doesn't only plan for the TB program, but for all activities in the puskesmas, so to plan TB, the planning team is involved. automatically the TB program holder, the head of the health center, the treasurer, the SIK planner, the health information system. We do have SIK personnel. The main person responsible for managing the program itself" (MI 1)

"The quality team, doctors, lab staff, then KTU, program managers. I am the main person in charge myself" (MI 2)

TB program planning at the Sikumana Health Center is carried out every year. The planning flow starts with making a list

of program needs, then discussing them in meetings and sending them to the Health Office. This is evidenced from the results of the interviews as follows:

"Yes. Every year there is a plan. Usually we plan the year before. So now in 2023 we are planning from 2022. It will be done together, later we will gather like a joint meeting to discuss and prepare a budget like that" (MI 2)

Implementation

The main activities in the implementation of pulmonary tuberculosis control program at the Sikumana Health Center include finding tuberculosis sufferers, diagnosing and classifying, examining sputum, and providing treatment. This is evidenced from the results of the interviews as follows:

"The flow of examination, the patient arrives, goes to the registration counter, then goes to the general poly, from the general poly the suspect is examined by a doctor if he has coughed for more than 2 weeks, has lost weight, and has symptoms like TB, then referred to P2TB . Up here I directed for sputum examination to the laboratory. If the result is positive immediately treated. But for example a referral from a hospital, still register at the counter first, and go straight to P2 and there is an introduction from the hospital. But those who are suspected of not being diagnosed with TB have to go through the general polyclinic first" (MI 2)

The implementation method for finding TB sufferers at the Sikumana Health Center is passive and active detection. Passive detection, namely health workers waiting for patients to come and check themselves directly at the Puskesmas, while active case finding, namely by early detection or screening of TB suspects to areas suspected of having TB suspects. This is evidenced from the results of the interviews as follows:

"Passive and active. Here it has started to be active because we have an investigation into our working contacts going down directly to the community looking for those suspects. We also have home visits for early detection. In the past, it was just passive waiting for the patient to come, but now it has started to be passive and then active. Early detection is for example looking for suspected patients, or looking for families, or people who are prone to TB, like knocking on a door, then taking samples, if we say we are suspected we will come to give a place for sputum so that patients can take samples, well, then deliver the sputum to Public Health Center. Continue to follow up, so I can find out for every TB patient whether he is taking medication regularly or not, whether he wants to check his sputum again or not, so it's like that. Then we also involve the PMO like that. We carry out TB counseling in the community such as at posyandu, schools, churches, in RT/RW" (MI 2)

"Usually if there are cases, for example, there will be passive and active ones. We wait for the passive ones where the patient comes to check, for the active ones we go down to the field looking for the patient" (MI 5)

Related to the cross-sectoral collaboration of the puskesmas in carrying out the detection of TB sufferers in the working area of the Sikumana Health Center. The Public Health Center cooperates with Neighborhood Associations (RT), sub-districts, cadres, and also from Non-Governmental Organizations (NGOs) who collaborate with health workers to go to the field to find suspects. This is evidenced from the results of the interviews as follows:

"We are collaborating and we are partners with PERDHAKI who have a very important role. He also has cadres, we also have cadres, if we have cadres for each kelurahan it's 1 to 2 people depending on the size of the area and that's what I choose" (MI 3)

"Yes, with all the cross-sectors in the sub-district area of the Puskesmas, for example, sub-district heads, village heads, NGOs" (MI 1)

Monitoring

Monitoring or supervision of the implementation of the Tuberculosis control program at the Sikumana Health Center is carried out by the Kupang City Health Office. Supervision is carried out every 3 to 6 months and lasts for 1 day. Supervision is carried out by asking questions related to reports about patient referrals, both referred and those sent to the puskesmas. This is evidenced from the results of the interviews as follows:

"From the service, well that's it, monev is usually quarterly. Usually the monitoring and evaluation is 1 day. What's normal might be like the report, then the supply of medicine is sufficient or not, like that" (MI 2)

"Usually monev is 3 months or 6 months and that's 1 day of activity. Because we report it every day, they automatically usually ask about problems or problems related to the report, such as the patient we referred didn't arrive and the patient sent to us didn't arrive, there are still patients who apparently don't have an ID card, because now it's mandatory, right? " (MI 3)

3) Output

Coverage

The coverage of TB case detection can be seen from the Case Detection Rate (CDR), at the Sikumana Health Center CDR cases of TB in 2022 amounted to 58.3% but it is still less than the set national standard of 90% with a total of 583 suspected cases. The coverage of the notification rate for all TB cases (CNR) at the Sikumana Health Center is 22.8% in 2022 with a total of 133 cases. The coverage of treatment success or Success Rate (SR) at the Sikumana Health Center in 2022 is 94.2% and has exceeded the target with 81 cases. The cure rate for TB sufferers at the Sikumana Health Center in 2022 is 98.2%. This amount has not met the national target of 100%.

Target

The target of pulmonary tuberculosis control program at the Sikumana Health Center apart from patients who are suspected of being suspected, the target of the program is also the family, relatives, neighbors or the community around the patient. So far, the accuracy of the target has been appropriate, namely patients who are suspected of being directed to be examined, then diagnosed and carried out further treatment. This is evidenced from the results of the interviews as follows:

"Is that the target for TB suspects? First from the patient's family, then neighbors, so people who are prone to TB. People who, for example, in this RT have TB, in their neighboring RT, they also have TB, that's already vulnerable, for example, in RT 20 RW 7, it's already prone to TB, because there are a lot of TB patients there, so the target is the closest family, neighbors, and the surrounding environment. close to TB patients" (MI 2)

"TB doesn't only affect adults, right? Usually we sometimes meet children in the house where the father or mother is being treated for TB. That's why we usually screen TB patients at home" (MI 4)

Discussion

Human resources (HR) in accordance with the standards are very important in achieving the goals that have been set. The human resources for the health of the TB control program at the Sikumana Health Center are in accordance with the minimum requirement standards consisting of 1 doctor, 1 nurse/TB officer, and 1 laboratory worker.[8] However, there are still health workers who perform multiple tasks with other programs such as program managers concurrently as general nurses in the general poly section to handle the school health unit section so that the workload becomes more and makes performance less than optimal. This is consistent with research found by Deswinda et al (2019) which showed that multiple assignments affected the performance of TB program officers to be less than optimal. [9].

TB prevention program training is one of the efforts to increase TB human resources by increasing the knowledge, attitudes and skills of officers in order to improve the competence and performance

of TB officers. However, the health workers at the Sikumana Health Center received less training because training always depended on the agency and was also related to limited funds. The results of this study are in line with research conducted by Wandhana et al in Sukoharjo Regency (2018). Most of the P2TB officers (91.7%) and all doctors at the Sukoharjo District Health Center have the history of poor training most of the P2TB officers followed TB training 1 time, there were even 8.3% who had never attend training. Tiered and continuous DOTS training is part of human resource development. When all TB officers at the Puskesmas have attended DOTS training and implemented it in health services, it is expected that the detection rate of pulmonary TB sufferers will also increase so as to achieve the national target. (10)

The amount of special health operational assistance funds for the P2TB program based on a review of the proposed activity plan (RUK) documents for 2021 is IDR 14,625,000.00 with program activities which include checking TB contacts at home, home visits for patients who neglect treatment, refreshing drugs supervisors and TB patients, counseling TB and HIV/AIDS, and knock on doors activities and based on the results of interviews, the amount of funds from the health operational assistance funds received by program managers was between 5,000,000 and 6,000,000 rupiah per year, and the DAU funds received were only 1,000,000 to 2,000,000 rupiah per year. These funds have not reached the standards set by the Ministry of Health if based on the Regulation of the Minister of Health of the Republic of Indonesia No. 4 of 2019 concerning Technical Standards for Fulfillment of Basic Service Quality at Standards Minimum Service in the Health Sector, namely a technique for calculating standard financing for health services for people suspected of having TB.(11)

Funds are an important component of providing facilities and means that support the implementation of funding activities in the TB program. Sufficient funds and good revenue are able to guarantee the implementation of program activities to achieve program objectives, namely reducing morbidity and mortality due to TB in the context of achieving health development goals to improve public health status. This is in line with the research of Pebrizal et al (2022) at the Puskesmas Tambusai, Rokan Hulu Regency, namely funds for the TB program come from APBD and BOK which are distributed annually to each Puskesmas.(12) Allocation of funds is used for HR development as well as for provision TB logistics, namely anti tuberculosis drugs OAT and Non anti tuberculosis drugs.

Facilities and infrastructure are part of the input program with the existence of facilities and infrastructure in an organization is one of the basic capital for the functioning of an organization Means for achieving Pulmonary Tuberculosis Control Program activities is one of the important things that need to be considered to support the achievement of service activities.

There is still no special room for sputum collection, so it does not meet the minimum requirements for microscopic laboratory facilities in the Tuberculosis Laboratory Service Standard (2015). (13) This is also in line with research by Indriyani et al (2021) which states that constraints in the provision of these facilities and infrastructure can hinder officers from finding cases that can affect the achievement of program objectives.(14)

Planning is a series of systematic activities to draw up a plan based on a detailed study of the current situation and predictions of conditions that will arise in the future based on facts and evidence. Planning steps include data collection, problem analysis, setting problem priorities, setting goals and alternatives for problem solving, preparing activity and funding plans, preparing monitoring and evaluation plans. (15)

Based on research at the Sikumana Health Center, the process of preparing a pulmonary TB control program plan was carried out in meetings to see the problems found from the previous year's achievements, after which problems were prioritized such as case detection rates, treatment success rates, and recovery rates that had not met the target. Then set

an alternative solution to the problem with a strategy of conducting home visits to check TB contacts at home and for patients who neglect treatment. The planning carried out included preparing a Proposed Activity Plan which included checking TB contacts at home, home visits for neglected patients, PMO and patient refreshing, counseling on TB and HIV/AIDS, and knocking on doors. The planning process also involves the head of the health center, the quality team, doctors, laboratory staff, heads of administration, pharmacists, and program holders in other fields. The planning for each program will be given to the management administration section to be integrated with other program plans so that they are adjusted to the budget obtained by the Puskesmas.

This research is in line with the research of Putri et al (2020) that the planning process for the Pulmonary TB program is carried out by involving the head of the puskesmas, other program holders, UKP and UKM representatives, and other health workers who collaborated to make a schedule for the implementation of activities. Obstacles in the planning process, namely the lack of funds for carrying out screening activities, incentives for health workers and cadres, health promotion media and counseling which according to informants there has been no additional funding. (16)

Implementation is the driving function of all program activities that have been planned in order to achieve the objectives of a program. Case finding activities at the Sikumana Health Center were carried out actively and passively. Active screening is carried out by screening TB suspects in areas suspected of having TB suspects within the working area of the Sikumana Health Center.

Then a diagnosis is made by means of microscopic examination of the sputum and is complemented by an examination using the Molecular Rapid Test (TCM) so that the results of the examination can be known quickly.(1) The TCM examination owned by the Sikumana Health Center makes patients who are in health facilities and also other hospitals refer for examination and treatment at the Sikumana Health Center. This has made the number of TB cases at the Sikumana Health Center in the last three years the highest compared to other Health Centers in Kupang City. Obstacles in the diagnosis and examination of pulmonary TB patients according to the informant are that patients are not active in encouraging themselves to come for treatment and are less concerned about their own health. This research is in line with the research of Zarwita et al (2019) concerning the achievement of finding pulmonary TB sufferers is the embarrassment of sufferers to go to the puskesmas who feel they will be ostracized if their disease is known by other people. (15)

Pulmonary TB counseling activities for the community at the Sikumana Health Center have not been carried out separately, but are usually carried out together with community activities such as Posyandu and Posbindu activities. Wilis' research (2021) says that people who have not received counseling about pulmonary TB can cause people's knowledge to be very minimal so that people have no awareness to check themselves at a health service. (17)

In monitoring treatment, health workers conduct patient visits and carry out monitoring and collaborate with the Drug Taking Supervisor (PMO) who will monitor and supervise patients while taking medication until treatment is finished. PMO is usually the patient's own family who can be trusted so that it is easy to supervise patients. Faizah and Raharjo (2019) said that one of the factors that influenced the treatment of pulmonary tuberculosis was the presence of PMOs who came from close families such as wives, husbands or children who could provide encouragement and motivation for patient treatment.(18)

Based on interviews with informants, it was found that there had been no training for PMO, but only given information and guidance from TB officers, so that they already knew their duties and responsibilities as PMO. Hariswan's research (2021) says that the PMO function directly supervises taking medication, reminds the schedule for taking medication and seeking treatment at service facilities and provides motivation and support to patients.(19)

Supervision is a direct monitoring activity and coaching activity to maintain standard competency through on the job training. Supervision can also be used as a post-training evaluation for input materials for future training improvements. Supervision must be carried out at all levels and implementing units, because the working staff will still need assistance to overcome the problems and difficulties they find. A feedback about performance should always be given to provide morale boost. (8)

Monitoring through supervision is carried out by looking at the results of recording and reporting of the puskesmas program. This is not in line with the research of Erdini et al (2020) which stated that monitoring should not only be carried out for the coordinators managing the Pulmonary TB program at the Puskesmas, but also must monitor other fields that are also involved in the detection of pulmonary TB patients.(20)

The results of research conducted by Chomaerah (2020) stated that officers did not receive good overall monitoring related to Pulmonary TB control. Monitoring and supervision only focuses on recording and reporting work and does not extend to program implementation.(21)

The input and process above can affect the output of the TB program in Sikumana Health Center. The coverage of TB case detection can be seen from the Case Detection Rate (CDR), at the Sikumana Health Center CDR cases of TB in 2021 amounting to 87% but still less than the set national standard of 90% with a total of 60 new cases of TB smear +. The coverage of the notification rate for all TB cases (CNR) at the Sikumana Health Center is 41.7% in 2020 with a total of 109 cases. The coverage of treatment success or Success Rate (SR) at the Sikumana Health Center in 2021 is 95% and has exceeded the target with 21 cases. The cure rate for TB sufferers at the Sikumana Health Center in 2021 is 54.2%, this number has not met the national target of 100%. This is in line with Abin et al's research at the Sasi Health Center, North Central Timor District (2022), namely a case finding rate of 15.9% has not reached the target because case finding is carried out passively or waiting for patients to arrive, while the treatment success rate for pulmonary TB patients is 14. 8% and complete treatment at 39.5% which is still far from reaching the national target of 85%.(22)

The main targets of the TB program are the target population, area, and officers. Regional targets are determined by taking into account the magnitude of the problem, leverage and regional readiness, while the target population is basically all residents in the region. (2) In addition to suspected suspected patients in P2TB at the Sikumana Health Center, the program targets are also the families of patients whose family members are patients with BTA+ who show the same symptoms, to neighbors and the surrounding environment. So far the targeting accuracy has been appropriate, namely patients who are suspected of being diagnosed and carried out further treatment if the examination results show BTA +, screening of families of patients who show the same initial symptoms as sufferers as well as neighbors and the environment around TB sufferers.

Conclusion

The coverage of TB Case Detection Rate (CDR) at the Sikumana Health Center CDR for TB cases in 2022 is 58.3% but it is still less than the set national standard of 90%. But, the coverage of treatment success or Success Rate (SR) and cure rate has exceeded the target. The target accuracy of the TB program at the Sikumana Health Center is in accordance with the main target of the TB program. The number of TB program officers at the Sikumana Health Center is up to standard and TB training for Pulmonary Tuberculosis Control Program officers is still lacking from the Kupang City Health Office. The amount of funds for the implementation of the pulmonary TB prevention program at the Sikumana Health Center comes from the Non-Physical Special Allocation Fund (DAK), namely Health Operational Assistance (BOK) and General Allocation Fund (DAU). The funds provided are considered insufficient and do not cover planned activities. The facilities and

infrastructure for the implementation of the TB program at the Sikumana Health Center are not complete because there is no special room for collecting specimens or sputum samples. The planning for the TB program at the Sikumana Health Center is in accordance with the proposed activity plan. The implementation of finding TB sufferers at the Sikumana Health Center uses passive methods (waiting for patients to arrive) and active methods, and patient were monitored by the drugs supervisors who is supervised by program holders. Monitoring or supervision of the implementation of the TB program at the Sikumana Health Center is more of an administrative nature, only checking records and reporting. Based on the results of the study, it was suggested that health workers or cadres should make home visits to collect sputum pots, provide incentives and personal protective equipment for health workers, conduct regular training, and need a special room for sputum collection.

Ethics approval

This study was verified by the Research Ethics Commission (KEPK), Health, Faculty of Public Health, Nusa Cendana University Kupang. The ethics permit number is 2023004-KEPK. The approval date for the ethics permit is February 06, 2023

Availability of data and materials

Available

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Author Contribution

EM researchers conducted data collection, data analysis, and wrote down all the research results. TR and DD researchers assist in checking the truth of the research data results. All three authors contributed equally to the writing of this manuscript. The authors have read and agreed on the final manuscript.

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