

Article

Implementation of Pulmonary TB Case Finding in the Prevention of Tuberculosis at the Tanah Tinggi Public Health Center

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Abstract. The success of TB management in Indonesia is determined through 3 indicators, namely the Case Notification Rate (CNR), Case Detection Rate (CDR), and Success Rate. In 2022 the Tanah Tinggi Public Health Center experienced a decrease in case discovery with a figure of 393 cases, this figure is lower than in 2020, namely 522 cases. The purpose of this study is to determine the implementation case discovery in an effort to overcome TB at the Tanah Tinggi Health Center. This research was conducted in October 2022 using a qualitative method, primary data collection was obtained through in-depth interviews of Public Health Center officers and TB patients. The research informants were 7 people with 3 main informants and 4 triangulation informants. The results of the study found that the policy followed PERMENKES No. 67 of 2016. Communication with the community is still constrained by the bad stigma that spreads. For implementing personnel at the Puskesmas are not sufficient in quantity and quality, and there is duplicate work that causes obstacles to achievement targets, scheduling activities have not been determined and case findings are also still passive. The implementation of TB case discovery at puskesmas has not reached the target because case discovery has decreased since 2020.

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1. Introduction

Tuberculosis is one of the leading causes of preventable death from infectious diseases. In 2019, it is estimated that 10 million people will contract TB and 1.5 million people will die from the disease. The main reason for the cause of death is that most sufferers are unconsciously transmitting it directly to those closest to the [1-2]. For decades, TB prevention has only been carried out passively, which has limited the ability to find cases in the community. The government's efforts to combat tuberculosis include the Regulation of the Minister of Health of the Republic of Indonesia Number 67 of 2016. The Minister of Health of the Republic of Indonesia issued a Regulation of the Minister of Health of the Republic of Indonesia Number 67 of 2016 to combat the spread of tuberculosis (TB), which is related to tuberculosis health problems, drug resistance, and other dangerous consequences. The eradication of tuberculosis in Indonesia is a top priority, and the country aims to achieve it by 2030. Community health centers (Puskesmas) in Indonesia encourage the spread of health service programs. Puskesmas came with the permission of the Indonesian Minister of Health. Law 75 of 2014 creates primary health institutions tasked with enforcing health regulations, especially TB control [3].

Based on the Ministry of Health of the Republic of Indonesia, in 2022 there are as many as 824 thousand TB patients in Indonesia and only 49% are found and treated appropriately then as many as 500 thousand TB patients in Indonesia have not been treated so that they are at risk of becoming source of transmission. The Ministry of Health estimates that the real number of TB cases in the country is far more than those found and treated. According to the World Health Organization in 2020, 10 million people in the world who have tuberculosis cause 1.2 million people to die each year. A total of 22,866 new cases of TB were reported in North Sumatra Province in 2016. A total of 14,844 patients were screened and treated, with a cure success rate of 11,611 (or about 78.2%) [4]. In contrast, there was an increase of 27,017 problems reported last year. North Sumatra reported 206 new cases of TB for every 100,000 inhabitants in 2019, with a CDR of 47.4% and a CDR success rate of 92.4% [5].

Although it is not one of the five cities in North Sumatra that has the most problems, TB sufferers in Binjai City continue to occur every year, and the number of these sufferers actually continues to increase. In the city of Binjai there are 8 health centers with 6 inpatient services and 2 non-inpatient health centers spread across 5 districts of the city of Binjai [6]. According to the latest data from the Central Bureau of Statistics, the reported number increased from 337 in 2017 accompanied by a Case Detection Rate (CDR) of 22% to 738 in 2018, indicating an increase from the number of cases detected [7]. According to data compiled by the Binjai City Health Office, there were 522 reported cases of tuberculosis in East Binjai Regency in 2019.

According to the Regulation of the Minister of Health No. 67 Article 6 of 2016 concerning tuberculosis control, the implementation of TB control is carried out through health promotion activities, TB surveillance, risk factor control, TB case finding and handling, providing immunity and administering preventive drugs. From these activities, the MDG indicators for TB in Indonesia are currently only the target of reducing incidence rates that have been achieved [8-9]. So that the puskesmas as the closest health facility to the community is expected to be able to improve pulmonary TB control programs with various efforts and cooperate with various partnerships to find TB cases and immediately treat them until they recover [10-12].

In the work area of the Tanah Tinggi Health Center in 2020, pulmonary TB suspects reached 393 and in 2022 Pulmonary TB became the number 3 most disease in 7 urban villages in the Tanah Tinggi Puskesmas work area, recorded in 2022 from January to October additional positive cases of 60 people, this figure is higher than in 2021 which amounted to 56 people from January to month December.

Given the prevalence of tuberculosis in the Tanah Tinggi Health Center, there is a possible shortage of TB officers around the facility which contributes to the high number of confirmed cases. One of the active actors who can take action as a policy implementer is the availability of the right

human resources (HR). Since the detection of active TB cases is more successful than passive detection, Ratnasari's research concludes that public health cadres are urgently needed [13-14].

One indicator of the success of a pulmonary TB control program is case finding. The lack of health workers and the presence of multiple jobs and assignments are one of the factors hindering success in suppressing existing tuberculosis cases and it continues to increase every year. This has resulted in not achieving the national case finding target and causing a low cure rate. This research was conducted with the aim of looking at the implementation of the discovery of TB patients and new TB cases in the East Binjai Tanah Tinggi Health Center by using indicators of the implementation of the Meter and Horn policy, 1975.

Policy implementation is one of the actions taken individually or collectively by the government or the private sector to achieve goals [15-16]. According to Wirano, policy implementation is a stage of the policy process after the pledge of the law. Implementation is widely understood to mean law enforcement, where various actors, organizations, processes, and technologies work together to implement policies in an effort to achieve policy goals and plans [17-18].

2. Methode

This research uses a qualitative research design with a type of case study research aimed at exploring data on the Implementation of Findings and Enforcement of TB Problems at the East Binjai Tanah Tinggi Public Health Center in 2022. The main focus of this research is on tuberculosis risk factor control activities at the east Binjai Tanah Tinggi Public Health Center. This research was carried out in October 2022. The determination of informants is determined by the purposive sampling method, which is sourced to certain considerations where the informant recognizes and is able to share complete data. There were 7 informants in this research consisting of laboratory coordinators of laboratory staff, doctors, KTU Puskesmas Tanah Tinggi, and 3 people with TB. The collection of information is tried by in-depth interviews, direct observation and searching for documents whose results are made in the form of narratives. The method of checking the validity of information uses the triangulation method, namely triangulation of sources and method.

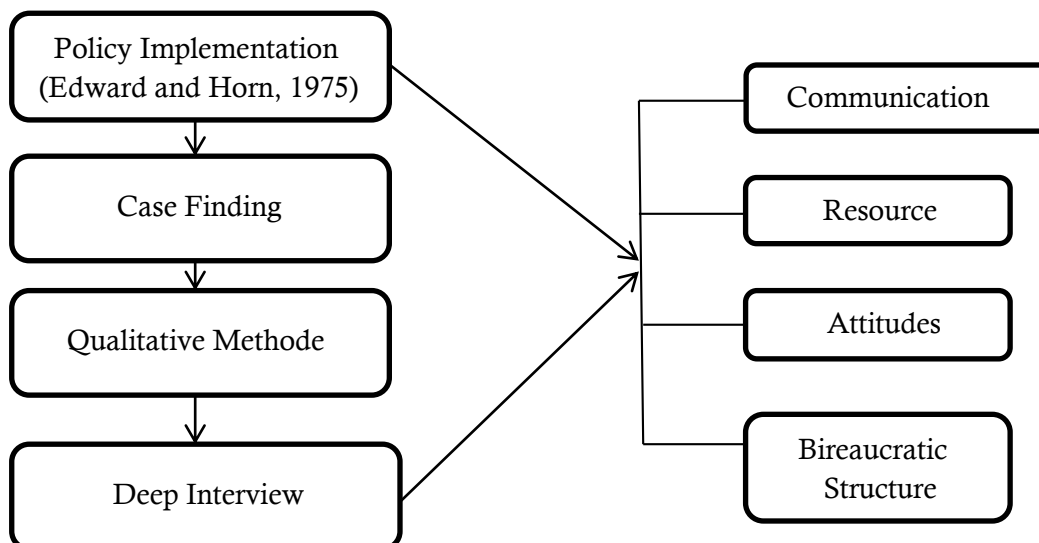


Figure 1. Research scheme

George C. Edward. Edward III's perspective on the implementation of public policy was used in this study. According to this idea, the success of a policy is determined by four factors: communication, resources, attitudes and bureaucratic structure. In this study Edward III's theory of implementation is considered relevant [19-21], because the variables in this theory can include all the data needed by the author regarding the implementation of the discovery of new TB cases in the working area of the East Binjai Public Health Center.

3. Results and Discussion

The Binjai City Health Center of the East Binjai Tanah Tinggi became the location of this study. A total of 65,395 people are domiciled in 7 villages served by the Tanah Tinggi Health Center, namely Tanah Tinggi, Mencirim, Sumber Karya, Sumber Mulyorejo, Tanah Tinggi, Timbang Langkat, and Tungguro. In this study, there were 7 informants consisting of 3 main informants and 4 triangulation informants. This research requires main informants as the main data source and triangulation informants as the validity of the data from the main informants to find out how TB cases are found by TB officers at the Tanah Tinggi Health Center. The main informants can be seen in table 1 below.

Table 1. Characteristics of main informants at the Tanah Tinggi Public Health Center

No	Informant	Age	Gender	Last Education	Status	Information
1	MT	47	Woman	S1	Coordinator Laboratory	Main Informant
2	BD	54	Man	S2	Doctor	Main Informant
3	NM	47	Woman	S2	Head of Administration	Main Informant

The main informants in this study included a Coordinator of the Tanah Tinggi Puskesmas Laboratory, a Doctor at the Tanah Tinggi Health Center, a Head of Administration at the Tanah Tinggi Health Center. The triangulation informants in this study consisted of 4 people, namely, one Laboratory Staff and 3 Positive Pulmonary TB patients. Here are the characteristics of triangulation informants in this study.

Table 2. Characteristics of triangulated informants at the Tanah Tinggi Public Health Center

No	Informant	Age	Gender	Last Education	Status	Information
1	WS	35	Woman	D3 Analyst	Laboratory Staff	Triangulation Informant
2	MS	30	Woman	SMA	TB Patient	Triangulation Informant
3	PN	58	Man	SD	TB Patient	Triangulation Informant
4	SG	63	Man	SD	TB Patient	Triangulation Informant

Table 2 shows that the research triangulation informants consisted of 2 women and 2 men aged 30-63 years, with 1 person educated D3 Analyst, 1 person educated in high school, and 2 people with elementary education.

One of the main objectives of TB control programs is to identify cases of disease. Tanah Tinggi Public Health Center has a TB prevention program that has long been known as P2TB. While some progress has been made in terms of new discoveries and the effectiveness of treatments, there is much more to be done. Contact investigations, sputum retrievals, mini-workshop activities, and counseling are examples of ways TB problem detection is achieved. Network and service coordination, contact investigation, detection of certain settings and hazards, routine and community-based detection, mass screening, and so on are still not on this list. No matter how good the intentions of a policy are, its effectiveness ultimately depends on the skills of those responsible for realizing it. Therefore, to recognize how the implementation of the findings of pulmonary TB problems in the East Binjai Tanah Tinggi Health Center can be measured through some variables from the George C. Edward III Theory [22-26].

3.1. Communication

The first variable in this research is communication, which is communication between linked organizations and ongoing activities. When an organization can communicate effectively with each other, both internally and externally, program execution is more likely to succeed. In order to prevent the occurrence of errors among the parties involved in its implementation, the informed data must be consistent [27-30]. The communication between the officers at the Tanah Tinggi Health Center has been quite good. In terms of data dissemination, the Tanah Tinggi Health Center provides interpersonal communication [31-32] between the officers concerned every day during duty time. Puskesmas Tanah Tinggi also held a mini-workshop in the form of performance achievements and targets that must be implemented after which monitoring and program assessment are attempted.

Currently we are being hit by the Covid -19 pandemic which has affected the discovery of tuberculosis cases because there is an impact of the social distancing treatment that must be applied by everyone, this has caused public panic about the changes that are currently plaguing us all. Moreover, at the beginning of the pandemic, all people became reluctant to go to the public health center, many people did not want to come to the puskesmas to check themselves about their TB symptoms, this caused the chain of transmission to become wider within the family circle. Then there were no communication efforts made with the public during the pandemic so that the discovery of new cases was hampered, this would last until early 2022, for example via zoom meetings. Which states indicators of successful dots strategy communication, namely communication of government commitment, case finding, treatment for 6 months, distribution of OAT, as well as recording and reporting [33-35].

The situation improved after Indonesia succeeded in reducing the positive number of cases for Covid 19 which had a positive impact on the discovery of new tuberculosis cases, in which one of the main informants conveyed information/communication with TB sufferers/patients which was also going quite well. The patient admitted that he was clear enough in receiving information from the TB officer regarding how to prevent transmission from occurring with the closest people such as relatives, neighbors and family, what if side effects occur from the drugs being consumed and communication can also be done via WhatsApp, because TB Puskesmas officers Tanah Tinggi is also willing and gives their number to patients to make it easier for patients if things happen related to side effects caused by the TB drugs they are taking.

Coordination between TB cadres and TB Puskesmas officers has also been running quite well, communication and coordination are also often carried out through the WhatsApp application. Then for communication with the Binjai City Health Office, it is also quite good. Communication is carried out during a workshop held by the Binjai City Health Office and the Puskesmas can also communicate via WhatsApp or telephone with the Health Office if needed.

However, there are still patients who have a bad stigma about TB, so there are still many people who are reluctant to get tested if they have a treatment like TB. Although the communication between

the health center and the patient has gone quite well, there are patients who claim to have never known information about TB before. Patients' lack of access to tuberculosis information is evidence that program implementers are not doing enough to raise awareness about the disease and provide accurate information. The executive's lack of understanding of the implementation process is reflected in the absence of communication efforts, which found that inadequate communication efforts indicate a lack of interest in seeing policies implemented [36-38].

The bad stigmas about TB have resulted in many people until now who think that someone who is exposed to TB is a disgrace that must be covered up so that the spread of bacteria in the family environment increases, they think that TB is a disease that can distance a person from the community because of its high transmission. easy to spread. Therefore, in terms of searching for TB patients, it is very difficult for officers to find new cases. As stated by Ms. MT as the Head of the Laboratory, that many patients report when the cough has been going on for months and there is a risk of spreading it to family members and during consultations some patients even do not want to admit that they have pulmonary TB even though they have done it TCM test and lung examination. This also hinders communication between TB officers and patients because when officers want to educate the public about TB, the community automatically avoids it and is indifferent to this incident where TB rates continue to increase in the East Binjai region.

3.2. Resources

The second variable is resources, resources consisting of the quantity and quality of human energy sources, facilities and infrastructure, and sources of funds. The implementation of the TB program must have a TB team, because the program cannot run alone if the person in charge of the program is only tried by himself. The quantity and quality of staff is very meaningful in implementing a policy program. Because the number of staff who are lacking or not of good quality wants to reduce the achievements of the program being run. Failures that are often intertwined in program implementation are partly due to inadequate, sufficient, or incompetent human resources in their fields [39-41].

Based on the results of the research, it was found that the human energy resources (HR) who participated in the implementation of the findings of pulmonary TB problems at the East Binjai Tanah Tinggi Public Health Center only consisted of 2 people, namely laboratory coordinators and laboratory staff. Regarding this matter, there is not an adequate need for minimum human resources at the Public Health Center sourced from the Minister of Health of the Republic of Indonesia Number. 67 In 2016, the number of people in the Dots Team consisted of 3 people, one nurse, one analyst, and one doctor. The holder of the TB program at the Tanah Tinggi Health Center is a Laboratory Coordinator and assisted by a Laboratory Staff [40-41].

All TB officers or officers at the Tanah Tinggi Health Center have undergone training according to their positions, although training for the person in charge of the program and the technical person in charge of the program is carried out at the Health Office. When it comes to TB education, the trainers are not within the jurisdiction of the Provincial Health Office.

Training is a process to improve employee competence and can train employees' skills, skills, abilities, and knowledge to do work efficiently and effectively to achieve goals in an organization. The more training that is tried will have a direct impact on the employee's ability to perform tasks, because continuing to be an employee often conducts training until the work skills want to continue to increase and continue to increase [41-42].

Based on the results of the study, it was found that TB officers at the Tanah Tinggi Health Center were still understaffed and not in accordance with the minimum needs of officers, even though the officers had received regular training. The laboratory coordinators and staff of the Tanah Tinggi Health Center have noticed that they need more TB officers. This is due to the fact that the two TB officers currently employed by the center are given field and laboratory tasks, making their workload much heavier than it should be. Due to lack of resources, the algorithm may not be able to find as

many examples as possible. Found similar results, stating that the more cadre involvement, the greater the number of TB suspects found [43-44].

In this case there are only 2 TB officers at the Puskesmas so that TB case detection does not run optimally due to a lack of human resources, even though finding new cases in 7 East Binjai sub-districts is very difficult when there are only 2 officers available and it is not proportional to the number of TB officers. The people living in this region. Then the presence of TB cadres also does not help much in finding new cases, this is in line with what was conveyed by the head of administration which concluded that several TB cadres scattered in the working area of the health center do not always report case findings and rarely even seek new cases without assistance. by Puskesmas staff, which means that TB cadres only carry out their duties when Public Health Center officers are also in the field. So this search activity has not gone well due to the lack of TB officers and the lack of awareness of TB cadres who are responsible for searching for TB cases.

Many new cases come from passive search, not active search, meaning that many patients come immediately when they can't stand coughing symptoms that last for months, this is in line with the exposure of one TB patient, namely informant triangulation, who stated that the patient was almost He had a cough for 3 months until the cough disturbed his sleep and then went to the Puskesmas when the symptoms got worse and resulted in rapid weight loss. From the explanation above, it can be seen that the lack of officers causes a small possibility of detecting new cases that are scattered due to the absence of a routine schedule and the minimum number of officers available to search for cases.

After that, facilities and infrastructure are also indispensable in the implementation of the program. Facilities are all that are used as equipment to achieve goals, on the contrary, infrastructure is all that is used as supporting equipment in carrying out activities. Energy sources of facilities used to carry out TB mitigation policies at the Tanah Tinggi Binjai Timur Health Center use communication media such as posters of cough ethics, banners, clean and healthy living attitudes (PHBS), media regarding stages, symptoms, and what actions should be taken in providing and conveying TB-related to TB to the patient or the patient's family. After that, there are laboratory equipment and materials that are suitable for standards such as sputum pots, preparation mirrors, preparation mirror storage boxes, lidi, and spiritus lamps. The informant said that the means and media of communication in the TB room have been very good and can be read by all groups. The availability of facilities has matched the Permenkes Number. 67 2016 [5,44-45].

Apart from the resources above, the source of funds is one that is indispensable in the implementation of a program. The BOK funds will be used to realize the results of the Pulmonary BOK (BOK) of the Tanah Tanah Health Center. Puskesmas relies in part on donations to their Health Operational Assistance Fund to maintain its service infrastructure. Help with health care administration is on the way for all areas. The East Binjai Tanah Tinggi Health Center maintains the BOK strategy to date. The TB control budget is right; it's not too much and not too little. According to the naming convention of the Ministry of Health for services. Technical Guidelines for the Third Year 2019 Health Non-Material Allocation Fund. Each Puskesmas has received a certain amount of funds from BOK which can be used to carry out public health promotion and prevention activities that are the scope of Public Health Center and their networks. The central and local governments are obliged to provide funds for tuberculosis prevention, as stated in Permenkes 67 of 2016 concerning Health [5,46].

Then in terms of searching for pulmonary TB cases in the work area of the Tanah Tinggi Health Center the funds that were disbursed while in the case search activities were not additional, this was in accordance with the explanation from the head of the TB Laboratory who conveyed that there were no additional special funds that were disbursed while on activities or not and the funds that have been provided are also sufficient in the sense that they are not excessive and not small. This was also confirmed by the triangulation informant Mrs WS that the funds from the BOK routinely always went down but were never excessive even though TB cases were found to be increasing in the field.

The available funds are also directly related to the success of finding new TB cases in the community because when there are sufficient or more funds available it will make it easier to find cases, for example by buying TCM test kits that can be used for people who have had direct contact with sufferers or other people. people who have symptoms and hold associations by setting regular schedules at the Puskesmas for people who experience symptoms or educating the public about the symptoms of TB.

3.3. Disposition

The third variable is Disposition, the commitment of officers can be seen from the behavior of TB countermeasures. The behavior of the implementers is referred to as the tendency, will, or convention of the implementers to carry out policies. The 3 elements that influence the expertise and desire of implementers in implementing policies are knowledge and understanding, reason they accept, reject or neutralize and the seriousness of the implementers in supporting the policy.

The implementation of the findings of TB problems at the Tanah Tinggi Health Center has been supported by a good trend between the implementers. This can be seen from the behavior of those who carry out TB problem finding activities as the first step to overcome TB problems. All TB officers also went into the field to tour residents' homes, and appealed to people who have symptoms of coughing for more than 2 weeks to immediately report to the laboratory officer or come directly to the Puskesmas.

According to the patient's statement, all implementers provide good services inside or outside the health center, are not complicated, make it easier, maintain patient privacy and are willing to serve patients via WhatsApp if there are side effects from the drug. Competent and interesting implementation can encourage patients to take part in the implementation of OAT in a disciplined manner. Although the behavior and sincerity of the implementers in implementing the findings of TB problems are quite good, the picture of action in the TB problem discovery strategy by the implementers is still lacking. Mass screening is just one of several components of the approach that has not yet been implemented. The criteria and objectives of the policy inform the actions of its implementers. Those who are assigned to the implementation must act in accordance with the established norms as they carry out their responsibilities [47-48].

However, according to one of the patients who was included in the triangulation informant who was interviewed, stated that there were several times when taking medicine at the Public Health Center they found officers who were not very friendly in serving them so that they seemed not to care about patients. This was directly denied by the doctor on duty, saying that we serve patients wholeheartedly so that patients want to be open about their illness and not stop taking medication during the treatment period.

3.4. Bureaucratic Structure

The last variable is the bureaucratic structure, the East Binjai Tanah Tinggi Health Center already has an SOP (Standard Operating Procedure). In implementing the TB program, the Tanah Tinggi Public health center relies on a central level policy, namely the Health Office, the Public Health Center has a use as an implementer in implementing policies from the center. For the statement of TB implementers, the policy used is guided by the Regulation of the Minister of Health No. 67 of 2016 concerning Tuberculosis Management. In 2020 reporting that one of the structural aspects of each organization is the existence of standard procedures (SOP or standard operating procedures). SOP have become guidelines for each implementor in their role [3, 49-50].

Based on the observation results, it is known that SOP are already available and exist in each room related to the TB program at the Tanah Tinggi Health Center, starting from registration to services that are in accordance with the applicable SOP. Sourced from observations that were tried SOP pasted in the TB room in the form of laboratory service flows, pulmonary TB service flows,

estimation grooves for health facilities with TCM (Molecular Express Test), healing flows, after that TB microscopic sputum examination and external network grooves TCM checking.

The distribution of tasks and authorities at the East Binjai Tanah Tinggi Health Center has been made with the issuance of a decision message and has been determined in the organizational structure that is installed on the 2nd floor of the Tanah Tinggi Health Center. The Laboratory Coordinator as the person in charge of the program, checks sputum and screens, carries out outreach activities, checks sputum illustrations and goes to the field, Laboratory analyst as Laboratory Staff, supervises and reports, regulates TB drugs, carries out socialization activities and goes to the field, Poly doctor is in charge of carrying out screening, Head of administration as helping to coordinate the implementation of the program. With the distribution of duties and authority of officers according to the midwives and their respective experts so that implementation can run efficiently.

The division of tasks and responsibilities in implementing TB control policies at Tanah Tinggi Binjai Timur Community Health Center was found to be still not optimal, because it came from observations of health workers who carried out double work in responsibilities in the laboratory and out in the field looking for patients. So that it was found that there was still a lack of officers who were responsible for the TB program. Multiple jobs result in officers not being fully responsible for their duties due to the piling up workload and the targets being achieved are not successful, especially if there are activities that are suddenly carried out while there is still work in the Laboratory that has not been completed.

However, overall the division of tasks at the Tanah Tinggi Health Center is in accordance with the available SOPs and according to their respective fields and expertise, but for the TB program it is still necessary to add TB officers according to the workload borne by the field staff to achieve tuberculosis elimination in 2030 and Indonesia will be free from tuberculosis in 2050. From the discussion described above, it is found that communication between officers and patients or the public who take part in the discovery of new cases is very important because communication can influence people's perceptions of their attitudes and concerns, and make it easier for officers to capture suspected TB cases in the area, by once the officer knows the direction in finding TB cases that have not been traced if the community also cooperates in sharing information.

In the resource variable, it was found that the biggest obstacle in finding cases was the lack of TB officers, which hampered the active search of cases. So that many people come directly to the health center to check themselves when it's already getting worse, from these people's complaints that the potential for direct contact with sufferers is very large because many patients have been experiencing symptoms for months and are just reporting. Judging from the facilities available, the Tanah Tinggi puskesmas has met the standards and there are no obstacles, then in terms of the available funding sources for the TB program nothing has changed even when there has been an increase in cases, so there are limitations in the TB control activities carried out.

In terms of disposition, some patients found that the puskesmas staff were not friendly in serving but many patients also said that the services provided were optimal and this was clarified by the officers because they had done their best in serving visiting patients. Lastly, namely the bureaucratic structure, the Tanah Tinggi Health Center has implemented SOPs that have been implemented for a long time according to the rules, but in the tb program the employee in charge requires additional employees in case finding so that they can achieve the desired target and there are dual jobs where laboratory staff also must seek and find new TB cases in the field so that work does not run optimally.

4. Conclusion

Based on the result of research and reviews, it can be concluded that the standars and targets regerding TB problem findings have been formalized by the Minister of Health Regulation in Permenkes Number. 67 of 2016. However, in its implementation there are activities that have not been carried out such as cough monitoring, periodic patient findings based on residents of the puskesmas work

area, and mass screening. After that, the readiness of human resources was not sufficient, the number of TB officers at the Puskesmas was only 2 people, this matter did not match the minimum standard for TB officers that had been set by the Permenkes, so that it could limit the findings of TB problem in the Tanah Tinggi Health Center work area. As well as there is still a lot of bad stigma about TB circulating in the wider community, which hinders the detection of TB cases because many people are reluctant to provide information about the presence of TB symptoms to their closest people.

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