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# Case Detection Rate by Health Employee Tuberculosis Program in Puncakjaya District

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#### **ABSTRACT**

**Introduction**: case detection (CDR) of tuberculosis in Puncak Jaya District is still low from the national target achievement of 70% due to barriers to human resources, training, methods, active suspicious TB screening, geographical location, costs, facilities and infrastructure and supervision.

Research of subject: to determine Case Detection Rate (CDR) by officers in the Tuberculosis Program in Puncak Jaya District Methods: Qualitatively conducted in August 2018 at the Puncak Jaya District Health Office, Illu and Mulia Health Centers. Informants as many as 9 informants were obtained by in-depth interviews and analyzed qualitatively.

Results: Lack of human resources in the implementation of Case Detection Rate (CDR) and adequate personnel in hospitals and two health centers (Illu and Mulia Health Center) and are still minimal in finding positive smear drivers who live at home. The training went well and but was not evenly distributed for all existing health workers causing a lack of maximum performance in the Case Detection Rate (CDR). The method refers to the Directly Observed Treatment Short Course (DOTS) strategy. Screening suspected TB was done passively through case finding promotion so that it was considered ineffective. Geographical location is an obstacle for officers in suspicious positive AFB screening due to the location of houses that are far and difficult to reach by land transportation and security issues. Costs are quite adequate in the provision of P2TB in the Puskesmas during examination and treatment but are not adequate in suspect screening. Facilities and infrastructure are sufficient in conducting inspections at health centers, medicines, health check-ups and transportation

facilities in mobile health center activities. Supervision is good and there are obstacles that cannot be resolved due to conditions of land transportation, costs, low awareness of the community and security.

*Keyword:* Case Detection Rate, health Employee, Tuberculosis

### 1. INTRODUCTION

Every pulmonary TB patient can transmit TB germs to 5-10 people around him. If the case finding rate is low, then the likely impact of the transmission will be more widespread. As a result of being infected with TB, an adult TB patient will lose an average working time of 3 to 4 months. This results in losing a household's annual income of around 20-30%. If TB sufferers die, they will lose around 15 years income. In addition to economically detrimental, TB also has other socially harmful effects to the point of being excluded by the community (RI Ministry of Health, 2014).

Internal barriers that are still experienced by the TB control program include the existing health service facilities not all fully involved in the TB control program. In addition to the workforce problem it was reported that 98% of staff in the Puskesmas and approximately 24% of TB staff in hospitals had been trained, the TB program had to continue to develop human resources given the high level of staff mutation. A new challenge for the TB program is the increasing need for training for new approaches such as drug-resistant

TB, PAL, PPI TB, and others. Basic training on TB is still needed given the expansion of the program and various new innovations to strengthen the implementation of the program, for example the introduction of new diagnostic tools. Other obstacles are low community participation due to poverty, unemployment, education level, low per capita income which results in the vulnerability of the community to TB (Ministry of Health, 2014).

The low discovery of new cases will have an impact on healing pulmonary TB disease and the occurrence of bacterial resistance to several anti-tuberculosis drugs or multi-drug resistance, so that pulmonary TB disease is very difficult to cure and cause high mortality rates (Ariani, 2015). This process will succeed if the fulfillment of infrastructure and the knowledge and attitudes of good officers. According to research conducted by Ratnasari (2015), the factors related to the performance of TB Paru program officers on case detection rates were AFB (+) knowledge of officers, officer training, officer arrest, suspicious TB screening and officer attitudes and unrelated factors are the level of education, work period and motivation. The research conducted by Aditama (2013) revealed that in the aspect of human resource input there are still multiple tasks so that the implementation of the program maximum results. achieved has not incentives from workload are still not sufficient despite adequate facilities and infrastructure. Besides cross checking, the cure rate is still very low in some Puskesmas because it is still below the target (85%). Constraints faced are lack of funds, personnel who do not attend training and there are still multiple tasks. Further stated by Ratnasari (2015), revealed that the limitations of human resources, multiple tasks, facilities and infrastructure were the reasons for suspicious screening activities. Not a few geographical factors also become obstacles in the selection of suspects by officers.

The work area of the Health Office of Puncak Jaya Regency consists of peat, mountain and dry land areas with an average height of 500-3,900 m above sea level. Transportation between districts uses air transportation, which is the only alternative that connects the capital of the district with the districts in the interior that cannot be reached by land and river transportation. Land transportation conditions are still very limited and quality is still relatively low.

The main communication facilities from the District Capital to the District and between districts are Radio Communication (SSB). While District Mulia as the district capital has been able to use cell phone services.

Health facilities in the Puncak Jaya Regency consist of 1 Daerah Mulia General Hospital and 8 health centers. The case finding of positive smear pulmonary TB patients in 2017 had a high incidence of positive smear pulmonary tuberculosis (CDR TB) cases below the set target, which was 70%. Without case finding and treatment the eradication program for pulmonary tuberculosis will not succeed. The results of observations and preliminary interviews were carried out in 2 Puskesmas officers and 1 clerk in one hospital (3 TB program officers) in Puncak Jaya Regency. It was found that the performance of tuberculosis pulmonary program management officers was not maximal. Another problem related to case finding by health workers at the Puskesmas is the presence of multiple tasks and transfer of employees in the environment in the P2 Puskesmas section. With the condition of concurrent employment in other words must be responsible for other tasks, Puskesmas officers feel that they have a heavy workload and the program officials also say that there are pulmonary tuberculosis sufferers who refuse, officers must visit their homes using their own means of transportation. In addition, the problem of geographical conditions and road conditions and the high cost of fuel make it difficult for

health workers to carry out suspected screening. Based on this, the researchers were interested in conducting a study entitled Case Detection Rate (CDR) by Tuberculosis Program Officers in Puncak Jaya Regency.

### 2. MATERIALS AND METHODS

### 2.1. Type and Design of Research

This type of research is qualitative descriptive research. Syaodih (2008) states that descriptive research is the most basic form of research. Aimed at natural or human engineering conditions. According Syaodih (2008) in Pongtiku, et al (2016) that qualitative research is a study aimed at describing and analyzing phenomena, events, social activities, attitudes, beliefs, perceptions, thoughts individuals of individually and in groups ". This type of research is qualitative with a case study approach, which is a method of research conducted with the aim of describing the problem that occurs to conclude the image objectively (Swarjana, 2013). Focus on research to understand the influence of human resources, training, active suspect screening methods, geographical location, costs, facilities and infrastructure, supervision in implementing Case Detection Rate (CDR) by officers in the Tuberculosis Program in Puncak Jaya Regency.

### 2.2. Place and Time of Research

The place for conducting this research was conducted at the Illu Health Center and the Mulia Health Center working area of the Puncak Jaya District Health

Office This research was conducted in August 2018.

### 2.3. Population and Samples

The population in this study were all P2 TB officers at Illu Health Center and Mulia Health Center and Puncak Jaya District Health Office. The selection of informants is done by using a snowball sampling technique, namely the selection of sampling based on the involvement of informants who know the problem clearly, can be trusted to be a good source of data and able to express opinions well and correctly (Swarjana, 2013). Informants are sources of information that knows for sure the events or events related to the research variables include human resources, training, active TB suspect screening methods, geographical location, costs, facilities and infrastructure, supervision in implementing Case Detection Rate (CDR) by officers at Tuberculosis Program in Puncak Jaya Regency. The number of informants was 9 informants, namely 1 P2M head of the Puncak Jaya District Health Office, 2 heads of the Puskesmas, 2 P2TB officers in the Puskesmas and 2 P2TB implementation staff at the Puskesmas and 2 laboratory staff at the Puskesmas.

### 3. RESULTS

### 3.1 Characteristics of Informants

Based on the research that has been done, it was obtained by characteristic officers in the Pulmonary TB program in Puncak Jaya Regency as follows:

Table 1. Characteristics of Informants by Age, Occupation, Position and Education in Puncak Jaya Regency in 2018

Informant	Age	Education	Position
	(year)		
Informant 1	38	D-III Nersing	Ka.Sie P2M Dinkes
Informant 2	40	D.III Nersing	Kapus Illu
Informant 3	44	S2 Manajement	Kapus Mulia
Informant 4	39	D-III Nersing	Pengelola program P2 TB Puskesmas Illu
Informant 5	48	D.III Nersing	Pengelola program P2 TB Puskesmas Mulia
Informant 6	35	D-III Nersing	Staf program P2 TB Puskesmas III
Informant 7	39	D-III Nersing	Staf program P2 TB Puskesmas III
Informant 8	47	S1 Analist	Staf LAB PKM Ilu
Informant 9	36	S1 Analist	Staf LAB PKM Mulia

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of the Puskesmas, 2 P2TB officers in the Puskesmas and 2 P2TB implementation staff at the Puskesmas and 2 laboratory staff

at the Puskesmas.

### 3.2 Human resources in implementing Case Detection Rate (CDR)

The workforce in the TB Control Program is aimed at ensuring energy needs for the implementation of TB Program activities in an implementing unit. In this workforce planning, standards are guided by minimum requirements both in the number and type of energy needed. Based on the results of interviews about human resources in the implementation of the Case Detection Rate (CDR) as quoted from the results of the interview as follows:

Carrying out Case Detection Rate (CDR) of TB patients needs good human resources and the maximum amount, however, the number of Human Resources in Puncak Jaya Regency is very minimal Overall in Puncak Jaya there are eight Puskesmas and one hospital, but those who run TB programs in the case of Case Detection Rate (CDR) is only two puskesmas and one hospital, because these three services have sufficient Human Resources, while the other six health centers still lack (Informant 1). In general, the personnel at Illu Puskesmas are adequate, there are doctors, responsible people, implementers including laboratory personnel (Informants 2).

Here already has enough personnel to carry out case discoveries, there are doctors, nurses and midwives and laboratory personnel for examination (Informant 3)

The results of interviews about human resources in the implementation of Case Detection Rate (CDR) 1 informant stated that P2TB personnel in the Puncak Jaya district were still very minimal and only two puskesmas had adequate staff in case finding. This was also reinforced by the statement of 2 informants who stated that the staffs at Illu Health Center and Mulia Health Center were adequate because there doctors, nurses and laboratory analysts. In addition, 4 informants stated that the existing rapture was sufficient in finding cases that were carried out in the Puskesmas and 2 informants stated that there were adequate laboratory personnel in laboratory examination.

# 3.3 Training in implementing Case Detection Rate (CDR)

Human Resource Development (HR) is a systematic process in meeting sufficient and quality workforce needs, according to needs. This process includes the provision of energy activities, coaching (training, supervision, workshops / on the job sustainability. Each training). and Government and Non-Government UPK must have minimum standards relating to basic needs (number and types of personnel) in implementing TB program activities in an implementing unit. Health workers who have the ability to understand the concepts and implementation of the DOTS strategy are very much needed to achieve successful treatment of TB patients receiving care from the UPK. Training is an effort to improve the knowledge, attitudes and skills of health workers related to improving the quality and performance of officers. The purpose of this activity is the availability of minimum service standards relating to the number and type of health workers at the nongovernment UPK. Capacity building needed includes knowledge, attitudes and skills in diagnosing and treating TB patients. The expected output of this activity is that each UPK has trained doctors, nurses and laboratory personnel.

Based on the results of interviews about training in human resources in the implementation of the Case Detection Rate (CDR) as quoted from the results of the interview as follows:

We often conduct training together with the Papua provincial health office, if there are activities we usually inform the puskesmas - puskesmas to take part in pulmonary TB training activities (Informant 1). I often attend training, I get a lot of knowledge, but after I can't implement it all because there are many limitations here, starting from logistics, facilities and other supporting infrastructure needed to carry out Case Detection (CDR), so it's better if those

who want to do the training just come here so they can see the limitations here so that they can be proposed later for higher leaders to pay attention (Informant 2).

The officers who had attended the training and training were conducted not here, but in Jayapura, so it was rather difficult for us too if someone came out to take part in the training, especially for other colleagues, especially the laboratory staff, there were only two people (Informant 3) ... TB program implementers in the field to improve skills, we need and must take training so that there is no mall practice when Case Detection (CDR) is conducted, but the reality now is that we are having difficulties because if we go to training, "who will do the suspecting through Case Detection Rate (CDR) ?! "because our officers are limited (Informant 4) ... Training is often done but not here (Informant 5).

The results of interviews about training human resource the implementation of the Case Detection Rate (CDR) concluded that 1 informant stated that training was often carried out for health workers and all health workers were simulated if there were training. One informant stated that the training that had been followed but could not be applied in the implementation was due to the lack of logistics, facilities and other supporting facilities. 3 informants stated that they had difficulty in attending training because of the lack of officers at the Puskesmas, making it difficult for other health workers in conducting case discovery and 2 informants stating that training should be conducted at the Puskesmas so that all existing health workers could know the implementation of case finding because case finding is difficult to implement because only 1 to 3 health workers know. In addition, 2 informants stated that the laboratory examination for TB examination was well understood through the training carried out.

### 3.4 Methods for implementing Case Detection Rate (CDR)

Improved methods of development and better use of methods for implementing Stop TB recommendations based on DOTS strategies with service standards refer to the International Standard for TB Care (ISTC) which aims at finding cases globally to improve and expand the use of strategies to stop TB transmission by increasing access to accurate diagnosis and effective treatment by accelerating the implementation of DOTS to achieve global targets in TB control and increasing the availability, affordability and quality of anti-TB drugs and developing strategies to deal with various challenges by adapting DOTS to prevention, dealing with TB with OAT resistance ( MDR-TB) and reduce the impact of TB / HIV and accelerate efforts to eliminate TB.

Based on the results of interviews about training in human resources in the implementation of the Case Detection Rate (CDR) as quoted from the results of the interview as follows:

In my opinion a good method is to use the Directly Obsessed Treatment Short Course (DOTS) Strategy, but we in Puncak Java haven't all services run the Observed Treatment Short Course (DOTS) strategy with the cost, facilities and infrastructure, human resources and security situation also affecting, then the Observed Treatment Short Course (DOTS) strategy can run in two PSAs and one hospital while the other health centers have not implemented, other than that another method is the Regional Action Plan (RAD) for the relevant regional apparatus in an effort to eliminate the 2035 but application haven't started yet (Informant 1).

Our method here is applied if there is a family diagnosed with TB positive, usually we inform the whole family to come to the examination, or inform the signs and symptoms of pulmonary TB if there are families who have these symptoms, we encourage the family to inform, but only patients who come that's just the next for

treatment, so we form a supervisor to take medicine from the family at the same time we ask to monitor if there are families who sick and tell them to transmission to other families (Informant 2) ..., The method here is more passive in the sense of only finding cases in the Puskesmas and diagnosed and reported and for follow-up. Usually we collaborate with cadres, families or PMO to provide information to family members or the community in the surrounding environment if there is someone who is sick like a continuous coughing, especially at night, we ask to report (Informant 3) ..., Method in finding cases here only patients who come, if there are members of the community who are sick and diagnosed, we tell the community and family to check if there are similar signs and symptoms. Once we went around or we did mobile health center activities, we collaborated with posvandu and cadres who were there to inform if there were family members who were sick and had the same symptoms to immediately seek treatment at the Puskesmas (Informant 4)

The results of the interview about the method in implementing the Case Detection Rate (CDR) were concluded that 1 informant stated that the method used was the Directly Observed Treatment Short Course (DOTS) strategy and not all services with the cost, facilities run and infrastructure, human resources and security situation. 7 informants stated that the method in case finding carried out so far was the effort of handling patients in the treatment. Puskesmas on While informants said that besides the examination at the Puskesmas, the method used was through the examination in the community health center.

# 3.5 Active TB suspect screening for Case Detection Rate (CDR)

Screening was suspected, the proportion of patients with positive smear TB was suspected, the proportion of smear positive TB patients among all pulmonary TB patients was recorded / treated, the

proportion of pediatric TB patients among all TB patients, case detection rate, number of case notifications, conversion rate, cure rate, treatment success rates and error rates. Analysis was carried out by comparing program coverage and target prevention programs that had been established in the 2008 tuberculosis prevention guidelines. Program indicators included suspect screening rates, the proportion of patients with positive smear TB among suspects, the proportion of patients with positive smear TB among all patients with pulmonary TB recorded / treated, the proportion of pediatric TB patients among all TB patients, case detection rate, number of case identification, conversion rate, cure rate, treatment success rate, and error rate. Descriptive analysis was carried out on each variable aspect of input, process, and output, presented in the form of tables and narratives so as to identify various variables that led to program failure.

Based on the results of interviews about the selection of suspects in the implementation of the Case Detection Rate (CDR) as quoted from the results of the interview as follows:

Screening is suspected to be carried out here by case finding in Puskesmas and health centers, screening mobile conducted if there are patients who come for treatment and are given information to the family to do the examination (Informant 1). Screening is suspected of the results of examinations carried out at the Puskesmas, we cannot come directly to the house considering security and transportation, so if there are family members who are sick or have signs and symptoms of TB, we recommend treatment and working with the hospital if something goes wrong treatment (Informant 2).

TB suspect screening through Case Detection (CDR), is carried out in accordance with the instructions, where friends at the Puskesmas level will make referrals to special hospitals for suspected treatment failures, while new suspects will be directly handled by the management in

the puskesmas (Informant 3) ... Penjaringan is carried out here for examination, if there are consumables or can not be carried out further examination or patients who experience failed drugs we refer to Mulia Hospital (Informant 8) ... Patients who are suspected of being examined and patients who fail treatment we refer to Mulia Hospital for further treatment (Informant 9).

### 4. DISCUSSION

# 4.1 Human resources in implementing Case Detection Rate (CDR)

The results of the study were obtained on human resources in the implementation of the Case Detection Rate (CDR) in Puncak Jaya District that P2TB personnel in the Puncak Java district were still very minimal and only two Puskesmas had adequate staff in case finding. The number of Puskesmas in Puncak Jaya Regency is 8 units and 2 health centers, including the Illu Health Center and Mulia Health Center, have adequate staff. This was acknowledged by two informants as the Head of Illu Health Center and Mulia Health Center, that human resources were adequate in the Puskesmas because there were doctors, nurses and medical laboratory personnel.

According to Kemeneks RI (2014), human resources in the prevention and case finding of pulmonary TB in microscopic referral health centers and selfadministering Puskesmas: the minimum requirement of trained implementing staff consists of 1 doctor, 1 TB nurse / officer and 1 laboratory staff and for type B hospitals the minimum need for trained implementing staff consists of 2 doctors, 2 nurses / TB officers, and 1 laboratory staff. This shows that human resources in Puncak Jaya Regency are adequate for 2 Puskesmas and 1 hospital.

This research is in line with the research conducted by Aditama (2013), in Boyolali Regency in the prevention program for pulmonary tuberculosis it was categorized as good quality because it was in accordance with the pulmonary P2TB

manual. This is complemented by a staffing arrangement consisting general of practitioners, paramedics program managers, and laboratory officers. According to the Indonesian Ministry of Health (2011) in the book National Strategy for TB Control in Indonesia, the objectives to be achieved are managerial and technical capacity in effective TB management and control, reinforced by the quality of TB services in adequate numbers of health facilities. Health workers at every level and health system who must have competencies to support the success of implementation and continuity of the national TB control strategy. The implementation is based on job descriptions and supported by a system that motivates to use their competencies in providing quality preventative and curative services for the entire population based on needs.

The informants said that the lack of health workers in the Case Detection Rate (CDR) in the area of Puncak Jaya District stated that there were sufficient staff at the Puskesmas (Illu Health Center and Mulia Pueskesmas), but this was not enough if a patient's visit or examination was conducted or suspected according to instructions. Technical in case finding. To maximize the available health workers, the officers collaborated with Posyandu cadres as monitors and found cases if there were people around them who had symptoms of pulmonary TB. Then it is expected that health cadres can remind and motivate patients who drop out of treatment in their area, or suspect TB screening by cadres or community-based. This needs to get the attention of the Health Office in the provision of health workers in six other health centers in the implementation of the P2TB Case Detection Rate (CDR) in Puskesmas, so that suspect screening can reach the wider community.

### 4.2 Training in implementing Case Detection Rate (CDR)

The results of the study found that training in human resources in the

implementation of the Case Detection Rate (CDR) was concluded to have been good and often done for health workers. Various responses from health workers who received the training revealed that the training was only given to 1-3 health workers, so that the implementation of case finding was not optimal because other health workers who did not attend the training did not know about it and hoped for on the job training all health workers in the health center can find out the mechanism or application of the determination of suspected cases of patients with pulmonary TB. Pratiwi's research (2012), that there is a relationship between training TB officers with the quality of TB services and TB officers who have participated in DOTS training have a 5.84 times greater chance of finding pulmonary TB patients than those who have not attended DOTS training. According to Notoatmodio (2011), training is a way to equip someone who has formal education in accordance with their duties, so they can improve the quality of their work in the hope that someone will more easily carry out their duties. Training is also an educational process that aims to improve the abilities or special skills of a person or group of people to improve performance. But when TB officers have not shown better quality, it is possible because of the additional burden of assignments given by their superiors.

Informants' statements about the lack of equal distribution of training for health workers led to the discovery of cases in visiting patients as well as other health workers who lived in the surrounding community. For this reason, there is a need for tiered and continuous DOTS training for all health care providers, evaluation of TB performance, performance-based incentives to motivate TB officers to be more sensitive to patients visiting the Puskesmas with symptoms of pulmonary TB. Good education is necessary for pulmonary TB officers, especially health analyst officers in re-examining sputum microscopically. This was done to see the progress of the treatment results and the ability to fill out TB forms with a large amount to encourage good performance. In addition, uneven training can lead to low case findings if health workers trained in DOTS strategies experience mutations and the limited number of health workers causes the benefits of DOTS training to be less than optimal.

### 4.3 Methods for implementing Case Detection Rate (CDR)

The results of the study were obtained by the methods carried out by the Illu Health Center and Mulia Health Center in the implementation of the Case Detection Rate (CDR) using the Directly Observed Treatment Short Course (DOTS) strategy while the six other Puskesmas units in the Puncak Jaya district were not implemented due to cost constraints, facilities and infrastructure, human resources and security situation. In addition, there is planning for the use of applications in the Regional Action Plan (RAD) in an effort to reach the Elimination of 2035 but the application has not yet begun or been implemented. Eight informants who worked at the Illu Health Center and Mulia Health Center stated that the method in finding cases that had been carried out so far was an effort to handle patients at the Puskesmas and if there was an on-going Puskesmas implementation.

Case finding figures which are also one of the main indicators for assessing progress or successful control tuberculosis (RI Ministry of Health, 2011). The method of finding TB patients, namely screening is suspected to be done passively with active promotion (Ministry of Health of the Republic of Indonesia, 2011). This is because TB treatment is quite long, which is 6 months, must be based on awareness of both parties, namely awareness of TB patients for routine treatment and focus of health workers in the implementation of treatment. as well as communication between the two parties that continue to be well maintained during treatment.

The lack of electricity in the Illu Puskesmas and Mulia Puskesmas and other

health centers, so that the method of applying the application cannot be implemented in monitoring the development or suspected data of pulmonary TB patients in making suspicious mapping into their working area, making it easy to make decisions in suspect screening.

# 4.4 Active TB suspect screening in the case of Case Detection Rate (CDR)

The screening suspected to be carried out in Puncak Jaya Regency was done passively, namely the discovery of suspects in patients who came to the health center. In the selection process, it is carried out through health promotion efforts by counseling to families providing supervisors for taking medication and monitoring or monitoring other families if there are similar signs and symptoms immediately to bring their families to health services for examination. This research is not in line with the research conducted by Aditama (2013) in Boyolali and Noveyanti (2014) districts in Tanah Kalikedinding Health Center Surabaya the implementation of P2TB in each Puskesmas to carry out active case finding, the rest passive promotive case finding.

The strategy for finding TB patients based on the Ministry of Health (2014) is to actively and passively, examination of TB patient contacts carried out in families with similar symptoms. In this study active discovery was considered to be not cost effective because it required a lot of money. Case identification is done by examining phlegm if the officers at the Puskesmas have had a laboratory and are able to carry out examination of phlegm preparations for TB patients. Illu and Puskesmas and Puskesmas Mulia have appointed PMOs from family members of TB patients. Every TB patient needs direct supervision in order to take medication regularly until healed and become a supervisor for other families if they have the same symptoms so that an examination is immediately carried out.

It is important that efforts to promote health are more comprehensive and periodic in changing people's behavior by collaborating with local community leaders and traditional tokens, so that people are more motivated in accessing health services in preventing transmission of pulmonary TB disease.

# 4.5 Geographical location in implementing Case Detection Rate (CDR)

The discovery of pulmonary TB sufferers is the first step in TB control program activities. One of the activities to find TB patients is by suspected TB screening. Screening is suspected to be done with someone with positive smear contact in one house, especially those who show the same symptoms should be examined for phlegm. TB suspect screening activities in the Puncak Jaya District Health Center area are only carried out by two Puskesmas because they are considered not cost effective, therefore screening activities are only carried out if it is needed in areas suspected of contacting TB patients or in areas where there are many TB patients but difficult to access by health services. Screening is supposed to be carried out by the method of finding TB patients with the DOTS strategy done by passive case finding and active case finding by means of active promotion to the community (Ministry of Health, 2014). The results showed that all informants admitted that the low number of cases found in patients with positive smear contact was one of the factors caused by geographical problems, while in logistics distribution at the Puskesmas it was revealed that five health centers could be reached by land and three public health centers that could be reached by air transportation in the provision of logistics and facilities and infrastructure at the health center.

The statement of informants who served in the Puskesmas stated that the distance between houses and expensive transportation costs caused the implementation of cases through home visits, because the location of positive smear houses in one family was far from the climbing area and the distance of the house was a minimum of 1 kilometres travelled by

foot, giving rise to security risks for officers. In addition, 3 informants added expensive transportation due to expensive and difficult fuel oil. The research conducted by Ratnasari (2015) revealed the same thing in Rembang Regency that networking activities were suspected of being influenced by geographical factors.

The information obtained is that there are activities to monitor cadres in the field, namely through routine meeting activities between community cadres and program implementers at the City / Regency and Provincial levels. During the meeting, a process of updating information was held as well as solving problems if problems were indeed found. This meeting is held at least at regular monthly reporting and activities carried out at the Regency / City level.

# 4.6 Costs for implementing Case Detection Rate (CDR)

The results of the study obtained funding sources in the implementation of the P2TB program at the Puskesmas originating from routine APBD funds and special autonomy and from the informant's statement that the costs were sufficient in implementing the program in the Puskesmas with training, medicine, medical devices consumables supporting and in the examiners while the implementation of programs outside the community center is still lacking. This was acknowledged by an informant as the head of P2M District Health Office in Puncak Jaya that the lack of costs was due to air and land transportation that required long walking which caused high costs distributing logistics at the Puskesmas. In addition, the statement of the informant was related to the implementation in the Puskesmas that the funds were not enough to reach the community in finding cases or suspect family members for positive smear patients, because of high fuel accommodation prices and long distances, because not all can be reached by vehicles.

The budget in achieving performance reflects the first few things, the

purpose and purpose of requesting funds. Second, the costs of the programs proposed in achieving this goal and the third, quantitative data that can measure achievement and work carried out for each program. Budgeting with this performance approach focuses on the efficiency of organizing an activity. Efficiency itself is a comparison between output and input. An activity is said to be efficient, if the output produced is greater with the same input, or the output produced is the same as fewer inputs. This budget is not only based on what is spent, as is the case with traditional budget systems, but also based on specific goals / plans whose implementation needs to be prepared or supported by an adequate budget and the use of these costs must be efficient and effective (Ministry of Health Republic of Indonesia, 2012). The use of costs in carrying out P2TB activities in Puskesmas uses the funds provided by routine APDB and health operational assistance with the applicable provisions, namely in accordance with the Decree of the Minister of Finance of the Republic of Indonesia. Pulmonary program activities come from the regional income and expenditure budget (APBD) pulmonary program activities are funded by the Puncak Jaya Regency government both to fund supervisors for taking medicines (PMO), procurement of report format books, operational costs and cross check inspection needs. Interviews with program managers and laboratories resulted in the opinion that the funds received were still adequate in implementing the Puskesmas. The low achievement of CDR is a nontechnical problem, including reaching in positive suspected BTA in examining home visits.

### 5. CONCLUSIONS

Based on the results of the discussion it can be concluded that the low case detection rate in Puncak Jaya Regency was concluded as follows:

1. The lack of human resources in the implementation of the Case Detection Rate

- (CDR) and adequate personnel in hospitals and two health centers (Illu and Mulia Health Center) and the lack of activities to find positive smear drivers who live at home.
- 2. Training is carried out outside of Puncak Jaya Regency, so that the training provided is not evenly distributed to all existing health workers causing a lack of maximum performance in the Case Detection Rate (CDR).
- 3. The method for implementing the Case Detection Rate (CDR) refers to the Directly Observed Treatment Short Course (DOTS) strategy.
- 4. Screening suspected TB is done passively through case finding promotion so that it is considered ineffective.
- 5. Geographical location is an obstacle for officers in suspicious positive AFB screening due to the location of houses that are far and difficult to reach by land transportation and security issues.
- 6. Costs are sufficient in financing P2TB in the Puskesmas during examination and treatment and inadequate costs in screening are suspected in activities outside the Puskesmas building.

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