



Analysis of the implementation of the pulmonary TB control program at puskesmas Balocci, Balocci district, Pangkep

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ABSTRACT

Tuberculosis is an infectious disease that can cause mortality caused by (Mycobacterium Tuberculosis), it attacks the lung organs and other organs so a TB control program is needed maximally. WHO (World Health Organization) states that TB is a major health problem in the world which causes morbidity in millions of people each year. In 2015-2017 the number of pulmonary TB in the Balocci Health Center was 271 people, of which only 168 patients were declared cured (62.7%), this indicates that the cure rate for Pulmonary TB patients has not reached the set target of 85%. This research was survey research by using a qualitative approach to analyze a control program. This research aims to analyze TB control programs in Balocci Health. The data was collected by observation and in-depth interviews with 6 informants consisting of the head of Mandala Health Center, Tuberculosis staff, tuberculosis patients, patients with pulmonary tuberculosis, and patient Dropouts. The result showed that the TB control program by DOTS strategy in Mandala Health Center was not done well. It is seen that tuberculosis patients don't get enough knowledge about tuberculosis diseases and understand it, lack of monitoring of the implementation of the Pulmonary TB program for patients with pulmonary tuberculosis which is characterized by a lack of active role in PMO (Drug Controllers) specifically designated for patients with pulmonary TB so that TB patients do not regularly take medication. Based on this research result, Pulmonary TB officers are expected to evaluate the PMO that has been appointed so that the PMO can play an active role in monitoring pulmonary TB patients to take medicine regularly and motivate patients with pulmonary TB.

KEYWORDS: analysis; control; tuberculosis

1. Introduction

Tuberculosis (TB) is a deadly disease in the world, both in developed countries and in developing countries like Indonesia. TB is a major health problem in the world that causes morbidity in millions of people every year. Based on the 2015 WHO report, in 2014 there were 9.6 million cases of pulmonary TB in the world, 58% of TB cases were in Southeast Asia and the West pasific region and 28% of cases were in Africa. In 2014, 1.5 million people worlldwide died from TB. Tuberculosis (TB) ranks second after Human Immunodeficiency Virus (HIV) as an infectious disease that causes the most deaths in the world's population (WHO) 2015.

Based on the 2017 Indonesia Health Profile, the number of Tuberculosis (TB) cases was found to be 351,893 cases, an increase compared to all TB cases found in 2015 which was 330,729 cases. The highest number of cases reported were in provinces with large

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populations, namely West Java, East Java and Central Java. TB cases in these three provinces account for 44% of all new cases in Indonesia. In 2016, the success rate for treating all TB cases was 85%. The cure rate for all cases must be achieved at least 85%, while the success rate for treatment of all is at least 90% (Indonesian Health Profile, 2017).

Management of the TB problem since 1995 in Indonesia has adopted the Directly Observed Treatment Shortcourse (DOTS) strategy recommended by WHO. This strategy has been proven to be quite effective in curing TB sufferers in several other developing countries, including Indonesia. Treatment of TB cases is one of the DOTS strategies that is able to control TB disease because it can break the chain of transmission of the disease. The TB Control Program using the DOTS strategy has been successful in achieving the target cure rate. The DOTS strategy consists of 5 key components, namely: (1) Political commitment, with increased and sustainable funding, (2) case finding through quality-assured sputum microscopic examination, (3) standardized treatment, with supervision and support for patients, (4) An effective management system and availability of OAT (Anti-Tuberculosis Drugs), (5) A monitoring, recording and reporting system that is capable of providing an assessment of patient treatment result and program performance (Ministry of Health of the Republic of Indonesia, 2014) (Fig. 1).

Based on the South Sulawesi province Profile, according to the CNR (Cross Notification Rate) new cases of BTA(+) pulmonary TB in South Sulawesi only reached 105.02/100,000 population. Achievements per Regency /City, that 3 (three) highest are Pangkep City at 3,006/100,000, Jeneponto Regency at 2,184/100,000 and Barru at 962/100,000, Takalar at 67/100,000 and Pare-pare at 68/100,000. The average success rate for treatment (Success Rate) at the provincial level reached 92.19%, with a breakdown of the Recovery percentage of 85.52%, however this increased by 2.58% compared to 2015 (89.61%). The success rate in 2016 has been able to exceed the national target of 85%. Of the 33 regencies/cities, there are 2 regencies/cities that have not been able to reach the success rate of 85%, including Pangkep and Pinrang (South Sulawesi Provincial Health Service).

Based on the Pangkep City Health Service Profile, it was found that the number of BTA (+) cases found in 2015 was 3,111 (51.63%) cases and in 2014 there were 3,047 (47.72%) cases. The cure rate and success of BTA (+) TB treatment in Pangkep City decreased in 2016 compared to the previous year. In 2016 the treatment success rate was 83.62% (Pangkep City Health Service, 2017).

2. Methods

The research method used in this research is a qualitative research method. According to Sugiyono (2016) the definition of a research method is as follows: "A research method is a scientific way to obtain data with a specific purpose and use". Qualitative research using in-depth interviews with informants to provide clear and in-depth knowledge about the implementation of the pulmonary TB control program using the DOTS strategy at the Balocci Health Center in Pangkep.

3. Results and Discussion

3.1 Demography

Based on Table 1, it is known that the population in the Balocci health center working area includes 4 sub-districts and 48 neighborhoods with a population of 74,179 people with a male population of 36,928 and a female population of 37,251 and a total of 17,385 families.

Based on Table 2, it is known that the working area of the Puskesmas Balocci is 394 Ha which handles 48 environments with a female population of 37,251.

Table 1. The number of population in the working area of puskesmas Balocci

Ward	Total Household	Total Male	Total Female	Total population
Tonasa	5.692	9.046	9.497	18.543
Majannang	6.279	15.624	15.334	30.958
Balocci baru	3.493	7.115	7.323	14.438
Kassi	1.894	5.143	5.097	10.240
Total	17.385	36.928	37.251	74.179

(Profil puskesmas Balocci Pangkep, 2017)

Table 2. Demography data of puskesmas Balocci

Data	Total
An area	394 Ha
Total subdistricts	4
Total environment	48
Total population	74.179
Total Male	36.928
Total Female	37.251
Total Newborn	871
Total Infant	2.358
Total Toddler	4.013
Total Pregnancy	1.657

(Profil puskesmas Balocci Pangkep, 2017)

3.2 Health Workers

There are 58 health workers at the Balocci Community Health with details in Table 3 below. It is known that the Balocci Community Health Center has 8 general practitioners who are always ready to provide health service to the community. Balocci Community Health Center has 1 pulmonary TB officer and 1 analyst officer.

Table 3. Health workers at puskesmas Balocci Pangkep

Health Workers	Balocci	Minasatene	Bontoperak	Total
Head Of Hospital	1	-	-	1
General practitioners	5	1	2	8
Dentist	2	-	12	3
Pharmacist	1	-	-	1
DIII Analyst	1	-	-	1
Pulmonary TB Officer	1	-	-	1
Pulmonary TB MDR	1	-	-	1

(Profil Puskesmas Balocci Pangkep, 2017)

Health workers are human resources that have a huge influence on the progress of health development. The pulmonary Tb control program at the Balocci community Health Center can be successful, of course, with the support of the health workers it has both in terms of quantity and quality.

The result of an interview regarding health workers at the Balocci Community Health Center can be seen below:

“We have sufficient health personnel, we have one doctor, we have an analyst officer, we also have a pulmonary TB officer, we also have MDR TB officer” (Informant 1).

“for the TB program, brother, you are alone, there are doctors, analysis is also there, there used to be a former member of TB, he used to also run the program here, yesterday he

served as treasurer so he was replaced by brother, Dr. Erwin, new brother, analyst one , Mrs.vincent runs the MDR TB program” (Informant 2).

Based on the result of the interview regarding the health workers above, it is known that the Balocci Helath Center has human resource, namely health standards, the minimum requirements for implementing staff from the pulmonary TB program at the Balocci Health Center, namely trained implementing staff consisting of 1 doctor and 1 nurse/TB officer and 1 laboratory officer.

In improving the quality of human resources at the Balocci Community Health workers here take part in training provided by the health service, especially TB control health workers who are also trained in treating TB patients. Training is an effort to improve the knowledge, attitudes, and skills of officers to improve the quality and performance of officers. The results of in-depth interviews regarding training for health centers can be seen in the interview below:

“There is also training, which is usually carried out by the health service. Then there are continuous meetings, meetings regarding the TB program for officers.for training, especially for training using the DOTS method, all the doctors have beeb trained, Tb officers and analyst officers have been trained” (Informant 1).

There is also training, I was also trained before. Before becoming a TB officer. The training is that the person is told about the history of TB, the signs and symptoms of TB, that’s what we learn there” (Informant 2).

Based on the results of the interview above, it is known that the Balocci Health Center health workers have received training from the Pangkep City Health Service, namely regarding the history of TB, sign of TB symproms as well as DOTS method Training given to doctors and analysis officers. Pulmonary TB is about recording and reporting,training in slide fixation screening of suspected pulmonary TB, microscopic examination of sputum. However, pulmonary TB officers received training only once a year. The head of the community health center as informant 1 said that the health workers at the Ballocci Community Health Center had received training form the Pangkep City Health service. Meanwhile, Informant 2, namely a pulmonary TB officer, said the the himself had also received training before becoming a pulmonary TB officer and the training was held at the Antares Hotel by the Pangkep City Health Service.

3.3 Health Service Facilities

The health service facilities owned by Puskesmas Balocci consist of several health facilities as shown in Table 4. Based on Table 4, it is known that Puskesmas has 1 main community health center and 51 community services in every sub-district.

Table 4. Health service facilities in puskesmas Balocci

Health Facilities	Total
Main health center	1
Auxiliary health center	2
Posyandu of toddler	39
Posyandu of elderly	7
Posbindu	2
Total	51

3.4 Characteristics of Informants

Data collection was carried out using interview guidelines for informants who were used as research sources. The number of informants in this research was 6 people. The characteristics of informants based on research can be seen in Table 5 below. It is known that the number of informants in this study was 6 informants, consisting of 1 informant, the head of Puskesmas Balocci Pangkep who is 53 years old with a doctor’s education, 1

pulmonary TB officer informant who is 36 years old has a bachelor's degree, 4 informants who are pulmonary TB sufferers who are respectively 23,43,36 and 35 years old

Table 5. Characteristics of informants

Informants	Gender	Age	Education	Position
Dr. Hafni Tanjung	Female	53	S1	Head of the health center
Latifah, S.Kep	Female	36	S1	TB Officer Lungs
Tomi	Male	23	S1	TB Patient in the treatment period
Roslidar Harahap	Female	43	SMA	TB Patient healed
Azhari Cahyadi	Male	36	SLTA	TB Patient healed
Mara Usman	Male	35	SLTA	TB Patient dropout

3.5 Fund

In this era of decentralization, funding for health programs, including funds for implementing pulmonary TB control programs, is highly dependent on allocations from regional and central governments. The APBD allocation for controlling pulmonary TB is generally still low due to the high dependence on funding from international donors and the many other public health problems that also need to be funded (Ministry of Health of the Republic of Indonesia, 2014).

Based on provisions from the Indonesia Ministry of Health (2014). The sources of funds used in pulmonary TB control program activities come from the APBN, APBD, and private grants. The results of in-depth interviews regarding funding, the Balocci Community Health Center in improving facilities and infrastructure received funding from the government as seen in the interviews regarding funding below.

"Funds usually come from the government, and APBD funds" (Informant 1).

"The funding comes from outside, I think, that's why this collaboration is called KNCV, there is training, there are donors from outside" (Informant 2).

3.6 Facilities and Infrastructure

These facilities and infrastructure include:

- a. Consumable facilities and infrastructure: reagents, sputum pots, glass preparations, emersion oil, alcohol ether, tissue, gloves, Lysol, sticks, filter paper, lens paper, OAT and TB recording and reporting forms
- b. Non-consumable facilities and infrastructure: binocular microscope, tube, spirit/Bunsen lamp, slide drying rack, and glass storage box.

The research results show that based on the informants' statements regarding the facilities and infrastructure for implementing the pulmonary Tb program, this can be seen from the table below:

"if we have the facilities, we have a laboratory, then the phlegm or sputum examination can be done yourself at the health center here, no longer sending it to other health centers. in the infrastructure, we should have a special room for TB sufferers, but we just have an ordinary room, then there should be a corner for taking sputum, that sputum corner which we plan to immediately create in the framework of this health center so that it is a good and better and for accreditation" (Informant 1).

"facilities and infrastructure for gituya TB patient are good" (Informant 2).

"yes, the infrastructure is complete, it's called a community health center" (Informant 3).

"yes, it's good that the equipment at the health center is complete, that's good" (Informant 4).

Based on interviews and observations that have been carried out, it is known that the Balocci Community Health Center is following the guidelines for controlling pulmonary Tb, where the facilities owned by the Balocci Community Health Center include supporting

facilities to the place where sputum is prepared so that is specifically for patients suffering from pulmonary TB so that every TB patient is not reluctant to use the equipment provided. Must be used and not spread the virus to the patient. The equipment they have is a phlegm collection pot, glass slides, microscopic examination of phlegm, and OAT medication.

3.7 Implementation of the Pulmonary TB Control Program

Every year there is an increase in pulmonary TB disease in patients with pulmonary TB. This occurs because pulmonary TB patient do not know about the symptoms of pulmonary TB disease, are embarrassed to seek treatment, and do not. Have the money for treatment.

The result of in-depth interviews about patients suffering from TB in Balocci Community Health Center Working area are show below:

"if it comes from the patient himself, the patient is lazy about seeking treatment, he is embarrassed" (Informant 1).

"recently, there has been an increase in Tb sufferers every year here, perhaps because the patients have been told that they don't understand, I don't know what, even though they have also been told that the disease is contagious, they are not allowed to throw phlegm carelessly that is, it is increasing and increasing" (Informant 2).

Based on the result of interviews with patients suffering from pulmonary TB, it is known that there has been an increase in Tb sufferers at the Pangkep Balocci Community Health Center. From the statements of informants 1 and 2, it is known that pulmonary TB patients feel lazy and embarrassed about seeking treatment, this is because pulmonary TB patients do not know enough about pulmonary TB disease, its symptoms and transmission.

3.8 TB Diagnosis

Patient discovery is the first step in implementing pulmonary TB control programs. That discovery of pulmonary TB sufferers at the Balocci Health Center was carried out passively, namely by waiting for the patient to come to the health center himself. The diagnosis of pulmonary TB requires a bacteriological examination first, this is done to identify TB patients at least 1 of the SPS Sputum test sample result in BT A+(Ministry of Health of the Republic of Indonesia, 2014).

The inspection flow is known from the interview below:

"The patient comes, takes a queue number, is examined by a doctor, then the doctor sends him to this clinic, pulmonary clinic, then he gives him a pot when we collect his phlegm, then he gives him a pot and he takes it home with him, it's delivered tomorrow when he wakes up with phlegm, he checks in the laboratory with Sis Rita, We'll let you know how the cough is going, how the phlegm is coming up. If the phlegm is positive, we treat it, if it is negative, we refer him for an X-ray at the hospital. Some patients lack knowledge and don't know how to collect phlegm, so the results are negative. but often we have to check for BTA, if a patient comes with an X-ray, we also have to check for BTA. "But if the BTA is positive, we immediately treat it, but if the X-ray is positive, we don't treat it immediately, we still check the phlegm first" (Informant 2).

"What happened that day from the older sister at the village head's office, Mrs. PKK, I complained to her, after she was sick, so I met her, had tension first, then we went to the health center. When I got to the health center, I checked but it wasn't there yet, I don't think it was TB before, right? At first it was still said to be a respiratory tract infection, oh like this, the first time at night there was a bloody cough but that was all, once, that's when we went for treatment, we went to Pirngadi for a check up apparently. We haven't found out yet, it's still a rock, then we went to the community health center, checked and said it was an infection, then we were told to take medicine, so there's no information about TB yet, I don't know, after that, I don't know how long it took before the severe coughing of blood continued and didn't stop. stop, then check the phlegm, the results are 1 week later, the results are positive, it's said to be positive for TB. My brother's condition

dropped yesterday. After that, I took treatment for 6 months, right? I took regular medication, after being positive for TB, it was like that" (Informant 5).

"Yes, it's fine, just normal, first come what's called a phlegm test, after that come get medicine, come get medicine" (Informant 6).

From the interview statement above in the diagnosis, it is known that the patient came to the puskesmas for treatment. First they have to take a queue number, then go to the general polyclinic to get an examination and be directed to the pulmonary polyclinic. Then they are given a pot to collect the phlegm and they are given another pot to take home and must return it the next day to have the phlegm examined in the laboratory. Meanwhile, according to informant 6 First they came, they did a sputum test after the results showed pulmonary TB then they came to get the medicine. Sputum examinations carried out by community health centers are based on microscopic examination of phlegm. An attempt was made to collect 3 sputum specimens from suspected pulmonary TB so that the diagnosis could be made.

3.9 DOTS Treatment

Once the diagnosis is confirmed with certainty through confirmation of the results of a microscopic examination, treatment begins immediately.

The principle of treating pulmonary TB is to use treatment according to OAT (Anti Tuberculosis Drugs).

"Oh, OAT is always available here" (Informant 1).

"We store the OAT with us, the OAT comes from the pharmacy warehouse there, which means it comes from the center. Here OAT is always available. "But if the stock starts to run out then we make a request and then we take it from the pharmacy people" (Informant 2).

"No, no. It's always there when you come to get medicine" (Informant 4).

Based on the results of interviews and observations, the availability of OAT and other facilities and infrastructure comes from the Pangkep City Health Service and the availability of OAT at the Balocci Pangkep health center is quite good. Medicines that have been procured are sent directly by the center by the Balocci health center's planned needs, and OAT is stored in the pharmaceutical warehouse installation and central medicine warehouse by drug storage requirements. Balocci Health Center always plans to provide good medicines so that it never runs out of medicine stock for pulmonary TB sufferers. So pulmonary TB sufferers who seek treatment at the Balocci health center feel that there is no problem in obtaining pulmonary TB medication at the community health center.

3.10 PMO

According to the Indonesian Ministry of Health (2014), PMOs should be health workers such as village midwives, nurses, workers, sanitarians, immunization interpreters and others. However, if there are no health workers, the PMO can come from health cadres, teachers, PPTI members, PKK, or other community figures or family members. The PMO has the task of reminding pulmonary TB sufferers to take medication regularly.

Based on the results of in-depth interviews with informants and pulmonary TB sufferers, it is known as follows:

"Yes, it has to be his family, it's mandatory, basically the one closest to him because the one who controls his family, the one who can see whether he is taking medicine or not is his own family" (Informant 1).

"That's the procedure for me, just the same house, there's someone who can do it, OK. "If there aren't any, sometimes it's cadres, but rarely cadres, but it's rare" (Informant 2).

"Yes, my mother. "But yes, we are the last to monitor ourselves, from treatment to taking medicine, we are the ones who monitor it for 6 months, Mamak just remembers that" (Informant 3).

"Yes, for PMO, just supervise it yourself" (Informant 4).

"If there are suggestions for monitoring taking medication, it's just that from the beginning to the end of treatment, just do it yourself, no one supervises you" (Informant 5).

"Just give me medicine. Just come and get your medicine regularly for up to 6 months. After 6 months, there was no evaluation with them" (Informant 6).

From interviews with 6 informants, it is known that the Balocci health center has appointed a PMO. In determining the PMO carried out by pulmonary TB officers, they appoint a patient's family member who has a good memory so that the PMO who is responsible for the patient does not forget to remind them to monitor daily medication swallowing. However, at the Balocci Community Health Center, the PMO, which has been specially appointed by health workers such as nurses or doctors for pulmonary TB sufferers, does not play an active role in carrying out its duties as a PMO, resulting in a lack of motivational support for patients and information about pulmonary TB control, which results in the case discovery rate being inappropriate. The target and transmission of pulmonary TB disease is increasing.

3.11 Pulmonary TB Cure

Efforts to reduce this number can be made by increasing the rate of discovery of pulmonary TB cases to prevent transmission due to pulmonary TB and regular treatment of pulmonary TB for 6-9 months, as well as political commitment in making policies and procuring funds for the implementation of the pulmonary TB program in collaboration with international organizations. sectors and cross-programs related to efforts to overcome the problem of pulmonary TB.

The treatment services provided by the Balocci Health Center in handling pulmonary TB cases are not yet optimal, this is due to obstacles in finding pulmonary TB cases at the puskesmas which is still done by waiting for patients to come for treatment. The success rate for pulmonary TB treatment is still low, this can be seen from the large number of patients who are lost to follow-up during treatment.

3.12 Informant Statement regarding Obstacles in Implementing Countermeasures

"From the patient himself, the patient is lazy, he is embarrassed. "As for the officer, if he doesn't come to get the medicine, he has to be visited and we have a PMO, a medicine taking supervisor, namely from his own family" (Informant 1).

"Sometimes there are cases, sometimes the patient is late in taking the medicine, sometimes they don't comply with taking the medicine, they are told they can't smoke, if the patient is a man they smoke too. "Sometimes he eats his medicine, so he forgets to take his medicine, every TB day, TB day is Tuesday, he comes on Wednesday" (Informant 2).

Patients feel bored of taking medicine continuously so that sometimes patients do not come to the health center to take medicine when the medicine runs out. An obstacle to the pulmonary TB control program is that smoking is the patient's hobby, making the patient unable to stop smoking during the treatment period. Of course, this situation makes the patient's TB disease increasingly difficult to cure. Even though pulmonary TB officers have warned pulmonary TB patients not to smoke. But the patient did not obey the warnings of the pulmonary TB officers. This may be caused by the patient's ignorance about TB disease.

3.13 Informant's Statement about the High Number of Pulmonary TB Cases

"Oh, recently there has been an increase in TB sufferers every year here, maybe because the patients have been told that they don't know where they are going, even though they have also been told that the disease is contagious, you shouldn't throw phlegm carelessly, that is, it will increase and increase" (Informant 2).

Based on in-depth interviews with informant 2 (TB officer) above, it is known that there is an increase in the number of patients suffering from pulmonary TB who come for treatment at the Balocci Health Center every year. This is because patients suffering from pulmonary TB do not care about the recommendations given by the health center. The patient also has no awareness of the pulmonary TB disease he suffers from, and always produces phlegm carelessly, as can be seen from the following interview.

"Yes, yes, if he is a patient, we will direct him here, for the patient he must be diligent in monitoring him. Don't forget to take your medicine, then if you cough and throw up phlegm, don't be careless, you should use a mask. As for the direction for the program, if the patient doesn't come, we'll take it easy and if sometimes the medicine isn't taken regularly, we'll have a schedule every day.

"In 1 week there is 1 day, Tuesday is called TB Day and we are expected to come to get medicine" (Informant 1).

Based on the results of the interview above, it is known that the Balocci Community Health Center, especially the pulmonary TB staff, have given instructions to patients suffering from pulmonary TB to diligently go to the community health center for treatment, take medication regularly and always cover their mouths when coughing and not to throw phlegm carelessly. However, in reality, patients suffering from pulmonary TB do not heed the recommendations given by the Community Health Center.

4. Conclusions

- a. Components in the availability of resources and facilities are not yet optimal. Health workers for the TB control program at the Balocci Community Health Center are in accordance with the 2014 standards of the Indonesian Ministry of Health and have received training provided by the Pangkep City Health Service, however the training received by health workers at the pulmonary TB health center is only once a year and has not been optimal in providing education to the community. general because the community health center only provides counseling for pulmonary TB suspects and pulmonary TB patients.
- b. The implementation of the pulmonary TB control program at the Balocci Community Health Center has not been running optimally because the PMO appointed by the community health center does not play an active role so that pulmonary TB patients do not regularly take medication and are less motivated in undergoing treatment.

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