

**Laporan Hasil Penelitian****SUCCESS OF PULMONARY TUBERCULOSIS TREATMENT SERVICES IN BANGETAYU PRIMARY HEALTH CARE SEMARANG REVIEWED FROM THE ASPECT OF QUALITY OF SERVICE****Aisyah Lahdji**

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***Submitted : Desember 2018 | Accepted : Januari 2019 | Published : Januari 2019*****ABSTRACT**

Pulmonary tuberculosis is a disease that until now has a high morbidity rate, including in Indonesia. Indonesia ranks second with the highest TB burden in the world. From 2013 to 2016, the percentage of the success rate of treatment in Semarang City was 83%, where the lift was still below the target of 90% and in the health profile of the Bangetayu Primary Health Care Semarang, the cure rate was 55% and complete treatment was 34%. One of the controls in TB disease is treatment with the *Directly Observed Treatment Short-Course* (DOTS) system by monitoring medication. The existence of these efforts still cannot increase the success rate of TB treatment. The purpose of this study was to analyze the scope of achievement of the success of pulmonary TB treatment in Bangetayu Primary Health Care in terms of service quality aspects. This study included descriptive observational research with a qualitative approach. Data collection in this study used interviews and observations by determining the source with the *snowball sampling* method, namely the head of the health care, the person in charge of the P2P program, the holder of the pulmonary TB program and laboratory officer. This research was conducted at Bangetayu Primary Health Care in November 2018 to December 2018. Assessment of service quality is seen from the aspects of input, process and 5 dimensions of service quality. The results of the study found that the quality of management services from input, process and 5 dimensions of service quality at the Bangetayu Primary Health Care were good. The conclusion of this study is that the Bangetayu Primary Health Care has implemented TB service management well, even though the achievements of TB treatment have not met the target, so that the failure to achieve success in TB treatment in Bangetayu Primary Health Care, Semarang is not caused by health service factors.

**Keywords** : Pulmonary tuberculosis, Bangetayu Primary Health Care, service quality**Correspondence to** : [lahdjiaa@yahoo.com](mailto:lahdjiaa@yahoo.com)**ABSTRAK**

Tuberculosis Paru (TB Paru) adalah penyakit yang sampai saat ini memiliki angka kesakitan yang tinggi termasuk di Indonesia. Indonesia menduduki peringkat kedua dengan nilai beban TB tertinggi di dunia. Dari tahun 2013 hingga tahun 2016, presentase angka keberhasilan pengobatan di Kota Semarang sebesar 83%, dimana angkat tersebut masih berada dibawah target sebesar 90% . Pada profil kesehatan Puskesmas Bangetayu Semarang, didapatkan angka kesembuhan sebesar 55% dan pengobatan lengkap sebesar 34%. Salah satu pengendalian pada penyakit TB adalah pengobatan dengan system *Directly Observed Treatment Short-Course* (DOTS) dengan pemantauan minum obat. Adanya upaya tersebut masih belum bisa meningkatkan angka keberhasilan pengobatan TB secara optimal. Tujuan penelitian ini adalah untuk menganalisis capaian keberhasilan pengobatan TB paru di Puskesmas Bangetayu yang ditinjau dari aspek

mutu pelayanan. Penelitian ini termasuk penelitian deskriptif observatif dengan pendekatan kualitatif. Pengumpulan data pada penelitian ini menggunakan wawancara dan observasi dengan penentuan narasumber dengan metode *snowball sampling*, yaitu kepala puskesmas, penanggungjawab program P2P dan pemegang program TB paru, petugas Laboratorium. Penelitian ini dilakukan di Puskesmas Bangetayu Semarang pada bulan November 2018 hingga Desember 2018. Penilaian mutu pelayanan dilihat dari aspek input, proses dan 5 dimensi mutu pelayanan. Hasil penelitian didapatkan bahwa mutu pelayanan manajemen dari input, proses dan 5 dimensi mutu pelayanan di Puskesmas Bangetayu Semarang sudah baik. Kesimpulan pada penelitian ini adalah Puskesmas Bangetayu sudah menerapkan manajemen pelayanan TB dengan baik, meskipun capaian keberhasilan pengobatan TB belum memenuhi target, sehingga ketidakberhasilan capaian keberhasilan pengobatan TB di Puskesmas Bangetayu, Semarang tidak disebabkan oleh faktor pelayanan kesehatan.

**Kata Kunci** : TB Paru, puskesmas bangetayu, mutu pelayanan

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## INTRODUCTION

Pulmonary tuberculosis (pulmonary TB) is a disease caused by mycobacterium tuberculosis. Pulmonary TB is often transmitted through droplets from pulmonary TB patients. Pulmonary TB not only attacks the lungs, but can also attack the skin, brain, bones and joints, and so on. (Kemenkes, 2013) Based on WHO data (World Health Organization) in 2015, it was reported that there were 10.4 million cases of pulmonary TB with an estimated 1.37 million cases per year. Of all these TB cases, Indonesia is one of the countries with the most TB sufferers. (WHO, 2015)

Based on the data from the 2016 National TB Prevalence Survey, Indonesia was ranked second with the highest TB burden in the world with TB case finding of 330,910 cases. This number has increased from 2014, which amounted to 324,539 cases. The prevalence of TB cases in Central Java in 2016 amounted to 115.36 per 100,000 population. (Dinkes Jateng, 2017) Semarang City is one of the cities that in the last 5 years the coverage of TB case discoveries has always increased. In 2015 the figure was 76% and in 2016 there was an increase of 76.6%. However, the high rate of TB case discovery is not balanced with the success rate of pulmonary TB treatment. From 2013 to 2016, the percentage of treatment

success rates in Semarang City was 83%, where the lift was still below the target of 90%. (Dinkes Semarang, 2017) In the health profile of the Bangetayu Primary Health Care, there was a cure rate of 55% and complete treatment of 34%, both of which were still below the target. (Profil Puskesmas Bangetayu, 2018)

According to H.L. Blum Theory, health status is influenced by four factors, namely heredity, behavior, environment and health services. The health service factor in question provides comprehensive services, namely promotive, preventive, curative and rehabilitative. Quality health services are seen from the input and process aspects associated with five dimensions of service quality, including *tangible, reliability, responsiveness, assurance* and *empathy*.

There are many factors that can influence the success of TB treatment, including: (1) patient factors: patients do not adhere to taking medication, patients move health care facilities, resistant to anti-tuberculosis drugs (OAT). (2) factor in taking medication supervision (PMO): there is no PMO, and PMO is lacking in monitoring. (3) drug factor: the OAT supply is disrupted so that the patient delays or does not continue taking the medication, and the OAT quality decreases because the storage does not meet the standard. Research conducted by Luluk

and Faizati in 2012 showed that there was no relationship between the quality of health services and compliance with taking pulmonary TB drugs. (Luluk & Dewi, 2012) Another study stated that the role of health workers in compliance with medication can be seen in the form of health promotion, supervisors taking medication and giving motivation or support in compliance with taking medication. (Winda, 2018)

The purpose of this study was to analyze the achievement of the success of pulmonary TB treatment in Bangetayu Primary Health Care in terms of service quality aspects.

## METHOD

This research is an observative descriptive study with a qualitative approach with interviews and observation of officers supported by puskesmas documents (profile of the city health service in 2017, profile of health centers in 2018 and performance achievements in 2017) and relevant literature. Determination of sources in this study using the *snowball sampling* technique. The respondents in this study were the head of the puskesmas, the person in charge of the P2P program, the holder of the pulmonary TB program and laboratory staff. This research was conducted at Semarang Semarang Public Health Center in November 2018 to December 2018..

## RESULT

This research was conducted at the Semarang Public Health Center in Semarang. Data is obtained through interviews, direct observation and study of supporting program documents. The respondents were 6 people, namely the head of the puskesmas, the person in charge of the P2P program, the holder of the TB program, the person in charge of the Individual Health Efforts program (UKP), the laboratory officer and the health promotion officer. Observations were made on the implementation of puskesmas services, especially pulmonary TB services. To strengthen the data from interviews and

observations, an examination of existing documents and archives was carried out. Observations were made to assess officers in providing services by using a checklist according to existing SOP, namely SOP handling pulmonary TB, sputum collection SOP and BTA examination SOP. The head of the Puskesmas explained,

*"The services provided by the Puskesmas are in accordance with the duties, principal and function of each officer, especially in TB services but do not escape from cross-program activities such as P2P programs with laboratories, P2P programs with pharmacy parts and health promotion departments. For more details, you can ask each program."*

### 1. Description of the research location

The area of Bangetayu Primary Health Care is 11.67 km<sup>2</sup> which is divided into 6 regions, namely Bangetayu Kulon, Bangetayu Wetan, Sembungharjo, Penggaron Lor, Kudu and Karangroto and has a population of 58,015 people. The vision of the Bangetayu Primary Health Care is the realization of quality, basic health services and an independent community in the field of health. The number of workforce at the Primary health care is 48 people. In 2017 there were 10 major diseases where the highest ranking was cases of Acute Respiratory Infection (ARI) of 9049 cases or 18.24% of the total visits of 49,854.

### 2. Description of the research result

#### A. Input

##### - Man

The P2P program holders are one person and are assisted by 6 Gasrukes. The P2P programholder explained,

*"Regarding the success of TB services, especially the success of TB treatment, it cannot be separated from other activity programs and can be asked in detail to TB program*

holders, doctors and laboratory officers."

In controlling TB treatment, TB program holders explained,

*"I worked with the Health Surveillance Officer (Gasrukes) and cadres. Currently, Gasrukes is 6 people divided into 6 regions, as well as 10 cadres. But, there are 4 active cadres."*

One of Gasrukes' tasks is to visit home if TB patients do not control and do not take medication. TB service officers are educated in D3 nursing who have taken training in handling pulmonary TB.

*"Besides that, I also ask for help from the family to supervise patients in taking medicine."*

In addition to PMO, control of taking medication is also assisted by a doctor of 4 people. The person in charge of UKP explained,

*"... the doctor has the duty to always provide education regarding how to take medication, drug side effects and procedures for prevention and transmission to pulmonary TB patients."*

TB treatment is also related to laboratory tests (phlegm examination) to see the success of treatment. Laboratory staff numbered 2 people with the last education of D3 health analysts. One laboratory officer explained,

*"I as a laboratory officer in relation to the TB program, I ran an AFB examination of old patients in the 2nd, 5th and final months of treatment, while for new patients, I sent patients to the Dr. Kariadi Semarang to do the Molecular Rapid Test."*

All service officers provide friendly, careful and responsive service.

- *Money*

The source of funds obtained by the primary health care comes from the APBD budget of 10% from Rp. 238,875,000, BOK funds of 20% from Rp. 465,000,000 and BLUD funds of 70% from Rp. 1,600,000,000. The funds compared to the previous year increased by 33% or Rp. 155,000,000. The head of the puskesmas explained,

*"To run the puskesmas program, until now the funds used are BOK, BLUD funds and KNCV. Until now, there are no problems, even if there are financial problems, the TB program will continue to be implemented because it is a national program."*

- *Method*

Method aspects in this study relate to TB program holders and laboratory staff. TB program holders explained, *"In TB services, I do services guided by SOPs that have been endorsed by the head of the community health center, namely the SOP on handling pulmonary TB."*, while laboratory officials explain,

*"I always carry out what is written in the SOP which is related to the Pulmonary TB program, which is the BTA examination SOP and sputum collection SOP."*

Some SOP related to laboratories include sputum collection SOPs and BTA examination SOPs. Based on the results of interviews and observations, all officers have carried out systematically, interrelated and continuous.

- *Material*

The Bangetayu Primary Health Care in TB services has its own room separate from the main building. The room measures 6 x 3 meters and behind the room there is an open place for patients to expel phlegm. In the TB service room, masks are provided for patients and officers in the room. The amount of OAT available at the primary health care has been fulfilled. OAT is stored in a pharmaceutical warehouse where only pharmacy officers can enter and meet the standards. In the laboratory room, the size of the room is 6 x 3 meters and the infrastructure has been fulfilled such as reagents, inspection equipment and APD.

- *Machine*

The machine aspect relates to OAT. TB program holders explained, *"The mechanism for giving OAT starts from the Pharmacy Installation (IF) of the Puskesmas to me and from me to TB patients at the same time I provide an explanation regarding how to take medicine, side effects of drugs, drugs and procedures for prevention and transmission. I submitted to the pharmacy department of the City Health Office according to the plan, then the medicine was taken by the pharmacy's pharmacy installation and stored in the pharmacy warehouse."*

Every month, pharmacists always calculate the amount of drug used reported to the City Health Office. Evaluation is carried out continuously, namely the recording phase of receipt, storage and expenditure of drugs.

- *Market*

Health services must provide comprehensive services, namely promotive, preventive, curative and rehabilitative. Health Promotion services, especially about TB, inform about TB, how to prevent it and how it doesn't get worse (complications). The health promotion officer explained,

*"The Health Promotion Program is carried out in several ways, which can be directly door to door or can be done by counseling. Gasrukes and I while doing door to door always gave TOSS leaflets (Find Treatments to Get Well) and explained about TB. The second way is to do counseling using power points, leaflets and video screenings. Counseling is done once a week regarding TB treatment and prevention in the building."*

In addition, health promotion officers gather cadres every month to share information regarding their environment.

B. Process

Assessment of the service process is routinely carried out by the Primary health care Quality team. In the service process the researcher observes directly based on the SOP, so that in the process of observation the researcher sees whether the officer in carrying out service activities is in accordance with the SOP or not. Observations were made during TB services and laboratory examinations (BTA examination and sputum sampling). TB services begin with preparation from service personnel to use personal protective equipment. After that the officer calls the registered patient and matches his identity with the medical record. The clerk performs a

history of the patient and checks vital signs and measures of body weight and physical examination. For new patients, phlegm is examined for examination of the Molecular Rapid Test at Hospital of Dr. Kariadi Semarang. In addition to sputum examination, new patients are also tested for blood sugar and HIV testing. For old patients, phlegm examination will be carried out at the 2nd, 5th and final months of treatment. After that, officers provided education related to how to drink OAT, OAT side effects, control if ESO arises, disease progression, procedures for preventing transmission and when phlegm is examined. After education, officers handed over OAT to patients. For new patients, drinking OAT is first witnessed directly by officers and PMO and patients may leave the room. Observations were made on 30 samples which at that time were scheduled for control. There are 23 steps in TB treatment SOP and during observation, the officers have carried out all SOP steps including education about how to take medication, drug side effects, control if there are side effects, routine control, disease progression, BTA prevention and examination procedures for the second month, 5 and the end of treatment, but the progression of the disease and prevention procedures are not carried out. The SOP on BTA examination laboratories and sputum sampling have been carried out in accordance with the SOP.

Apart from input and process aspects, service quality can be assessed from 5 aspects, among others :

- *Tangible*

The assessment carried out is an examination room for patients and the sputum sampling site is good and

meets the requirements, and the laboratory space and available facilities are complete. The appearance of TB service personnel and laboratory staff is kind, friendly and polite

- *Reliability*

The assessment carried out is that the formal education of the officers is in accordance with the qualifications and the officers have attended regular training related to the TB program

- *Responsiveness*

The assessment carried out is that all officers involved in TB services run a service program that is in accordance with the SOPs that are made and the skills and abilities of the officers are good so that the TB program is carried out quickly and precisely,

- *Assurance*

The assurance assessment is that all officers have attended training related to the TB program so that the implementation of the TB program runs well and patients feel safe, and trust

- *Empathy*

The empathy factor in service, TB patients feel cared for by officers by providing an understanding that TB can be cured with regular treatment and good nutrition so that patients feel comfortable and safe

## DISCUSSION

The results of the above research is a direct research process carried out at the Bangetayu Primary Health Care. This study uses the theory of H.L. Blum, that is, health status is influenced by 4 factors, namely heredity, environment, behavior and health services. (Fitriani, Husnil, & Ridhah, 2016)

This study assessed the success of pulmonary TB treatment in terms of service management aspects. Service management is seen from the inputs and processes that are viewed from the dimensions of service quality. The input and process of the management of the Bangetayu Primary Health Care are good and have met the standards. Research conducted by Luluk and Dewi showed no relationship between service quality and compliance with OAT drinking. (Luluk & Dewi, 2012) However, the primary health care service factor is also important in providing services and controlling TB treatment. Research conducted by Juliani explained that it was very important factors of ability, knowledge and work skills of health workers related to pulmonary TB services. (Juliani, A., Ansar, & Jumriani, 2012) In addition, research conducted by Nukman on Permatasari, factors that influence the success of pulmonary TB are: (a) facilities include adequate availability of medicines, education of health workers and drug administration, (b) patient factors including knowledge, awareness and determination to recover, and personal hygiene, (c) family and community environment factors. (Permatasari, 2005) Other studies explain that the quality of health services has no significant relationship with compliance with taking medication because health care workers provide counseling to patients from the beginning of attending treatment, schedule to take medication, take drugs and eat nutritious foods. (Zuliani, 2009) One of the factors that can underlie the failure to achieve successful TB treatment is behavioral factors. The behavioral factor in question is the level of knowledge and level of behavior of the patient. Research conducted by Octovianus, et al. In 2015 showed that the level of knowledge that was less numerous had dropped out by 77.6% and good knowledge was 11.9%. In addition, lack of motivation can also affect drop out cases. The more or less experienced motivation dropped out by 83.6% when compared to patients who had

good motivation. (Octovianus, Suhartono, & T, 2015) Another influential factor is smoking. Research conducted by Kolappan shows that smokers have a higher risk than nonsmokers, (Kolappan, Gopi, Subramani, & Narayanan, 2007) and research conducted in India shows that smoking is a risk factor for TB infection. (Shetty, Shemko, Vaz, & Souza, 2006)

### CONCLUSION

In this study, it can be concluded that the Bangetayu Primary Health Care has implemented TB service management well, even though the achievements of TB treatment success have not met the target. The failure to achieve TB treatment in Bangetayu Primary Health Care, Semarang was not caused by health service factors.

### REFERENCES

- Dinkes Jateng. (2017). *Profil Kesehatan Provinsi Jawa Tengah Tahun 2016*. Semarang: Dinkes Jawa Tengah.
- Dinkes Semarang. (2017). *Profil Kesehatan Kota Semarang Tahun 2016*. Semarang: Dinkes Semarang.
- Fitriani, M., Husnil, F., & Ridhah, T. (2016). Perilaku Masyarakat dalam Pengelolaan Kesehatan Lingkungan (Studi di Desa Segiguk sebagai Salah Satu Desa Penyangga Kawasan Hutan Suaka Margasatwa Gunung Raya Ogan Komering Ulu Selatan). *Jurnal Penelitian SAINS Vol. 18 No. 1*, 41-46.
- Juliani, A., A., D., Ansar, & Jumriani. (2012). Evaluasi Program Imunisasi Puskesmas di Kota Makassar Tahun 2012. *Jurnal FKM*.
- Kemenkes, R. (2013). *Petunjuk Teknis Manajemen TB Anak*. Jakarta: Kementerian Kesehatan, Direktorat Jenderal Pengendalian Penyakit dan Lingkungan.

- Kemenkes, R. (2015). *Profil Kesehatan Indonesia 2014*. Jakarta: Kementerian Kesehatan.
- Kolappan, C., Gopi, P., Subramani, R., & Narayanan. (2007). Selected Biological and Behavioural Risk Factors Associated with Pulmonary Tuberculosis.
- Luluk, & Dewi, F. (2012). Hubungan Antara Tingkat Pengetahuan dan Mutu Pelayanan Terhadap Kepatuhan Minum Obat Penderita Tuberculosis Paru di Puskesmas Gatak. *LPPM UMS*.
- Octovionus, L., Suhartono, & T, K. (2015). Analisis Faktor-faktor yang Berhubungan dengan Kejadian Drop Out Penderita TB Paru di Puskesmas Kota Sorong. *Jurnal Manajemen Kesehatan Indonesia*.
- Permatasari, A. (2005). Pemberantasan Penyakit TB Paru dan Strategi DOTS. *Fakultas Kedokteran Universitas Sumatera Utara*.
- Shetty, N., Shemko, Vaz, & Souza. (2006). An Epidemiological Evaluation of Risk Factors for Tuberculosis in South India. *International Journal Tuberculosis Lung Disease*.
- WHO. (2015). *Global Tuberculosis*. Switzerland: WHO.
- Winda, R. (2018). Peran Tenaga Kesehatan dalam Kepatuhan Minum Obat Pasien Tuberculosis Paru di Wilayah Kerja Puskesmas Bulu Kabupaten Sukoharjo. *LPPM UMS*.
- Zuliani, I. (2009). Pengaruh Karakteristik Individu, Faktor Pelayanan Kesehatan dan Faktor Peran Pengawas Minum Obat Terhadap Tingkat Kepatuhan Penderita TB Paru Dalam Pengobatan di Puskesmas Pekan Labuhan Kota Medan. *Fakultas Kesehatan USU*.