

Medication Compliance for Tuberculosis Patients with Quote TB Light at Public Health Center in 2020

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ABSTRACT

Tuberculosis is a chronic disease that requires prolonged medication and slow recovery, hence the problem that often occurs is the patients' medication compliance. This study is aimed to identify the Description of the Medication Compliance for Tuberculosis Patients with Quote TB Light in Public Health Center. The method of this study was quantitative descriptive using cross sectional design with 92 patients from February to March 2020. The results showed that 51% of tuberculosis patients had complied with the medication. Based on the dimensions of Quote TB Light, the majority of patients have a good perception regarding: TB services (93.65%); the information received is appropriate (100%); health workers when providing consultations (100%); the availability of infrastructures (66%); the service provided by health workers is appropriate (74.5%); the affordability of TB medication is good (100%); and the attitude of health workers (100%). The conclusion is that the description of the medication compliance of tuberculosis patients based on Quote TB Light is good, but it is necessary to improve the quality of services on health workers' capability and competence, to make improvements and consistent interventions in waiting time, and to pay attention to the infrastructure in order to provide the comfort for patients.

Keywords: Tuberculosis, medication compliance, quote TB light

INTRODUCTION

Tuberculosis (TB) is an infectious disease that is still a public health problem, and one of the causes of death.¹ Based on Global Report Tuberculosis in 2017, globally new tuberculosis cases amounted to 6.3 million.² In 2017, the number of Tuberculosis patients in Indonesia has increased into 425,089 cases and it increased compared to 2016 with 360,565 cases.³ Profil Banten in 2016 showed that the proportion of TB BTA positive cases among the suspects were 17.13%, which is above the normal portion, namely 5-15%.⁴ The high proportion of TB BTA positive cases may be due to a too tight screening or problems in the laboratory examination (false positive). Then, based on data from the South Tangerang City Health Office in 2015, it showed that there were still several indicators of TB control that has not been achieved, i.e. ODHA who received the medication at 89% (RPJMD's target of 100%), coverage for finding and handling TB BTA disease patients was 46% (RPJMD's target of 95%).⁵ According to WHO in Yutrichia (2019), factors that influence the medication compliance are socio-economy, distant health facilities, knowledge, and lack of medicine distribution.⁶ However, in some researches, some of these factors has nothing to do with the medication compliance. Based on Kurniawan's research (2011), it showed that knowledge, availability of transportation facilities, family support, availability of OAT has no significant relationship with the medication compliance.⁷ Inayah (2019) showed that the medicine used are still using those from the previous program and the room used to expel sputum is no longer feasible.⁸ The quality of service is a factor that affects TB patients' medication compliance. According to Probandari (2013), patients' medication compliance is influenced by public dissatisfaction with services such as inconsistent service hours, discriminatory services, less clean facilities and environments, and deeper lack of information about TB and TB-HIV.⁹ Sineri Research (2014)) showed that the aspects of planning and organizing have not been carried out by all those responsible for TB, no collaboration with other Public Health Centers, cross-program or cross-sector, and environmental constraints, especially limited geographic access and transportation.

The quality of TB services can be measured with an instrument, Quote Light TB, which has been developed by USAID. The components measured in this instrument have been adjusted to the services provided to TB patients, that therefore this instrument is very suitable for measuring the quality of TB

services. There are 9 components measured in this Quote TB instrument, i.e. the availability of TB services, the suitability of the information received, the patient's perception on the behavior of officers when providing consultations, the TB-HIV relations, the availability of infrastructure, services suitability provided by officers, the patient's affordability, the patient's perception on the attitude of staff and the support from health facilities.¹⁰ This instrument can identify customer complaints, which later can be used as a basis for making improvements.

Based on the preliminary study at Pamulang Public Health Center in October 2019, it was found that out of 30 TB patients there were 2 non-compliant patients with the medication, 13 less-compliant patients and 15 compliant patients. Based on the data, it showed that the rate of patients' medication compliance patients is still low. The impact of such indisciplinary medication in TB patients can increase the occurrences of drug resistance where the bacteria will not be sensitive to certain antibiotics. If this happens to some medicines or drugs, Multi-Drug Resistance will occur in which when it happens to a patient, it will make the medication being more difficult.

Based on 2018 data at Pamulang Public Health Center for the medication of TB patients, there were still 22 cases (62.86%) (national target of 85.71%) and 35 new TB cases that have been declared cured as many as 29 cases (77.14%) had not reached the national target of 85%. In addition, from the preliminary study, the quality of TB services at Pamulang Public Health Center based on the patients' perception that there are still two dimensions with poor service, namely dimensions of infrastructure availability and professional competence.

In reference to the data above, it can be concluded that there are still several indicators of TB services at Pamulang Public Health Center that have not reached the target. It showed that the quality of TB case prevention services at Pamulang Public Health Center needs to be improved. From the problems described, this encourages the desire of researchers to conduct the research on Medication compliance For Tuberculosis Patients with Quote Tb Light at Pamulang Public Health Center in 2020.

METHOD

The method used in this research is descriptive quantitative with cross-sectional design. The main purpose of the descriptive method used to describe something objectively.¹¹ Data collected by using two

questionnaires, the first namely the MMAS-8 (Morisky Medication Adherence Scale) and the second instrument using Quote Light TB, an instrument that can be used to assist in assessing the quality of TB services. This study was conducted from February to March 2020. The population of this study were all TB

patients at TB Clinic with a sample of 102 patients obtained from the total registrations in 2019 at Pamulang Public Health Center. The number of samples is determined from the total sampling. The sampling technique used is incidental sampling.

RESULTS AND DISCUSSION

Table 1. Medication Compliance of TB Patients

Medication compliance	Frequency	%
Non-compliant	11	12
Less-Compliant	34	37
Compliant	47	51
Total	92	100

Table 1. showed that more patients were compliant with the medication (51%) and 12% of patients were non-compliant with the medication. The reason the patient did not comply with the medication was caused by several things, i.e. the patient did not take medication other than the reason for forgetting (63.6%), the patient stopped taking the medicine when there is no symptom (54.4%) and the patient felt annoyed with the previous medication plan (72.7%). The reason for patients who were not compliant with the medication was mostly annoyed by the previous

medication plan (38.2%). This is in line with Fitria's research (2014) which stated that things that can lead to non-compliance with the medication can be caused by intentionally forgetting routines or schedules, according to the prescribed medication.¹² The compliance of TB patient with the routine medication is a major factor in the successful medication in healthy life behavior. According to Helper (2011), the Success in TB medication is not only from the medical aspect, but social aspects also play a role in motivating patients to undergo regular medication.¹³

Table 2. Medication Compliance of TB patients in the dimensions of the availability of TB services

TB services	Medication Compliance						Total	
	Non-Compliant		Less-Compliant		Compliant		n	%
	N	%	N	%	n	%		
Poor	0	0.0	1	2.9	3	6.4	4	4.3
Good	11	100	33	97.1	44	93.6	88	95.7
Total	11	100	34	100	47	100	92	100

Based on Table 2, it was found that 11 respondents were non-compliant with the medication, 34 respondents were less-compliant with the medication and 47 respondents who were compliant with the medication; the majority had good perception on TB services in Pamulang Public Health Center. In this study, TB services were measured by looking at 8 items, such as waiting time for services, the same service, comfort of working hours, availability of drugs, going to other facilities, easy-to-reach distances, TB services availability during working hours and the officers readiness to serve. Meanwhile based on the results of this study, it was found that there are 2 items that are still poor, namely service time and TB services availability during working hours. On the item of length of service

time, most respondents said that sometimes it exceeds 30 minutes (48.9%) and for TB services availability during working hours, most of the respondents said that sometimes TB services during working hours is not available or suitable (46.7%) and there were still respondents who said that services during working hours is never suitable (10.9%). The average waiting time is not more than 30 minutes.¹⁴ If the experience of long waiting times will affect the satisfaction and quality of services received by patients, which is in line with the research carried out by Torry (2016) which revealed that the perceived waiting time and speed of service affect the patient's satisfaction. The longer patient's waiting time, the medication compliance and service quality will decrease.¹

Table 3. Medication compliance of TB patients in the dimensions of Information received

Suitability of Information received	Medication Compliance							
	Non-Compliant		Less-compliant		Compliant		Total	
	n	%	n	%	n	%	n	%
Not Suitable	0	0.0	3	8.8	0	0.0	3	3.3
Suitable	11	100	31	91.2	47	100	89	96.7
Total	11	100	34	100	47	100	92	100

Based on Table 3, it was found that out of 92 respondents, 11 respondents were non-compliant with the medication, 34 respondents were less-compliant with the medication, and 47 respondents were compliant with the medication; the majority had the perception that the information received is suitable. For the quality of TB services, patients obtained complete information related to TB. The information provided consists of 9 items, i.e. about TB transmission, curable TB, the importance of taking medication, drug side effects, sputum examination, length of

medication, drug storage, medication visit time, and TB can affect everyday's life. Of the 9 items, the average patient answered "yes" to getting information related to TB. According to Irnawati (2016), providing information to patients in order to increase suggestions so that patients understand about pulmonary TB disease and its medication is a form of the information support provided by officers to patients. If the patient understands this information, it will increase the medication compliance.¹⁶

Table 4. Medication Compliance of TB Patients in the Dimensions of Patients Perception on Staff During Consultations

Patients' Perception on Staff During Consultation	Medication compliance						Total	
	Non-Compliant		Less-Compliant		Compliant		n	%
	n	%	n	%	n	%		
Good	11	100	34	100	47	100	92	100
Total	11	100	34	100	47	100	92	100

Based on Table 4, it was found that out of 92 respondents, 11 respondents were non-compliant with the medication, 34 respondents were less-compliant with the medication, and 47 respondents were compliant; the majority had good perception on officers when providing consultations and no respondent had Poor perception on officers when providing consultations. If it is viewed based on the large number of pulmonary TB patients at Pamulang Public Health Center, it is expected that the morbidity rate of pulmonary TB patients will decrease. Apart from scheduling patients to routinely control and regularly take medication, it is important to conduct the counseling, so that patients really understand on how to seek a perfect recovery for themselves. Forms of counseling interaction can be carried out in various ways such as keeping personal

information, paying respect, solving problems faced, responding quickly, and giving attention to the patients.¹⁷ To view the patients' perception on the officers when providing a consultation, it is assessed with 7 items, i.e. the officer respecting the patient, the officer listening to the patient, the explanation from the officer, enough time for discussion, discussion of problems, discrimination of services, and respecting privacy. From these 7 items, it is identified that the dimension of providing consultation by officers is good. Establishing good relationship is the basis of counseling with patients. Having a good relationship will create the openness from the patient to the staff, creating trust or credibility by respecting, respecting each other, being responsive, paying attention, listening to complaints, and communicating effectively.

Table 5. Medication compliance of TB patients in the dimensions of Infrastructure

Infrastructure	Medication Compliance							
	Non-Compliant		Less-compliant		Compliant		Total	
	n	%	n	%	n	%	n	%
Not available	4	36.4	16	47.1	16	34.4	36	39.1
Available	7	63.6	18	52.9	31	66	56	60.9
Total	11	100	34	100	47	100	92	100

Based on Table 5, it is identified that from 92 respondents, 11 respondents were non-compliant with the medication, 34 respondents were less-compliant with the medication and 47 respondents were compliant; the majority had good perception on the availability of the infrastructure at the public health center in Pamulang. According to KUPAS TB (2015), the infrastructure as referred to in TB services includes clean service facilities, comfortable waiting rooms, and clean toilets. To view the patients' perception on TB service infrastructure, it is rated under 4 items according to Quote TB light, i.e. clean facilities, comfortable seats, toilets which can be used. From the results of the research at Pamulang Public Health Center, it was found that 1 item was still not good, namely the toilet could not be used. Some respondents said that they never

use the toilet (32.6%). TB Clinic at Pamulang Public Health Center provides toilets, however, the toilets were out of order and unusable. So, if the patient wants to go to the toilet, he/she must use another toilet that is located outside the TB clinic. According to Bustami's (2011) theory, the infrastructure is not directly related to the clinical effectiveness, but can influence the patient's decision to come again to the health service. In the absence of toilet, it will interfere patients' comfort. Comfort can affect patient or consumer satisfaction to come for the medication at the Public Health Center. Therefore, Pamulang Public Health Center must pay more attention to the infrastructure in TB Clinic so that it can provide the comfort for patients, because the comfort is very important to attract patients which can ensure the continuity of medication.

Table 6. Medication compliance of TB patients in the dimensions of Services Provided by Officers

Suitability of Services Provided by Officers	Medication Compliance							
	Non-Compliant		Less-compliant		Compliant		Total	
	n	%	n	%	n	%	n	%
Not suitable	3	27.3	12	35.3	12	25.5	27	29.3
Suitable	8	72.7	22	64.7	35	74.5	65	70.7
Total	11	100	34	100	47	100	92	100

Based on Table 6, it was found that 92 respondents, 11 respondents were non-compliant with the medication, 34 respondents were less-compliant with the medication and 47 respondents were compliant with the medication; the majority had the perception that the services provided by officers were suitable. According to Wibowo (2012), the Competence is a dimension of the actions of officers who are used to complete their work in different forms and performance level. In TB services,¹⁸ what is meant by the professional competence is an ability that must be possessed in order to be able to carry out supervision, examination, medication and assistance in consuming drugs.

To view the patient's perception on the dimensions of services suitability provided by officers, it can be viewed from 6 aspects, namely the officer offers a sputum examination, when the patient first arrives, a physical examination is carried out, the health worker checks the patient's sputum when the patient is diagnosed with TB, the sputum examination until getting the result times, the sputum examination against people who live with the patient in the same house, TB officers should make sure that the PMO checks the drugs taken every day. From the results of the research at Pamulang Public Health Center, there were 2 Poor aspects, i.e. there is no

physical examination when the patient first comes (52.2%) and sputum examination was not carried out on people who live with the patient in the same house (62%). The dimensions of services suitability provided by the officers to the patients are related to the agreed skills, appearance or performance of

health service providers which include truth and consistency. The inadequacy of the services provided to the patients can cause several things ranging from small deviations to service standards to large deviations that can bring fatal consequences, such as the safety of the patient's life.¹⁹

Table 7. Medication Compliance of TB Patients in The Dimensions of Affordability

Patient Affordability	Medication Compliance							
	Non-Compliant		Less-compliant		Compliant		Total	
	n	%	n	%	n	%	n	%
Good	11	100	34	100	47	100	92	100
Total	11	100	34	100	47	100	92	100

Based on Table 7, it was found that out of 92 respondents, 11 respondents were non-compliant with the medication, 34 respondents were less-compliant with the medication and 47 respondents were compliant with the medication; the majority had perception that the affordability on TB medication at Pamulang Public Health Center is good and there were no respondents who had Poor perception on affordability. According to Prayogo's research (2013), what causes the patient's non-compliance with the medication is that their assumption that the medication requires money.²⁰ The affordability includes administrative costs, doctor's fees and medicines. In addition, spending on transportation to the Public Health Center is not too burdensome for patients (KUPAS TB 2015). In terms of TB service quality, the affordability

for TB patients can be viewed from several aspects, namely whether the patients have to pay for TB services such as sputum checks, drugs and transportation costs for patients to come to the health facilities. From some of these aspects, the average patient is never charged for TB medication, which is in line with Helper (2011) which stated that in the eradication of pulmonary TB in the world it, is the responsibility of WHO. According to the research by Ratnaningtyas (2012), with free medical expenses, TB patients feel they are not burdened.²¹ With the free TB service program, it is expected that the people will be more confident to go to the Public Health Center so that they can be cured from TB disease. TB patients will feel better after taking the medicine given by the Public Health Center.

Table 8. Medication compliance of TB patients in the dimensions of patient perception on officers' attitudes

Patients 'Perception on Officers' Attitudes	Medication Compliance							
	Non-Compliant		Less-compliant		Compliant		Total	
	n	%	n	%	n	%	n	%
Good	11	100	34	100	47	100	92	100
Total	11	100	34	100	47	100	92	100

Based on Table 8, it was found that out of 92 respondents, 11 respondents were non-compliant with the medication, 34 respondents were less-compliant with the medication and 47 respondents were compliant with the medication; the majority had good perception on the attitude of the officers.

The results of the study were found to be in line with the research conducted by Dewi

(2015) who stated that there was a significant relationship between good staff attitudes and medication compliance in patients with pulmonary TB (pvalue <0.05).²² In terms of TB service quality to assess patient perception regarding the attitude of the officer, it can be viewed from 4 items, i.e. being friendly, accepting the patient with smile, not looking away, the patient is treated the same as the

officer treating other patients. From some of these aspects, in average, officers have treated patients appropriately in accordance with the KUPAS TB's theory. According to Adelia, Ratna et al (2017), one of which that can motivate patients to complete the medication regularly is friendly health workers.²³ According to Dermawanti (2014), health workers who are empathetic, supportive and equality can improve the medication for pulmonary TB patients.²⁴ Attitude of health officers in providing services can influence patients to be active in undergoing the medication and can change the patient's attitude to not drop out the medication during the pulmonary TB medication period until it is completed. Therefore, Pamulang Public Health Center officers maintain a good attitude so that TB patients are active in undergoing the medication.

CONCLUSION

It could be concluded that the medication compliance of tuberculosis patients based on Quote TB Light is quite good, as many as 51% of patients have complied with the medication. Majority patients who have complied with the medication have good perception on TB services (93.65), have a perception that the information received is suitable (100%), have a good perception on officers when providing consultations (100%), have a good perception on the availability of the infrastructure in *Puskesmas* (66%) , have a perception that the service provided by officers is suitable (74.5%), have a perception that the affordability of TB medication at the Public Health Center is good (100%), and have a good perception on the attitude of the officers (100%). Although the description of the medication compliance of tuberculosis patients based on Quote TB Light is quite good, it is necessary to improve the quality of service on the competence of officers, to make improvements and consistent interventions in waiting time, and to pay attention to the infrastructure in order to provide the comfort for patients.

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