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THE SUCCESS RATE OF TUBERCULOSIS SURVEILLANCE IN THE REGENCY OF ACEH BARAT

*[1]Khairunnas, [2]Yarmaliza, [3]Teungku Nih Farisni, [4]Susy Sriwahyuni S, [5]Zakiyuddin

***ABSTRACT**--One of the successful tuberculosis (TB) countermeasures is the achievement of a Case Detection Rate with a national standard of at least 70%. In 2018 the Regency of Aceh Barat CDR achievement is still very low (25.39%). The success of TB surveillance is inseparable from the components inherent in surveillance. The purpose this study was to look at the relationship between input components (HR and facilities), processes (data collection) and outputs (cross-sectoral feedback) with the success of TB surveillance in Regency of Aceh Barat. The research method was observational analytic with cross sectional study design in which there were 13 respondents who were responsible for the TB program with univariate and bivariate analysis (Spearman rank correlation). Quantitative research results found that the value of each variable is greater than the ρ (rho) table (0.560) at α = 0.05, it shows that there is a relationship between the input components (HR and facilities), process (data collection) and outputs (cross-sectoral feedback) with successful TB surveillance in Regency of Aceh Barat.*

***Keywords**-- Component, Success, Surveillance, Tuberculosis*

I. INTRODUCTION

Tuberculosis (TB) is still a global public health problem. It is the third largest communicable disease that causes death, after diarrhea and respiratory infections. According to the World Health Organization (WHO) in 2017, the number of deaths due to TB was the same as in the previous year which was 1.3 million deaths, but the number of new cases decreased to 10 million cases including 5.8 million cases (58%) for men, 3.2 million cases (32%) for women and 1 million cases (10%) for children (WHO, 2018). Tuberculosis is one of the diseases that must be eliminated immediately as stated in the discussion of the National Health Conference (Rakerkesnas) in 2018. The Ministry of Health discussed the synergism between the local government and the central government in accelerating the elimination of Tuberculosis.

The Government of Indonesia is planning to achieve the elimination of TB by 2030 with a National Case Detection Rate (CDR) target of 70% (Indonesian Ministry of Health, 2018). According to the data from the Indonesian Ministry of Health (2018), the Case Detection Rate (CDR) of Indonesia in the third quarter of 2017 was 33.9%, and an increase of 38.4% in 2018. DKI Jakarta is the only province in Indonesia that has reached the

[1]* *Public Health Faculty of Universitas Teuku Umar, khairunnas@utu.ac.id.*

[2] *Public Health Faculty of Universitas Teuku Umar.*
[3] *Public Health Faculty of Universitas Teuku Umar.*

[4] *Public Health Faculty of Universitas Teuku Umar.*

[5] *Public Health Faculty of Universitas Teuku Umar.*

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National CDR target of> 70% which is 80.8% in 2017 and 77.1%. Aceh Province ranks 22nd with a CDR of 25.6% in 2018, this percentage is increased compared to 2017 which was 22.3%.

Data from the Department of Health Aceh Province found a new number of people with positive BTA (BTA +) which was 4,023 in 2015. The highest number of reported cases was in Lhokseumawe City with 420 cases and 406 cases were followed by Pidie Regency (Department of Health Aceh Province, 2016). The proportion of pediatric TB among all TB patients in Aceh Province is at the lowest, with the proportion of only 1% among all cases, this is lower than the proportion of pediatric TB among all TB patients in Indonesia (7%) (Indonesian Ministry of Health, 2015).

Data from the Department of Health West Aceh Regency (2017) in 2017 the positive TB BTA cases (BTA+) increased by 172 cases. In 2018, cases of positive TB BTA (BTA +) increased by 229 cases, of which 82 cases were new cases of positive BTA (BTA +). The highest number of cases was found in the Johan Pahlawan Public Health Center with 28 cases, Cot Seumeureung Public Health Center with 11 cases and Meureubo Public Health Center with 9 cases. The prevalence of TB cases in 2018 showed that 153 cases were suffered by men and 76 cases were suffered by women (Department of Health West Aceh Regency, 2018).

According to data from Department of Health, the CDR rate in West Aceh Regency was 25.39% in 2018, the percentage is an increase from the previous year which was only 18.67% in 2017 and 20.2% in 2016. Case Detection Rate (CDR) West Aceh Regency is still far from the National CDR target, that is 70%. This shows that TB prevention and response efforts have not been maximized, because success indicator of TB prevalence is still far away (Indonesian Ministry of Health, 2015).

Based on the background stated above, the researchers are interested in conducting research on " The Success Rate of Tuberculosis Surveillance in The Regency of Aceh Barat ".

II. LITERATURE REVIEW (HEADING 1)

2.1 Tuberculosis

According to the Indonesian Ministry of Health (2018) Tuberculosis is an infectious disease caused by Mycobacterium tuberculosis or also known as Acid Resistant Bacteria (BTA). Most TB attacks the lungs, but can also affect other organs. Transmission occurs when TB patients cough or sneeze, germs are spread into the air in the form of sputum (droplet neclei). Infection occurs when other people breathe air containing the sputum of the infectious sputum. TB can affect anyone, but the disease is growing rapidly in people living in poverty, marginalized groups, and other vulnerable populations (Indonesian Ministry of Health, 2015).

Tuberculosis is an infectious disease caused by germs from the Mycobacterium tuberculosis group that most often attacks the lungs. There are several species of Mycobacterium, including: M. tuberculosis, M. africanum, M. bovis, M. Leprae and others also known as Acid Resistant Bacteria (BTA) (Indonesian Ministry of Health, 2018). According to the Indonesian Ministry of Health (2014), a group of Mycobacterium bacteria other than Mycobacterium tuberculosis that can cause disturbances in the airways is known as MOTT (Mycobacterium Other Than Tuberculosis) which sometimes can interfere with the diagnosis and treatment of TB.

2.2 Surveillance

Surveillance is a continuous observation of the spread and trend of incidents through systematic data collection, consolidation, evaluation of morbidity and mortality reports and other relevant data together according to time and the regular distribution of information to those who want to know it (Ridwan, 2017). According to Nugroho (2017) Surveillance can be used to collect data on various elements of the disease chain, starting from behavioral risk factors, preventive actions, as well as program and cost unit evaluations. In other words, surveillance systems are clicked to get a picture of a community's disease burden, including the number of cases, incidence, prevalence, case-fatality rate, mortality and morbidity rates, medical costs, prevention, potential epidemics and information about the emergence of new diseases.

According to Arina (2016) the implementation of a good surveillance system is the capital in implementing a more effective tuberculosis prevention and control program both in terms of planning, controlling and monitoring and evaluating the program. The components that must be possessed in TB surveillance are as follows: 1) Input: Human Resources, Funds, Facilities, 2) Process: Data Collection, Data Processing, Data Analysis, Information Dissemination, 3) Outputs.

III. METHODOLOGY/MATERIALS

The research method used is observational analytic research, with cross sectional study design. This research was conducted in West Aceh Regency from April 9 to May 15, 2019. The population of this study consisted of 13 TB program officers in all Puskesmas in Aceh Barat Regency. The sampling technique used in this study was total sampling, so the total samples in this study were 13 respondents. The independent variable of the study is input (Human Resource/HR and facilities), process (data collection), output (cross-sectoral feedback) and attributes (acceptability and flexibility), while the dependent variable is the success of TB surveillance in West Aceh Regency.

IV. RESULTS AND FINDINGS

4.1 Result

No	Variabel	Spearman correlation coefficient / r_s value	ρ (*rho*) table	Conclusion
1.	Input Variable (HR)	0.673	0.560	Ho is rejected
2.	Input Variable (facilities)	0.893		Ho is rejected
3.	Process Variable (Data Colection)	0.643		Ho is rejected
4. a.	Output Variable (The Implementation of Cross-Sectional Feedback)	1.000		Ho is rejected

b.	Output Variable (The Completion of Cross-Sectional Feedback)	1.000	Ho is rejected

4.2 Discussion

The Relationship between Input Variable (HR) and the Success of Tuberculosis Surveillance in West Aceh Regency in 2019

From the Spearman Rank Correlation test, the Spearman correlation coefficient or the value of r_s is 0.673> ρ (rho) table (0.560) at α = 0.05, so it can be concluded that Ho is rejected, which means the input variable (HR) has a significant relationship with the success of tuberculosis surveillance in West Aceh Regency with the percentage of 67.3%.

Of the 13 Puskesmas in Aceh Barat Regency, there are only 5 Puskesmas that have complete human resources according to the type of Puskesmas that are regulated in the Republic of Indonesia Health Minister Regulation No. 67 of 2016. The 5 Puskesmas whose human resources are met are in 2 Satellite Puskesmas (PS) namely Drien Rampak Puskesmas and Puskesmas, and there are 3 Microscopic Referral Puskesmas (PRM) or Independent Implementing Puskesmas (PPM) namely Meureubo Puskesmas, Cot Seumeureung Puskesmas, and Meutulang Puskesmas.

Health centers that do not meet human resources entirely because there are no doctors, both doctors who are specifically placed in the TB program and doctors who have been trained on TB disease. The puskesmas that have complete human resources all do not have doctors who are specifically placed in the TB program but rather they have been trained in TB disease. In addition, researchers found several Puskesmas where TB officers concurrently held positions with laboratory workers or other positions, so that TB officers had excessive workloads, which in turn had an impact on sub-optimal staff performance.

The input component, especially human resources, is very important in accordance with the theory which states that the input component is the main resource that has a considerable influence on the process and achievements of the surveillance system (Notoatmodjo, 2011). In addition, human resources are the most important element or capital in an organization because HR plays a role in determining the direction and goals of the organization, progressing the organization, determining the success of the organization, and having a role in the implementation of activities (Satrianegara, 2009)

1. The Relationship between Input Variable (facilities) and the Success of Tuberculosis Surveillance in West Aceh Regency in 2019

Based on the Searmens Rank Correlation test results obtained Spearman correlation coefficient / rs value (0.893)> ρ (rho) table (0.560) at α = 0.05, it can be concluded that Ho is rejected, which means the input variable (means) has a relationship significant with the success of tuberculosis surveillance in West Aceh Regency by 89.3%.

The researchers found that from 13 Puskesmas, only 1 Puskesmas did not have complete surveillance facilities because it did not have communication devices (telephone), while 12 other Puskesmas had complete surveillance facilities. In addition, researchers found that of the 13 Puskesmas, only 1 Puskesmas provided two-wheeled

vehicles for the selection of the network while the other 12 used private two-wheeled vehicles to carry out the screening but were still given transportation money instead, so the researchers concluded that the 12 Puskesmas had 1 wheeled vehicle two as surveillance facilities.

The input component, especially facilities, is very important in accordance with the theory which states that the input component is the main resource which has a considerable influence on the process and achievements of the surveillance system (Notoatmodjo, 2011). Facilities are the factors which influences the success of surveillance pulmonary TB. Availability of facilities enough will support the implementation process the program to be effective and efficient, so that a program will be hampered if existing facilities and infrastructure are not adequate (Permatasari, 2005)

2. The Relationship between Process Variable (Data Colection) and the Success of Tuberculosis Surveillance in West Aceh Regency in 2019

Based on the Searmens Rank Correlation test results obtained Spearman correlation coefficient / rs value (0.643)> ρ (rho) table (0.560) at α = 0.05, it can be concluded that Ho is rejected, which means the process variable (data collection) has a relationship which is significant with the success of tuberculosis surveillance in Aceh Barat Regency at 64.3%.

The 13 puskesmas screened TB suspects in the last 1 year of 2018, but only 3 puskesmas did routine screening every 3 months, while 10 other puskesmas did not routinely screen every 3 months. Puskesmas that do not routinely do the screening every 3 months, on average do only once a year selection with a duration of 1 village / day, this is because the system of fund disbursement at the Puskesmas is done once a year. Researchers also found that only 8 Puskesmas conducted networking in all Puskesmas working areas, while 5 other Puskesmas did not screen in all Puskesmas working areas, this was due to insufficient budget funds to carry out networking in all Puskesmas working areas.

The results of the field study also found that only 3 respondents (23.31%) knew the target of the case finding rate (CDR) in the Puskesmas working area correctly and in accordance with what the Health Office had targeted. Whereas the other 10 respondents (76.9%) did not know the target number of case finding (CDR) in the work area of their Puskesmas, while 6 out of 10 respondents answered that they knew the target or case finding number but the answers given were wrong so the researchers concluded that the respondent did not know target or number of findings of the case. The importance of the process component in accordance with the theory which states that, the process component is an activity that serves to change an input to be expected results of the system (Levey, Samuel & Loomba, 1973).

3. The Relationship** between **Output Variable (Cross-Sectioanal Feedback) and the Success of Tuberculosis Surveillance in West Aceh Regency in 2019

a. Variabel** Output **(Carried Out Feedback (Feedback) Across Sectors)

Based on the Searmens Rank Correlation test results obtained Spearman correlation coefficient / value of rs (1,000)> ρ (rho) table (0.560) at α = 0.05, it can be concluded that Ho is rejected, which means the output variable (carried out feedback (feedback) across sectors) has a significant relationship with the success of tuberculosis surveillance in Aceh Barat Regency by 100%.

Based on the results of research in the field found that all respondents namely 13 people (100%) get cross-sector feedback from the Regency Health Office of West Aceh, and respondents on average answer feedback is done twice a year where feedback is done every year and end of year.

b. Variabel Output (Completeness Of Feedback (Feedback) Across Sectors)

Based on the Searmens Rank Correlation test results obtained Spearman correlation coefficient / rs value (1,000)> ρ (rho) table (0.560) at α = 0.05, it can be concluded that Ho is rejected, which means the output variable (completeness of feedback (feedback) across sectors) has a significant relationship with the success of tuberculosis surveillance in Aceh Barat Regency by 100%.

Based on the results of research in the field it was found that all respondents did not get cross-sectoral feedback from the West Aceh Regency Health Office in full based on the main indicators of information generated from the surveillance process according to the Republic of Indonesia Decree No. Kepmenkes. 67 of 2016 where there are 11 main indicators. Researchers found that feedback was only given through presentations at the meeting and all participants were not given a hard file and for soft files obtained if the respondent asked the Health Department, so the information obtained from respondents was based on the level of memory of each respondent.

The theory that supports the output component is very important, the output component is the result obtained from the process (Levey, Samuel & Loomba, 1973), so the results of this surveillance must be disseminated to the parties concerned.

V. CONCLUSION

1. There is a relationship between the input component (HR) and the success of TB surveillance in Aceh Barat Regency at 67.3% (rs value (0.673)> ρ (rho) table (0.560) at α = 0.05).
2. There is a relationship between the input component (facility) and the success of TB surveillance in West Aceh Regency at 89.3% (rs value (0.893)> ρ (rho) table (0.560) at α = 0.05).
3. There is a relationship between the components of the process (data collection) and the success of TB surveillance in Aceh Barat Regency at 64.3% (rs value (0, 643)> ρ (rho) table (0.560) at α = 0.05).
4. There is a relationship between the output component (cross-sectoral feedback) and the success of TB surveillance in West Aceh Regency by 100% (rs (1,000)> ρ (rho) table (0.560) at α = 0.05) .
5. There is a relationship between output components (completeness of feedback) across sectors and the success of TB surveillance in Aceh Barat Regency by 100% (rs (1,000) > ρ (rho) table (0.560) at α = 0.05) .

REFERENCES

1. Arina, M. (2016). Gambaran Kualitas Sistem Surveilans TB di Dinas Kesehatan Kabupaten Gresik Berdasarkan Pendekatan Sistem dan Penilaian Atribut. Journal of Diponegoro University.
2. Department of Health Aceh Province. (2016). Profil Kesehatan Aceh. Aceh.
3. Department of Health West Aceh Regency. (2018). TB Paru BTA Positif dan Semua Kasus TB serta Kasus TB Anak Tahun 2018. Aceh Barat.
4. Fenila, N. (2016). Evaluasi Sistem Surveilans Penemuan Suspek Tuberkulosis (TB) di Puskesmas

Wilayah Kerja Dinas Kesehatan Kabupaten Magelang. Unnes Journal of Public Health, 5(2), 120–129.

5. Indonesian Ministry of Health. (2014). Buku Saku Pengendalian Tuberkulosis (TB). Jakarta: Dirjen P2PL.
6. Indonesian Ministry of Health. (2015). INFODATIN Tuberkulosis Temukan Obati Sampai Sembuh. Jakarta.
7. Indonesian Ministry of Health. (2018). Evaluasi Rencana Aksi 2018 TBC, Imunisasi, dan Rencana Tindaklanjut 2019. Jakarta.
8. Levey, Samuel & Loomba, P. N. (1973). Helath care administration a managerial prespective. Lippineett Comp.
9. Notoatmodjo, S. (2011). Kesehatan Masyarakat : Ilmu dan Seni. Jakarta: Rhineka Cipta.
10. Nugroho, S. (2017). Modul Surveilans. Yogyakarta: Universitas Respati Yogyakarta.
11. Permatasari, A. (2005). Pemberantasan Penyakit TB Paru dan Strategi DOTS. USU.
12. Ridwan, A. (2017). Surveilans Kesehatan Masyarakat. Jakarta: Trans Info Media.
13. Satrianegara. (2009). Buku Ajar Organisasi dan Manajemen Pelayanan Kesehatan serta Kebidanan. Jakarta: Salemba Medika.
14. WHO. (2017). Global Tuberculosis Report 2017. Jenewa.
15. WHO. (2018). Global Tuberculosis Report. Francis.