

## PROGRAM "CAHAYA TBC" (OUTPOURING OF HEART THAT HURTS TB)

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### Abstract

Tuberculosis (TB) is an infectious disease that causes the second death after the Human Immunodeficiency Virus. Compliance with TB treatment is very important to achieve the Millennium Development Goals (MDGs) in the context of eliminating TB. Health problems in OKU Regency note that TB is the 10th type of infectious disease with the highest incidence rate. The partner's problem from the results of the preliminary study is that the provision of TB treatment services, strengthening the motivation of Drug Swallowing Supervisors (PMO), and providing information/education is not yet optimal. The solution implemented by the service team is the implementation of the "CAHAYA TBC Program", which is a village development and innovation program consisting of 4 activity sessions, and involving patients, PMO, health cadres, and those responsible for the Puskesmas TB program. Patient compliance in undergoing the treatment program will be monitored in the "TB Patient Self-Management Guidance Module" module which will be carried out for 3 months and involve 30 people. The results of implementing the program were an increase in knowledge by 47%, an increase in skills by 22.5% from the pre and post test results of participants, and an increase in TB treatment visits to the Tanjung Agung Community Health Center UPTD by 92% at the end of the activity.

**Keywords:** Tuberculosis (TBC), Support System, Treatment

### INTRODUCTION

Tanjung Agung Health Center is a work unit that prioritizes good governance, involving individuals, groups, and organizations with various programs. The focus is on the Tuberculosis (TB) program, with 59 TB cases reported since 2021, with 132 target cases. The implementation of the TB program is a challenge that must be overcome because it is a national target and even the current Millennium Development Goals (MDGs) (Profile of Ogan Komering Ulu Regency, 2019).

Health workers continue to strive to improve the achievement of TB case finding and treatment by conducting home visits and increasing the schedule for taking Anti-TB Drugs (OAT) through continuous online networks so that TB patients complete treatment. There is a problem complained by patients and families of caregivers, namely boredom due to the long treatment process, and 75% of TB patients are in productive age (adults) who say it is difficult

to leave their jobs for treatment. Low motivation from people who are sick with TB can cause the treatment to be severed, so that patients return to more severe illness and have the potential to transmit to the surrounding community. The person in charge (PJ) of the TB Program at the Tanjung Agung Health Center said there was a lack of ability to deliver updated information that could inform patients and the public about TB. TB PJ officers and health cadres have also not been given related information and training, and there is support from village midwives who are not active in delivering suspect communities to sputum to the Puskesmas (Action Plan of the Ogan Komering Ulu Health Office, 2019; Profile of Ogan Komering Ulu Regency, 2012).

A literature review on the effectiveness of public health volunteers in preventing tuberculosis (TB) in the Philippines highlights the importance of TB prevention and treatment. TB is a complex disease that affects both physical and psychological conditions. The effectiveness of TB prevention depends on the effectiveness of interventions on physical, psychological, social, and spiritual aspects (Friedman, Bowden, & Jones, 2015). Various studies identify associations between mental health, socio-demographic factors, economic factors, psychological factors such as depression, and support factors that have an impact on adherence to TB patients' treatment (Nazhofah, 2022; Fang XH et al, 2019; Tang Y et al, 2015). Community-based research that has been carried out focuses on the potential of MDR TB to improve diagnosis and treatment, which aims to improve the completeness of patient treatment, provide accurate information, and support community efforts in Bogor Regency. This study uses the CERMAT (Smart Against TB Transmission) Program to guide intervention and treatment in communities with the highest incidence of TB in Indonesia (Nursasi, 2022).

The results of the preliminary study and literature review of the service team designed the program as a solution that can be implemented to overcome the problems felt by TB patients, nurses, and PJ TB Program at Tanjung Agung Health Center by formulating the TB Light Program which is an application and innovation of existing research. This service activity is carried out to create a TB self-help group, where after participating in the "CAHAYA TBC" program they no longer have a negative stigma against TB disease as evidenced by increasing the knowledge and skills of participants, and can be an agent providing education and support to other communities who have TB symptoms.

## **IMPLEMENTATION METHOD**

The science and technology program will be carried out to improve the quality of TB adult groups in the Tanjung Agung Health Center target area. The "CAHAYA TBC" program is aimed at solving problems related to stress management, preventing TB transmission, and providing support to TB clients for complete treatment, in an effort to break the chain of TB transmission in the community. Where the activities that will be carried out to solve the above problems are TB Transmission Prevention Management, Nutrition Management with Food Combining modifications, Adequate Rest and Sleep with Sleep Hygiene and Stress Management interventions, and the Establishment of TB Support Groups. The technical implementation of activities carried out by the service team is illustrated in the following process table:

**Table 1. Activity Process Flow**

<b>Input</b>	<b>Process</b>	<b>Output &amp; Outcome</b>
<p><b>Stakeholders involved in the implementation of the "CAHAYA TBC"</b></p> <p><b>Program:</b></p> <p>a) OKU Health Office</p> <p>b) Tanjung Ajung Health Center</p> <p>c) Tanjung Agung Village</p>	<p><b>Stakeholder Contribution:</b></p> <p>a) OKU Health Office, formulating a policy for eliminating TB cases</p> <p>b) Tanjung Ajung Health Center, assisting and maintaining sustainable programs.</p> <p>c) Tanjung Ajung Village, Partner Area of the program implementation</p>	<p><b>Improved Behavior to Prevent Transmission and Provide TB Support:</b></p> <p>a) Increased Knowledge of TB transmission prevention</p> <p>b) Improved TB transmission prevention skills</p> <p>c) The increase in the ability to provide support to TB clients is evidenced by the increase in the number of treatment visits to Puskesmas</p>
<p><b>Risk Factors for TB Transmission:</b></p> <p>a) The high cases of TB findings at the Tanjung Ajung Health Center are</p> <p>b) Humid environment</p> <p>c) There are TB clients in all Rw areas in Tanjung Ajung Village</p> <p>d) Low Social Support</p> <p>e) Health behaviors that have not been good</p>	<p><b>PROGRAM "CAHAYA TBC"</b></p> <p><b>Session 1 :</b> Management of TB Transmission Prevention</p> <p><b>Session 2:</b> Nutrition Management</p> <p><b>Session 3:</b> Meeting Rest and Sleep Needs</p> <p><b>Session 4:</b> Stress Management and TB Self-Help Group</p>	<p><b>Sustainable Program with:</b></p> <p>a) Modules and Implementation Guide of the "CAHAYA TBC" program</p> <p>b) Program Implementation Video</p> <p>c) Publication of popular articles in the mass media for the success of the program</p>
<p><b>Problems that arise in adult groups susceptible to contracting tuberculosis:</b></p> <p>Impaired fulfillment of needs, impaired psychosocial functioning, sleep disorders, disease transmission</p>		

## **RESULTS AND DISCUSSION**

Community service activities by the Baturaja Nursing Study Program Lecturer group at the preparatory stage began with a meeting with the leaders of the Puskesmas and the Handler in Charge of the Tuberculosis (TB) Program at the Tanjung Agung Health Center. The results

of coordination with community service partners agreed that the implementation of the TB CAHAYA program was carried out in the hall of UPTD Tanjung Agung Health Center, the implementation was attended by the target community service participants, namely patients and TB Swallowing Supervisors (PMO) totaling 30 people, as well as PJ TB Health Center Officers and target areas. Human resources in the community can play a role in providing motivation and become a complementary intrinsic component for health workers are health cadres (Rohana, 2019).

The distribution of characteristics of participants who participate in community service activities is as follows:

**Table 2. Distribution of Respondent Characteristics  
Distribution of TB Patient Characteristics and PMO at UPTD Tanjung Agung Health Center, September 2003 (n=30)**

Characteristics of Respondents	Frequency	%
<b>Age</b>		
Adolescent	5	16,7
Adult	20	66,6
Elderly	5	16,7
<b>Jenis Kelamin</b>		
Man	5	25
Woman	25	75

Source: TB Treatment Support Behavior Questionnaire, 2023

Based on Table 1, it can be seen that the distribution of respondents by age in the application of the TB "CAHAYA" program is dominated by adults by 66.6%, and by sex is dominated by female participants by 75%. Adulthood is a cycle in which individuals tend to carry out social and religious activities (Jahja, 2011). The results of this activity are similar to research on family support for adherence to taking TB drugs at the Pitu Health Center which was attended by 60% of adult female participants (Holedu, 2021). The support system provided by caregivers is influenced by several factors such as gender, age, education, and employment (Mubarak, 2008). Drug swallowing supervisors (PMO) who are in adulthood have mature logic and patience, as well as strong physical abilities in providing support for drug supervision of TB patients (Dewi, 2019).

The implementation of the program in the community for 4 months, starting from June to October 2023. The stages of activities carried out in the "CAHAYA TBC" Program are as follows:

1. First meeting: Filling out *pretest* sheets of TB control knowledge and skills, providing education about TB and its treatment and the benefits that will be obtained if regularly undergoing treatment.
2. Second meeting: Providing education to families of TB patients who will be assigned to be Drug Swallowing Supervisors (PMO), related to PMO duties and TB screening obligations for household contacts.
3. Third meeting: Group discussion implementation (*Forum Group Discussion*) explores the

inhibiting and supporting factors of the running of the treatment program (Outpouring of Heart), and continues with making a joint commitment to obey treatment by writing down the expectations that will be achieved when recovering. Writing sheets of outpouring of hearts and hopes made by TB patients and PMOs are affixed to the 'Tree of Hope' which will be a medium of encouragement in the TB treatment room of the Puskesmas. This meeting was closed by filling out a *posttest* sheet of TB control knowledge and skills.

4. Continuous activities to measure patient adherence in undergoing treatment programs will be monitored in the module "TB Treatment Program Adherence" which contains information about TB, Treatment, TB patient self-care at home, PMO roles and duties, and TB patient quality of life monitor sheet.

Other activities in the community carried out are sticking TB information posters, in addition to mediating with religious leaders and village officials related to providing support to the community to obey the recommendations for screening examinations for those who have symptoms of TB. The results of processing evaluation data on the activities of participants using questionnaires (Muawizah (2021) modified from: (Kigozi et al., 2017); (Haasnoot et al., 2010); (Shah, 2015); (Choi, 2018); (Putra et al., 2020); (Kinanti, 2014) on community service activities as follows:

**Table 3. Average Distribution of Respondents' Knowledge and Skills  
Average Distribution of Knowledge and Skills of TB Patients and PMO Before and  
After the Implementation of the CERDIK Cadre Program at UPTD Tanjung Agung  
Health Center, September 2003 (n=30)**

Category	Measurement	Mean	<i>Increased Knowledge (%)</i>
Knowledge	Before	38,2	42
	After	80,2	
Skills	Before	25,3	22,5
	After	47,8	

Source: TB Treatment Support Behavior Questionnaire, 2023

Based on Table 3, it can be seen that the average value of knowledge of TB patients and PMO before the CAHAYA TB program was 38.2, and the average value of knowledge after the CERDIK cadre program was 80.2, which means there was an increase in knowledge by 42%. The average skill of TB patients and PMO before the CAHAYA TB program was carried out before the program was 25.3, and after the implementation of the program, the average value became 47.8. There was an increase in cadre skills by 22.5% after the implementation of the CAHAYA TB program. The results of this activity are in line with the results of previous community service activities which stated that there were significant differences in the knowledge and attitudes of cadres before and after being given education and training on self-care for TB patients during the Covid-19 pandemic in Lampung (Saftarina, 2020). Details of the implementation of service activities can be seen in the following figure:



**Figure 1. Opening of Activities**



**Figure 2. Delivery of educational material**



**Figure 3. Outpouring of Hearts and Games**



**Figure 4. TBC campaign**



**Figure 5. Hope Tree for TB Patients**

## **CONCLUSION**

Community service activities have been carried out in the UPTD Tanjung Agung Health Center target area, Ogan Komering Ulu Regency well, because cooperation has been established in the implementation of Tri Dharma of Higher Education activities with the Baturaja Nursing Study Program, Poltekkes, Ministry of Health, Palembang. Participants who attended the implementation of community service were very enthusiastic. The results of community service activities obtained the transfer of science and technology in the form of medical knowledge and skills, providing support, and making commitments to complete treatment. A discussion forum has also been formed between PMO, health cadres, and PJ TB Program UPTD Tanjung Agung Health Center through online networks.

The increase in results achieved in pretest and posttest knowledge activities by 42%, skill improvement by 22.5%, and increased TB treatment visits to UPTD Tanjung Agung Health Center by 92% at the end of the activity. Participants expressed a desire for activities similar to other health problems to be carried out on an ongoing basis, and health cadres provided suggestions to increase the availability of drugs during the implementation of services, as well as the need for pulmonologists in their regions. This activity is expected to be continued by UPTD Health officers, Tanjung Agung Health Center, and Health Cadres.



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