

FAMILY NURSING CARE MANAGEMENT WITH SERVICE EXCELLENCE FOR MRS. S WITH PULMONARY TUBERCULOSIS IN BANGUN REJO VILLAGE TANJUNG MORAWA SUBDISTRICT DELI SERDANG REGENCY NORTH SUMATRA PROVINCE YEAR 2025

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ABSTRACT

Pulmonary Tuberculosis (TB) remains one of the most significant infectious diseases affecting public health, particularly in Indonesia, which ranks second globally in TB cases after India. TB is an airborne infectious disease that primarily affects the lungs. This case study aims to describe the implementation of family nursing care management using a *service excellent* approach for a patient, Mrs. S, diagnosed with Pulmonary Tuberculosis and residing in Bangun Rejo Village, Tanjung Morawa District, Deli Serdang Regency. The research employed a descriptive case study method with a systematic nursing process including assessment, nursing diagnosis, care planning, implementation, and evaluation. The initial assessment revealed several nursing problems: ineffective airway clearance, nutritional deficit, activity intolerance, and lack of family knowledge regarding TB and adherence to treatment. Interventions were carried out through educational, collaborative, and supportive approaches involving the family as active care partners. Education was focused on treatment adherence, proper nutrition, and infection prevention. The results showed improved family understanding, increased treatment compliance, and better overall health condition of the patient. The evaluation phase indicated that active family engagement significantly contributed to treatment success and enhanced the patient's quality of life. In conclusion, the application of family nursing care based on *service excellent* principles plays a crucial role in reducing the incidence of Pulmonary Tuberculosis and improving therapeutic outcomes at the community level.

Keywords: Pulmonary Tuberculosis, Nursing Care, Family Engagement, Service Excellent, Treatment Adherence.

INTRODUCTION

This disease is caused by a microorganism known as *Mycobacterium tuberculosis*, which primarily affects the lungs. However, Pulmonary Tuberculosis can also impact other organs in the body, such as the lymph nodes, abdomen, bones, joints, pericardium, pleura, genitourinary system, and meninges. The disease spreads through tiny droplets or aerosols released when an infected person coughs, sneezes, spits, or speaks (Akande 2020), (Kemenkes RI 2020).

The Indonesian government has prioritized TB elimination as a national health agenda, in alignment with the Sustainable Development Goals (SDGs) target 3.3, which aims to end the epidemics of HIV, tuberculosis, malaria, and other communicable diseases by 2030.

Community- and family-based approaches are essential to support the success of this program (Nation 2024).

According to the Global Tuberculosis Report 2023 by the World Health Organization (WHO), TB continues

to be the leading cause of death from infectious diseases, with approximately 10.6 million people infected and 1.3 million deaths recorded globally. The Southeast Asia region contributes to around 45% of global TB cases, with Indonesia ranking second after India, accounting for 10% of all cases worldwide (WHO 2024).

In North Sumatra Province, TB cases increased from 34,717 cases in 2022 to 49,999 cases in 2023. Deli Serdang Regency is one of the regions with a high TB burden, including in Bangun Rejo Village. A preliminary survey conducted in March 2025 identified 18 residents with Pulmonary TB, one of whom was Mrs. S, the subject of this study. Mrs. S had twice discontinued treatment due to drug side effects and lack of family support, increasing the risk of drug resistance and community transmission (Dinkes Provsu 2023).

The implementation of family nursing care using a service excellent approach is crucial to address this issue. This approach includes family education, monitoring, and empowerment to act as active partners in care. It is expected to improve medication adherence, accelerate recovery, and reduce TB transmission within households and communities.

METHODS

This activity was conducted from March 9 to 12, 2025, in Dusun VI, Bangun Rejo Village, Tanjung Morawa Subdistrict, Deli Serdang Regency, North Sumatra Province. The location was selected based on preliminary survey results conducted in early March, which revealed that 18

residents were diagnosed with Pulmonary Tuberculosis. One of them, Mrs. S, became the focus of this study. Mrs. S had discontinued TB treatment twice due to drug side effects and lack of family support, increasing the risk of resistance and transmission.

The method used in this activity was a descriptive case study approach, applying a comprehensive process of family nursing care. Data collection was carried out through direct interviews with the patient and her family members, observation of environmental conditions, and nursing assessment using a standardized family nursing assessment format. The instruments used included observation sheets, assessment forms, and field notes.

The main focus of this activity was to enhance family support for TB patients through a service excellent-based nursing approach, which emphasizes the active involvement of family members in the recovery process and the prevention of disease transmission within the household.

RESULTS

The results of this activity were based on a comprehensive family nursing assessment of Mrs. S, a Pulmonary Tuberculosis (TB) patient residing in Dusun VI, Bangun Rejo Village, Tanjung Morawa Subdistrict. The assessment was conducted through interviews, direct observations, and physical examinations during three home visits between March 9 and 12, 2025. The findings identified four primary nursing problems: Mrs. S experienced productive cough lasting more than three weeks, accompanied by shortness of breath and difficulty expelling phlegm effectively. On

the third visit, interventions were carried out by teaching her effective coughing techniques, including deep breathing, holding the breath for 2–3 seconds, followed by two strong coughs while seated in a semi-Fowler's position. Family members were instructed to assist and remind the patient to use this technique regularly. The patient was also encouraged to drink 6–8 glasses of warm water daily to help loosen the mucus. Evaluation showed that the patient had understood and was able to perform the technique independently, although phlegm production remained significant

The issue of nutritional deficit was indicated by a drastic weight loss (from 50 kg to 38 kg), decreased appetite, and fatigue. The intervention included educating the family about high-calorie and high-protein foods such as eggs, tempeh, chicken, mung bean porridge, and milk. The family was also guided to create a structured meal schedule with three main meals and two snacks daily, and to monitor the patient's weight weekly. Evaluation revealed improved family understanding; the patient began eating more regularly and experienced reduced nausea, although no significant weight gain was observed yet.

The issue of non-adherence to treatment was based on the patient's history of discontinuing TB medication twice due to boredom and nausea. Intensive education was provided regarding the dangers of stopping treatment, such as drug resistance and prolonged recovery. Visual aids (simple illustrated leaflets on the TB cycle) were used to support learning. A family

member was designated as a Directly Observed Treatment Supervisor (DOTS/PMO), and a daily medication checklist was created and displayed at home. Evaluation showed that the patient had begun taking medication consistently, and the family actively monitored and reminded her each morning.

The issue of ineffective health maintenance was evident in the patient's home environment, which was previously dark, damp, and rarely cleaned. The intervention involved educating the family about the importance of proper ventilation, natural lighting, and sanitation. The nursing team assisted the family in rearranging the bed placement away from damp walls and encouraged them to open windows and doors for at least two hours each morning. The family was also provided with simple guidelines for floor and room cleaning using natural disinfectants (warm water + antiseptic solution). Evaluation showed the family had started routinely ventilating the home, which appeared brighter and cleaner, although full improvements were still in progress across all rooms

DISCUSSION

The case of Mrs. S illustrates the multifaceted challenges faced by patients with Pulmonary Tuberculosis (TB), where clinical symptoms are often accompanied by psychosocial, nutritional, and environmental issues. The nursing care provided through a family-centered, service excellent approach during home visits resulted in several notable changes in both the patient's condition and the family's involvement in care (Wijaya and Zaini 2024).

The issue of ineffective airway clearance, characterized by a prolonged productive cough and difficulty expectorating phlegm, was addressed through direct training on effective coughing techniques and hydration guidance. By the third visit, the patient demonstrated the ability to apply these techniques independently. This aligns with Potter & Perry (2017), who emphasize the importance of non-pharmacological strategies such as effective coughing in managing secretions in pulmonary conditions. The family's role in supporting and monitoring the patient's respiratory exercises reinforced the sustainability of this intervention (Almeida, Paguia, and Neves 2024).

Nutritional deficit was another significant problem, as evidenced by drastic weight loss and decreased appetite. Nutritional education provided to the family, combined with practical meal planning and regular weight monitoring, showed encouraging results. Although weight gain was not yet evident, improved appetite and eating patterns were achieved. This outcome supports findings by Suyatno et al. (2021), highlighting that family support in meeting dietary needs is essential for recovery in TB patients.

Non-adherence to medication, previously observed in Mrs. S due to side effects and a lack of understanding, was overcome through intensive education and the use of visual aids. Assigning a family member as a Directly Observed Treatment (DOT) supporter enhanced compliance and accountability. This intervention reflects

Friedman's (2010) view that families act as primary health managers, especially in chronic disease control.

Environmental factors also played a crucial role. The family's home, previously dark and damp, was gradually improved through education on sanitation, ventilation, and household hygiene. WHO (2023) emphasizes that living conditions significantly affect TB transmission risk, making environmental improvements a critical preventive measure (Sinaga et al. 2024).

Overall, this case demonstrates that a holistic, service excellent-based nursing approach not only enhances clinical outcomes but also strengthens family capacity and responsibility in managing communicable diseases. These findings support the integration of family-based care into community TB programs, contributing directly to the achievement of SDGs Target 3.3 ending the epidemic of tuberculosis through sustainable, community-driven interventions.

CONCLUSION AND SUGGESTION

This study aimed to implement family nursing care management using a service excellent approach for a TB patient in a home setting. The findings indicate that such an approach successfully enhanced the patient's adherence to treatment, nutritional behavior, respiratory management, and hygiene practices, while also strengthening family involvement in care. These outcomes support the role of family as a key partner in TB control at the community level.

It is recommended that service excellent-based family nursing care be

integrated into TB control programs at the primary health care level. Health workers should be trained to actively involve families in treatment supervision and education. Future research is needed to evaluate the long-term impact of family-based interventions on treatment success, recurrence rates, and TB prevention strategies in similar community settings.

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