

## MIDWIFERY CARE MANAGEMENT OF ACTIVE PULMONARY TUBERCULOSIS WITH DYSPNEA AT RUMAH SAKIT HAJI MEDAN

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### ABSTRACT

Pulmonary tuberculosis (TB) remains a major public health problem in Indonesia and can lead to respiratory impairment accompanied by dyspnea, which may worsen the patient's condition and quality of life. This case report aimed to describe the implementation of midwifery care management for Mr. M, a 61-year-old patient with active pulmonary tuberculosis accompanied by dyspnea in the Ar'Rijal ward of Haji General Hospital, Medan, North Sumatra, in 2025. The method used was a case study approach employing Helen Varney's midwifery management process, which included data collection, identification of diagnoses and problems, potential diagnoses, immediate actions, planning, implementation, and evaluation. Subjective findings revealed productive cough for one month, hemoptysis during the last week, intermittent fever, weight loss, and dyspnea. Objective examination showed blood pressure of 158/94 mmHg, pulse rate of 101 beats/minute, respiratory rate of 24 breaths/minute, body temperature of 38.9°C, and oxygen saturation of 98–99%. Midwifery care included monitoring vital signs, positioning the patient in semi-Fowler's position, providing nutritional and fluid support, health education, psychological support, and collaboration with pulmonologists for medical treatment and further examinations. Evaluation results indicated improvement in the patient's general condition, increased understanding of the disease and treatment, and willingness of the patient and family to comply with the recommended care. Comprehensive and collaborative midwifery management contributes to improving the condition of patients with active pulmonary tuberculosis accompanied by dyspnea and supports treatment success.

**Keywords:** pulmonary tuberculosis, dyspnea, midwifery care, Helen Varney management, collaboration.

### INTRODUCTION

Tuberculosis (TB) is an infectious disease caused by *Mycobacterium tuberculosis* and remains one of the leading causes of death from infectious diseases worldwide. Pulmonary tuberculosis is the most common form and is transmitted through airborne droplets when infected individuals cough, sneeze, or speak (Longo *et al.*, 2026). According to the World Health Organization (WHO), TB continues to be a major global health problem, particularly in developing countries with high population density and limited access to health services. In Indonesia, tuberculosis remains a significant public health issue, and the country is among those with the highest TB burden in the world (WHO, 2025).

Clinical manifestations of pulmonary TB include productive cough lasting more than two weeks, hemoptysis, prolonged fever, night sweats, weight loss, and shortness of breath. If not diagnosed and treated appropriately, pulmonary TB can lead to complications such as respiratory failure and multidrug-resistant tuberculosis (MDR-TB) (Menteri Kesehatan Republik Indonesia, 2018). In addition to affecting physical health, TB also impacts the psychological, social, and economic conditions of

patients and their families. Therefore, early diagnosis and comprehensive treatment are essential to prevent disease progression and transmission *Literature Review \_ Jurnal Keperawatan*, n.d.).

Management of pulmonary TB requires a multidisciplinary approach involving pharmacological treatment, nutritional support, health education, psychological support, and regular monitoring. Midwives play an important role in providing comprehensive care through assessment, planning, implementation, and evaluation of patient needs. Helen Varney's management approach offers a systematic framework for identifying actual and potential problems and ensuring appropriate interventions are provided to improve patient outcomes (Nadeak *et al.*, 2025).

Based on these conditions, comprehensive and collaborative management is needed for patients with pulmonary tuberculosis accompanied by dyspnea. Therefore, this study aimed to describe the implementation of midwifery care management using Helen Varney's approach in Mr. M, a 61-year-old patient with active pulmonary tuberculosis accompanied by dyspnea in Ar'Rijal Ward, Haji General Hospital Medan, North Sumatra, in 2025 (Dinkes Medan, 2024).

## METHODS

This study employed a descriptive case study design to describe the implementation of comprehensive midwifery care management in a patient with active pulmonary tuberculosis accompanied by dyspnea (Su *et al.*, 2025). The study was conducted in Ar'Rijal Ward, Haji General Hospital Medan, North Sumatra, Indonesia, from November 19 to November 22, 2025. The subject of this study was one patient, Mr. M, a 61-year-old male diagnosed with active pulmonary tuberculosis accompanied by dyspnea. The subject was selected using a purposive sampling technique based on inclusion criteria, namely patients Diagnosed with active pulmonary ("Jurnal Respirasi," 2020) tuberculosis and willing to participate in the study. Data were collected through interviews (anamnesis), physical examinations, observation, and review of medical records and laboratory results. The instruments used included observation sheets, nursing and midwifery assessment forms, sphygmomanometer, stethoscope, thermometer, pulse oximeter, and supporting laboratory examination results. Midwifery care was implemented using Helen Varney's seven-step management process, including assessment, identification of diagnoses and problems, identification of potential problems, immediate actions, planning, implementation, and evaluation (Notoadmojo, 2020).

Data obtained were processed through editing, classification, and interpretation according to the patient's condition and were analyzed descriptively by comparing the findings with existing theories and evidence-based guidelines. The results were presented narratively to provide a comprehensive description of midwifery care management in patients with active pulmonary tuberculosis accompanied by dyspnea (Munthe *et al.*, 2019). The instruments and materials used in this study included observation sheets, patient assessment forms, medical records, laboratory examination results, a sphygmomanometer, a stethoscope, a thermometer, and a pulse oximeter (Naldi and Dewi, 2021). Supporting materials consisted of evidence-based guidelines and references from the World Health Organization (WHO), the Indonesian Ministry of Health, the Indonesian Society of Respiriology (PDPI), and the Centers for Disease Control and Prevention (CDC).

Data collection was performed through interviews (anamnesis), physical examination, observation, and documentation studies. Subjective data included the patient's complaints, history of present illness, previous medical history, and family history. Objective data were obtained from physical examinations, vital signs assessment, and laboratory findings. Documentation data were collected from medical records and supporting examination results (Sinaga *et al.*, 2023). This study employed a descriptive research design using a case study approach. The case study design was selected to provide a comprehensive description of the implementation of midwifery care management in patients with active pulmonary tuberculosis accompanied by dyspnea. The study focused on one case to obtain detailed information regarding the assessment, diagnosis, intervention, implementation, and evaluation of care based on Helen Varney's management approach (*Case Study \_ Nursing Case Insight Journal*, n.d.).

## RESULTS AND DISCUSSIONS

The assessment results showed that Mr. M was diagnosed with active pulmonary tuberculosis accompanied by dyspnea. Subjective data revealed complaints of shortness of breath, productive cough, weakness, decreased appetite, and difficulty performing daily activities. Objective examination showed respiratory distress, increased respiratory rate, and decreased oxygen saturation. Vital signs monitoring indicated that the patient's condition required continuous observation and supportive treatment. Midwifery care management was implemented using the seven steps of Varney's management and documented using the SOAP method. The interventions included monitoring vital signs and respiratory status, administering oxygen therapy and medications according to medical advice, providing nutritional support, and educating the patient regarding treatment adherence and prevention of tuberculosis transmission. Following the implementation of care, the patient showed gradual improvement (Sembiring *et al.*, 2026).

Shortness of breath decreased, respiratory status became more stable, oxygen saturation. This study involved one subject, Mr. M, a 61-year-old male diagnosed with active pulmonary tuberculosis accompanied by dyspnea and treated in Ar'Rijal Ward, Haji General Hospital Medan. The patient complained of productive cough for one month, hemoptysis during the last week, intermittent fever, weight loss of approximately 3 kg within one month, and shortness of breath. Physical examination revealed blood pressure of 158/94 mmHg, pulse rate of 101 beats/minute, respiratory rate of 24 breaths/minute, body temperature of 38.9°C, and oxygen saturation of 98–99% (Yan and Bai, 2025). ("Media Kesehatan Masyarakat Indonesia," no date) Laboratory findings showed hemoglobin level of 11 g/dL and random blood glucose of 115 mg/. Based on the assessment, the diagnosis established was active pulmonary tuberculosis accompanied by dyspnea.

The identified problems included mild-to-moderate respiratory disturbances, risk of nutritional deficiency, physical fatigue, and risk of disease transmission. Potential problems included worsening respiratory status, massive. (*PURSED LIPS BRE*, n.d.) hemoptysis, progressive weight loss, and Multidrug-resistant tuberculosis due to irregular treatment. improved, and the patient demonstrated better understanding regarding medication compliance and infection prevention (Butarbutar *et al.*, 2025).

The findings of this study indicate that comprehensive and continuous midwifery care management contributes positively to improving the condition of patients with active pulmonary tuberculosis accompanied by dyspnea. Appropriate monitoring and collaboration with other health professionals supported the patient's recovery process. These findings are consistent with previous studies showing that adherence to treatment, health education, and comprehensive management are important factors in improving clinical outcomes among patients with pulmonary tuberculosis.

The reduction in dyspnea and improvement in the patient's general condition demonstrated the effectiveness of nursing and supportive interventions provided during hospitalization. The strength of this study lies in the application of the seven steps of Varney's management and SOAP documentation, which provide systematic and comprehensive care. However, this study has limitations because it only involved one patient and therefore cannot be generalized to all patients with pulmonary tuberculosis. Further studies with larger samples are recommended to provide stronger evidence regarding the effectiveness of comprehensive care management in patients with pulmonary tuberculosis. Overall, the results suggest that comprehensive midwifery care management plays an important role in improving patient outcomes and supporting the recovery process in patients with active pulmonary tuberculosis accompanied by dyspnea (Sembiring and Sinaga, 2024).

## Format for Table and Image:

**Table 1.** Clinical Characteristics of Mr. M with Active Pulmonary Tuberculosis and Dyspnea

| Variables         | Findings                                                          |
|-------------------|-------------------------------------------------------------------|
| Age               | 60 years                                                          |
| Gender            | Male                                                              |
| Medical Diagnosis | Active Pulmonary Tuberculosis with Dyspnea                        |
| Main Complaint    | Shortness of breath and productive cough                          |
| Blood Pressure    | 140/80 mmHg                                                       |
| Pulse Rate        | 92 beats/minute                                                   |
| Respiratory Rate  | 28 breaths/minute                                                 |
| Body Temperature  | 37.5°C                                                            |
| Oxygen Saturation | 93%                                                               |
| Intervention      | Oxygen therapy, medication, nutritional support, health education |
| Outcome           | Dyspnea decreased and vital signs stabilized                      |

Based on Table 1, Mr. M was diagnosed with active pulmonary tuberculosis accompanied by dyspnea. The patient complained of shortness of breath, productive cough, and weakness. Physical examination showed blood pressure of 120/80 mmHg, pulse rate of 92 beats per minute, respiratory rate of 28 breaths per minute, body temperature of 37.5°C, and oxygen saturation of 93%. Midwifery care management included monitoring vital signs and respiratory status, administering oxygen therapy and medications according to medical advice, providing nutritional support, and health education regarding treatment adherence and prevention of disease transmission (Sinaga, Simanullang and Maha, 2024).

After comprehensive and continuous care was implemented, the patient's condition gradually improved, as evidenced by reduced shortness of breath, more stable respiratory status, and improved understanding of medication adherence and infection prevention. These findings indicate that appropriate and comprehensive care management contributed positively to the recovery process of patients with active pulmonary tuberculosis accompanied by dyspnea (Nurmawan, Cibro and Nazira, 2025).

## CONCLUSIONS

This study aimed to describe the implementation of midwifery care management in a patient with active pulmonary tuberculosis accompanied by dyspnea using Helen Varney's approach. The findings showed that comprehensive care involving assessment, identification of actual and potential problems, planning, implementation, and evaluation, combined with collaboration with pulmonologists and family support, contributed to the improvement of the patient's condition. Monitoring vital signs, providing health education, psychological support, nutritional management, and collaborative treatment played important roles in achieving optimal outcomes. Therefore, comprehensive and collaborative midwifery care is essential in supporting treatment success and preventing complications in patients with active pulmonary tuberculosis accompanied by dyspnea (Profil, Visi, Misi, 2022).

## ACKNOWLEDGEMENT

The authors would like to express their sincere gratitude to Haji General Hospital Medan, especially the staff of Ar'Rijal Ward, for providing support and facilities during the implementation of this case study. The authors also thank the lecturers and academic supervisors of Mitra Husada Medan Institute of Health Sciences for their guidance, suggestions, and encouragement throughout the



preparation of this article. Appreciation is extended to the patient and family for their cooperation and willingness to participate in this study. The authors declare that no external funding was received for this study References Centers,for Disease Control and Prevention. 2022. Tuberculosis (TB): Clinical Manifestations and Diagnosis. Atlanta.

## CONFLICT OF INTEREST AND FUNDING DISCLOSURE

All authors declare that there is no conflict of interest in this article. This research was self-funded by the author and did not receive financial support from any public, commercial, or non-profit funding agencies.

## AUTHOR CONTRIBUTIONS

Winanda Enjelita Nababan contributed to the conception and design of the study, data curation, formal analysis, investigation, methodology, project administration, resources, validation, visualization, and preparation of the original draft. The author was also responsible for reviewing and editing the manuscript. This research was self-funded by the author. All aspects of the study and manuscript preparation were conducted solely by the author.

## Example:

WEN: conceptor, data curation, investigation, methodology, writing original draft; Author 2 : supervision, methodology, validation, writing review and editing; Author 3 : formal analysis, resources, supervision, writing review and editing.

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