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RESEARCH & PUBLISHING

Priviet Social Sciences Journal

Volume 6
Issue 3 March, 2026

Article 31

16-03-2026

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**To cite this article:** Mamonto, F., Jaata, J., Patonengan, G. S., & Pongkorung, A. (2026). Nursing care for patient Mrs. SM with a diagnosis of Broncial Asthma in the Bethesda Room, Monompia GMIBM Hospital, Kotamobagu. *Priviet Social Sciences Journal, 6*(3), 374-383. https://doi.org/10.55942/pssj.v6i3.1672

**To link to this article:** https://doi.org/10.55942/pssj.v6i3.1672

*Private Social Sciences Journal*
E-ISSN 2798-6314
P-ISSN 2798-866X
https://doi.org/10.55942/pssj.v6i3.1672

Volume 6
Issue 3
March Edition 2026

# Nursing care for patient Mrs. SM with a diagnosis of Broncial Asthma in the Bethesda Room, Monompia GMIBM Hospital, Kotamobagu

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*Received 25 December 2025*
*Revised 17 February 2026*
*Accepted 16 March 2026*

## ABSTRACT

Asthma is a chronic respiratory disease that affects the airways and is commonly found in adults. The condition is characterized by bronchial hyperresponsiveness, airway inflammation, and reversible airflow obstruction triggered by various internal and external stimuli. Clinically, asthma presents with recurrent episodic symptoms such as wheezing, persistent coughing, shortness of breath, and chest tightness. These symptoms often lead to the accumulation of mucus or secretions in the respiratory tract, which can obstruct the airways and result in ineffective airway clearance. If not properly managed, this condition may worsen respiratory distress and significantly reduce the patient's quality of life. Therefore, comprehensive nursing care is required to help maintain airway patency and improve respiratory function in patients with bronchial asthma. This study employed a descriptive case study approach to examine the nursing care provided to a patient diagnosed with bronchial asthma in the Bethesda Room at Monompia General Hospital GMIBM Kotamobagu. Data collection was conducted through patient interviews, direct observation, and physical examination to identify the patient's clinical condition and nursing problems. The primary nursing diagnosis identified was ineffective airway clearance related to airway hypersecretion. Nursing interventions included the implementation of effective coughing exercises as a non-pharmacological therapy, patient positioning, monitoring of sputum production, and collaboration with pharmacological therapy when necessary. The results of the nursing intervention showed improvement in the patient's airway clearance ability, indicated by increased effectiveness of coughing and reduced sputum retention. In conclusion, the application of effective coughing techniques combined with comprehensive nursing care can support airway clearance and improve respiratory comfort in patients with bronchial asthma. These findings highlight the important role of nurses in implementing non-pharmacological interventions to optimize respiratory management in clinical settings.

**Keywords:** airway clearance; bronchial asthma; effective cough; nursing care

## 1. INTRODUCTION

Asthma is a chronic inflammatory disorder of the airways characterized by variable respiratory symptoms and reversible airflow limitation. Pathophysiologically, asthma involves persistent inflammation of the bronchial mucosa, airway edema, mucus hypersecretion, and structural changes known as airway remodeling. These processes lead to increased airway hyper-responsiveness, whereby the bronchi become excessively sensitive to various stimuli (Holgate, 2008; Barnes, 2008). Clinically, asthma manifests as recurrent episodes of wheezing, dyspnea (shortness of breath), chest tightness, and coughing, particularly at night or in the early morning. The symptoms are typically episodic and vary in intensity over time, often triggered by specific environmental or internal factors (Global Initiative for Asthma, 2023).

Asthma is classified as an obstructive airway disease because it primarily affects the bronchi and bronchioles, without directly involving the alveoli. Airflow obstruction in asthma is generally reversible, either spontaneously or with appropriate pharmacological treatment (Sundaru & Sukamto, 2017). Two principal mechanisms underlie this airflow limitation: airway inflammation and bronchial hyperresponsiveness. Inflammatory processes occur within the airway lumen and mucosa, characterized by the infiltration of inflammatory cells, such as eosinophils, mast cells, and T lymphocytes (Barnes, 2008). These inflammatory responses result in swelling of the airway walls and increased mucus production. Simultaneously, bronchial hyperresponsiveness leads to contraction of the smooth muscles surrounding the airways, causing bronchoconstriction and narrowing of the airway diameter. The combination of mucosal edema, mucus plugging, and smooth muscle constriction significantly reduces airflow and increases the work of breathing (Holgate, 2008).

Asthma is often associated with allergic reactions to various environmental triggers, including exposure to cold or hot air, cigarette smoke, dust mites, pollen, animal dander, and air pollution. In many individuals, asthma has a hereditary or genetic component, with a family history of atopy or allergic diseases increasing susceptibility (Wenzel, 2012). However, asthma is a multifactorial disease; in addition to genetic predisposition, environmental and lifestyle factors play a substantial role. Occupational exposures to chemical irritants, sudden weather changes, respiratory tract infections, and psychological stress or mood disturbances can also precipitate asthma exacerbations (Halimatusyakdiah et al., 2025). These triggers may lead to acute episodes characterized by the rapid onset of symptoms and, in severe cases, life-threatening respiratory distress.

Asthma has an impact that extends beyond respiratory symptoms. Individuals with asthma frequently experience fatigue, decreased exercise tolerance, sleep disturbances due to nocturnal symptoms, and limitations in daily activities. Chronic or poorly controlled asthma may lead to repeated hospitalizations and increased dependency on healthcare services (Reddel et al., 2015). The sensation of breathlessness and chest tightness can cause anxiety, which may further exacerbate bronchoconstriction through psychophysiological mechanisms. Although asthma impairs airflow and reduces effective oxygen exchange, appropriate management can restore adequate oxygenation and significantly improve functional capacity (Global Initiative for Asthma, 2023).

Globally, asthma remains a major public health concern. The World Health Organization (WHO) estimates that more than 262 million people worldwide are affected by bronchial asthma, with approximately 455,000 annual deaths resulting from complications and inadequate disease control (World Health Organization, 2024). Despite advances in pharmacotherapy and public health interventions, asthma continues to impose a substantial burden on healthcare systems (Masoli et al., 2004). The disease contributes not only to direct medical costs, such as hospital admissions, medications, and emergency care, but also to indirect costs, including loss of productivity, school absenteeism, and reduced quality of life.

Epidemiological data demonstrate variations in asthma prevalence across different countries and regions. Studies have indicated that the prevalence of asthma varies widely depending on environmental conditions, lifestyle factors, and access to healthcare services (To et al., 2012). In several Asian countries, including Indonesia and Singapore, asthma prevalence remains significant among children and adults.

In Indonesia, asthma is one of the most common chronic diseases affecting the population. The high number of asthma cases reflects the ongoing challenges in disease prevention and management within the healthcare system (Rosfadilla, 2022). Asthma also represents a considerable burden among school-aged children and may negatively affect academic performance and psychosocial development (Ananda et al., 2026).

Given the relatively high incidence and significant health burden associated asthma, comprehensive management strategies are essential. Nurses play a crucial role in preventing asthma recurrence and promoting optimal disease control. Their responsibilities include providing patient-centered education regarding trigger avoidance, proper inhaler techniques, medication adherence, and early recognition of exacerbation symptoms (Abilowo, 2022; Septia et al., 2024).

Effective asthma management requires a multidisciplinary approach involving physicians, nurses, respiratory therapists, and community health workers. Through health promotion, early detection, and continuous monitoring, healthcare professionals can reduce the frequency of exacerbations, prevent complications, and enhance patients' quality of life (Syokumawena et al., 2025). Therefore, conducting case studies on patients with bronchial asthma is highly relevant, as it provides deeper insights into clinical manifestations, management strategies, and the practical application of nursing care in real-world settings.

## 2. LITERATURE REVIEW

### 2.1. Concept of Bronchial Asthma

Bronchial asthma is a chronic inflammatory disorder of the airways characterized by variable respiratory symptoms and reversible airflow limitation. According to the World Health Organization, asthma presents with recurrent episodes of wheezing, shortness of breath, chest tightness, and coughing, which vary in intensity and frequency (World Health Organization, 2024). The underlying pathophysiology involves chronic airway inflammation, bronchial hyper-responsiveness, mucosal edema, excessive mucus secretion, and bronchoconstriction. These mechanisms collectively lead to narrowing of the airway lumen, resulting in impaired ventilation and increased breathing (Holgate, 2008). The Global Initiative for Asthma emphasizes that asthma is not merely an episodic condition, but also a chronic disease requiring long-term control therapy to suppress inflammation and prevent exacerbations (Global Initiative for Asthma, 2023). Persistent inflammation may lead to airway remodeling, including structural changes such as subepithelial fibrosis and smooth muscle hypertrophy, which can progressively reduce lung function if not adequately managed. Therefore, understanding the inflammatory nature of asthma is fundamental for guiding nursing care and therapeutic interventions.

### 2.2. Epidemiology of Asthma

Asthma remains a major global health concern, with significant morbidity and mortality. The World Health Organization estimates that more than 260 million people worldwide live with asthma, and hundreds of thousands of deaths occur annually due to poorly controlled disease and severe exacerbations. Despite advances in pharmacological management, asthma continues to impose a substantial burden on healthcare systems, particularly in low- and middle-income countries, where access to preventive therapy may be limited. In Indonesia, asthma is among the most prevalent non-communicable diseases. National health reports indicate that millions of Indonesians are affected, including a significant proportion of children and working-age adults. The chronic nature of asthma contributes to repeated hospital visits, absenteeism from school or work, and decreased quality of life. These epidemiological findings highlight the importance of comprehensive nursing management in both acute and long-term care settings, including inpatient units such as the Bethesda Room at the GMIBM Hospital in Kotamobagu, Indonesia.

### 2.3. Clinical Manifestations and Impact on Patients

Asthma symptoms typically include episodic dyspnea, wheezing, persistent coughing, and chest tightness. Symptoms may worsen at night or early in the morning, and are often triggered by allergens, respiratory infections, air pollution, emotional stress, or physical activity. During severe exacerbations, patients may experience tachypnea, use of accessory respiratory muscles, reduced oxygen saturation, and difficulty speaking full sentences. In addition to physical manifestations, asthma significantly affects psychological and social wellbeing. Chronic breathlessness may lead to anxiety and fear of recurrent attacks. Nocturnal sleep disturbances contribute to fatigue and reduced daily function. In hospitalized patients, acute episodes may cause distress and uncertainty, requiring not only physiological stabilization but also emotional support. Consequently, nursing care must address the holistic needs of patients, encompassing physical, psychological, and educational dimensions.

### 2.4. Principles of Asthma Management

The Global Initiative for Asthma outlines two primary goals of asthma management: achieving symptom control and reducing the risk of future exacerbations. Pharmacological treatment includes reliever medications, such as short-acting beta-agonists (SABA), and controller medications, particularly inhaled corticosteroids (ICS), which target airway inflammation. The stepwise approach recommended by GINA ensures that treatment intensity is adjusted according to the severity and level of control of the disease. Non-pharmacological management is equally important and includes avoidance of known triggers, smoking cessation, environmental control, vaccination when indicated, and patient education. Written asthma action plans are strongly recommended to empower patients to recognize early signs of deterioration and take appropriate action. Effective management requires consistent monitoring of symptoms, lung function, and treatment adherence, in which nurses play a critical role.

### 2.5. The Role of Nurses in Asthma Care

Asthma is classified as an obstructive airway disease because it primarily affects the bronchi and bronchioles without directly involving the alveoli. Airflow obstruction in asthma is generally reversible, either spontaneously or with appropriate pharmacological treatment (Global Initiative for Asthma, 2023). The two principal mechanisms underlying this airflow limitation are airway inflammation and bronchial hyperresponsiveness. Inflammatory processes occur within the airway lumen and mucosa and are characterized by the infiltration of inflammatory cells, such as eosinophils, mast cells, and T lymphocytes, which contribute to airway swelling and increased mucus production (Holgate, 2008). Simultaneously, bronchial hyperresponsiveness leads to contraction of the smooth muscles surrounding the airways, causing bronchoconstriction and narrowing of the airway diameter. The combination of mucosal edema, mucus plugging, and smooth muscle constriction significantly reduces airflow and increases the work of breathing. Consequently, individuals with asthma may experience episodic breathing difficulties that can worsen when exposed to environmental triggers or during periods of inflammation (World Health Organization, 2024).

## 3. RESEARCH METHOD

This research method used a descriptive analytical approach with a case study approach. The subject in this case was a patient with bronchial asthma in the Bethesda inpatient ward at RSU Monompia GMIBM Kotamobagu. Data collection methods used are interviews and observation. The study began by determining the possibility of shortness of breath and monitoring for coughing up phlegm; subsequently, the researchers placed the patient in a semi-Fowler or Fowler position, placed a sheet and bent over the patient's lap, and removed secretions from the sputum container. The researchers then explained the purpose and process of effective coughing, encouraging deep breaths through the nose for 4 seconds, held for 2 seconds, and then exhaled through the mouth with pursed lips for 1 second. They encouraged repeating deep breaths up to 3 times, and encouraged coughing

forcefully immediately after the 3rd deep breath. Training was conducted with the assistance of the client's family.

The case study approach was selected because it enables an in-depth examination of the patient's clinical condition and the implementation of nursing interventions in a real clinical environment. Case studies are particularly useful in nursing research because they allow researchers to observe patient responses to therapeutic interventions, evaluate the effectiveness of care strategies, and document changes in clinical status over time. In the context of bronchial asthma management, a detailed observation of respiratory symptoms, airway clearance ability, and patient responses to effective coughing exercises is essential to determine the practical outcomes of nursing care interventions (Abilowo et al., 2022; Septia et al., 2024).

Data analysis in this study was conducted descriptively by comparing the patient's clinical condition before and after the nursing interventions were implemented. The evaluation process focused on changes in respiratory status, sputum production, coughing ability, and sleep quality. The outcomes were assessed according to the Indonesian Nursing Outcome Standards (SLKI) and nursing interventions based on the Indonesian Nursing Intervention Standards (SIKI). Continuous monitoring was conducted over a three-day period to observe the patient's physiological responses and improvements in airway clearance. This approach is consistent with evidence-based nursing practice, which emphasizes systematic observation and evaluation to determine the effectiveness of clinical interventions in improving patient outcomes (Global Initiative for Asthma, 2023; Reddel et al., 2015).

## 4. RESULTS AND DISCUSSION

### 4.1. Nursing Care Management of Mrs. SM with Bronchial Asthma

Based on the results of the assessment obtained through interviews with the client's husband and observations, it was found that the client had a history of bronchial asthma for 30 years. During the assessment, the client complained of shortness of breath, coughing up mucus, dizziness, and difficulty sleeping. No family members suffered from the same disease. During the interview process, the client appeared weak. During the physical examination, the client was in a state of delirium with a GCS score of 11. The results of the physical examination were BP: 170/100 mmHg, Body temperature: 36.5, Pulse: 112x / minute, RR: 26X / minute. The author also conducted a head to toe examination, obtained data on the thorax, there was chest wall retraction, irregular breathing patterns and additional breath sounds of rhonchi. The client's husband stated that the client often coughed with phlegm, had a decreased appetite, and experienced difficulty sleeping.

Nursing diagnosis There are two nursing diagnoses identified from all diagnoses, both physical and psychosocial, interventions have been given that are appropriate to the client's condition, including: the first diagnosis is ineffective airway clearance due to airway hypersecretion. (SDKI D.0001). Objective (SLKI L.01001) airway clearance. After nursing actions for 3 × 24 hours with complaints of shortness of breath, coughing up mucus, dizziness and difficulty sleeping with the following outcome criteria: effective coughing increases (5), sputum production decreases sufficiently (4). Intervention (SIKI 1.01006) effective coughing exercises. Observation identified coughing ability and monitored the presence of sputum retention. Therapeutic setting semi fowler or fowler position, installing a sheet and bend on the patient's lap, removing secretions in the sputum container, education explaining the purpose and procedure of effective coughing, encouraging a deep breath through the nose for 4 seconds, held for 2 seconds then exhaled from the mouth with pursed lips rounded for 1 second, encouraging repeating deep breaths up to 3 times, encouraging a strong cough immediately after the 3rd deep breath. Collaborating with the administration of mucolytics or expectorant acetylcysteine. The second diagnosis is sleep pattern disorder due to physical restraint. (SDKI D.0055). Objective (sleep pattern SLKI). After nursing actions for 3x24 hours with complaints of difficulty sleeping with outcome criteria: complaints of difficulty sleeping have increased sufficiently, complaints of frequent waking have increased sufficiently. Intervention (SIKI 1.09265). Observation identified activity and sleep patterns, identified sleep-disturbing factors (physical and psychological), and identified foods and drinks that interfered with

sleep. Therapeutic modification of the environment (e.g., lighting, noise, temperature, mattress, and bed), performing procedures to increase comfort (e.g., massage, positioning, and acupressure therapy), and educating the patient on the importance of getting enough sleep during illness.

Nursing implementation: Implementation to clients according to client needs, including the first diagnosis of ineffective airway clearance related to airway hypersecretion (SDKI D.0001). Implementation carried out on clients is identifying coughing ability, monitoring the presence of sputum review, adjusting the semi-fowler or fowler position, installing a sheet and bend on the patient's lap, removing secretions in the sputum container, explaining the purpose and procedure of effective coughing, encouraging deep breaths through the nose for 4 seconds, holding for 2 seconds, then exhaling from the mouth with pursed lips rounded for 8 seconds, encouraging deep breaths up to three times, encouraging strong coughing immediately after the third deep breath, and collaborating with the administration of mucolytics or expectorant acetylcysteine. After all implementations were carried out, an evaluation of subjective data was obtained from the client's family, who said the client complained of shortness of breath, coughing, and dizziness, and objectively the patient appeared short of breath, the client appeared to be coughing up mucus, BP 170/100 mmHg, N 112x/minute RR 24x/minute SB 36.5 KU delirium GCS 11.

Furthermore, in the second diagnosis, namely, sleep pattern disorder due to physical restraint (D.0055), implementation was carried out, namely, identifying activity and sleep patterns, identifying sleep-disturbing factors (physical or psychological), identifying food and drinks that interfere with sleep, modifying the environment (e.g., lighting, noise, temperature, mattress, and bed), performing procedures to increase comfort (e.g., massage, positioning, and acupressure therapy), and explaining the importance of getting enough sleep during illness. After the implementation, an evaluation of subjective data from the client's family was obtained, stating that the client had difficulty sleeping due to shortness of breath and objectively enlarged eye bags for 1 2 hours per day, droopy and reddish eyes, pale face, and the client always tried to open oxygen and IV.

Evaluation: The evaluation phase is crucial for the successful implementation of the nursing process. The factors assessed are accuracy, completeness, and quality of data; client problem-solving; goal achievement; and implementation of nursing interventions. The first day the client was not able to cough effectively, for complaints of shortness of breath and coughing up phlegm still existed, Vital Signs: BP: 170/100 mmHg, SB: 36.5C, N: 112x/minute, RR: 26x/minute. The second day the patient still felt shortness of breath and coughing up phlegm, Vital Signs: BP: 130/100mmHg, SB: 36.5C, N: 108x/minute, RR: 24x/minute, the nursing problem of ineffective airway clearance had not been resolved, the intervention was continued. On the third day, the client was able to effectively cough without assistance. Vital signs: BP: 130/100 mmHg, BP: 36.5°C, N: 108x/minute, RR: 24x/minute. Shortness of breath and coughing with phlegm decreased, and the nursing problem of ineffective airway clearance was partially resolved; therefore, the intervention was continued. Based on the nursing actions, it can be concluded that the problem has been partially resolved; therefore, the intervention should be maintained.

### 4.2. General Discussion

Nursing Assessment: The results of the assessment revealed bronchial asthma as a health problem. The results of the physical examination of Mrs. S BP: 170/100 mmHg, SB: 36.5C, N: 112x/minute, RR: 26x/minute. The results of the head-to-toe examination revealed chest wall swelling, irregular breathing pattern, and additional breath sounds of rhonchi. The client's husband stated that the client often coughs with phlegm, has a decreased appetite, and has difficulty sleeping.

Nursing diagnosis: Assessment data was used to identify nursing problems. The data that emerged from the first diagnosis were subjective data of the client complaining of shortness of breath, coughing up mucus, dizziness, objective data included the client appearing short of breath, coughing up phlegm and chest wall indrawing with TTV: BP: 170/100mmHg, SB: 36.5C N: 112x/minute, RR: 26x/minute CU: Delirium E4 M3 V4. The data that emerged from the second diagnosis included subjective data of the client's family reporting that the patient had difficulty sleeping due to shortness of breath. Objective

data were enlarged eye bags, sleeping for only 1–2 hours, droopy and reddish eyes, pale face, and the patient always tried to open oxygen and IV.

Nursing interventions: Interventions carried out to overcome the ineffectiveness of airway clearance are identifying coughing ability, monitoring sputum retention, arranging semi-Fowler or Fowler position, placing a sheet and a sling on the patient's lap, removing secretions in the sputum container, explaining the purpose and procedure of effective coughing, encouraging deep breaths through the nose for 4 seconds, holding for 2 seconds then releasing through the mouth with pursed lips rounded for 1 second, encouraging repeating deep breaths up to 3 times, encouraging coughing strongly immediately after the 3rd deep breath. Nursing interventions to overcome sleep pattern disorders included identifying activity and sleep patterns, identifying sleep-disturbing factors (physical or psychological), identifying food and drinks that disturb sleep, modifying the environment (e.g., lighting, noise, temperature, mattress, and bed), performing procedures to increase comfort (e.g., massage, positioning, and acupressure therapy), and explaining the importance of obtaining sufficient sleep during illness.

Nursing evaluation: Based on the results of the evaluation conducted by the author, the author will provide nursing care according to the client's needs according to the diagnosis and plan made by the author. The initial diagnosis was ineffective airway. The procedure will involve identifying the ability to cough, monitoring the presence of sputum retention, adjusting the semi-Fowler or Fowler position, installing a sheet and bending on the patient's lap, removing secretions in the sputum container, explaining the purpose and procedure of effective coughing, encouraging deep breaths through the nose for 4 seconds, holding for 2 seconds, then releasing from the mouth with pursed lips rounded for 1 second, encouraging repeating deep breaths up to three times, and encouraging coughing strongly immediately after the third deep breath. Subjective data analysis shows that the cough is still phlegmy and the patient is short of breath, and objectively, the client still produces phlegm and the chest wall is retracted. Furthermore, in the second diagnosis, namely, sleep pattern disorders, implementation is carried out by identifying activity and sleep patterns, identifying sleep-disturbing factors (physical or psychological), identifying food and drinks that interfere with sleep, modifying the environment (e.g., lighting, noise, temperature, mattress, and bed), performing procedures to increase comfort (e.g., massage, positioning, and acupressure therapy), and explaining the importance of getting enough sleep during illness. After implementation, subjective data evaluation was obtained, showing that the client had difficulty sleeping due to shortness of breath, and objective data showed enlarged eye bags, droopy and reddish eyes, a pale face, and a constant attempt to open oxygen and IV.

The findings of this case study indicate that the patient experienced classical symptoms of bronchial asthma, including dyspnea, productive cough, and sleep disturbances. These clinical manifestations are consistent with the pathophysiological characteristics of asthma described in previous studies. Airway inflammation, mucus hypersecretion, and bronchial constriction contribute to airway obstruction, resulting in impaired ventilation and increased respiratory effort (Barnes, 2008; Holgate, 2008). The presence of rhonchi during auscultation and the patient's increased respiratory rate further supported the diagnosis of airway obstruction caused by excessive mucus accumulation in the bronchi.

The implementation of effective coughing exercises played an important role in improving airway clearance in this patient. Effective coughing is a non-pharmacological intervention designed to mobilize secretions from the lower respiratory tract and facilitate their removal through productive coughing. This intervention enhances mucociliary clearance and helps prevent mucus retention, which may worsen airway obstruction. Previous studies have shown that structured coughing exercises significantly improve sputum expectoration and respiratory comfort in patients with bronchial asthma (Abilowo et al., 2022; Septia et al., 2024).

The improvement observed on the third day after the intervention demonstrates the effectiveness of combining respiratory exercises with supportive pharmacological therapy. The administration of mucolytic agents, such as acetylcysteine, reduces sputum viscosity, making it easier for patients to expel mucus through coughing. When combined with proper positioning techniques, such as the semi-Fowler position, these interventions help optimize lung expansion and promote better ventilation. These

findings are consistent with asthma management recommendations, which emphasize the integration of pharmacological and non-pharmacological strategies to achieve optimal airway clearance (Global Initiative for Asthma, 2023).

Another important finding of this study is the presence of sleep pattern disturbances caused by respiratory discomfort. Sleep disturbances are common among patients with uncontrolled asthma because nocturnal bronchoconstriction and airway inflammation tend to worsen at night. Patients often experience repeated awakenings due to shortness of breath or coughing episodes, which can lead to fatigue and reduced daily functioning. Therefore, addressing sleep disturbances is an important component of holistic asthma management, as adequate rest is essential for physical recovery and immune function (Masoli et al., 2004; World Health Organization, 2024).

Environmental modifications and comfort-enhancing interventions were implemented to improve the patient's sleep quality. Adjustments to room lighting, noise levels, and patient positioning were made to create a more conducive environment for rest. In addition, comfort measures, such as positioning and relaxation techniques, were applied to reduce physical discomfort associated with dyspnea. These nursing interventions align with patient-centered care principles, which emphasize addressing both physiological and psychological needs during hospitalization (Reddel et al., 2015).

Overall, the results of this study demonstrate that structured nursing care plays a critical role in managing bronchial asthma in hospitalized patients. Through systematic assessment, appropriate nursing diagnoses, targeted interventions, and continuous evaluation, nurses can significantly improve patient outcomes. The integration of airway clearance techniques, patient education, and environmental support contributes to the reduction of respiratory symptoms and improvement of the patient's overall comfort and functional status. These findings reinforce the importance of evidence-based nursing practices in respiratory care management (Holgate, 2008; Barnes, 2008).

## 5. CONCLUSION

The study results showed that the nursing care management for patients with bronchial asthma with nursing problems carried out by the researcher was ineffective airway management for airway clearance and sleep support management for sleep pattern disturbances. The interventions carried out included observation, therapy, and education. In addition, this case study highlights the important role of nurses in implementing comprehensive and evidence-based care for patients with bronchial asthma. Through systematic assessment, targeted nursing diagnoses, and the application of effective coughing techniques combined with supportive therapies, nurses can significantly improve airway clearance and patient comfort. Continuous monitoring, patient education, and environmental adjustments are also essential components of successful asthma management. Therefore, strengthening nurses' clinical competencies in respiratory care interventions is crucial to improving patient outcomes and reducing the risk of complications in individuals with bronchial asthma.

### Ethical Approval

Not Applicable

### Informed Consent Statement

Not Applicable

### Authors' Contributions

FM conceptualized the study, developed the nursing care framework, and designed the case study methodology. He coordinated the data collection process in the Bethesda Room at the GMIBM Hospital Kotamobagu, conducted the clinical assessment analysis, and interpreted patient outcomes. He

also led the drafting, reviewing, and finalization of the manuscript to ensure academic rigor, coherence, and methodological accuracy. JJ contributed to the development of the research design and supported the formulation of nursing diagnoses, outcomes (SLKI), and interventions (SIKI). He assisted in data validation, critical analysis of the nursing care process, and refinement of the discussion section to align with current evidence-based practice. GSP participated in clinical data documentation, implementation review, and evaluation of nursing interventions. She contributed to the literature integration, ensuring that the manuscript was supported by relevant theoretical and clinical references. She also assisted in manuscript editing and formatting according to academic standards. AP supported the monitoring and evaluation analysis of nursing outcomes, contributed to revising the manuscript critically for important intellectual content, and ensured clarity, consistency, and compliance with publication guidelines. All authors reviewed and approved the final version of the manuscript.

**Disclosure Statement**

The Authors declare that they have no conflict of interest

**Data Availability Statement**

The data presented in this study are available upon request from the corresponding author for privacy.

**Funding**

This study did not receive any external funding.

**Notes on Contributors**

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