

## EXCELLENT NURSING CARE MANAGEMENT FOR A CHILD WITH PNEUMONIA IN RESIDENTIAL ROOM 4, H. ADAM MALIK GENERAL HOSPITAL, MEDAN, NORTH SUMATERA PROVINCE 2025

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### ABSTRACT

Pneumonia remains a leading cause of morbidity and mortality among children under five, particularly in developing countries. This scientific paper presents a case study on the implementation of comprehensive nursing care using a service excellent approach for a pediatric patient (An. A) treated in RB4 Ward at H. Adam Malik General Hospital, Medan, in 2025. A descriptive method with a case study approach was applied, covering the five stages of the nursing process: assessment, diagnosis, planning, implementation, and evaluation. Based on the assessment, four primary nursing diagnoses were identified: ineffective airway clearance, ineffective breathing pattern, hyperthermia, and nutritional deficit. Interventions focused on respiratory monitoring, therapeutic positioning, oxygen therapy, medication collaboration, and nutritional support. The evaluation revealed clinical improvements, including more effective coughing, improved breathing patterns, normalized body temperature, and increased appetite. The results demonstrate that systematic nursing care with a service excellent orientation effectively supports the recovery process in children with pneumonia. This paper aims to contribute to improving the quality of pediatric nursing care, particularly in managing respiratory infections such as pneumonia.

**Keywords:** Nursing Care, Pneumonia, Children, Pediatric, Therapeutic

### Introduction

Pneumonia remains a leading cause of child mortality worldwide (He *et al.*, 2015). UNICEF data shows that in 2021, more than 740,000 children under the age of five died from pneumonia, representing one child every 43 seconds (Degif *et al.*, 2025). This disease accounts for approximately 14% of all under-five deaths globally. The burden of this disease is greatest in low- and middle-income

countries, such as Sub-Saharan Africa and South Asia, where access to health services, immunizations, and adequate nutrition remains very limited (Ahmed *et al.*, 2024). Key risk factors contributing to high pneumonia mortality include poor nutrition, air pollution, incomplete immunizations, and delays in seeking medical care (Lenny Sijabat *et al.*, 2022).

Pneumonia is an inflammatory process that occurs in the alveoli of the

lungs, which can be caused by microorganisms or non-microorganisms. Non-infectious factors include aspiration of food or gastric contents, exposure to chemicals such as hydrocarbons and lipoids, as well as allergic reactions, drugs, or radiation. The most common cause of infection is *Streptococcus Pneumoniae*, followed by *Chlamydia pneumoniae*, and other bacteria such as *Staphylococcus aureus*, *Haemophilus influenzae*, and *Mycobacterium tuberculosis*. In children under five years of age, approximately 45% of cases are caused by viruses, especially influenza viruses and RSV, followed by parainfluenza, adenovirus, rhinovirus, and metapneumovirus (Hasalia, Noerjoedianto and Damris, 2025)

According to the World Health Organization (WHO) report in 2024, pneumonia is one of the most common acute respiratory infections causing death and morbidity in children under five worldwide resulting in more than 700,000 deaths each year, accounting for approximately 14% of all deaths of children under five years of age (WHO 2024). Pneumonia is still a significant health problem in Indonesia, especially among children under five who live in homes with inadequate physical conditions (Indrayani, Novia and Ropii, 2022)

Pneumonia is one of the leading causes of death in infants in Indonesia. An estimated 19,000 children die annually from pneumonia, with an estimated 71 children contracting the disease every hour. Data from the Indonesian Ministry of Health (2021) shows that in 2021 there were 886,030 cases of pneumonia in infants, with 217 of these cases resulting in death. The Basic Health Research (Riskesdas) (2018) also noted that the prevalence of pneumonia was quite high in infants (0–11 months) at 23.80% and in

toddlers (1–4 years) at 15.50%. This high incidence of pneumonia contributes to the infant mortality rate, which remains a health challenge in Indonesia. Therefore, efforts to prevent and control pneumonia, such as immunization, improving nutrition, and improving sanitation and access to health services, need to be continuously strengthened to reduce the incidence and mortality due to this disease (Kadek Susi Indrayani, 2024)

In North Sumatra Province (Sumut), the estimated number of pneumonia cases in 2020, or the target number of children with pneumonia in North Sumatra Province (Sumut), was 41,908 cases, but the number found was 5,398 cases (12.88%), and in Medan City, the number of 7,575 cases, but the number found was 349 cases (4.6%)(Yanthi, 2023)

According to a survey I found from data from the H. Adam Malik General Hospital, there was an increase in pneumonia cases in children in both inpatient and outpatient services from 2023 to 2024. In 2023, the number of pediatric patients hospitalized for pneumonia was recorded at 112 cases, while the number of outpatients was 51 cases. Then in 2024, these numbers increased, with 130 inpatient cases and 171 outpatient cases. These findings indicate that pneumonia remains a serious health problem among children, especially with the significant increase in outpatient cases at H. Adam Malik General Hospital, Medan

### Research Method

The type of research used in this scientific paper is descriptive with a case study approach, focusing on a single unit such as the client, family, community, or institution. This study, titled "*Nursing Care for Child An. A with Pneumonia in Ward RB4 of H. Adam Malik General Hospital*,

*Medan, in 2025,"* applies the nursing process, including assessment, nursing diagnosis, intervention, implementation, and evaluation (Yessi, 2024). The research was conducted from May 5 to May 7, 2025, in Ward RB4, 1st floor, at H. Adam Malik General Hospital, Medan, a central government hospital under the Directorate General of Health Services, Ministry of Health. Located at Jalan Bunga No. 17, Medan Tuntungan, this hospital is also recognized as a Teaching Hospital based on the Decree of the Minister of Health No. 502/Menkes/SK/LX/1991, dated September 6, 1991. It officially became the Education Center for the Faculty of Medicine, University of North Sumatra, on January 11, 1993, and was inaugurated by the President of the Republic of Indonesia on July 21, 1993.

## Result

Nursing care for An. A, a 5-year-old boy diagnosed with pneumonia, was conducted comprehensively in RB4 Ward of H. Adam Malik General Hospital, Medan, from May 5 to May 7, 2025. The initial assessment covered the child's identity, medical history, and clinical data such as a body temperature of 38.8°C, respiratory rate of 45 breaths/minute, productive cough, shortness of breath, and general weakness. The patient was treated with oxygen therapy, intravenous antibiotics, and nursing interventions including respiratory monitoring and family education, in accordance with the typical clinical profile of pediatric pneumonia.

Based on the assessment, four priority nursing diagnoses were established: (1) ineffective airway clearance, (2) ineffective breathing pattern, (3) hyperthermia, and (4) imbalanced nutrition: less than body requirements.

These diagnoses were identified using both subjective data from the family and objective findings from physical examination. Although theoretical literature lists a fifth potential diagnosis, it was not adopted due to the absence of required major data elements according to Indonesian Nursing Diagnosis Standards (SDKI).

The nursing interventions were developed based on the 2017 Indonesian Nursing Intervention Standards (SIKI). For ineffective airway clearance, actions included positioning the child in semi-Fowler's position, teaching effective coughing, and collaborating on mucolytic therapy. Hyperthermia was addressed with warm compresses, adequate fluid intake, and administration of antipyretics. Nutritional issues were managed through family education, encouragement of frequent small meals, monitoring of intake, and collaboration with a nutritionist.

Implementation of nursing care was consistent and tailored to the patient's needs. It included daily assessments, oxygen therapy, monitoring respiratory status, educating caregivers, and ensuring supportive feeding strategies. The nurse also ensured active collaboration with the healthcare team. Evaluation across the three-day period revealed clinical improvement, such as reduced body temperature, more stable respiratory patterns, improved appetite, and weight gain.

This nursing care aligns with the global approach recommended by UNICEF in addressing childhood pneumonia, which emphasizes early detection, integrated management, and strong caregiver involvement. Overall, the case study of An. A demonstrates a professional and evidence-based application of the nursing process, effectively addressing both the

physiological and psychosocial needs of the pediatric patient.

## Discussion

The nursing care provided to An. A, a 5-year-old child diagnosed with pneumonia and treated at RB4 Ward of H. Adam Malik General Hospital Medan from May 5 to May 7, 2025, illustrates a comprehensive and systematic implementation of the nursing process. The assessment phase was conducted thoroughly, including the collection of identity information, vital signs, and clinical observations. Objective data revealed that the patient had a fever (38.8°C), elevated respiratory rate (45 breaths/min), appeared weak and irritable, and was receiving oxygen therapy via nasal cannula and intravenous fluids (0.9% NaCl). These clinical signs are consistent with theoretical descriptions of pneumonia symptoms in children, thereby supporting the validity of the collected data.

Based on this assessment, four prioritized nursing diagnoses were established: ineffective airway clearance, ineffective breathing pattern, hyperthermia, and imbalanced nutrition (less than body requirements). Although the literature often suggests five common nursing diagnoses for pediatric pneumonia cases, one diagnosis could not be applied due to the lack of sufficient major data indicators as outlined in the Indonesian Nursing Diagnosis Standards (SDKI). The selected diagnoses were grounded in valid subjective and objective findings, reflecting the child's actual condition and ensuring clinical relevance in planning care. (Octaria *et al.*, 2021)

The planned interventions were aligned with the Indonesian Nursing Intervention Standards (SIKI, 2017) and

followed evidence-based practices. For ineffective airway clearance, nursing actions included monitoring vital signs, teaching effective coughing techniques, positioning the patient in a semi-Fowler's position, and collaborating in the administration of mucolytics and nebulization. Interventions for other diagnoses, such as hyperthermia and nutritional deficiency, were similarly well-structured, involving pharmacological therapy, fluid support, dietary modifications, and multidisciplinary collaboration. These interventions demonstrate a systematic and holistic approach to pediatric nursing care. (3)

The implementation of nursing actions was consistent with the care plan and carried out professionally. The nurse monitored the child's respiratory function, administered medications appropriately, and educated the family about the child's condition and care needs. Nutritional support was tailored to the child's caloric requirements in collaboration with a nutritionist. Over the course of three days, the evaluation showed marked improvement in the child's condition, including normalized body temperature, improved appetite, more effective coughing, and stabilized respiratory rate. These outcomes align with UNICEF's global strategies for managing childhood pneumonia, which include early detection, appropriate treatment, nutritional support, immunization (PCV and Hib), and quality primary healthcare. (State, 2025) The case of An. A reflects that localized nursing care can effectively support international child health goals



### Conclusion and Suggestion

Based on the nursing care provided to An. A, a child with a respiratory disorder (pneumonia) at RB4 Ward, H. Adam Malik General Hospital in 2025, it can be concluded that the nursing process—including assessment, nursing diagnoses, intervention planning, implementation, and evaluation—was carried out thoroughly and in accordance with nursing theory. During the assessment, data collected aligned with theoretical expectations, including signs of fever, increased respiratory rate, and other respiratory distress indicators. Five nursing diagnoses were identified: ineffective airway clearance, hyperthermia, impaired gas exchange, ineffective breathing pattern, and nutritional deficits. Nursing interventions followed national standards (SDKI and SIKI), involving monitoring vital signs, health education, medication management, and non-pharmacological pain relief techniques. After three days of care, positive outcomes were observed, such as improved breathing patterns, reduced fever, and increased appetite, confirming the effectiveness of the implemented care strategies.

This research offers several recommendations for future nursing practice. For the author, the experience provided valuable insights into the clinical application of respiratory nursing care in pediatric cases. For the development of nursing science, this study may serve as a reference for nurses treating children with pneumonia, encouraging evidence-based practices. For the hospital institution, it is expected that continuous improvement of care quality will reduce pneumonia incidence and enhance service standards. Finally, for the patient and family, the nursing interventions provided should serve

as a form of health education, enabling them to manage symptoms effectively and contribute to recovery through informed home care practices.

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