National Journal of Multidisciplinary Research and Development
www.multinationaljournal.com
E-ISSN: 2455-9040
Received: 13-09-2026, Accepted: 13-10-2026, Published: 28-10-2026
Volume 11, Issue 4, 2026, Page No. 22-26

Nursing management of patients with respiratory disorders: An analytical review of clinical practices

Rajender Prasad Bhawaria[1], Sushil Kumar Rundla[2], Naveen Andrews[3], Neera Choudhary[3]
[1] Principal, Symbiosis Institute of Nursing, Jaipur, Rajasthan, India
[2] Associate Professor, Symbiosis Institute of Nursing, Jaipur, Rajasthan, India
[3] Assistant Professor, Symbiosis Institute of Nursing, Jaipur, Rajasthan, India
DOI: https://doi.org/10.66856/njmrd.2026.11.4.11088

Abstract
Respiratory disorders are a major cause of illness and hospitalisation and require timely assessment, continuous monitoring, and appropriate nursing care. Patients with conditions such as chronic obstructive pulmonary disease, asthma, pneumonia, and other respiratory problems may experience breathlessness, impaired oxygenation, ineffective airway clearance, fatigue, and anxiety, which can affect their recovery and quality of life. Nurses play an important role in the clinical management of these patients through systematic assessment, monitoring of respiratory status, oxygen therapy, airway management, medication administration, positioning, breathing exercises, infection prevention, patient education, and early recognition of complications. The present study aims to examine the nursing practices used in the management of patients with respiratory disorders and to assess the consistency of these practices in clinical settings. The study focuses on key areas of nursing care, including respiratory assessment, monitoring of vital signs and oxygen saturation, maintenance of airway patency, administration of prescribed therapies, positioning, nutritional and fluid support, psychological care, and discharge education. A quantitative descriptive approach may be used to assess clinical nursing practices among nurses involved in the care of patients with respiratory disorders. The findings are expected to identify commonly followed practices, areas of variation, and possible gaps in respiratory nursing care. The study may provide useful evidence for strengthening standardised nursing interventions, improving patient safety, promoting early identification of respiratory deterioration, and enhancing the overall quality of respiratory care.

Keywords: Respiratory disorders, nursing management, clinical nursing practice, respiratory assessment, patient care

Introduction

Respiratory disorders are an important health problem because they can affect a person's ability to breathe normally, maintain adequate oxygen levels, perform daily activities, and maintain a good quality of life. These disorders may be acute or chronic and include conditions such as pneumonia, asthma, chronic obstructive pulmonary disease (COPD), tuberculosis, and other infections and diseases of the respiratory system. The World Health Organization (WHO) reports that COPD and asthma are among the most common chronic respiratory diseases and together affect more than half a billion people worldwide [1]. Respiratory diseases also contribute substantially to disability, reduced productivity, hospitalisation, and premature death.

The overall impact of respiratory disorders can be understood from their contribution to global mortality. In 2023, COPD was the third leading cause of death worldwide and was responsible for approximately 3.4 million deaths. Lower respiratory infections were also a major cause of mortality, causing around 2.7 million deaths during the same year. Chronic respiratory diseases are particularly relevant in the South-East Asian region, where they account for about 12% of all deaths [2]. These figures show that respiratory disorders are not only individual health problems but also place a considerable burden on families and healthcare systems.

India also faces a significant burden of respiratory disease. COPD remains an important cause of illness and death, while pneumonia, other lower respiratory infections, and tuberculosis continue to affect many people. Several factors contribute to respiratory problems in the Indian population [3]. These include tobacco use, exposure to household and outdoor air pollution, occupational exposure to dust and harmful chemicals, respiratory infections, allergens, and other environmental factors. Air pollution is especially important because repeated or prolonged exposure can contribute to the development and worsening of respiratory conditions.

Patients with respiratory disorders require careful and regular observation because their condition may change quickly. Common problems include breathlessness, persistent cough, wheezing, increased respiratory rate, abnormal breath sounds, low oxygen saturation, excessive sputum, chest discomfort, weakness, fatigue, and anxiety. An acute worsening of asthma, COPD, pneumonia, or another respiratory condition may require urgent intervention and, in severe cases, hospitalisation [4]. For this reason, early recognition of changes in respiratory status is an important part of safe and effective nursing care.

Nurses have a major responsibility in the day-to-day management of patients with respiratory disorders. Nursing care begins with a proper assessment of the airway and breathing pattern. Nurses regularly monitor respiratory rate, oxygen saturation, pulse, and blood pressure, level of consciousness, chest movement, breath sounds, and the amount and nature of respiratory secretions. Depending on the patient's condition and treatment plan, nursing interventions may include appropriate positioning, maintaining airway patency, administering prescribed

oxygen, nebulisation, medications, airway-clearance techniques, breathing exercises, and monitoring fluid and nutritional needs [5]. Nurses must also observe patients for signs of worsening respiratory distress and report significant changes promptly.

Good respiratory nursing care is not limited to managing immediate symptoms. Patients, particularly those living with chronic respiratory conditions, need support to manage their illness after leaving the hospital. Nurses can help patients understand their medications, demonstrate the correct use of inhalers or other devices encourage treatment adherence, teach appropriate breathing exercises, and explain how to avoid known triggers [6]. Advice related to smoking cessation, healthy lifestyle practices, and recognition of warning signs can also help patients manage their condition more effectively. Patient and family education therefore form an important part of comprehensive respiratory care.

Infection prevention is another essential area of respiratory nursing practice. Patients with respiratory infections may transmit microorganisms through droplets, contact, or contaminated equipment. Nurses therefore have an important role in maintaining hand hygiene, following respiratory hygiene practices, using personal protective equipment when required, maintaining clean equipment, and following appropriate infection-control procedures. Safe oxygen administration is equally important [7]. Oxygen should be given according to the patient's clinical condition and prescribed treatment plan, with regular monitoring of oxygen saturation and respiratory status.

The quality of respiratory care can differ according to nurses' knowledge and skills, availability of equipment, workload, and adherence to clinical guidelines, communication, documentation and opportunities for patient education. Therefore, examining actual nursing practices is important for understanding what is being done effectively and where improvements may be needed. A practical assessment of clinical nursing practices can help identify gaps in respiratory assessment, treatment, safety measures, patient education, and continuity of care.

Assessment and Nursing Management of Patients with Respiratory Disorders [8]

Area of Assessment	What the Nurse Checks	Nursing Care
Airway and Breathing	Checks whether the airway is clear and observes breathing rate, depth, rhythm, and breathing effort.	Keeps the airway clear, provides comfortable positioning, encourages effective coughing, and performs suctioning when required.
Oxygenation	Monitors oxygen saturation and looks for signs such as bluish skin, restlessness, confusion, or increasing breathing difficulty.	Provides prescribed oxygen, checks the patient's response, and reports any continued or worsening oxygen problem.
Chest and Lung Function	Observes chest movement and listens for abnormal sounds such as wheezing, crackles, or reduced breath sounds.	Records changes in respiratory findings and provides or supports appropriate interventions.
Cough and Sputum	Assesses the patient's cough and observes the amount, colour, thickness, and other features of sputum.	Encourages effective coughing and airway-clearance methods, maintains suitable fluid intake when allowed, and collects sputum samples when ordered.
Medicines and Treatment	Observes the patient's response to prescribed medicines, nebulisation, and other respiratory treatments.	Gives medicines as prescribed, watches for benefits or side effects, and records the patient's response to treatment.
Position and Breathing Exercises	Assesses the patient's breathing comfort, posture, activity tolerance, and ability to perform breathing exercises.	Uses suitable positions, such as semi-Fowler's or Fowler's position, and teaches simple breathing and relaxation exercises.
Infection and Patient Safety	Looks for fever, increased sputum, worsening cough, and other signs that may indicate infection or clinical deterioration.	Follows infection-control practices, maintains safe use of equipment, and reports important changes without delay.
Psychological and Functional Needs	Assesses anxiety, tiredness, sleep problems, activity limitations, and the patient's ability to manage daily activities.	Provides reassurance, emotional support, help with activities when needed, and advice on conserving energy.
Education and Follow-up Care	Checks the patient understands of the disease, medicines, inhaler use, warning signs, and follow-up requirements.	Educates patients and families about treatment adherence, trigger avoidance, lifestyle changes, self-care, and follow-up appointments.

The table presents the important areas that nurses should consider while caring for patients with respiratory disorders. Regular observation of airway, breathing, and oxygen levels helps nurses identify early changes in the patient's condition. Assessment of breath sounds, cough, sputum, and the patient's response to prescribed treatment also provides useful information about the progress of the illness.

Simple measures such as appropriate positioning, breathing exercises, and methods to clear respiratory secretions can make breathing easier and support better airway function. Maintaining infection-control practices and using respiratory equipment safely are also essential parts of quality nursing care.

Nurses should also pay attention to the patient's emotional and educational needs. Breathlessness can cause fear and anxiety, so reassurance and emotional support are important. Patients should be taught about their medicines, correct inhaler use, healthy habits, warning signs, and the importance of follow-up care. Overall, careful assessment and appropriate nursing interventions can improve patient safety, support recovery, and promote better management of respiratory conditions.

Clinical Nursing Practices, Patient Safety and Infection Prevention

Clinical nursing care for patients with respiratory disorders should not be viewed as a routine set of procedures. It

requires continuous clinical judgement, timely decision-making and close observation because respiratory conditions can change rapidly. A patient who appears stable at one assessment may develop significant respiratory distress within a short period. Therefore, effective nursing practice depends on the ability to connect assessment findings with immediate and appropriate action. For example, a fall in oxygen saturation accompanied by increasing respiratory rate and use of accessory muscles should not be considered an isolated abnormal reading; it may indicate worsening respiratory function and requires prompt reassessment and communication.

Continuous Monitoring as a Safety Practice

Regular monitoring is one of the strongest safeguards for respiratory patients. Nurses should assess respiratory rate, breathing pattern, oxygen saturation, pulse, blood pressure, and temperature, level of consciousness, chest movement, and breath sounds. However, relying only on a single SpO_2 reading can be misleading. A patient with COPD, pneumonia, or severe asthma may show other signs of deterioration even when the oxygen saturation appears temporarily acceptable [9]. For example, increasing restlessness, difficulty speaking, worsening breathlessness, or use of accessory muscles may indicate increasing respiratory effort. Therefore, respiratory assessment should consider the overall clinical picture rather than one numerical value.

Oxygen Therapy and Patient Safety

Oxygen therapy can be highly beneficial when appropriately administered, but it should not be treated as a harmless routine intervention. Nurses need to follow the prescribed oxygen flow, delivery device, and target range while observing the patient's clinical response. For example, a patient with acute respiratory distress may require oxygen to correct hypoxemia, whereas excessive oxygen administration may be inappropriate for some patients with chronic respiratory disease [10]. This demonstrates why oxygen therapy requires assessment and monitoring rather than simply increasing the oxygen flow whenever a patient complains of breathlessness.

Safe Medication and Treatment Practices

Medication administration is another area where careful nursing practice directly affects patient safety. Respiratory patients may receive bronchodilators, corticosteroids, antibiotics, nebulised medications, mucolytic, and other therapies. Nurses should confirm the correct patient, medication, dose, route, and timing before administration and then evaluate the patient's response. For instance, after nebulised bronchodilator therapy, the nurse should assess whether wheezing and breathing difficulty have improved rather than assuming that administration alone means the treatment was effective. Similarly, antibiotics should not be considered a treatment for every respiratory illness [11]. Their use should follow the prescribed clinical indication because unnecessary antibiotic use can contribute to antimicrobial resistance. Nurses therefore have an important role in safe administration, monitoring, documentation, and patient education.

Airway Clearance and Respiratory Support

Maintaining airway clearance is particularly important for patients who produce large amounts of sputum or have a weak cough. Appropriate positioning, effective coughing techniques, breathing exercises, adequate hydration when clinically permitted, and suctioning when indicated may assist in maintaining airway patency. For example, a patient with pneumonia who cannot effectively clear thick secretions may develop increasing breathlessness if airway clearance is neglected [12]. This highlights the need to assess the patient's ability to cough and clear secretions rather than simply recording the presence of a cough.

Infection Prevention in Respiratory Care

Infection prevention should be considered a fundamental part of respiratory nursing rather than an additional task. Respiratory infections can spread through droplets, contact, contaminated equipment, and inadequate respiratory hygiene. Nurses therefore need to follow hand hygiene, standard precautions, appropriate personal protective equipment, respiratory hygiene, and institutional infection-control procedures. However, Equipment used for respiratory treatment also requires careful attention. Nebulisers, suction equipment, oxygen-related devices, and other reusable items should be appropriately cleaned or reprocessed according to hospital policy [13]. For example, sharing respiratory equipment between patients without appropriate cleaning can create an avoidable pathway for infection transmission. Thus, infection prevention depends not only on personal hygiene but also on the safe management of the clinical environment and equipment.

Early Recognition of Emergency Conditions

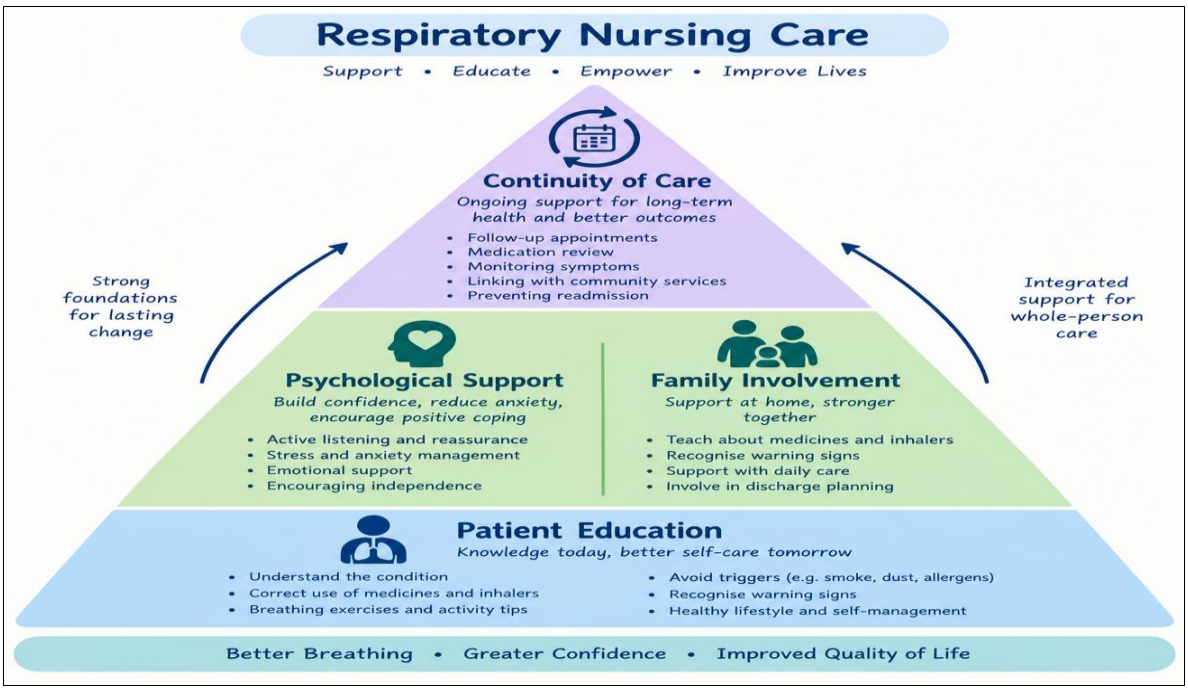
A major argument for strong nursing surveillance is that nurses are often the healthcare professionals who remain continuously present with hospitalised patients. They may therefore identify subtle changes before a serious emergency develops. Increasing respiratory rate, falling oxygen saturation, new confusion, cyanosis, severe wheezing, inability to speak comfortably, or sudden deterioration in consciousness should receive immediate attention.

For example, if a patient with asthma develops increasing breathlessness and is unable to complete sentences, waiting for the next routine observation may place the patient at unnecessary risk [14]. The nurse should recognise the change, reassess the patient, initiate appropriate measures within their scope of practice, and promptly seek medical assistance. Early action can be critical in preventing further deterioration.

Documentation and Clinical Communication

Accurate documentation is another important element of patient safety. Respiratory assessment findings, oxygen therapy, medications, nursing interventions, and patient responses should be recorded clearly. Documentation becomes particularly important during shift changes. If a patient’s increasing oxygen requirement or worsening respiratory symptoms are not communicated effectively, the next healthcare professional may not recognise the seriousness of the situation [15].

Patient Education, Psychological Support and Continuity of Care [16]



The pyramid presents a conceptual framework showing how major components of respiratory nursing care are interconnected and contribute to effective patient management. Patient education is placed at the foundation because patients need clear information about their condition, prescribed medicines, inhaler techniques, symptoms, and self-care practices to participate effectively in their treatment. The middle level includes psychological support and family involvement, which provide emotional encouragement and practical assistance during illness and recovery. These factors may improve the patient's ability to cope with respiratory symptoms and follow the recommended treatment plan. Continuity of care is positioned at the highest level and focuses on follow-up assessment, monitoring of symptoms, review of treatment, and coordination of healthcare services after discharge. Overall, the framework highlights that respiratory nursing care should not be limited to hospital-based treatment but should continue through education, emotional support, family participation, and appropriate follow-up to promote self-management, reduce avoidable complications, and improve patient outcomes.

Clinical Outcomes, Challenges, Implications for Nursing Practice

The quality of nursing care provided to patients with respiratory disorders can be reflected in several clinical and patient-related outcomes. Appropriate nursing interventions may help maintain adequate oxygenation, facilitate removal of respiratory secretions, reduce breathing difficulty, improve activity tolerance, and support regular use of prescribed medicines. These interventions may also contribute to better functional ability and overall quality of life. Since respiratory conditions can change quickly, repeated assessment and close observation are essential for identifying deterioration at an early stage and initiating appropriate care.

However, achieving positive outcomes may be difficult when nurses work under conditions such as increased workload, insufficient staffing, limited clinical resources, or differences in professional knowledge and skills. Patient-related factors can also influence the effectiveness of care. Poor adherence to treatment, inadequate understanding of the illness, limited family support, anxiety related to breathing difficulties, financial constraints, and difficulty obtaining follow-up services may interfere with effective disease management.

These issues demonstrate that respiratory nursing requires more than completing routine clinical tasks. Nurses must combine careful assessment, clinical reasoning, evidence-informed interventions, patient education, and regular evaluation of treatment response. Care should also be adapted to the individual patient because respiratory symptoms, functional limitations, treatment responses, and available social support may vary considerably between patients with the same diagnosis.

Continuity of care is another important consideration. Effective discharge preparation should include clear instructions regarding medicines, inhaler use, symptom monitoring, warning signs, lifestyle measures, and follow-up appointments. Involving family members, where appropriate, can provide additional support for treatment adherence and home-based care. Communication and coordination among nurses, patients, caregivers, and other healthcare professionals are also necessary to maintain consistency in treatment.

Therefore, effective respiratory nursing should not be evaluated simply on the completion of prescribed procedures. Its broader value lies in improving patient safety, symptom control, functional capacity, self-management, treatment adherence, and continuity of care. Strengthening nurses' clinical knowledge and practical skills, together with a patient-centred approach, can support better management and outcomes for individuals with respiratory disorders.

Conclusion

Respiratory disorders require continuous and coordinated nursing care because changes in respiratory status can occur

rapidly and may influence patient safety, functional ability, and recovery. Effective nursing management involves systematic assessment, close monitoring, timely intervention, appropriate oxygen and medication administration, airway management, infection prevention, and regular evaluation of treatment responses. These practices are important not only for providing quality care but also for achieving measurable improvements in patient outcomes.

The discussion indicates that appropriate nursing interventions can contribute to improved oxygenation, reduced respiratory distress, effective airway clearance, better activity tolerance, improved medication adherence, and greater ability to perform daily activities. Patient education regarding disease management, medication use, inhaler technique, warning signs, and self-care can further strengthen treatment participation and promote greater independence. Psychological support and family involvement may also improve coping, confidence, and adherence to the recommended care plan.

Continuity of care is another important determinant of nursing outcome. Proper discharge preparation, follow-up assessment, treatment review, and communication between healthcare professionals can support sustained symptom control and reduce the risk of avoidable complications or readmission. Although workload, staffing shortages, limited resources, and patient-related barriers may influence the delivery of respiratory nursing care, these challenges can be addressed through continuing professional development, evidence-based practice, effective documentation, and individualised care planning. Conclusively, respiratory nursing should be evaluated not only by the completion of clinical procedures but by the outcomes achieved through nursing interventions. Improved respiratory status, symptom control, functional capacity, self-care ability, treatment adherence, patient safety, and quality of life represent important indicators of effective nursing practice. An integrated approach combining clinical care, education, psychological support, family participation, and continuity of care can therefore contribute to better short-term and long-term outcomes for patients with respiratory disorders.

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