Enhancing Palliative Care for Respiratory Patients: A Collaborative Approach by Nurses, Pharmacists, and Respiratory Therapists in Managing Dyspnea and Symptom Control

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Abstract

Background: Managing dyspnea is critical in palliative care for respiratory patients, and interdisciplinary collaboration between nurses, pharmacists, and respiratory therapists is essential for optimizing symptom control. This study explored how these professionals work together to improve symptom management in a tertiary hospital setting.

Methods: A qualitative study was conducted using semi-structured interviews and focus groups with 20 healthcare professionals, including nurses, pharmacists, and respiratory therapists. Data were analyzed using thematic analysis to identify key themes related to interdisciplinary collaboration.

Results: Four major themes emerged: (1) Interdisciplinary Role Clarity, highlighting the specific contributions of each profession in managing dyspnea; (2) Communication and Coordination, emphasizing the importance of regular team meetings but noting challenges with informal communication; (3) Pharmacological and Non-Pharmacological Synergy, showing the effectiveness of combining opioids, bronchodilators, and non-invasive ventilation; and (4) Challenges and Solutions in Collaborative Care, identifying workload and role overlap as barriers to optimal teamwork.

Conclusion: Interdisciplinary collaboration enhances dyspnea management in palliative care patients with respiratory conditions. Clear role definitions, improved communication, and integrated pharmacological and non-pharmacological interventions are crucial for optimizing patient outcomes. Future research should explore standardized collaborative care protocols and their impact on patient outcomes.

Keywords: Palliative care, dyspnea, interdisciplinary collaboration, nurses, pharmacists, respiratory therapists, symptom management, non-invasive ventilation, opioids

Introduction

Palliative care aims to improve the quality of life for patients with serious, chronic, or terminal illnesses by focusing on symptom management and addressing the emotional, psychological, and social aspects of care. Among respiratory patients, especially those with conditions such as chronic obstructive pulmonary disease (COPD), lung cancer, or interstitial lung disease, dyspnea is one of the most distressing symptoms (Kamal et al., 2012). The management of dyspnea and other symptoms in these patients is critical for maintaining comfort and dignity, particularly in end-of-life care.

The complexity of palliative care for respiratory patients requires a multidisciplinary approach that leverages the skills and expertise of nurses, pharmacists, and respiratory therapists. Nurses play a pivotal role in assessing symptoms, providing direct patient care, and offering emotional support to patients and families. Pharmacists contribute by optimizing pharmacological interventions, such as opioids and bronchodilators, ensuring effective symptom control while minimizing side effects (Marciniuk et al., 2011). Respiratory therapists provide essential non-pharmacological interventions, such as oxygen therapy, non-invasive ventilation, and breathing techniques, which help reduce the sensation of breathlessness (Kallet & Diaz, 2009).

While the individual contributions of these professionals are well-established, the collaboration between nurses, pharmacists, and respiratory therapists has the potential to significantly enhance the quality of care provided to palliative respiratory patients. Effective interdisciplinary teamwork can improve symptom management, streamline treatment plans, and ultimately enhance patients 'quality of life (Oishi and Murtagh, 2014). However, research on the specific impact of this collaboration on managing dyspnea and other symptoms in respiratory patients remains limited.

This study aims to explore the collaborative role of nurses, pharmacists, and respiratory therapists in managing dyspnea and symptom control for palliative care patients with respiratory conditions. By understanding how these professionals work together, this research seeks to identify strategies for improving interdisciplinary care and enhancing patient outcomes.

Literature Review

1. Palliative Care in Respiratory Patients

Palliative care is increasingly recognized as an essential component in the management of patients with advanced respiratory diseases. Conditions such as chronic obstructive pulmonary disease (COPD), lung cancer, and interstitial lung disease (ILD) often result in a high symptom burden, particularly in the form of refractory dyspnea, pain, and fatigue (Nava and Hill, 2009). Unlike other diseases where palliative care is often introduced in the terminal stages, respiratory conditions benefit from early palliative interventions that focus on improving quality of life rather than solely on curative measures (Zimmermann et al., 2014). The provision of palliative care for respiratory patients remains underutilized despite its potential to alleviate suffering and enhance patient well-being (Sorenson, 2013).

2. Dyspnea and Symptom Control in Palliative Care

Dyspnea, a subjective sensation of breathlessness, is one of the most common and distressing symptoms experienced by patients with advanced respiratory conditions. Its management is a cornerstone of palliative care in these patients. Dyspnea can be triggered by a variety of physiological and psychological factors, requiring a multifaceted approach to control (Kamal et al., 2012). Pharmacological interventions, such as opioids and bronchodilators, have been shown to reduce the sensation of dyspnea effectively (Ekström et al., 2014). Non-pharmacological methods, including oxygen therapy, non-invasive ventilation (NIV), and breathing techniques, have also been beneficial in alleviating symptoms, particularly when used in conjunction with medication (Kallet & Diaz, 2009). However, despite available interventions, the complexity of dyspnea management often leads to suboptimal symptom control, highlighting the need for a collaborative, interdisciplinary approach.

3. The Role of Nurses in Palliative Respiratory Care

Nurses are at the forefront of palliative care, playing a critical role in both symptom assessment and direct care. They are often responsible for the initial identification of symptoms, ongoing monitoring, and coordinating care between other healthcare providers. Nursing interventions in the management of dyspnea include administering medications, providing comfort measures, and offering emotional support to patients and their families (Smith et al., 2021). In respiratory palliative care, nurses frequently assist with oxygen therapy, provide education on breathing techniques, and monitor patient responses to both pharmacological and non-pharmacological interventions. Their holistic approach to care allows them to address not only the physical aspects of dyspnea but also the psychological and emotional components that exacerbate the sensation of breathlessness (Zimmermann et al., 2014).

4. The Role of Pharmacists in Symptom Management

Pharmacists play a key role in optimizing the pharmacological management of palliative care patients. Their expertise in medication selection, dosing, and management of side effects is critical in controlling symptoms such as dyspnea. Opioids, commonly used to manage breathlessness, require careful titration and monitoring to avoid adverse effects, particularly in respiratory patients (Marciniuk et al., 2011). Pharmacists also ensure the appropriate use of adjunct medications, such as anxiolytics and bronchodilators, which can help relieve the sensation of breathlessness when combined with opioids. Furthermore, pharmacists are instrumental in preventing drug interactions and managing polypharmacy, which is prevalent in palliative care settings (Koh and Koo, 2002). By collaborating with nurses and respiratory therapists, pharmacists can tailor medication regimens that are both effective and well-tolerated by patients, enhancing their overall comfort and quality of life.

5. The Role of Respiratory Therapists in Managing Dyspnea

Respiratory therapists (RTs) are uniquely positioned to provide specialized non-pharmacological interventions that directly address respiratory symptoms. Their expertise in managing mechanical ventilation, administering oxygen therapy, and implementing non-invasive ventilation (NIV) is crucial for palliative respiratory patients. In particular, the use of NIV has been shown to reduce dyspnea and improve gas exchange, providing symptomatic relief for patients with advanced lung disease (Kallet & Diaz, 2009). RTs also educate patients and families on breathing techniques such as pursed-lip breathing and relaxation exercises, which help reduce the perception of breathlessness (Mollica et al., 2010). Through close collaboration with nurses and pharmacists, respiratory therapists contribute to a more comprehensive care plan that addresses the physiological, psychological, and emotional aspects of dyspnea.

6. Interdisciplinary Collaboration in Palliative Care

The interdisciplinary collaboration between nurses, pharmacists, and respiratory therapists is essential for optimizing symptom control and improving patient outcomes in palliative care. Effective teamwork allows for a holistic approach to managing complex symptoms like dyspnea, ensuring that interventions are well-coordinated and tailored to individual patient needs. Studies have shown that interdisciplinary care models in palliative settings lead to better symptom control, improved quality of life, and increased patient satisfaction (Oishi and Murtagh, 2014). However, collaboration between these professionals is not without challenges, including communication barriers, role ambiguity, and differences in clinical approaches. Despite these challenges, the benefits of interdisciplinary care in managing symptoms such as dyspnea are well-documented, with evidence suggesting that patients receive more comprehensive and effective care when professionals work together (Kamal et al., 2012).

Methodology

1. Study Design

This research was conducted using a qualitative descriptive design at a tertiary hospital with a well-established palliative care program. The study aimed to explore the collaborative role of nurses, pharmacists, and respiratory therapists in managing dyspnea and improving symptom control in respiratory patients receiving palliative care. A qualitative approach was chosen to capture in-depth perspectives from the involved healthcare professionals and understand the nuances of interdisciplinary collaboration in this context.

2. Study Setting

The study was conducted at the palliative care unit of a tertiary hospital that provides specialized care for patients with chronic and terminal conditions, including respiratory diseases. The hospital has a multidisciplinary palliative care team that includes nurses, pharmacists, respiratory therapists, physicians, and social workers.

3. Participants

A purposive sample of 20 healthcare professionals was recruited for this study, including:

- 8 nurses
- 6 pharmacists
- 6 respiratory therapists

Inclusion criteria were as follows:

- At least two years of experience working in palliative care or respiratory care.
- Direct involvement in the management of palliative care patients with respiratory conditions.
- Willingness to participate in in-depth interviews or focus groups.

Exclusion criteria included professionals not directly involved in symptom management or those without clinical responsibilities in the palliative care unit.

4. Data Collection

Data were collected utilizing semi-structured in-depth interviews and focus groups. The interviews and focus groups were conducted in private rooms within the hospital, allowing participants to discuss their experiences openly and comfortably. Each interview lasted between 45 to 60 minutes, while focus group discussions were approximately 90 minutes long.

The interview guide covered the following key topics:

- The role of each profession (nursing, pharmacy, and respiratory therapy) in managing dyspnea.
- Perceived challenges in symptom management, particularly dyspnea.
- Collaboration strategies between nurses, pharmacists, and respiratory therapists in palliative care.
- Perceived impact of interdisciplinary collaboration on patient outcomes, particularly in terms of symptom control and quality of life.
- Recommendations for improving interdisciplinary teamwork in palliative care settings.

All interviews and focus groups were audio-recorded with participants' consent and later transcribed verbatim for analysis. Field notes were taken during the interviews to capture non-verbal cues and contextual factors.

5. Data Analysis

Thematic analysis was used to analyze the qualitative data. The transcripts were read multiple times to gain an understanding of the data and then coded using NVivo software (version [X]). The coding process involved identifying patterns, recurring themes, and significant statements related to the collaborative roles of nurses, pharmacists, and respiratory therapists in managing dyspnea.

The coding process followed the six-step method outlined by Braun & Clarke (2006):

1. Familiarization with the data: Reading and re-reading transcripts to become immersed in the data.
2. Generating initial codes: Systematically coding relevant sections of the data related to symptom management and interdisciplinary collaboration.
3. Searching for themes: Grouping similar codes together to identify overarching themes.
4. Reviewing themes: Refining and reviewing the themes to ensure they accurately represented the data.
5. Defining and naming themes: Defining each theme and developing a coherent narrative around each.
6. Producing the report: Synthesizing the themes into findings that addressed the research objectives.

The main themes identified included:

- Interdisciplinary Role Clarity: How each profession perceived their role in symptom management.
- Communication and Coordination: The effectiveness of communication between nurses, pharmacists, and respiratory therapists.
- Pharmacological and Non-Pharmacological Synergy: The integration of medication and respiratory therapy interventions for optimal symptom control.
- Challenges and Solutions in Collaborative Care: Perceived barriers to teamwork and suggested improvements.

6. Ethical Considerations

Ethical approval for this study was obtained from the Ethics Committee. Informed consent was obtained from all participants prior to their involvement in the study. Participants were assured that their responses would be anonymized and used solely for research purposes. They were also informed of their right to withdraw from the study at any time without any negative consequences.

The confidentiality of participants was maintained throughout the study by assigning numerical codes to interview transcripts and removing any identifying information. All data, including audio recordings and transcriptions, were securely stored on password-protected devices and accessible only to the research team.

7. Trustworthiness

To ensure the trustworthiness of the findings, the study adhered to the criteria of credibility, dependability, confirmability, and transferability (Lincoln & Guba, 1985). Credibility was enhanced by prolonged engagement with the participants and triangulating data from interviews and focus groups. Dependability was ensured by maintaining an audit trail of decisions made throughout the research process. Confirmability was achieved by involving multiple researchers in the data analysis process to minimize bias. Transferability was addressed by providing detailed descriptions of the study setting and participants to allow others to assess the applicability of the findings to similar contexts.

Findings

From the data analysis, four major themes emerged, each with multiple sub-themes that illustrated the collaborative efforts and challenges faced by nurses, pharmacists, and respiratory therapists in managing

dyspnea and symptom control in respiratory palliative care patients. The themes reflect both the strengths of interdisciplinary collaboration and the barriers encountered in daily practice.

Theme 1: Interdisciplinary Role Clarity

The first theme that emerged was the need for clarity in the roles of each profession in managing dyspnea. Participants emphasized the importance of understanding their specific responsibilities, as well as how these roles complemented one another.

Sub-theme 1.1: Nurses as Frontline Symptom Assessors

Nurses were consistently identified as the primary caregivers who performed initial symptom assessments and monitored changes in patient status.

- Nurse 4: “We’re the ones who are with the patients 24/7. We assess their breathing, monitor how they're feeling, and report back to the team if there's any deterioration.”
- Nurse 6: "We spend more time with patients than anyone else, so we see firsthand how dyspnea impacts their comfort and anxiety levels."

Sub-theme 1.2: Pharmacists as Medication Experts

Pharmacists described their role in optimizing medication regimens, especially in managing opioids and bronchodilators for dyspnea relief.

- Pharmacist 2: “My role is to make sure the medications are not only effective but also safe. For instance, when opioids are prescribed for dyspnea, I closely monitor for any side effects like respiratory depression.”
- Pharmacist 5: "We also work with the respiratory therapists to ensure that any bronchodilators or nebulizers are administered in the most effective way possible."

Sub-theme 1.3: Respiratory Therapists as Technical Experts

Respiratory therapists were seen as the experts in non-pharmacological interventions, such as oxygen therapy and non-invasive ventilation, which are essential in controlling dyspnea.

- RT 3: “Our role is very hands-on. We’re the ones adjusting oxygen levels, setting up non-invasive ventilation, and teaching patients how to use breathing techniques.”
- RT 1: "We collaborate with nurses and pharmacists to make sure the patient is receiving both the right medication and the right respiratory support."

Theme 2: Communication and Coordination

Communication between nurses, pharmacists, and respiratory therapists was a recurring theme in the data, with participants highlighting both successful examples of coordination and areas where improvements were needed.

Sub-theme 2.1: Effective Communication During Team Meetings

Participants reported that regular interdisciplinary team meetings helped facilitate effective communication between the different professions.

- Nurse 1: “In our morning rounds, everyone contributes – we talk about how the patient is doing from a respiratory perspective, what medications are working, and what else can be done.”
- RT 2: “These meetings give us a chance to make sure we’re all on the same page when it comes to patient care.”

Sub-theme 2.2: Informal Communication Barriers

While formal meetings were highlighted as a strength, informal day-to-day communication was often seen as lacking, particularly between shifts.

- Pharmacist 4: “There are times when a medication change happens, and I don’t find out until much later. We need better ways to communicate those changes on the spot.”
- Nurse 3: "Sometimes we have patients who are rapidly deteriorating, and I need to get respiratory therapy in immediately, but it can be challenging to get everyone on the same page in real-time."

Theme 3: Pharmacological and Non-Pharmacological Synergy

The integration of medication and respiratory interventions was crucial in controlling dyspnea. Participants expressed how combining pharmacological and non-pharmacological interventions improved patient outcomes.

Sub-theme 3.1: Opioid and Bronchodilator Optimization

Pharmacists and respiratory therapists described how they collaborated to optimize the use of both opioids and bronchodilators, ensuring that dyspnea was controlled without adverse effects.

- Pharmacist 1: “We often start with low doses of opioids to see how the patient responds and work closely with the RT to adjust oxygen levels accordingly.”
- RT 4: “We try to match the patient’s need for relief with the correct dosage of bronchodilators. We also train them on how to use their nebulizers effectively so they get the most out of their treatment.”

Sub-theme 3.2: Non-Invasive Ventilation (NIV) and Breathing Techniques

Respiratory therapists played a pivotal role in utilizing non-invasive ventilation and teaching patients various breathing techniques that provided relief from dyspnea, especially in conjunction with medications.

- RT 5: “For patients who can’t tolerate high doses of medication, non-invasive ventilation offers great relief. It’s a balance between medication and the right respiratory intervention.”
- Nurse 2: "I've seen patients who are on opioids, but it’s really the breathing techniques that the respiratory therapist taught them that help them the most during a crisis."

Theme 4: Challenges and Solutions in Collaborative Care

Participants discussed several challenges in interdisciplinary collaboration, including workload issues, communication barriers, and role overlap. However, they also proposed solutions to overcome these obstacles.

Sub-theme 4.1: Workload and Time Constraints

Participants acknowledged that heavy workloads and time constraints often made collaboration difficult, especially during emergencies or periods of staff shortage.

- Nurse 7: “It’s tough to find time to coordinate with the pharmacist and RT when I’m juggling multiple patients. We could definitely use more time for team coordination.”
- Pharmacist 3: "Sometimes we don't get to sit down and discuss the patient's full care plan. We’re all stretched thin, and it affects how well we can collaborate."

Sub-theme 4.2: Role Overlap and Clarification

Some participants expressed concerns over role overlap, particularly when it came to patient education and symptom monitoring. However, clearer role definitions and mutual respect were seen as solutions to this issue.

- RT 6: “There are times when we overlap in what we’re doing, especially when it comes to patient education. But when we respect each other’s expertise, it becomes more of a collaborative effort rather than stepping on each other’s toes.”
- Nurse 5: "If we all stick to our roles but remain flexible enough to assist each other, the patient gets better care overall."

Discussion

The findings of this study highlight the significance of interdisciplinary collaboration among nurses, pharmacists, and respiratory therapists in managing dyspnea and other symptoms in palliative care patients with respiratory conditions. This discussion will interpret the study’s findings in light of existing literature, emphasize the practical implications for clinical practice, and explore the challenges faced in enhancing collaboration. It will also provide recommendations for improving patient care and offer suggestions for future research.

Interdisciplinary Role Clarity

The study found that role clarity was a crucial factor in ensuring effective collaboration between nurses, pharmacists, and respiratory therapists. Nurses, as frontline caregivers, were responsible for initial symptom assessment and monitoring, while pharmacists optimized medication regimens, and respiratory therapists provided non-pharmacological interventions. These findings align with previous research, which emphasizes that clearly defined roles allow each profession to bring their expertise to the table without overstepping or duplicating responsibilities (Jansen, 2008).

Clear role differentiation not only reduces the risk of role overlap but also promotes a more holistic approach to patient care, as each professional addresses different aspects of symptom management. For example, nurses focused on symptom reporting and patient support, pharmacists on medication management, and respiratory therapists on breathing techniques and ventilation. This aligns with Oishi and Murtagh, (2014), who found that effective interdisciplinary teams in palliative care led to better patient outcomes by allowing each profession to maximize their contribution.

Communication and Coordination

Effective communication between nurses, pharmacists, and respiratory therapists was another key finding of the study. Participants reported that regular interdisciplinary team meetings facilitated better communication, leading to improved patient outcomes. This supports existing literature that underscores the importance of structured communication channels in interdisciplinary care (Manser. 2009).

However, informal communication, particularly in high-pressure situations, was noted as a challenge. Communication breakdowns were often linked to heavy workloads or shift changes, where critical information might be delayed. Previous studies have highlighted similar issues, with failures in communication leading to suboptimal care or delayed interventions (Manser. 2009). To address this, future interventions should include standardized communication tools such as SBAR (Situation, Background, Assessment, Recommendation) protocols that facilitate clear, concise exchanges of patient information between shifts and departments.

Pharmacological and Non-Pharmacological Synergy

The integration of pharmacological and non-pharmacological interventions emerged as a crucial component of dyspnea management. This study found that opioids, bronchodilators, and non-invasive ventilation (NIV)

were most effective when used together, with each profession contributing their expertise. Pharmacists optimized the medication regimen to reduce dyspnea without exacerbating respiratory depression, while respiratory therapists implemented NIV and oxygen therapy to relieve symptoms non-pharmacologically. This integrated approach is supported by Kallet & Diaz (2009), who found that combining medication with breathing support improves symptom control and reduces the patient's perception of breathlessness.

Non-pharmacological interventions, particularly breathing exercises and non-invasive ventilation, were also seen as critical tools in managing dyspnea. These findings are consistent with the work of Mollica et al. (2010), who found that techniques such as pursed-lip breathing and relaxation exercises, when taught by respiratory therapists, could significantly reduce the severity of dyspnea in patients with advanced respiratory diseases. This underscores the importance of combining both pharmacological and non-pharmacological strategies to provide comprehensive symptom relief.

Challenges and Solutions in Collaborative Care

Despite the positive impact of interdisciplinary collaboration, several challenges were noted, including heavy workloads, time constraints, and role overlap. Participants expressed concerns over the difficulty of finding time for coordination, particularly in busy hospital settings. These findings resonate with research by Kvarnstrom (2008), which suggests that inadequate staffing and high patient loads can hinder effective teamwork in palliative care. The need for increased resources, such as staffing and dedicated time for interdisciplinary meetings, was a common suggestion from participants to overcome these barriers.

Role overlap was also identified as a challenge, particularly in patient education and symptom monitoring. However, participants suggested that mutual respect and clear role boundaries could mitigate these issues, allowing each profession to contribute without redundancy. This aligns with the recommendations of Oishi and Murtagh (2014), who advocate for the establishment of clear roles and responsibilities in interdisciplinary teams to reduce conflicts and improve efficiency.

Practical Implications for Clinical Practice

The findings of this study have several important implications for clinical practice. First, fostering clear role differentiation among nurses, pharmacists, and respiratory therapists can enhance teamwork and ensure that each professional's expertise is fully utilized in managing dyspnea and other symptoms. Hospital administrations should implement formal role definitions and interdisciplinary training sessions to strengthen collaborative efforts.

Second, improving communication channels between team members is essential for ensuring timely and effective patient care. The implementation of standardized communication tools such as SBAR, along with scheduled interdisciplinary team meetings, can facilitate better information flow and reduce the risk of communication breakdowns.

Third, integrating pharmacological and non-pharmacological interventions in patient care plans should be standard practice in managing dyspnea for respiratory patients. Nurses, pharmacists, and respiratory therapists should work together to tailor individualized care plans that combine medication, ventilation support, and breathing exercises to provide comprehensive symptom control.

Recommendations for Future Research

While this study has provided valuable insights into interdisciplinary collaboration in palliative respiratory care, several areas warrant further investigation. Future research could explore the development and testing of standardized interdisciplinary care protocols that incorporate both pharmacological and non-pharmacological interventions for managing dyspnea. Additionally, more studies should investigate the long-term impact of interdisciplinary collaboration on patient outcomes, including quality of life and symptom control, in various palliative care settings.

Moreover, quantitative studies could be conducted to evaluate the effectiveness of specific interventions, such as the use of non-invasive ventilation or opioid titration, in managing dyspnea in a collaborative care framework. This would provide further evidence to guide clinical practice in optimizing palliative respiratory care.

Conclusion

In conclusion, this study highlights the critical role of interdisciplinary collaboration between nurses, pharmacists, and respiratory therapists in managing dyspnea and improving symptom control for respiratory patients in palliative care. While challenges such as communication barriers and role overlap persist, fostering clear role definitions, improving communication, and integrating pharmacological and non-pharmacological interventions can significantly enhance patient outcomes. By addressing these issues, healthcare teams can provide more comprehensive and effective care, ultimately improving the quality of life for patients in palliative care.

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