

# Exploring Nurses' and Respiratory Therapists' Perspectives on Managing Acute Respiratory Distress Syndrome in the Intensive Care Unit

<sup>1</sup>Ahmed A. Majrashi, <sup>2</sup>Manal, A. Alanazi, <sup>3</sup>Mohammed B. Alshahrani,  
<sup>4</sup>Nawaf M. Al-Anazi

Respiratory Therapist  
Health affairs at the Ministry of National Guard

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## **Abstract-**

**This qualitative research study delves into the experiences and perspectives of nurses and respiratory therapists in managing Acute Respiratory Distress Syndrome (ARDS) within the Intensive Care Unit (ICU). Through semi-structured interviews, challenges, strategies, and collaborative practices in ARDS management were explored. Findings underscored the critical role of evidence-based protocols, continuous education, and interdisciplinary teamwork in optimizing patient outcomes. The study highlights the imperative of effective communication and shared decision-making among healthcare providers in delivering comprehensive care to ARDS patients.**

**Keywords: Acute Respiratory Distress Syndrome (ARDS), Intensive Care Unit (ICU), Nurses, Respiratory Therapists, Qualitative Research, Challenges, Strategies, Collaboration, Interdisciplinary Teamwork, Patient-Centered Care.**

## **INTRODUCTION:**

Acute Respiratory Distress Syndrome (ARDS) is a severe and often life-threatening condition characterized by rapid onset of widespread inflammation in the lungs. It presents significant challenges in the Intensive Care Unit (ICU) due to its complex pathophysiology and the critical nature of the patients affected. ARDS management requires a high level of expertise and coordinated care across various healthcare professionals, particularly nurses and respiratory therapists, who play pivotal roles in the daily management and care of these patients.

Nurses and respiratory therapists are integral members of the ICU multidisciplinary team, providing continuous monitoring, mechanical ventilation management, and other life-supporting interventions. Despite the critical function they serve, there is a limited understanding of the specific challenges these professionals face and the strategies they employ to manage ARDS effectively. Understanding their perspectives can provide valuable insights into the nuances of clinical practices and the areas needing support or improvement.

The importance of collaboration in the ICU cannot be overstated, as the complexity of ARDS requires seamless teamwork and communication between various healthcare providers. Effective collaboration ensures not only the efficient delivery of care but also the incorporation of diverse expertise in treatment planning and execution. However, the nature and dynamics of this interdisciplinary teamwork, particularly in the context of ARDS management, remain under-researched.

This study aims to address these gaps by exploring the experiences and perspectives of nurses and respiratory therapists in managing ARDS within the ICU. The objectives of this research are threefold: first, to identify and understand the challenges encountered by these professionals; second, to uncover the

strategies and best practices they use to deliver optimal care; and third, to examine the collaborative efforts between nurses and respiratory therapists and how these impact patient outcomes.

By gaining a deeper understanding of these aspects, we hope to shed light on the ways to enhance ARDS management through improved healthcare provider support, effective teamwork, and the development of targeted interventions. Ultimately, this research aspires to contribute to the broader goal of improving patient outcomes and the quality of care in the ICU for those suffering from ARDS.

### **Literature Review:**

Acute Respiratory Distress Syndrome (ARDS) is a complex clinical condition that needs meticulous management to improve patient outcomes. The cornerstone for managing ARDS includes lung-protective ventilation strategies, fluid management, and the use of adjunctive therapies. According to the Berlin definition, ARDS is classified based on the severity of hypoxemia: mild, moderate, and severe (Ranieri et al., 2012). Lung-protective strategies, which recommend low tidal volumes (4-8 mL/kg of predicted body weight) and limiting plateau pressures to  $\leq 30$  cm H<sub>2</sub>O, are well-supported by evidence (The ARDS Network, 2000).

Nurses and respiratory therapists play pivotal roles in the management of ARDS, providing essential support through clinical monitoring, ventilation management, and patient care. Nurses ensure continuous patient assessment, manage medications, and support the physiological and psychological needs of patients (Ohs et al., 2017). Respiratory therapists are responsible for the operation and adjustment of mechanical ventilators, inhalation therapy, and patient education on respiratory care (Kacmarek et al., 2016).

Managing ARDS presents multiple challenges, including the need for rapid decision-making and the management of complex ventilatory settings. Studies have indicated that resource limitations, such as insufficient staffing and lack of advanced training, exacerbate these challenges (Cox et al., 2009; Gattinoni et al., 2015). Additionally, the unpredictable course of ARDS necessitates quick adaptations and robust knowledge to prevent potential complications like ventilator-induced lung injury (VILI) (Brower et al., 2000).

Effective collaboration between nurses and respiratory therapists is critical for the successful management of ARDS in the ICU. Interdisciplinary teamwork has been shown to enhance patient outcomes and streamline care processes by leveraging the unique skills of each team member (Streton et al., 2016). Regular communication, joint rounds, and shared decision-making are key elements that facilitate productive teamwork (Moerer et al., 2006). However, the dynamics of these collaborative efforts and their challenges are underexplored, necessitating further qualitative research to understand how these interactions can be improved (Wheelan et al., 2003).

Most of the existing literature on ARDS management focuses on clinical trials and quantitative assessments, leaving a gap in qualitative insights from the perspectives of healthcare providers. Understanding the lived experiences of nurses and respiratory therapists can provide a holistic view of the barriers and facilitators in ARDS care. This approach can inform policy changes, educational programs, and support systems designed to improve interdisciplinary collaboration and patient care.

### **Methodology:**

#### **Research Design:**

This qualitative research study utilized a phenomenological approach to explore the experiences and perspectives of 12 registered nurses and 8 licensed respiratory therapists who have extensive experience in managing Acute Respiratory Distress Syndrome (ARDS) in the Intensive Care Unit (ICU). The aim of the study was to gain a deeper understanding of the challenges, strategies, and collaborative practices involved in ARDS management from the viewpoint of frontline healthcare providers.

#### Data Collection:

Semi-structured interviews were conducted with the participants to gather rich, detailed descriptions of their experiences in treating ARDS patients. Participants were asked open-ended questions relating to their encounters with ARDS cases, the difficulties they faced, the strategies they employed, and their perceptions of collaborative teamwork in the ICU. Each interview lasted approximately 45-60 minutes and was audio-recorded with participant consent.

#### Data Analysis:

Thematic analysis was used to analyze the interview data and identify common themes and patterns across the participants' responses. The analysis process involved transcribing the interviews, coding the data, grouping codes into themes, and refining the themes through constant comparison and discussion among the research team. Saturation was reached after 20 interviews, indicating a rich data set with no new themes emerging from subsequent interviews.

#### Trustworthiness and Rigor:

To ensure the trustworthiness of the study, member checking was conducted with a subset of participants to verify the accuracy of the findings. Peer debriefing sessions were held to discuss the coding process and interpretation of data, enhancing the credibility of the analysis. The researchers maintained reflexive journals to document their biases and assumptions throughout the study, promoting transparency and rigor.

#### Ethical Considerations:

Ethical approval was obtained from the department. Participants provided informed consent before participating in the interviews and were assured of confidentiality and anonymity in reporting their experiences. All data were securely stored and handled in compliance with data protection regulations.

### Findings:

#### Theme 1: Challenges in Managing ARDS

- Subtheme 1.1: Patient Acuity\*\*

Participants repeatedly emphasized the high acuity levels of ARDS patients, describing the rapid deterioration of respiratory function and the complexity of managing multiple comorbidities simultaneously. One nurse stated, "It's challenging to see how rapidly patients with ARDS can deteriorate, requiring immediate intervention and close monitoring."

- Subtheme 1.2: Resource Constraints\*\*

Several participants highlighted the resource limitations that impede optimal care delivery for ARDS patients. A respiratory therapist shared, "We often face challenges with limited ventilator availability and the need for continuous monitoring, especially during peak periods."

#### Theme 2: Strategies for ARDS Management

- Subtheme 2.1: Protocol Adherence\*\*

Both nurses and respiratory therapists underscored the importance of adhering to evidence-based protocols in ARDS management. A nurse mentioned, "Following standardized protocols for ventilation and care helps maintain consistency and ensures the best possible outcomes for patients."

- Subtheme 2.2: Continuous Education\*\*

Many participants discussed the significance of ongoing education and training in staying abreast of the latest advancements in ARDS management. A respiratory therapist explained, "Attending regular workshops and training sessions helps us refine our skills and update our knowledge on new treatment modalities."

### Theme 3: Collaboration and Teamwork

- Subtheme 3.1: Interdisciplinary Communication\*\*

Effective communication and collaboration between nurses and respiratory therapists were consistently identified as key components of successful ARDS management. A nurse emphasized, "Regular team huddles and clear communication channels facilitate smooth coordination between team members and enhance patient care."

- Subtheme 3.2: Shared Decision-Making\*\*

Participants highlighted the importance of shared decision-making in addressing the dynamic nature of ARDS cases. A respiratory therapist noted, "Collaborative decision-making with nurses and other team members enables us to tailor treatment plans to individual patient needs and respond promptly to changes in condition."

#### **Discussion:**

The findings of this study shed light on the significant challenges encountered by healthcare providers in managing Acute Respiratory Distress Syndrome (ARDS) in the Intensive Care Unit (ICU). The high acuity levels of ARDS patients pose a considerable clinical challenge, requiring swift interventions and close monitoring to prevent adverse outcomes. Resource constraints, such as limited ventilator availability and staffing issues, further exacerbate the complexity of ARDS management (Murphy et al., 2011).

In response to these challenges, participants highlighted the importance of adhering to evidence-based protocols and guidelines to optimize patient care. Strict adherence to ventilation protocols and standardized treatment approaches was emphasized as crucial in maintaining consistency and ensuring the best possible outcomes for ARDS patients (Hashimoto et al., 2017). Continuous education and training emerged as another key strategy employed by healthcare providers to enhance their skills and stay updated on the latest advancements in ARDS management (Peck, 2019).

Effective interdisciplinary communication and teamwork were identified as essential elements in navigating the complexities of ARDS management. Regular team huddles, clear communication channels, and structured interdisciplinary meetings were highlighted as facilitators of seamless coordination and information sharing among healthcare providers (Collins and Currie, 2009)

). Shared decision-making emerged as a crucial component in responding promptly to changes in patients' conditions and tailoring treatment plans to individual needs (Kon et al., 2016).

The collaborative efforts between nurses and respiratory therapists play a pivotal role in ensuring comprehensive and patient-centered care for individuals with ARDS. By leveraging the unique expertise of each team member and promoting a culture of open communication and mutual respect, healthcare providers can enhance the quality of care delivered to ARDS patients in the ICU (Lin et al., 2020).

#### **Conclusion:**

In conclusion, the experiences and perspectives shared by nurses and respiratory therapists in this study provide valuable insights into the challenges, strategies, and collaborative practices involved in managing ARDS in the ICU. By addressing these challenges and fostering effective teamwork, healthcare providers can optimize patient outcomes and improve the overall quality of care in the critical care setting. Future research should continue to explore innovative approaches to enhance interdisciplinary collaboration and support the well-being of both patients and healthcare providers in the management of ARDS.

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## Appendix

### Appendix A: Interview Guide

#### 1. Introduction

- Brief explanation of the study's purpose and the participant's role.

#### 2. Demographic Information

- Age, gender, years of experience in ICU, specific role (nurse/respiratory therapist), etc.

#### 3. ARDS Management Experience

- Can you describe a challenging experience you encountered while managing ARDS patients?
- What strategies do you usually employ when faced with challenging ARDS cases?
- How do you collaborate with other healthcare team members in the management of ARDS patients?

#### 4. Protocol Adherence and Decision-Making

- How crucial is it to follow standardized protocols in ARDS management?
- Can you provide an example of a situation where protocol adherence positively impacted patient outcomes?
- How do you make decisions regarding ventilator settings and patient care plans in ARDS cases?

#### 5. Collaborative Practices

- What communication strategies do you find most effective when working with other healthcare providers in the ICU?
- How do you ensure smooth interdisciplinary collaboration in managing ARDS patients?
- Can you describe a situation where shared decision-making led to better patient outcomes in ARDS cases?

#### 6. Wrap-up

- Any additional insights or experiences you would like to share?
- Thank the participant for their time and contribution to the study.

### Appendix B: Informed Consent Form

Dear Participant,

The purpose of this study is to explore the experiences and perspectives of healthcare providers in managing Acute Respiratory Distress Syndrome (ARDS) in the Intensive Care Unit (ICU). Your participation involves a one-on-one interview where you will be asked questions related to your experiences in ARDS management. Your participation is voluntary, and your responses will remain anonymous and confidential.

By proceeding with the interview, you consent to the recording of the session for data analysis purposes. You have the right to withdraw from the study at any time without providing a reason. If you have any questions or concerns, please feel free to contact the researcher.

Thank you for your participation in this study.

[Signature of Participant] [Date]