Global Journal of Clinical and Public Health Research

Case Report OPEN ACCESS

A Case Report on Comprehensive Nursing Care in the Intensive Care Unit: Impact on Patient Recovery

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Abstract

Critically ill patients admitted to the Intensive Care Unit (ICU) require continuous monitoring and specialized nursing care to prevent complications and improve outcomes.

This case report highlights the role of evidence-based nursing interventions in the management of a critically ill patient admitted with severe sepsis and respiratory failure. Comprehensive ICU nursing care, including vigilant monitoring, infection control, ventilator care, pressure injury prevention, and psychosocial support, contributed significantly to clinical stabilization and recovery.

This report emphasizes the critical role of ICU nurses as key members of the multidisciplinary healthcare team.

ARTICLE HISTORY
Received: 12/11/2025
Accepted: 25/11/2025
Published: 10/12/2025

KEYWORDS
Intensive Care Unit, Nursing Care, Critical Care, Patient Safety, Case Report

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Introduction

The Intensive Care Unit (ICU) is a highly specialized clinical environment designed for the management of critically ill patients requiring advanced life support and continuous monitoring. Nursing care in the ICU plays a pivotal role in early detection of deterioration, prevention of complications, and coordination of multidisciplinary care. This case report aims to describe the nursing management of a critically ill patient and highlight the impact of systematic and holistic nursing care on patient outcomes.

Case Presentation

A 58-year-old male patient was admitted to the ICU with a diagnosis of **severe sepsis secondary to community-acquired**

pneumonia, complicated by acute respiratory failure. The patient had a history of hypertension and type 2 diabetes mellitus. On admission, he was febrile, hypotensive, tachycardic, and hypoxic, requiring immediate respiratory and hemodynamic support.

Vital signs on admission were as follows: blood pressure 86/52 mmHg, heart rate 118 beats/min, respiratory rate 30 breaths/min, oxygen saturation 84% on room air, and temperature 39.2°C. The patient was intubated and placed on mechanical ventilation. Vasopressor support and broad-spectrum intravenous antibiotics were initiated.

Nursing Assessment

Comprehensive nursing assessment included:

- Continuous monitoring of vital signs and hemodynamic parameters
- Neurological assessment using the Glasgow Coma Scale (GCS)
- Respiratory assessment including ventilator parameters and arterial blood gas (ABG) analysis
- Skin integrity and pressure injury risk assessment
- Fluid balance monitoring and urine output measurement
- Pain, sedation, and comfort assessment

Nursing Interventions

Key nursing interventions implemented during ICU stay included:

1. Respiratory Care

- Ensuring correct ventilator settings as prescribed
- Regular suctioning using aseptic technique
- Oral care with chlorhexidine to prevent ventilator-associated pneumonia (VAP)
- Positioning the patient with head-end elevation at 30–45 degrees

2. Hemodynamic and Infection Control Care

- Continuous monitoring of blood pressure and central venous pressure
- Accurate administration of vasopressors and intravenous fluids
- Strict adherence to infection prevention protocols, including hand hygiene and catheter care

3. Skin and Mobility Care

- Regular repositioning every two hours
- Use of pressure-relieving mattresses
- Early passive range-of-motion exercises to prevent ICU-acquired weakness

4. Nutritional and Elimination Care

- Initiation of enteral feeding via nasogastric tube
- Monitoring of gastric residual volumes
- Strict input-output charting

5. Psychological and Family Support

- Providing regular updates to family members
- Maintaining patient dignity and comfort
- Reducing environmental stressors such as excessive noise and light

Outcome

Over the course of 10 days in the ICU, the patient showed gradual clinical improvement. Vasopressor support was tapered off, inflammatory markers decreased, and respiratory function improved. The patient was successfully weaned from mechanical ventilation and transferred to the general medical ward in stable condition.

Discussion

This case demonstrates that timely, structured, and holistic nursing care plays a vital role in the recovery of critically ill patients. ICU nurses act as patient advocates, early detectors of complications, and coordinators of care. Evidence-based nursing practices significantly reduce ICU-related complications such as infections, pressure injuries, and prolonged mechanical ventilation.

Conclusion

Effective nursing care in the ICU is fundamental to patient survival and recovery. This case highlights how comprehensive nursing

interventions, combined with multidisciplinary collaboration, can lead to favourable patient outcomes. Continuous training and adherence to critical care nursing protocols are essential for improving ICU care quality.

Patient Consent

Written informed consent was obtained from the patient's legal guardian for publication of this case report. Patient identity has been protected.

Conflict of Interest

The authors declare no conflict of interest.

Acknowledgment

The authors acknowledge the ICU nursing team for their dedication and professional excellence in patient care.

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