

Prevention of Pressure Ulcers in Hospitalized Patients: A Review of Evidence-Based Nursing Interventions

Ms Kusuma Habalakatti¹, Ms Soumya G Hodlur²

¹Assistant Professor, Department of Medical and Surgical Nursing,
SCT Shanti Institute of Nursing Sciences, Bagalkot

²Assistant Professor, SCT Shanti Institute of Nursing Sciences, Bagalkot

Abstract—Background: Pressure ulcers (also called pressure injuries) are a persistent patient safety issue in hospitalized populations, leading to increased morbidity, prolonged hospitalization, and higher care costs ^[1,2]

Objective: To synthesize current evidence on nursing-led strategies for preventing pressure ulcers in adult hospitalized patients.

Methods: A narrative review of peer-reviewed literature published between 2010 and 2025 was conducted using PubMed, CINAHL, and Cochrane reviews ^[1,3]. Key nursing interventions including bundled care approaches, skin assessment, repositioning, support surfaces, education, and multifaceted protocols were evaluated. ^[1,4]

Findings: Evidence supports that multifaceted, bundled interventions implemented by nursing teams such as regular risk assessment, repositioning, skin care protocols, use of pressure-relieving surfaces, and staff education reduce the incidence of pressure ulcers more effectively than isolated strategies. ^[1,4,5]

Conclusion: A comprehensive, evidence-based nursing care plan is essential to decrease pressure ulcer incidence and enhance quality of care ^[2]. Further research should explore cost-effectiveness and implementation barriers in resource-limited settings.

I. INTRODUCTION

Pressure ulcers are localized injuries to skin and underlying tissue, typically occurring over bony prominences due to prolonged pressure, shear, or friction ^[1]. These injuries are common in patients with limited mobility, particularly in acute and critical care settings, and are associated with pain, infection, and longer hospital stays. ^[2]

Hospital policies and nursing guidelines worldwide emphasize prevention as a priority ^[2]. Nurses are pivotal in assessing risk, implementing preventive measures, and educating patients and caregivers ^[1,3].

Despite this, incidences persist, which highlights variability in implementation and knowledge gaps in practice ^[4].

II. METHODS

This review drew on recent and high-impact research articles, systematic reviews, and evidence-based practice guidelines ^[1,2,3]. Databases searched included PubMed, CINAHL, and Cochrane, focusing on studies that evaluated nursing approaches to pressure ulcer prevention. Search terms included pressure ulcer prevention, nursing interventions, hospitalized patients, evidence-based strategies, and quality improvement ^[4].

III. NURSING INTERVENTIONS FOR PRESSURE ULCER PREVENTION

1. Multifaceted and Bundled Care Approaches
Multifaceted interventions that combine repositioning schedules, support surfaces, structured education, and skin care protocols consistently show greater reduction in pressure injury incidence than single interventions alone ^[1,4]. One systematic review reported that a care bundle dramatically reduced pressure injury prevalence when implemented as part of a structured nursing protocol, with educational components improving knowledge and practice among nursing staff ^[1].

2. Risk Assessment and Early Identification
Risk assessment tools such as the Braden Scale help identify patients at high risk for pressure injury development. Regular risk assessments are necessary for planning care; however, alone they are insufficient without parallel preventive actions ^[2].

3. Repositioning and Mobilization

Frequent repositioning is a cornerstone of pressure ulcer prevention. Evidence indicates that regular repositioning ideally every 2 hours for high-risk patients helps redistribute pressure, though evidence on specific intervals varies and is sometimes inconclusive without adjunct strategies [3].

4. Pressure-Relieving Support Surfaces

Support surfaces such as high-specification foam mattresses or alternating pressure mattresses reduce interface pressure. Guidelines recommend their use for patients at higher risk, though choice should be tailored to individual clinical needs [2].

5. Skin Care and Moisture Management

Maintaining skin integrity through regular cleansing, moisture management, and the use of protective barrier creams prevents skin breakdown, especially in incontinent patients or those with moisture exposure [1,2].

6. Education and Training for Nursing Staff

Staff education significantly influences prevention outcomes. Nursing education programs improve adherence to protocols and enhance confidence in implementing preventive measures. Multifaceted nursing education also helps address gaps in attitudes and competence related to pressure ulcer prevention [5].

7. Organizational and Quality Improvement Strategies

Quality improvement strategies that standardize assessment practices, documentation, and prevention protocol compliance have been shown to reduce pressure ulcer incidence when supported by organizational commitment [1,3].

IV. DISCUSSION

The evidence reinforces that pressure ulcer prevention is most effective when nursing interventions are combined into multifaceted care plans [1,4,5]. Single interventions (e.g., repositioning alone) can help but are often insufficient without integration into a comprehensive protocol that includes risk assessment, support surfaces, education, and monitoring [2,4].

Despite progress, implementation gaps remain, including inconsistent risk assessment and variation in practice adherence. Barriers such as staffing levels, resource availability, and nurses' attitudes toward prevention can influence outcomes [5].

V. CONCLUSION

Pressure ulcers remain a significant concern in hospitalized patients, but evidence-based nursing interventions can substantially reduce their incidence [1,2]. Comprehensive protocols combining risk assessment, regular positional changes, support surfaces, skin care, and ongoing staff education are critical [1,4]. Future research should focus on optimizing these interventions in diverse clinical environments and measuring long-term sustainability [3,5].

REFERENCES

- [1] B. Alshahrani, J. Sim, and R. Middleton, "Nursing interventions for pressure injury prevention among critically ill patients: A systematic review," *Journal of Clinical Nursing*, vol. 30, nos. 15–16, pp. 2151–2168, 2021, doi: 10.1111/jocn.15709.
- [2] National Pressure Injury Advisory Panel, European Pressure Ulcer Advisory Panel, and Pan Pacific Pressure Injury Alliance, *Prevention and Treatment of Pressure Injuries: Clinical Practice Guideline*. Perth, Australia: EPUAP/NPIAP/PPPIA, 2019.
- [3] L. M. Soban, S. Hempel, B. A. Munjas, J. Miles, and L. V. Rubenstein, "Preventing pressure ulcers in hospitals: Nurse-focused quality improvement interventions," *The Joint Commission Journal on Quality and Patient Safety*, vol. 37, no. 6, pp. 245–252, 2011.
- [4] E. D. Wahyuni, Y. S. Dewi, N. R. Laili, *et al.*, "A systematic review of pressure ulcer prevention," *Fundamental and Management Nursing Journal*, vol. 6, no. 1, 2023.
- [5] D. Scott and M. Jones, "Education and staff attitudes in pressure injury prevention: Systematic review," *Journal of Wound Care*, vol. 30, no. 7, pp. 515–525, 2021.