International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor 2025: 7.089

Pressure Ulcer Management among Nursing Staff in a Tertiary Care Government Teaching Hospital, Lucknow, India

Dr. Ariba Arshad[1], Brig Dr. Pradeep Srivastava[2], Dr. Nitin Dutt Bhardwaj[3], Dr. Toshi Sharma[4]

[1, 2, 3, 4]Department of Hospital Administration, King George's Medical University, Lucknow, India

Abstract: ***Background: Effective pressure ulcer management depends on consistent translation of recommended preventive and management measures into bedside nursing practice. A study was conducted to describe the observed practice of nursing staff regarding pressure ulcer management in a tertiary care government teaching hospital in Lucknow, India. Method: A total of 384 staff nurses were assessed in Shatabdi Phase I and Phase II hospital of King George's Medical University. Practice was assessed through a structured nine-item observational checklist covering skin assessment and staging, repositioning, skin care, skin protection, pressure redistribution, debridement and dressing, and nutritional practices. Result: The overall practice score reported was 57.8%. The highest achievement was observed for debridement and application of a suitable dressing (85%), followed by use of decompression/pressure redistribution devices (66%) and keeping the skin clean and dry (63%). Repositioning every two hours was achieved by 59%, use of skin protectant by 58%, and proper skin assessment with a pressure injury staging assessment tool by 57%. Lower achievement was observed for use of pH-balanced cleansing liquid (46%), provision of individualized nutritional guidance (45%), and regular monitoring of nutritional indicators (42%). Conclusion: The observational findings demonstrate variability in pressure ulcer management practices, with comparatively stronger performance in wound management and pressure redistribution and weaker performance in skin-care and nutritional components.***

Keywords: pressure ulcer, pressure injury, nursing staff, nursing practice, pressure ulcer management, observational checklist, tertiary care hospital.

1. Introduction

Pressure ulcers are localized areas of necrosis of tissue which results from unrelieved pressure when soft tissue is compressed between a bony prominence and an external surface for a longer period of time. Many synonyms for pressure ulcer have been used such as bed sores, pressure sores, decubitus ulcers and ischemic ulcers. Subcutaneous tissues are at a greater risk for development of pressure injury. The most common location for the development of pressure ulcers are areas of skin overlying bony prominences. These include sacrum, ischial tuberosities, greater trochanters, heels and lateral malleoli. About 95 percent of all pressure ulcers develop on the lower portion of the body: 65% in the pelvic region and 30% on the lower limbs.[1]

The patients who are at risk for pressure ulcer development are those in palliative care, critical care, paediatric and operating room settings, people who are overweight and obese, individuals with spinal cord injury. Critically ill patients who are hemodynamically unstable due to low blood pressure, shock, or dehydration are at risk for deep tissue injury.[2] Pressure ulcer is a common health problem in hospitals, nursing homes and health care settings. This condition not only causes pain and discomfort to the patient but it also increases the risk of infections, prolong stays in hospitals and increased healthcare cost. Prevention of pressure ulcer begins by identifying high risk individuals, systematically examining the skin, using bed and chair support services and changing posture, mobility and nutritional support.[3]

The development of pressure sores is a complex and multifactorial process. Both external and internal factors play a role in the development of pressure ulcers.

The pressure ulcers develop in stages and the stages are classified as follows:

- Stage 1- Intact skin with non-blanchable erythema
- Stage 2- Partial thickness skin loss with epidermis and dermis involved
- Stage 3- Total thickness skin loss extending into the subcutaneous tissue but not through the fascia underneath.

Full thickness tissue loss involving the fascia with significant tissue loss. Muscle, bone, tendon, or joint involvement may occur. [4]

2. Materials and Methods

Study design and study setting: The study was conducted in Shatabdi phase I and Shatabdi phase II hospital of King George's Medical University, Lucknow. The study is an observational type of study, it comes under statistical studies that have become more frequent and important during the last 20 years.[5]

Inclusion Criteria: All Staff nurses in In Patient Department (IPD) of Surgical Gastroenterology, Nephrology, Radiodiagnosis, Pain medicine unit, Dialysis unit, Radiotherapy, Pulmonary Critical Care unit, Surgical Oncology, Trauma Surgery, Neuro Surgery, Thoracic and Vascular Surgery, Medical Gastroenterology, Endocrine Surgery and Emergency Medicine of Shatabdi phase I and Shatabdi phase II of King George Medical University will be included in the study.

Exclusion Criteria: Sister incharge, Nursing Superintendent and all Staff nurses of Blood Bank and Transfusion Medicine, Human Organ Transplant, Clinical Haematology, Intensive

Care Unit (ICU) and Operation Theatre (OT) of Shatabdi phase I and Shatabdi phase II of King George Medical University will be excluded from the study.

Participants and sample size: A total of 384 nurses were included in the study. The study reports that the minimum sample size was calculated as 384.

Sampling Technique: For selecting the sample, a total consecutive sampling technique will be used. Consecutive sampling is a sampling approach where the sampling is done consecutively (i.e. first-come, first-served basis) after ensuring that the sample has fulfilled all the eligibility criteria specified and the recruitment process will continue until the required sample size is met. It is a non-probability sampling method. which is often used as sampling technique for ordered population, especially in a clinical survey.[6]

Practice assessment: Nursing practice was assessed by direct observation using a structured nine-item practice checklist (P1–P9). Each item was recorded as achieved or not achieved. The checklist covered: (1) proper skin assessment and use of a pressure injury staging assessment tool; (2) turning the patient every two hours; (3) use of pH-balanced cleansing liquid for skin cleansing; (4) keeping the skin clean and dry; (5) use of skin protectant for patients with incontinence; (6) use of decompression or pressure redistribution devices for at-risk patients; (7) debridement and application of a suitable dressing; (8) provision of individualized nutritional guidance; and (9) regular monitoring of nutritional indicators.

Data analysis: Statistical methods will be used for data analysis which will be done with the help of MS Excel and SPSS Software

3. Result

Practice was assessed among all 384 nurses. The overall practice score reported was 57.8%. Considerable variation was observed across the nine practice components.

The strongest observed practice was debridement of pressure ulcers and application of a suitable dressing, achieved by 328 nurses (85%). Use of decompression or pressure redistribution devices was achieved by 254 nurses (66%), while 242 nurses (63%) maintained the skin clean and dry. Repositioning every two hours was achieved by 227 nurses (59%), and 223 nurses (58%) used skin protectants for moisture-related skin lesions in patients with incontinence. Proper skin assessment and use of a pressure injury staging assessment tool was observed in 220 nurses (57%).

The lowest levels of achievement were seen in the nutritional and selected skin-care components. Only 178 nurses (46%) used pH-balanced cleansing liquid, 171 nurses (45%) provided individualized nutritional guidance, and 163 nurses (42%) regularly monitored nutritional indicators.

Table 1: Distribution of nurses according to achievement of individual practice components (N=384)

Item	Practice component	Achieved	Achieved %	Not achieved	Not achieved %
P1	Proper skin assessment and use of pressure injury staging assessment tool	220	57%	164	43%
P2	Patient repositioning – turning the patient every two hours	227	59%	157	41%
P3	Skin care – use of pH-balanced cleansing liquid	178	46%	206	54%
P4	Keeping the skin clean and dry	242	63%	142	37%
P5	Use of skin protectant for moisture-related skin lesions in patients with incontinence	223	58%	161	42%
P6	Use of decompression or pressure redistribution device for patients at risk	254	66%	130	34%
P7	Debridement of pressure ulcer and application of a suitable dressing	328	85%	56	15%
P8	Provision of individualized nutritional guidance	171	45%	213	55%
P9	Regular monitoring of nutritional indicators	163	42%	221	58%

4. Discussion

The practice findings show substantial variation across individual pressure ulcer management activities. Wound-related management, particularly debridement and application of a suitable dressing, had the highest level of observed achievement. Pressure redistribution and maintenance of skin hygiene were also relatively better implemented. In contrast, nutritional practices and the use of pH-balanced cleansing agents showed lower implementation. The experience-wise analysis demonstrated that practice achievement varied across experience groups rather than showing a uniform pattern across all nine components. In a descriptive study, the critical care nurses' health behaviour regarding the systematic evaluation of the skin and repositioning of patients intermittently by turning and positioning tools, along with other measures such as the use of mattresses and devices with a pressure-relieving effect, skin hygiene practices, controlling body fluid accumulation, and an effective diet and fluid regime, was assessed. The critical care nurses displayed a moderate to good performance level regarding their health protection behaviour.[7]

These findings indicate gaps in the routine implementation of selected pressure ulcer management practices, particularly nutritional assessment and support. The study therefore identifies a need for strengthening practical implementation through regular in-service education, competency-based training, supportive supervision, standardized protocols and regular audits.

5. Conclusion

The observational assessment of 384 nursing staff demonstrated an overall practice score of 57.8% for pressure ulcer management. Practice achievement was highest for debridement and application of a suitable dressing (85%) and lowest for regular monitoring of nutritional indicators (42%).

The findings indicate that although several core bedside practices were performed by a substantial proportion of nurses, important gaps remained in skin-care and nutritional components of pressure ulcer management. Strengthening standardized, evidence-based bedside practices and regular monitoring may help improve consistency of pressure ulcer care.

6. Future Scope of the Study

1) Interventional studies can assess the effectiveness of the education and training program on practice of nurses in the management of pressure ulcers.
2) Additional researches can be carried out to identify the obstacles that influence the adoption of pressure ulcer prevention practices.
3) Future research may include an examination of the effects of staffing, workload, and availability of resources on pressure ulcer prevention and management practices.
4) Comparative studies can be performed across different health care professionals and institutions.

References

[1] Kanj LF, Wilking SV, Phillips TJ. Continuing medical education: Pressure ulcers. Journal of the American Academy of DERMATOLOGY. 1998 Apr 1;38(4):517-38. 29.8.2025.
[2] Tirgari B, Mirshekari L, Forouzi MA. Pressure injury prevention: knowledge and attitudes of Iranian intensive care nurses. Advances in skin & wound care. 2018 Apr 1; 31(4): 1-8. 29.8.2025.
[3] Gadagi S, Pujar S, Natekar DS. Evaluation of knowledge and practice on pressure ulcer prevention among immobilized clients at HSK hospital. 29.8.2025.
[4] Zaidi SRH, Sharma S. Pressure Ulcer. National Library of Medicine. Treasure Island (FL): StatPearls Publishing; 2024. 29.8.2025.
[5] Cochran WG. Observational studies. Observational Studies. 2015;1(1):126-36.
[6] Bujang MA, Sa'at N. Application of consecutive sampling technique in a clinical survey for an ordered population: does it generate accurate statistics. Philipp Stat. 2016;65(2):87-96.
[7] Majeed HM, Hassan AF, Jasim AH, Al-Ganmi AH. Protective health behaviors among critical care nurses concerning pressure ulcer prevention for hospitalized patients at Baghdad teaching hospitals. Al-Rafidain Journal of Medical Sciences (ISSN 2789-3219). 2023 Sep 5; 5: 205-10.