



PRESSURE ULCERS: CARE AND PREVENTION

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Abstract

Pressure ulcers, also known as bedsores or pressure injuries, are localized injuries to the skin and underlying tissues caused by prolonged pressure, friction, or shear. They commonly occur in bedridden patients, older adults, and individuals with limited mobility. Pressure ulcers represent a significant healthcare challenge worldwide because they increase morbidity, mortality, healthcare costs, and reduce the quality of life of patients. Effective prevention and proper wound care management are essential in reducing complications and improving patient outcomes. This article reviews the causes, risk factors, classification, prevention strategies, and evidence-based approaches to pressure ulcer care.

Keywords: Pressure ulcer, bedsore, prevention, wound care, nursing care, patient safety.

Introduction: Pressure ulcers are one of the most common complications among patients with prolonged immobility. According to the World Health Organization (WHO) and international wound care organizations, pressure ulcers affect millions of patients annually in hospitals, nursing homes, and home care settings. They are especially common in elderly individuals, spinal cord injury patients, critically ill patients, and those with chronic diseases.

Pressure ulcers develop when continuous pressure reduces blood supply to the skin and tissues, leading to ischemia and tissue necrosis. Inadequate nutrition, moisture, infection, and poor hygiene can further contribute to ulcer development.



The prevention of pressure ulcers is considered a major indicator of healthcare quality because most pressure ulcers can be prevented through proper nursing care, patient assessment, and timely interventions.

Causes and Risk Factors

Several intrinsic and extrinsic factors contribute to the development of pressure ulcers.

Intrinsic Factors

- Advanced age
- Reduced mobility or paralysis
- Malnutrition and dehydration
- Chronic illnesses such as diabetes mellitus and vascular diseases
- Impaired sensory perception
- Poor circulation
- Obesity or underweight conditions

Extrinsic Factors

- Prolonged pressure on bony prominences
- Friction and shear forces
- Excessive moisture from sweating or incontinence
- Poor bedding conditions
- Inadequate repositioning

Common anatomical sites for pressure ulcers include the sacrum, heels, hips, elbows, ankles, and occiput.

Classification of Pressure Ulcers

Pressure ulcers are commonly classified into four stages according to tissue damage severity.

Stage I

The skin remains intact but shows non-blanchable redness. The affected area may be painful, warm, or firm.



Stage II

Partial-thickness skin loss occurs involving the epidermis and dermis. The wound may appear as a blister or shallow open ulcer.

Stage III

Full-thickness tissue loss extends into the subcutaneous tissue. Fat may be visible, but bone and muscle are not exposed.

Stage IV

Extensive tissue destruction occurs with exposed bone, tendon, or muscle. These ulcers carry a high risk of infection and complications.

Additional categories include:

- Unstageable pressure ulcers
- Deep tissue pressure injuries

Prevention of Pressure Ulcers

Prevention is the most effective strategy in pressure ulcer management. Evidence-based preventive measures include the following:

Regular Repositioning

Patients should be repositioned at least every two hours to relieve pressure on vulnerable areas. Wheelchair users should shift weight frequently.

Skin Assessment

Daily skin inspection helps identify early signs of tissue damage. Healthcare providers should pay attention to redness, swelling, moisture, and skin temperature changes.

Use of Support Surfaces

Special mattresses, cushions, foam pads, and air-fluidized beds help redistribute pressure and reduce tissue damage.

Nutritional Support

Adequate protein, calories, vitamins, and hydration are essential for maintaining skin integrity and promoting wound healing.



Moisture Management

Keeping the skin clean and dry is important. Incontinence care and the use of moisture barriers can reduce skin breakdown.

Patient and Caregiver Education

Education about mobility, nutrition, hygiene, and early warning signs is essential for preventing pressure ulcers.

Pressure Ulcer Care and Treatment

The management of pressure ulcers depends on the stage and severity of the wound.

Wound Cleaning

Pressure ulcers should be cleaned regularly using normal saline or appropriate wound cleansers. Harsh antiseptics should be avoided because they may damage healthy tissue.

Debridement

Necrotic tissue removal promotes healing and reduces infection risk. Debridement methods include surgical, enzymatic, autolytic, and mechanical techniques.

Dressings

Different dressings are selected depending on wound characteristics.

Common Types of Dressings

- Hydrocolloid dressings
- Foam dressings
- Alginate dressings
- Hydrogel dressings
- Antimicrobial dressings

Dressings maintain a moist wound environment and protect against contamination.



Infection Control

Infected pressure ulcers may require topical or systemic antibiotics. Signs of infection include redness, swelling, foul odor, fever, and purulent discharge.

Pain Management

Pain assessment and management are important aspects of pressure ulcer care. Analgesics and non-pharmacological interventions may improve patient comfort.

Surgical Intervention

Severe Stage III and Stage IV ulcers may require reconstructive surgery or flap closure procedures.

Role of Nurses in Pressure Ulcer Prevention and Care

Nurses play a critical role in preventing and managing pressure ulcers. Their responsibilities include:

- Conducting risk assessments using tools such as the Braden Scale
- Monitoring skin condition regularly
- Implementing repositioning schedules
- Providing wound care and dressing changes
- Educating patients and caregivers
- Documenting wound progression and treatment outcomes

Effective nursing interventions significantly reduce the incidence of pressure ulcers and improve patient recovery.

Complications of Pressure Ulcers

Untreated pressure ulcers can lead to serious complications, including:

- Cellulitis
- Osteomyelitis
- Sepsis
- Chronic pain
- Delayed healing



- Increased hospitalization duration
- Psychological distress

In severe cases, pressure ulcers may contribute to increased mortality rates, particularly among elderly and critically ill patients

Conclusion

Pressure ulcers remain a major healthcare concern worldwide, particularly among immobilized and vulnerable patients. Prevention strategies such as regular repositioning, nutritional support, skin assessment, and proper hygiene are essential for reducing the occurrence of pressure ulcers. Early detection and evidence-based wound care management improve healing outcomes and reduce complications. Healthcare professionals, especially nurses, play a vital role in pressure ulcer prevention and treatment through continuous assessment, patient education, and high-quality care practices.

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