

Evidence based
guide assessing
treating pressure
ulcers nursing essay



Pressure ulcers, also known as pressure sores or bed sores, are localised areas of skin damage resulting from underlying tissue damage caused by excess pressure preventing blood circulation and causing a lack of oxygen and nutrients to tissue cells. Eventually, tissue cells die and pressure damage is caused. Shearing, when a part of the body tries to move but the surface of the skin remains in place, can also cause pressure ulcers, as can friction forces, abrasion caused by shearing forces increasing to overcome the bodies resistance to movement. They can develop anywhere on the body, but are more common in areas that have little body fat, such as heels, buttocks, hips, and the lower back. They most commonly occur in people with limited mobility due to illness or ageing, who cannot reposition themselves to relieve the pressure. Other risk factors include vascular disease, dehydration, malnutrition, diabetes, neurological impairment (e. g. spinal cord injury), obesity, and poor posture. Particular sub-groups are particularly vulnerable to developing pressure ulcers, including those with spinal cord injury (Kirsch, 2001), the elderly (Ronda and Falce, 2002), and pregnant mothers (Prior, 2002). Wet or moist skin resulting from perspiration or incontinence can also increase susceptibility to shearing and friction.

Pressure sores can be identified by skin discolouration. Mild tissue damage causes skin to look brown or purple, whilst more severe ulcers can result in exposed muscle and bone. The area around the dead tissue is usually red and inflamed. There are four grades of pressure ulcer, which can be recognised accordingly (EPUAP, 2002):

Grade 1: Skin is intact and any discoloration is not affected by light finger pressure.

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Grade 2: Partial skin loss with epidermis and/or dermis. The pressure ulcer presents as an abrasion, blister or shallow crater.

Grade 3: Full thickness skin loss and damage of subcutaneous tissue (manifests as a deep crater).

Grade 4: Full thickness skin loss, extensive destruction, and necrosis to underlying tissue.

Approximately 400, 000 new pressure ulcers occur annually in England, accounting for approximately 2% of gross NHS expenditure (Posnett and Franks, 2008). Eighteen percent of inpatients have a pressure ulcer and the length of a hospital stay is reported to be 2-3 times greater for those with pressure ulcers (Allman et al., 1999). Prolonged contact with healthcare services is necessary for people with pressure ulcers. Increased mortality is also associated with pressure ulcers, particularly in older people (Landi et al., 2007). A two to four-fold increase in mortality risk has been reported, particularly in older people in intensive care units (Bo et al., 2003).

Not only are pressure ulcers a burden on NHS resources, but they also have a huge impact on patient quality of life – physically, socially, and psychologically (Hopkins et al., 2006). Wounds are often painful (Hopkins et al., 2006), have a bad odour and can exude abundantly, especially during the early phases when inflammation is most common (Iocono et al., 1998). They also require extensive care and frequent dressing changes.

The personal and economic implications of pressure ulcers are so vast that their prevention has been adopted as one of eight high impact actions for nurses and midwifery (NHS Institute for Innovation and Improvement, 2009).

Wound Assessment

According to NICE (2005) clinical guidelines, pressure ulcer assessment should include the following components: identifying the cause of the ulcer; site/location; dimensions; stage or grade; amount and type of exudate; signs of infection; pain; surrounding skin; undermining/tracking (sinus or fistula); odour; and the involvement of clinical experts, such as a tissue viability nurse. It is also recommended that this is supported by tracings and/or photography (calibrated with a ruler).

Taking a holistic approach to assessment, other factors of importance within the assessment include: health status; illness status (i. e. acute, chronic); co-morbidities; mobility; posture; sensory impairment; nutritional status; previous pressure damage; psychological factors (i. e. mood, motivation); social factors (i. e. home environment); continence status; medication; and blood flow. In terms of mobility, a thorough investigation is needed, including ability to walk, reposition, and transfer, etc.

The holistic assessment is ongoing, with regular patient measurement of risk, symptomology, infection, and changes in patient need. Since pressure ulcers are treated by an inter-disciplinary team of health professionals, it is essential to each assessment is recorded accurately, as are any treatments provided (NMC Code, 2008).

Wound aetiology most commonly identified during the assessment of pressure ulcers include odour, exudate, infection, and wound bed tissues (e. g. slough, necrotic tissue). When assessing the ulcer, the surface area of the ulcer needs to be measured intermittently over time via photographs and tracing of the margins; the two maximum perpendicular axes also need measuring (Stacey et al., 1991). Re-assessment is required at 12-weeks if there is no progress, followed by 12-weekly intervals. If the wound is not healing, then a number of issues need to be considered, including the aetiology of the ulcer, comorbidities, management, patient compliance, and biopsy.

Wound Management

Wound cleansing, the application of fluid to the ulcer to aid removal of exudate, debris and contaminants, is an important component of pressure ulcer care and infection control (Moore and Cowman, 2008). Techniques for wound cleansing include high-pressure irrigation, swabbing, low-pressure irrigation, showering, bathing, washing the affected area under running liquid, and hydrotherapy (Lindholm et al., 1999). Irrigation tends to be the preferred technique (Joanna Briggs Institute, 2008). Different cleansing fluids can also be used, such as saline, water, and antiseptic solutions. Normal saline or tap water is recommended (Joanna Briggs Institute, 2008), with the evidence showing them to be more effective at lowering risk of infection than sterile isotonic saline (Angeras et al., 1992).

There are a vast array of dressings available, the most appropriate depending on the characteristics of the wound. Hydrocolloid dressings are recommended for low to moderately exuding wounds, with thin versions <https://assignbuster.com/evidence-based-guide-assessing-treating-pressure-ulcers-nursing-essay/>

being used for wounds that are dry or have low levels of exudate (Fletcher, 2005). When hydrocolloid comes into contact with wound exudate it forms a gel that facilitates autolytic debridement, which uses the body's own enzymes and moisture to re-hydrate and soften any hard eschar and slough. These dressings are usually used for grade 3 and 4 pressure ulcers.

Alginate dressings, on the other hand, absorb fluid, controlling wound hydration. These dressings are usually used for wounds with moderately or heavy exude. Some alginates are suitable for infected wounds if used alongside antibiotics; daily dressing changes are usually necessary in such cases.

Where debridement is necessary, hydrogel dressings offer the gentlest method as they soften the necrotic tissue to facilitate its separation from the wound bed. These are usually used these for odorous ulcers. Activated charcoal dressings can also be useful for the containment of malodour (Kelly, 2002).

Particularly effective for infection management are silver-impregnated dressings and hydropolymer dressings, which reduce bacteria at the wound surface by an anti-microbial action (Ballard and McGregor, 2002). Aquacel AG, manufactured by ConvaTec, are topical antimicrobial dressings containing silver, which are recommended for patients who are at particular risk of infection, such as patients with diabetes (Brown, 2006). Aquacel AG is made from sodium carboxymethylcellulose (NaCMC) containing 1.2% silver which is an ionic form. These dressings are ideal for large, open wounds as the dressing traps bacteria and provides a micro-environment that facilitates

healing. Whilst the Aquacel AG dressing is applied directly to the wound, a secondary dressing is required. Specific indications for use are for application to exuding wounds such as leg ulcers, superficial pressure ulcers, partial thickness burns, and most granulating wounds. There are no known contraindications to the use of these dressings, but they are unlikely to be useful for wounds that are very dry or covered with hard black necrotic tissue. These dressings are available in a range of sizes including 5cm x 5cm, 10cm x 10cm, 15cm x 15cm, 20cm x 30cm, and 2g x 45cm. The dressings are easy to remove, preventing unnecessary pain or skin damage, improving the patient experience.

Ibuprofen-impregnated dressings (Biatain-Ibu) are available for patients with very painful wounds (Hampton, 2008). Such dressings are made highly absorbent foam and ibuprofen (Jørgensen et al., 2006). On contact with wound fluid, 0.5mg of ibuprofen per cm² is released onto the wound.

It is necessary to determine the condition of the wound and identify the objectives of treatment so that the most suitable dressing can be used in reaching treatment objectives. Possible objectives include selecting dressings based on grade, presence or likelihood of infection, amount of exudate, need for debridement, level of pain, and the patient preference.

The effective management of pressure ulcers is essential for reduce patient distress and discomfort (Spilsbury et al., 2007). For example, using a dressing that offers pain-free removal, as is often the case with alginate dressings, can make a huge difference to the patient experience.

Inappropriate dressings can stick to the wound bed, which can hinder the healing process.

In terms of infection, this can be handled in a number of ways, not merely via wound cleansing and appropriate dressing. For example, the aseptic technique can be used when dressing pressure ulcers in order to prevent microbial contamination by organisms that could cause infection (ICNA, 2003). This involves ensuring that only uncontaminated equipment and fluids can come into contact with susceptible body sites during the dressing procedure. When adopting this method, it is necessary to ensure that the packaging of equipment is in good condition and in date and that a dispenser of alcohol hand gel is within access for hands to be decontaminated. A disposable apron and clean gloves should be used while dressing ulcers. Furthermore, if there is more than one pressure ulcer, caution needs to be taken to minimise environmental contamination and cross-infection. Any old dressings need to be removed carefully to control for the large amount of micro-organisms that are shed into the air and could spread to other susceptible wounds. On completing the aseptic procedure, all waste needs to be disposed according to waste disposal policies.

Infectious agents such as bacteria and viruses can attach to a 'reservoir' that supports the infectious agency to survive and multiply (e. g. pressure associated with long periods of sitting). If the infectious agent then finds a 'portal' of exit such as via the skin, respiratory or urinary system), the infection will spread. This chain of infection requires breaking in order to prevent the spread of micro-organisms. There are three primary techniques that can break the chain, including standard precautions (e. g. hand hygiene, <https://assignbuster.com/evidence-based-guide-assessing-treating-pressure-ulcers-nursing-essay/>

aseptic techniques); decontamination (e. g. of patient care equipment); and environmental cleanliness (e. g. adhering to the Good practice in infection prevention and control: guidance for nursing staff (RCN, 2005)).

Evidence-Based Guidance

The National Institute of Clinical Excellence (NICE, 2005) have published guidelines on 'The management of pressure ulcers in primary and secondary care: A Clinical Practice Guideline,' as developed by the Royal College of Nursing. The guidelines comprise the following areas of pressure ulcer management: holistic assessment; pressure-relieving support surfaces; mobility and positioning; dressings and topical agents; debridement; nutritional support; surgery; electrotherapy and electromagnetic therapy; and topical negative pressure. Any recommendations made within the guidance are based on the best available evidence of clinical and cost-effectiveness.

The recommendations made within the NICE guidance, along with personal judgment and patient input, provide a minimum standard for providing high quality care. They are particularly useful in outlining some of the key procedures in the assessment of ulcer severity, such as the recording of ulcer grade using the European Pressure Ulcer Advisory Panel Classification System (EPUAP and NPUAP, 2009). This facilitates treatment decision-making.

Grade 2 ulcers above are to be documented as a local clinical incident.

Patients with grade 1-2 ulcers should be provided with high specification foam mattress or pressure-reducing cushion. Close observation of skin

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changes and the documentation of positioning and repositioning regimes are also essential, the latter for the purposes of consistency in the provision of care from different healthcare professionals. Patients with grade 3-4 ulcers should be provided with an alternating pressure mattress or a continuous low pressure system.

The NICE guidelines are a useful resource, but do have some limitations in terms of translating evidence into practice. The use of pressure-relieving surfaces is a key recommendation for pressure ulcer prevention and yet many of the pressure-relieving items of equipment are expensive and not easily obtained within today's economic climate. There is a paucity of research on the efficacy and cost-effectiveness of various pressure-relieving equipment and the research that is referred to is generally from low quality studies that are under-powered or possess flaws in methodology. The same is true of recommendations on dressings, whereby recommendations are made not on the evidence but more so on professional consensus. It is important to note, however, that the NICE guidelines on pressure ulcer management are to be used alongside the guidance on pressure ulcer prevention, which does provide further information on pressure-relieving devices, including beds, mattresses and overlays (NICE, 2003).

Guidelines on nutritional support were stronger, although research with larger numbers of participants is needed to strengthen findings further. In general, however, the evidence is in favour of utilising the Malnutrition and Universal Screening Tool (MUST; Elia, 2003) in carrying out a nutritional risk assessment of patients and using this alongside their general health status, patient preference, and expert input from a dietician to make decisions

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regarding nutritional supplementation. It is not always evident that a patient is malnourished, highlighting the importance of adopting an effective means of assessing nutritional status. Indeed, patients with wounds can require as much as 1, 000kcal (kilocalories) more than usual per day (Woodrow, 1998) and requirements for protein, vitamins A, B, C and iron also increase (Gray and Cooper, 2001).

Surprisingly, the guidelines do not refer to the WHO Pain Ladder (WHO, 1990), which can be a useful tool in deciding on the most appropriate pain relief. Failing to assess and treat pain is negligent (Levine et al., 2008) and thus the guidelines would be more comprehensive if it were to integrate this issue into its recommendations. Pain is emphasised within the guidelines as being part of pressure ulcer management, however, the recommendation of tools such as the WHO Pain Ladder would be demonstrative of a patient-centred approach via the measurement of subjective levels of pain.