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PRESSURE ULCERS: HOW TO IDENTIFY DIFFERENT CATEGORIES

The quality agenda has identified pressure ulcers as a largely preventable patient safety incident with the National Patient Safety Agency encouraging clinicians to adopt a zero tolerance approach. This article examines the various categories of pressure ulcer and how to distinguish between them.

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The prevention and treatment of pressure ulcers is the responsibility of every clinician. The National Pressure Ulcer Advisory Panel (NPUAP) (2009) states that the information used to determine the stage of a pressure ulcer is not exclusively held by any health profession.

Cost of pressure ulceration

Up to 200,000 people in the UK have a chronic wound. The estimated cost of treatment is £2.3–£3.1 billion per year, and rising (Posnett and Franks, 2008). Additionally, the Department of Health (DH) (2010) estimates that a category III pressure ulcer costs between £363,000–£543,000 and a category IV ulcer between £447,000–£668,000 to treat.

Added to these financial costs are: the reduction in the quality of life to individuals; reduced mobility; possible pain and malodorous wounds. It is, therefore, important that all clinicians understand how to prevent pressure ulceration and identify those individuals at risk of developing one.

What is a pressure ulcer?

The skin is the largest organ in the human body accounting for approximately 15% of a person's body weight and receiving a third of their circulating blood volume (Flanagan and Fletcher, 2003). Protection is one of the major homeostatic functions of the skin, as it is constantly exposed to the trauma of its external environment (Flanagan and Fletcher, 2003).

Damage to the skin can lead to the development of a pressure ulcer if pressure remains unrelieved. Therefore, it is vital that all clinicians understand the anatomy of the skin and its underlying structures in order to detect and prevent early skin damage.

The NPUAP and European Pressure Ulcer Advisory Panel (EPUAP) (2009) have defined pressure ulcers as 'a localised injury to the skin and/or the underlying tissue, usually over a bony prominence, as a result of pressure or pressure in combination with shear'.

The development of pressure ulcers in healthcare is a serious incident, and each clinician has a duty to understand the causes of these ulcers and the effective, evidence-based preventative strategies that can be used.

The main causes of pressure ulceration are:

- » Shear
- » Friction
- » Unrelieved pressure
- » Reduced mobility
- » Poor nutrition
- » Underlying health issues
- » Extremes of age
- » Incontinence, both urinary and faecal.

Each individual clinician must ensure that they have the requisite knowledge and skills to be able to effectively assess the patient's skin, and plan care around promoting skin integrity. If a clinician is unsure of how to plan or implement appropriate care strategies in line with local and national guidance, policies and procedures, then advice should be sought from an appropriately trained clinician.

The patient should be central to all care interventions and, as such, patients, their family and carers should be advised on pressure-relieving strategies and healthy lifestyle choices. This will ensure that they make an informed decision regarding care and can voice their own preferences in maintaining a healthy lifestyle.

Pressure ulcers

Pressure ulcers can be described

as one of four categories, previously referred to as grades or stages. The categories refer to the amount of visible tissue loss, stage or grade of the ulcer.

Category/stage III or IV deep tissue injuries, or those that are difficult to classify, are considered 'never events' (a serious, largely preventable patient safety incident) and, therefore, accuracy is imperative in making this injury distinction (NPUAP, 2009).

Never events have also been highlighted by a DH (2009) document challenging the NHS to provide safer care for patients. It recommends that the NHS should initially focus on eliminating avoidable cases of pressure ulcers, *Clostridium difficile* and venous thromboembolism. The DH (2009) states that the majority of pressure ulcers are entirely preventable through risk assessment and implementing effective and timely pressure-relieving measures, such as repositioning immobile patients and removing pressure from at risk areas.

Classification of pressure ulcers

A break in the skin can be assigned a category once the wound has been diagnosed as a pressure ulcer (NPUAP, 2009). Assigning a pressure ulcer category is based on visual inspection of the skin and determines the extent of tissue destruction and wound depth (NPUAP, 2009). The EPUAP and NPUAP (2009) presents the four categories/stages as:

- ▶▶ Category/stage I: non-blanchable erythema (redness of the skin)
- ▶▶ Category/stage II: partial thickness
- ▶▶ Category/stage III: full

thickness skin loss

- ▶▶ Category/stage IV: full thickness tissue loss.

For full explanation of each category, please access:

http://www.epuap.org/guidelines/Final_Quick_Prevention.pdf

Identifying category III and IV pressure ulcers

Category III pressure ulcers are defined as being of full thickness skin loss, where the subcutaneous fat may be visible to the naked eye, but the skin damage has not exposed bone, tendon or muscle. Slough may be present but does not obscure the depth of tissue loss and may include undermining and tunneling. Undermining is deep tissue damage under the wound margins, and the wound is often far larger underneath the surface due to the damage to the deep tissue. Tunneling is a narrow opening under the skin that causes a space and could lead to possible abscess formation.

The depth of a category/stage III pressure ulcer varies by anatomical location — the bridge of the nose, ear, occiput (back of the head) and malleolus (bony prominence on the ankle) do not have subcutaneous tissue (adipose/body fat) and category/stage III ulcers can be shallow/superficial. In contrast, areas of significant adiposity can develop extremely deep category/stage III pressure ulcers (EPUAP and NPUAP, 2009).

In comparison, category IV pressure ulcers also have full thickness tissue loss, but in this category there is exposed bone, tendon or muscle, like in category III slough or eschar may also be present (EPUAP and

NPUAP, 2009). These ulcers can extend into the muscle and/or the supporting structures (for example the fascia, tendon or joint capsule) making osteomyelitis (infection of the bone) or osteitis (inflammation of the bone) a risk factor.

The depth of category/stage IV pressure ulcers vary by anatomical location. As mentioned before, the bridge of the nose, ear, occiput and malleolus do not have (adipose) subcutaneous tissue and these ulcers can also be shallow. A category IV pressure ulcer will often include undermining and tunneling (EPUAP and NPUAP, 2009).

A pilot pressure ulcer prevalence survey conducted across 26 hospitals in Belgium, Italy, Portugal, Sweden and the UK was carried out by Vanderwee et al (2007). Out of 5,947 patients, 1,078 were reported to have a pressure ulcer. The results of the study identified that most of the pressure ulcers were category I (n=454) or category II (n=282). Full thickness pressure ulcers were less common — category III (n=199) and category IV (n=143). However, despite the fact that this study identified that less patients had developed a category III or IV pressure ulcer, the cost of ulcers remains a financial burden on the health service.

This is due to the cost of nursing care; cost of pressure redistributing mattresses; cost of wound dressings; extended stay in hospitals for treatment of pressure ulcers and community care when patients are discharged home with an ulcer. Posnett and Franks (2007) maintain that pressure ulcers are the single most costly chronic wound to the NHS.

Meeting the quality agenda

The DH (2009) stated that there would 'be safer care for patients who could be confident that they would be protected from avoidable harm,' and identified pressure ulcers as an area that required tackling. In 2010, the National Patient Safety Agency [NPSA] urged the NHS to take a zero tolerance approach to the development of pressure ulcers and work towards preventing them entirely.

The NPSA (2010) offered guidance on the prevention of pressure ulcers highlighting simple solutions including observing patients' skin, changing the position of patients at regular intervals, checking for a moisture-free environment and monitoring patients' nutritional status. The NPSA (2010) state that since 2005, there have been around 75,000 patient safety incidents reported to the NPSA regarding patients developing pressure ulcers. Analysis of the reported patient safety incidents has identified that pressure ulcers are not just associated with those typically considered at risk (NPSA, 2010).

This is clearly a cause for concern and highlights the need for accurate patient 'at risk' assessment, regular individual-based reassessments, implementation of evidence-based care and regular evaluation of the care interventions by all clinicians involved in skin care.

The NHS Institute for Innovation and Improvement (2009) published eight High Impact Actions (HIA) including *Preventing avoidable pressure ulcers in NHS provided care*, which recognises

the importance of developing and implementing strategies that will help to reduce the incidence of pressure ulceration.

All NHS organisations now have a statutory duty to report serious patient safety incidents to the NPSA. This was made mandatory in April 2010, (prior to this reporting had been voluntary). The development of a category III or IV pressure ulcer is to be classified as a patient safety issue and, as such, will be recorded as a clinical incident, informing the tissue viability team.

Additionally, the reduction in pressure ulcers is one of the locally agreed Commissioning for Quality and Innovation (CQUIN) targets for 2010/11 in England, again, supporting and reiterating the importance of reporting pressure ulcer development and incidence (DH, 2008).

Conclusion

Pressure ulcers are a financial burden to healthcare services and can reduce the quality of life for those individuals who develop them. Through the quality agenda, the DH has defined its ambition to eliminate all avoidable pressure ulcers in NHS care. It is the task of all clinicians to educate themselves on the causes of pressure ulcers and the strategies to prevent ulceration, access and read relevant local, national and European guidance. It is also vital to report all category III and IV ulcers as critical incidents. Integral to this is the need to educate all patients, their family and carers on prevention strategies and healthy lifestyle choices to prevent skin damage.

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