Understanding the latest guidance on pressure ulcer prevention

Michael Ellis

Pressure ulcers result in pain and poor quality of life for patients as well as being regarded as an indicator of poor practice for nurses and healthcare organisations. Similarly, prevention of pressure ulcers is preferable to treatment, which can be expensive. This article considers the latest guidance on the prevention of pressure ulcers and looks at some of the innovations such as pressure-relieving devices and the use of dressing products, which nurses can use to provide holistic care. Finally, the author reiterates that despite the use of guidelines and innovative products, the nurse must also rely on their clinical judgement.

KEYWORDS:
- Pressure ulcers
- Prevention
- Support surfaces
- Dressings

‘Nurses can generally judge, by talking to patients, observing them and assessing the quality of their skin, who are most likely to develop a pressure ulcer. Despite this, patients continue to sustain pressure injuries...’

PRESSURE ULCERS

Pressure ulceration is defined in the literature as tissue damage that arises from the application of direct pressure and/or shearing forces to the skin and soft tissues, usually over a bony prominence (National Pressure Ulcer Advisory Panel [NPUAP] et al, 2014). In the UK, the National Institute for Health and Care Excellence (NICE, 2014) produced its own guidelines on the prevention and management of pressure ulcers, which is informed by an internationally standardised pressure ulcer assessment scale (NPUAP et al, 2014).

This pressure ulcer grading system has provided a common language for clinicians to easily describe the depth of tissue damage and has been regularly updated in response to a growing evidence base on the aetiology and pathophysiology of pressure ulceration (NPUAP et al, 2014).

However, the NPUAP (2016) recently suggested that pressure ulcers should actually be referred to as ‘pressure injuries’ to better highlight the concept of healthcare-associated harm. The NPUAP has also highlighted the need to include in the guidelines medical device-related pressure injury and injury to the mucosal membranes. The European Pressure Ulcer Advisory Panel (EPUAP, 2016) is debating the impact of this and has yet to identify their position on the proposed changes to the terminology. However, the new NPUAP classification has the potential to significantly effect the broader context of pressure ulcer classification and prevention.

PRESSURE ULcer RISK

NICE (2003; 2005; 2014) has published guidance relating to the assessment of risk. Consistently, in each guideline they have identified a lack of strong evidence that pressure ulcer risk assessment scales are of any greater value than clinical judgment. The 2003 NICE guidance suggested that if a scale was used, it should be as an aide memoire only; while in the 2014 NICE guidance, the suggestion was that nurses should only use a validated scale in support of clinical judgement.

Despite the changing recommendations, the focus remains on the need for community nurses to have adequate

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information about the patient to make an individualised risk assessment. The guidance also highlighted the need to revisit assessments regularly, as all patients are potentially at risk of pressure damage (NICE, 2014).

Lahmann et al (2006) identified that patients sometimes developed pressure ulcers despite being assessed as not being at risk following the use of validated risk assessment tools. Similarly, Moore and Cowman (2014) considered the ability of a number of different assessment scales to impact on pressure ulcer incidence reduction, concluding that there was not enough evidence from well-designed randomised controlled trials to support the use of risk assessment tools. Balzer et al (2013) also highlighted that there is a lack of evidence about how pressure ulcer risk assessment scales actually relate to preventative care.

In the author’s opinion, this does not necessarily mean that pressure ulcer risk assessment tools are worthless. Indeed, they have been a part of nursing practice for many years, however, it can be difficult for nurses to distinguish their own knowledge of risk assessment criteria from an actual patient who may be at risk. What is important is that when tools and scales are used to estimate risk, the outcomes of these tools are considered alongside a broader, holistic nursing assessment of the patient; in short, clinical judgment is key.

### PRESSURE ULCER PREVENTION

The act of performing a risk assessment will not in itself prevent pressure ulcers (Anthony, 2008), and it is important that any assessment nurses make is followed by appropriate interventions. Gibbons et al (2006) outlined the SSKIN bundle approach as a way of increasing the reliability of interventions as part of a safety improvement project (Table 1).

The SSKIN bundle approach represents a move away from the traditional reliance on mattresses and cushions as the sole method of pressure ulcer prevention and guides clinicians to consider five key components of care delivery:  
- Skin assessment
- Skin’s surface
- Importance of the patient keeping moving
- Incontinence
- Nutrition.

To support this, a Cochrane review by McInnes et al (2015) highlighted the ongoing paucity of high-quality evidence that any particular mattress system is better than another, the only demonstrable finding being that ‘high specification’ foam mattresses were better than
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traditional hospital mattresses. However, it is difficult to define what ‘high specification’ foam means in the modern context.

A systematic review by Sprigle and Sonenblum (2011) identified that the effect of regular repositioning is probably more important than reliance on support surfaces, allowing the tissues to fully reperfuse as they are completely offloaded. The study also identified difficulties in prescribing a blanket approach to the frequency of repositioning as it is dictated by a number of factors; type of support surface, patient position, comorbidities, weight, patient’s capacity for independence, etc.

McCoulough (2016), however, highlights the difficulties of delivering intensive care procedures such as the SSKIN bundle in a community setting where, for example, there is less contact with clinicians than in an inpatient environment, greater involvement of family and carers, and much more patient education required.

**SUPPORT SURFACE INNOVATIONS**

In recent years, manufacturers of support surfaces have turned their attention to innovation as a way of setting their products apart. However, many follow similar principles and in the author’s opinion, clinical decisions about support surfaces are often driven by cost.

One such innovation is the advent of hybrid mattresses that contain both air cells and foam, some of which use a system of valves to circulate air around the mattress in response to small patient movements.

Others can be classed as high specification foam mattresses that have the option of adding a pump to produce a dynamic system. More recently, some companies have introduced gels as a way of increasing the immersion effect of the support surface — these also claim to improve the skin’s microclimate by reducing skin temperature and sweating (Registered Nurses’ Association of Ontario [RNAO], 2016).

The skin’s microclimate has been an increasing consideration in preventing pressure damage partly because of its inclusion in international pressure ulcer prevention guidance (NPUAP et al, 2014), which gives microclimate as much importance as the support surface’s ability to reduce pressure. With this new focus, the ability of support surfaces to keep the skin cool and dry has led to different materials being used as mattress covers, as well as the introduction of new ‘overlay’ systems that actively move the air between the pressure-reducing surface and the skin (McInnes et al, 2015).

In addition to mattresses and cushions, localised surfaces for specific areas of the body are increasingly available. These may come in the form of gel polymers, silicone sheets, foams, inflatable air cells or ‘fluff’ fibres. Where a defined area of the body is at risk...
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of pressure ulcer development these devices can add a degree of extra protection, though as yet, there has not been any high quality clinical trials into these products that nurses can use to help them choose the right product. While many of the products have been subject to local studies that provide evaluations of their value, these are difficult to draw accurate conclusions from.

What is clear is that the choice of support surfaces available is increasing and this can make it difficult for the nurse to select what is most appropriate for a particular patient. In the author's opinion, the ideal support surface would be one that is pressure-reducing, improves skin microclimate, allows the patient to move independently and is comfortable (RNAO, 2016). However, individualising support surfaces for specific patients may not be easy to achieve in light of difficult financial circumstances and the logistical capabilities of individual healthcare organisations.

### Holistic Care

Despite some innovation, the evidence available to community nurses around the prevention of pressure damage remains weighted towards the regular assessment of skin, use of appropriate support surfaces, regular repositioning to relieve pressure, good skin care... and good nutritional care.

Brindle (2010) suggested that the benefit of using dressings to prevent pressure damage arises from their ability to help with local microclimate management and reduce shear forces, as well as the fact that they are easy to remove and replace, which permits regular inspection. In the author's opinion, the final point helps to offset some of the financial concerns about the use of dressings as prophylactic measures. If a new dressing were being used at every skin inspection (sometimes two-hourly), the cost would be prohibitive; however, silicone adhesives allow dressings to stay in place for days at a time.

However, the international guidelines (NPUAP et al, 2014) suggested that when making a decision about whether to use dressings as a prophylactic measure, nurses still need to assess whether a dressing is appropriate for the particular patient as well as considering the dressing's features (Table 2).

### Table 1: The SSKIN bundles five components of care

<table>
<thead>
<tr>
<th>Care component</th>
<th>Description</th>
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<tbody>
<tr>
<td>Skin assessment</td>
<td>Regular inspection of the skin and an assessment of its condition</td>
</tr>
<tr>
<td>Surface</td>
<td>Selection of appropriate support surfaces (e.g. mattress, chair, cushions) and protection from surfaces on medical devices (e.g. oxygen tubing), ensuring that they are effective</td>
</tr>
<tr>
<td>Keep moving</td>
<td>Regular repositioning</td>
</tr>
<tr>
<td>Incontinence</td>
<td>Support to manage incontinence needs and protect skin from moisture-associated skin damage (M ASD) caused by urine and faeces (and other body fluids such as wound exudate)</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Promote effective hydration and nutritional intake</td>
</tr>
</tbody>
</table>

After years of guidance suggesting that the use of dressings to prevent pressure ulcers is unlikely to provide significant benefit, recent international guidelines have identified some well-designed studies that suggest dressings actually may be of some value (NPUAP et al, 2014).

### Table 2: Important considerations when choosing the correct dressing

<table>
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<tr>
<th>Consideration</th>
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<tbody>
<tr>
<td>Dressing's ability to manage microclimate</td>
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<tr>
<td>The ease of application and removal</td>
</tr>
<tr>
<td>The ability to regularly assess the skin</td>
</tr>
<tr>
<td>Where the dressing will be applied (anatomical location)?</td>
</tr>
<tr>
<td>Correct dressing size</td>
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</tbody>
</table>

### Table 3: Common pressure ulcer reduction strategies

<table>
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<tr>
<th>Strategy</th>
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<tr>
<td>Patient/staff education around risk and risk reduction</td>
</tr>
<tr>
<td>Defining risks</td>
</tr>
<tr>
<td>Setting goals</td>
</tr>
<tr>
<td>Regular skin inspection</td>
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<tr>
<td>Supporting aspects of individual care plan delivery as appropriate</td>
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Following the principles of the SSKIN bundle (Gibbons et al, 2006) and questioning how evidence may be integrated into nursing practice will help community nurses remain focused on the needs of the patient. Similarly, the guidelines issued by NPUAP et al (2014) help to spell-out where the nurse’s focus should be when trying to prevent pressure ulcers: of particular note is the importance the NPUAP guidelines place on involving patients and their carers in pressure ulcer reduction strategies (see Table
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3), something that should not be overlooked if nurses are to provide care for the whole person.

CONCLUSION

Providing effective pressure ulcer prevention is reliant on the nurse understanding the patient’s needs and responding to them. Nurses also need to be aware of innovative products and technology, but should ensure that these are integrated with an understanding of best practice.

Guidelines are always helpful in directing the nurse’s focus, but they are not sufficient to prescribe the care that each individual needs. The nurse should be able to combine the principles of best practice outlined in guidelines such as the NPUAP et al (2014) with their own local policies to critically consider their patient’s individual needs. This will help them provide a plan of care that mitigates risk so far as is reasonably possible and provides support where there are shortfalls.

REFERENCES


KEY POINTS

- Pressure ulcers result in pain and poor quality of life for patients as well as being regarded as an indicator of poor practice for nurses and healthcare organisations.

- Similarly, prevention of pressure ulcers is always preferable to treatment, which can be expensive.

- Providing effective pressure ulcer prevention is reliant on the nurse understanding the patient’s needs and responding to them.

- Nurses also need to be aware of innovative products and technology, but should ensure that these are integrated with an understanding of best practice.

- This article considers the latest guidance on the prevention of pressure ulcers and looks at innovations such as pressure-relieving devices and the use of dressing products, which nurses can use to provide holistic care.

- Guidelines are always helpful in directing the nurse’s focus, but they are not sufficient to prescribe the care that each individual needs.

- The choice of support surfaces available to community nurses is increasing and this can make it difficult for them to select what is most appropriate for a particular patient.

- The author reiterates that despite the use of guidelines and innovative products, the nurse must also rely on their clinical judgement.

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