

# Pressure Ulcers

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**A**t the recent Third Congress of the World Union of Wound Healing Societies held in Toronto in June, one of the 10 available streams focused solely on the problematic issue of pressure ulcers. The presenters confirmed that pressure ulcers remain one of our biggest challenges in wound care. Despite increased awareness, greater educational opportunities, wide dissemination of best practice guidelines and a better appreciation of quality improvement practices, there remains little evidence across the Americas and Europe to demonstrate an overall trend in the decrease of pressure ulcer prevalence.<sup>1</sup> And, unfortunately, pressure ulcers continue to be “one of the most expensive wounds we have to manage.”<sup>2</sup>

## Extent of the Problem

Discussions focused on the differences, strengths and weakness of collecting and analyzing prevalence and incidence data for pressure ulcers. Prevalence studies can be misleading depending on how the data were collected, and it is advised to review this information cautiously. When considering prevalence, it is important to reflect on how the particular study was conducted (skin inspection vs. chart review: chart reviews usually identify lower prevalence), what type of pressure ulcer classification was used and whether Stage I pressure ulcers were included. The collecting of incidence data has an advantage in that it provides a method of monitoring preventative actions, but it can be difficult when collecting the data to determine when the skin damage actually occurred. Incidence studies are a more appropriate measure of causation and evaluation than prevalence studies.<sup>3</sup>

When looking at prevalence and incidence rates throughout the Americas, one would expect that trends would be changing due to better education, readily available best practice guidelines and an overall

increase in the awareness of the issue and appreciation of the problem. Unfortunately, at this point, there are limited data available to support a significant decrease in pressure ulcer prevalence. Local studies show changes in prevalence when prevention becomes a focus, but indicate that when the attention decreases, prevalence increases again. This would suggest that methods or programs for pressure ulcer prevention must focus on long-term sustainability to be successful.<sup>1</sup> Unfortunately, Europe has been unable to demonstrate a significant improvement despite their efforts, due to a lack of data.

## Risk Assessment

The presenters in this session confirmed that risk assessment alone is not enough to prevent pressure ulcers. The Braden, Norton and Waterlow tools remain the strongest pressure ulcer risk assessment (PURA) tools for predicting level of risk, but the Braden Scale for Predicting Pressure Ulcers remains the most validated and encompassing. Strong emphasis was placed on the importance of looking at factors beyond the PURA. Combining the PURA tool with patient/individual factors and clinical judgement is important for better prevention and prediction.

(RISK ASSESSMENT + CONSIDERATION OF INDIVIDUAL FACTORS + CLINICAL JUDGEMENT = BETTER PREDICTION AND BETTER PREVENTION)<sup>4</sup>

Diane Langemo reviewed the importance of assessing pain in patients with pressure ulcers and to remember that pressure ulcers greatly affect the patient’s quality of life. A message worth noting is that often, because patients are experiencing so much pain, they may be afraid to move—which may lead to more skin breakdown.<sup>5</sup>

### Risk-Based Prevention

Presentations in this session stressed the importance of focusing on the care related to the risk score and not the number in isolation. Utilize the subscales (for example, in the Braden Scale) to identify treatment interventions and then use the scores to drive the intensity of the interventions. Recommendations were made that prevention programs should focus on developing the plan related to the risk and then regularly assessing patient outcomes.

Eric DeLaat presented a study that concluded that pressure ulcer programs should have active management, a local champion, educational interventions, social interaction and leadership, and useful feedback (beyond prevalence rates) to demonstrate to staff that work is making a difference, and should also include financial incentives for areas focusing on prevention.<sup>6</sup> Nutrition, as a risk factor, was also analyzed and recommendations were made to assess nutritional risk weekly for the first four weeks after admission, as patients' eating habits may change in a new environment.

### Skin Care

An Australian study by Graves in 2005 suggested that \$285 million bed days are lost related to the treatment of pressure ulcers and that pressure ulcers remain the most expensive wound we have to manage.<sup>2</sup> Mikel Gray suggested that as clinicians, we need also to look more closely at differentiating pressure ulcers from incontinence-associated dermatitis (IAD) and that misdiagnosis is an issue.<sup>7</sup> In order to diagnose IAD, clinicians should consider skin folds (especially in obese patients), red, bright, glistening skin, inflammation, lack of necrosis in the wound, skin erosion and secondary cutaneous infections (for more details refer to Gray, *Journal of WOCN*, 2007;34(2):134-142). It was suggested that clinicians often rely too heavily on visual inspection alone and that physiologic parameters were needed to further augment a differential diagnosis. Clinicians should consider looking beyond patient history and other related factors as well, and pay more attention to peri-wound skin in clinical assessments.

### Staging and Grading

This session confirmed that many differences exist between the NPUAP and EPUAP staging systems and that work is needed to come to a consensus. These two systems are not the same and therefore do not measure the same things. Clinicians need to be mindful that recent changes to the NPUAP staging system will cause a change in the distribution of prevalence data available, and so we need to interpret with caution. Staging/grading systems can be difficult to understand and use, and recommendations were made to focus on providing better education on their definitions and how to use them in practice. Even short, targeted sessions can make a big difference. Less experienced nurses often have difficulty discerning between stage II and III and staff without training do not stage ulcers correctly. It was also emphasized that deep tissue injury represents an intense amount of pressure and may take 24 to 48 hours to develop, so it is important to re-evaluate frequently. Deep tissue injury (a recently added category) is often the start of a stage III or IV ulcer.

### Pressure, Friction, Shear

The importance of managing pressure, friction and shear together was emphasized. If shear is not managed, repositioning patients may actually make pressure ulcers worse. Pressure causes microstructural changes in the skin and leads to a build-up of cytokines. The addition of shear increases its effects 2.4 times that of static pressure. It was suggested that asymmetrical undermining is an indicator of shear forces and should be evaluated.

### Managing Mechanical Forces

Although repositioning can be labour intensive, reducing the number of people identified at risk can make turning schedules for staff feasible. Repositioning devices (like sliding sheets) help to manage mechanical forces that place patients at risk for developing pressure ulcers. A review of the evidence on pressure mapping—looking at various positioning—suggests that lowest pressure is in the semi-Fowler, 30-degree position. It was also emphasized that measuring pressure is not enough, and clinicians need to

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also consider skin inspection, tcpO<sub>2</sub> (transcutaneous oxygen pressure), aligned posture, how a client propels in a wheelchair, attitudes and expectations. Recommendations for teaching repositioning to “healthy” patients were to reposition every nine minutes laterally and six minutes frontally. Very frequent positioning is recommended as almost two minutes is needed before normal oxygenation is restored to the affected area.

### Treatment Strategies

In reviewing wound bed preparation and the role of debridement in treating pressure ulcers, discussion in this session confirmed that there remains little to no evidence that one method of debridement is more effective than another, as there are no randomized controlled trials (RCTs) in humans. More research is also needed to determine whether or not debridement results in faster healing and whether or not debridement removes biofilms. When cleansing and dressing pressure ulcers, a Cochrane Review, 2008, on the use of water in cleansing confirmed that drinkable, safe tap water is acceptable for use on acute wounds, lacerations, surgical wounds and chronic wounds in healthy adults. When it comes to dressings, however, controversy remains about which silver product to use where. To date, there is largely commercially generated evidence, and the evidence is often conflicting. More research is needed in this area, as well as on the long-term outcomes on the development of resistance with silver dressings. Suggestions were made to use silver dressings for treatment of pressure ulcer infection and inflammation appropriately and with careful consideration. Confirmation around the use of antiseptics was also provided, suggesting they are appropriate in superficial infection and may be effective in breaking down biofilms

(chlorhexidine, povidone iodine). Verifying bacterial balance requires vigilant assessment and clinical judgement, accurate documentation and microbiological assessment.

### Closing Prevention Guideline Gaps: EPUAP/NPUAP Collaboration

The body of evidence is currently being reviewed in a collaborative effort between EPUAP and NPUAP to develop an international pressure ulcer prevention guideline. Results of this collaboration are expected to be released in February 2009. The two organizations have agreed to produce joint guidelines for prevention and treatment of pressure ulcers. Challenges to date include language and terminology (e.g., alternating air systems/mattresses), technology, knowledge and skills, and distance. However, the biggest challenge is the gaps in evidence. EPUAP is currently leading the guidelines for prevention, while the NPUAP has taken the lead on developing the guidelines for treatment. Draft guidelines are posted at [www.pressureulcerguidelines.org](http://www.pressureulcerguidelines.org), and stakeholders (anyone that represents an organization) are encouraged to make comments and provide feedback.

### Stream Conclusion

It is evident that much work remains to be done in the area of pressure ulcer prevention and reduction and more evidence is needed, in certain areas, relating to pressure ulcer treatment. Most pressure ulcers are preventable, and future strategies need to focus on pressure ulcer prevention programs. As clinicians, we have the tools to create change; the time is now to make change happen. ☺

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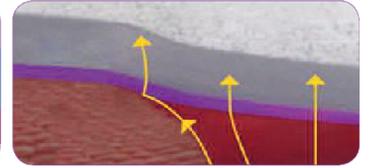
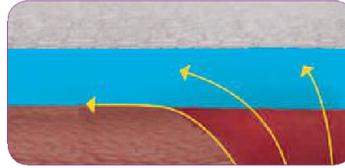
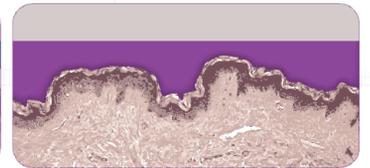
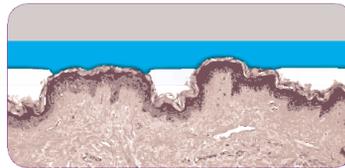
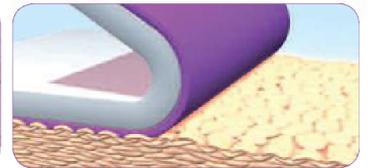
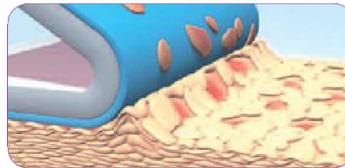


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