

## Preventing pressure ulcers

*Adequate staffing and devices to implement active strategies are the key*

PRESSURE ULCERS significantly reduce the quality of life of patients and increase the costs of patient care, as well as length of hospital stay. The most notable feature of pressure ulcers is that most are preventable. Prevalence studies in Australian acute-care hospitals have found their prevalence to range from 4.5% to 27%.<sup>1</sup>

Guidelines for preventing and treating pressure ulcers have been developed in many countries, beginning with the Netherlands<sup>2</sup> and the United States.<sup>3</sup> Guidelines specifically tailored to Australian healthcare were released in 2001 by the Australian Wound Management Association.<sup>4</sup> A major limitation of all these guidelines is the level of evidence on which they are based. Using the evidence-grading system of the National Health and Medical Research Council,<sup>5</sup> only one recommendation in the Australian guidelines achieved level 1 (evidence obtained from a systematic review of all relevant randomised controlled trials) — the recommendation that pressure-reducing or pressure-relieving mattresses or beds be used in place of standard hospital mattresses in high-risk patients. As is common with many guidelines for preventing pressure ulcers, much recommended practice is based only on consensus statements from experts in the field.

In this issue of the Journal, Jolley and colleagues (page 324) report a randomised controlled trial of a newly developed pressure-reducing surface, the Australian Medical Sheepskin, compared with standard care in the prevention of pressure ulcers.<sup>6</sup> The trial was in 441 hospital patients considered at low to moderate risk of developing pressure ulcers. Patients using the sheepskin developed new pressure ulcers at a rate half that of patients receiving standard care.

Clearly, in this group of patients, the Australian Medical Sheepskin is better than standard care. However, it must be appreciated that standard care in this study was itself suboptimal. It consisted of “any other pressure-relieving device or prevention strategy deemed appropriate by ward nursing staff, comprising standard hospital mattress and sheet, with or without other low-technology constant pressure-relieving devices and repositioning as determined by nursing staff”. Standard care resulted in 16.6% of patients developing a pressure ulcer.

The answer to reducing the prevalence of pressure ulcers lies not in implementing any one strategy, but in providing an institution-wide prevention program. Common to guidelines for preventing pressure ulcers is identification of patients at risk. It is imperative that some form of structured method to identify those at risk is applied to all hospital inpatients. Assessments need to be repeated regularly throughout a patient’s hospital stay and when there is a significant change in health status. A number of risk-assessment tools can be used, the most common being the Norton Risk Assessment Score,<sup>7</sup> the Braden Scale<sup>8</sup> and the Waterlow Risk Assessment card.<sup>9</sup> The major risk factors for

developing pressure ulcers are immobility, sensory loss, impaired cognitive state, urinary and faecal incontinence, age over 65 years, male sex, European background, chronic illness, poor nutritional status, impaired oxygen delivery to tissues, raised skin temperature, skin dryness and the presence of pressure, shear or friction forces.

After establishing a patient’s risk of developing a pressure ulcer, the next step is to implement preventive strategies to reduce that risk. This requires the support of hospital administrations in providing both the necessary trained staff and pressure-reducing or pressure-relieving devices. It is also imperative that staffing levels are adequate to ensure that nurses have sufficient time to provide the “hands-on” care necessary for these high-risk patients.

For patients at low to moderate risk of developing pressure ulcers, the ideal preventive strategy may include any one of a wide range of pressure-reducing or

pressure-relieving surfaces, including the Australian Medical Sheepskin, combined with a repositioning strategy. The Australian Medical Sheepskin has yet to be compared with other surfaces and devices in this group of patients.

A major challenge in many areas of medical practice is to successfully implement guidelines for clinical practice. A recent review of effective strategies for implementing pressure-ulcer guidelines concluded that active strategies were more successful in reducing ulcer prevalence.<sup>10</sup> The most effective strategies used targeted educational sessions and, in particular, multiple approaches. Such a strategy was recently shown to reduce pressure-ulcer prevalence in a multicentre Australian study.<sup>11</sup> This indicates that developing guidelines alone is not sufficient to influence outcomes, but that they need to be linked to educational strategies to ensure their successful implementation and subsequent influence on clinical outcomes.

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