

# Stage I Pressure Ulcers: Catching Pressure Injury before Skin Breakdown

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The National Pressure Ulcer Advisory Panel (NPUAP) published updated definitions of pressure ulcers in February 2007. These definitions were followed in October 1, 2008 by the “Present on Admission” (POA) focus of Centers for Medicare and Medicaid Services (CMS). This new focus identified pressure ulcers as a hospital-acquired condition whose management would be the financial responsibility of the institution.

Stage I pressure ulcer development often can be curtailed by offloading. Clinicians managing pressure ulcers should be diligent about patient re-positioning via turning schedules, with special attention to bony prominences and the bed, only elevating the head of the bed beyond 30° for less than 1 hour at a time. Additionally, other factors that undermine healthy intact skin should be considered, such as friction and shear, incontinence and moisture, and nutrition and hydration.

Prevention is always the best course of action. No cookie-cutter recipe exists for the treatment of a Stage I pressure ulcer. The periwound skin should be examined and contributing factors treated. If the skin is moist, protective barrier creams should be used and the source of the moisture determined and contained or managed. Incontinence can be addressed by implementing toileting schedules or by diverting the urine and stool from the skin surface. The effects of friction and shear can be reduced by using lift sheets and overhead trapeze bars when possible. Dressing selection should be patient-appropriate: absorptive hydrocolloids with a thin edge that resists rolling, foam dressings with a gentle adhesive border. Heels should be bridged, floated, or suspended — socks will not do the trick and if the patient has active legs, pillows will not work. The patient’s nutritional and hydration status should be monitored and diet modified as necessary.

Prevention and treatment are a team effort. Clinicians should educate and solicit the cooperation of the patient, caregivers, family, nursing personnel, nutritionists, therapists, and physicians. The presence of a Stage I pressure ulcer indicates damage already has occurred; to navigate this slippery slope, we must render quality care that contributes not only to the quality of life for our patients, but also to the financial well-being of our institutions. ■

## Commentary from Ferris Mfg. Corp.

Stage I pressure ulcers are areas of intact skin with a defined area of tissue damage beneath. This underlying injury may present as nonblanchable redness. Dark pigmented skin may not have visible blanching but its color may differ from the surrounding area. The injured area may be painful, firmer or softer, and/or warmer or cooler compared to the adjacent tissue. PolyMem® QuadraFoam® dressings have been shown to help resolve Stage I pressure ulcers faster than often anticipated.<sup>1</sup> The dressing is composed of glycerin; an absorbing agent; a mild, tissue friendly, nonionic, nontoxic cleansing agent; and a hydrophilic matrix membrane that binds the components together. The dressing components work synergistically to limit the course of the inflammatory response caused by injury.<sup>2</sup> This helps quickly resolve the injury<sup>2</sup> while also helping reduce, if not eliminate, wound pain, edema, and bruising.<sup>2,3</sup> No generic versions of PolyMem QuadraFoam dressings are available.

In a representative case study,<sup>1</sup> a 19-year-old man in a vegetative state developed a Stage I trochanter pressure ulcer along with a suspected deep tissue injury pressure ulcer on the contralateral trochanter. The patient was appropriately positioned and PolyMem dressings were placed on both injuries. Both injuries were completely resolved when the dressings were removed at day 8.



**Day 0: Stage I pressure ulcer.**



**Ulcer resolved at initial inspection on day 8.**

## References

1. Wilson D. Quick slough removal, granulation formation and wound healing using polymeric membrane dressings. Poster presented at the National Pressure Ulcer Advisory Panel Biennial Conference. Arlington, VA. February 2009.
2. Beitz AJ, Newman A, Kahn AR, Ruggles T, Eikmejer L. A polymeric membrane dressing with antinociceptive properties: analysis with a rodent stab wound secondary hyperalgesia. *J Pain*. 2004;5(1):38–47.
3. Sessions R. Can a drug-free dressing decrease inflammation and wound pain? What does the evidence say? Poster presented at the Wound Healing Society Meeting. Dallas, TX. April 2009.