The Impact of “Micro-Shifts” and Airbed Adjustments with the Use of Continuous Bedside Pressure Mapping*

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Purpose/Problem
With advanced support surfaces, pressure ulcers continue to develop affecting 7.4 million people annually worldwide.1 Research has suggested that repositioning interventions are ineffective2 and caregivers only know if their repositioning techniques are ineffective when damage occurs. With the use of continuous bedside pressure mapping (CBPM), caregivers are able to assess areas of high pressure and, with “micro-shifts” (small adjustments made with dress sheets) and airbed adjustments, can maximize pressure redistribution.

Methods
In SICU, daily rounds were made to identify high-risk patients. During a month-long study, 10 patients were identified for CBPM intervention. An algorithm was implemented and, with the help of the bedside caregivers (nurses and aides), patients were repositioned the way they normally do. Initial pressure was recorded and the caregivers were shown the mapping image and then were allowed to make adjustments including “micro-shifts” prior to second measurement (25 separate measurements). The CBPM allowed for support surface assessment for each individual and, when high pressures could not be managed with the hospital-owned mattress, a specialty surface and CBPM were rented.

Outcomes
Bedside caregivers were able to “micro-shift” patients and adjust airbed settings to lower peak pressures by 25% on average using the image from the CBPM systems. Screenshots overall showed lower pressures once “micro-shifting” and airbed adjustments were completed. CBPM highlighted hot, red areas, prompting the caregivers to utilize “micro-shifts” and adjust airbed settings to gain optimal pressure redistribution. No patients developed a pressure ulcer with the use of CBPM.

Conclusions
> Turning a patient alone does not ensure that high pressures on that patient have been minimized.
> With the CBPM image, caregivers effectively assess high pressures and can then utilize the interventions of “micro-shifting” and adjusting air settings on mattresses to gain optimal pressure redistribution.
> Effective patient repositioning and correct choice of support surfaces each plays an important role in minimizing pressure under bedbound patients, thereby contributing to prevention of pressure ulcers, 2,3,4

References

* M.A.P.™ by Wellsense USA, Inc, Nashville, Tennessee

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