Purpose/Problem

Biofeedback is a process that enables an individual to learn how to change physiologic activity for the purposes of improving health and performance. Precise instruments measure physiologic activity and these instruments rapidly and accurately ‘feed back’ information to the user. The presentation of this information — often in conjunction with changes in thinking, emotions, and behavior — supports desired physiologic changes. For decades, patients have been repositioned in bed without any feedback confirming that their positioning is effective. A new continuous bedside pressure mapping (CBPM) system* now offers caregivers feedback through a visual image of where pressures exist beneath patients.

Methods

Bedside caregivers were asked to reposition patients to the best of their abilities, using pillows and positioning aids without the visual feedback from the CBPM system. Once positioned, caregivers were shown the image of where pressures existed and then were able to reposition the patient to alleviate areas of higher pressures. Data from the CBPM device, in the form of visual screenshots and peak pressure values, were obtained after each episode of repositioning.

Results

Screenshots displayed lower pressures when the feedback from the CBPM system was utilized by caregivers. Lower peak pressure measurements were also evident after the visual image from the CBPM system was made available to the bedside caregivers.

Conclusions

With the biofeedback from the CBPM system, caregivers were able to more effectively reposition patients. Effective patient repositioning plays an important role in minimizing pressure under bedbound patients, which is an essential component of preventing pressure ulcers.

References


Thurman K, Wickard S. Take the Pressure Out of Pressure Ulcers. Long-Term Living 2011 October;60(10):22-23.

*The M.A.P™ System, by Wellsense, USA, Inc., Nashville, TN

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