Evidence in focus

Publication summary

Pickham D, et al. *Wounds* (2018)*

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Leaf Patient Monitoring System highlights a need to improve compliance with turning practices that are designed to help prevent pressure injuries

Leaf helped to identify and mitigate disparities in care delivery in patients admitted to intensive care units (ICUs)

Study design

- An analysis of secondary endpoints for 555 patients (mean age, 60 years) in the control arm of a pragmatic, randomized, controlled trial (LS-HAPI) who were admitted to one of two ICUs at Stanford University School of Medicine, USA
- All participating patients had a wearable sensor applied to their torso and were randomized to either the control group (no Leaf real-time sensor data were shared with physicians) or the treatment group (Leaf real-time sensor data were shared to influence turn practice and patient care)
- Patient care thresholds were defined as turning at least every 2 hours, a minimum magnitude turn of 20 degrees and at least 20 minutes of tissue depressurization

Key results

- In total, 44,870 hours of monitoring data were analyzed; mean monitoring time was 73 hours per patient
- Overall compliance with turning protocols was 54%; compliance during night shifts was significantly lower than for morning and afternoon shifts (see Figure)
- Compliance was lower with men than women (see Figure) and decreased with increasing BMI; men with BMI >30 had the lowest compliance (43%)
- Compliance was greater for low-risk patients with Braden score ≥19 than for high-risk patients with Braden score ≤12 (66 vs 55%; p<0.005)
- Only 38.5% of turns (10,623 of 27,566) were greater than the 20 degree pre-established turning angle threshold and only 37.8% of patients stayed in the new position for at least 15 minutes

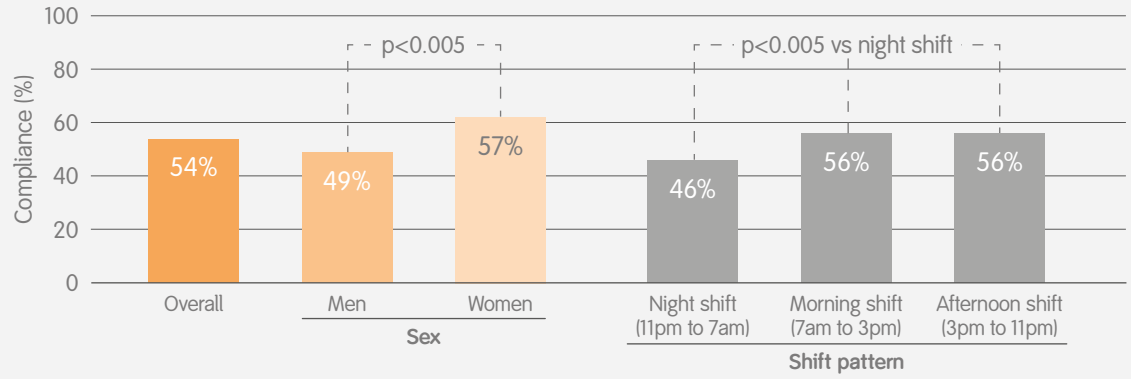

Figure. Compliance with turning protocols by sex and hospital shift

Evidence in focus (continued)

Conclusion

The Leaf wearable sensor highlighted a need to improve turning practices that help to prevent pressure injuries in patients admitted to ICUs and it also helped to mitigate disparities in care delivery.

Study citation

*Pickham D, Pihulic M, Valdez A, Mayer, B, Duhon P, Larson B. Pressure injury prevention practices in the ICU: real-world data captured by wearable patient sensors. Wounds. 2018 May 29. [Epub ahead of print]

Available at: Wounds

For detailed product information, including indications for use, contraindications, effects, precautions and warnings, please consult the product's Instructions for Use (IFU) prior to use

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