

Use of Waffle Mattresses to Prevent Pressure Injuries

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Background

- Hospital-acquired pressure injuries cost Americans an estimated burden of \$26.8 billion. (Cesca, 2024)
- Pressure injury practice guidelines have long existed, but low uptake of the recommendations face the challenges of:



Purpose

To determine if adding waffle air-filled mattresses on top of hospitalized adult medical surgical patient mattresses impacts hospital-acquired pressure injuries compared to turning every two hours alone. (Wan, 2023)

Methods

- Literature review was used to assess current scientific evidence in peer-reviewed publications to answer the clinical question.

Significance

While clinical practice guidelines recommend repositioning every two hours, there is a paucity of evidence in the reviewed literature to support the practice reduces or prevents pressure injuries.



Results

- Turning a patient every two hours interrupts sleep, may lengthen recovery, and possibly suppresses immune function. (McGough, 2022)
- Use of pressure-relieving mattresses poses potential for longer intervals between positioning of patients. (McGough, 2022)
- Overlay mattresses may prevent further development of pressure injuries. (Chung, 2022)
- Compared with foam surfaces, reactive air surfaces may reduce pressure injury risk and promote pressure injury healing. (J, 2021)



Discussion

- Limited low-level evidence was found to support turning a patient every two hours or use of waffle air-filled mattresses to reduce pressure injury.
- Turning patients every two hours may have benefits besides reduction of pressure injuries not identified in our literature review.

Next Steps

- Use waffle air-filled mattresses on patients with Braden of 18 or below and/or a Braden mobility score of 1 or 2 in addition to turning every two hours
- Monitor and track incidents of pressure injury metrics and compliance with turning.