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Preventing Pressure Ulcers in Adults: An Integrative Review

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Preventing Pressure Ulcers in Adults: An Integrative Review

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**Background & Significance**
- Pressure ulcers (PU) affect 1.3 million to 3 million adults in the United States.
- PU's are associated with decreased quality of life, impaired function, infection, poorer prognosis, and increased costs of care.
- PU's are one of the main risks that can impede a fast recovery in the healthcare setting.
- PU's are preventable complications. It’s important for nurses to promote skin integrity.
- Pressure ulcer prevention includes: heel devices, sheeplin, foam body support, seat cushions, nutritional supplementation, repositioning, dressing, pads, creams, lotions, cleansers, and mattresses.

**EVIDENCE-BASED PRACTICE QUESTION**
In the adult population, does the use of alternative mattresses reduce the risk of pressure ulcers compared to standard hospital mattresses?

- P – Adults
- I – Alternative mattresses
- C – Standard mattresses
- O – Pressure ulcers

**METHODS**
- Of the 313 articles that were reviewed, 18 were selected with 8 repeats for a total of 10 articles.
- Keywords searched:
  - Elderly patient, facility acquire pressure ulcers, immobile, mattresses, nursing home, padding, physical activity, pressure ulcers, prevention, standard mattresses, and systematic review.
- Databases used:
- Inclusion criteria:
  - Adult population at risk for pressure ulcer population, comparing alternative to standard mattresses, published within past 5 years, English articles with full text available.
- Exclusion criteria:
  - Any articles that did not coincide with the inclusion criteria.

**RESULTS**
- Levels of Evidence:
  - Level 1 (Meta analysis, Systematic Review)
  - Level 2 (RCT)
  - Level 5 (Systematic Review)
  - Level 6 (Descriptive)
  - Level 7 (Expert panel)

- Population:
  - All 10 articles focused on adults.

- Intervention:
  - An alternative mattress is any step up mattress from the standard mattress including overlays, low tech constant low pressure supports (gel-filled, fiber-filled, air-filled, water-filled, and bead-filled mattresses) and high tech support surfaces (air fluidized and low-air-loss beds).
  - 7 articles had significant focus on alternative vs. standard mattresses.
  - 3 articles discussed alternative vs. standard mattresses while concentrating on other interventions.

- Comparison:
  - A standard mattress is the baseline mattress for the healthcare institution.
  - All 10 articles compared alternative to standard hospital mattresses.

- Outcome:
  - Of the 7 articles, 5 have significant evidence to support utilizing alternative mattresses over standard mattresses, while 1 article agreed but data was inconclusive. 1 article concluded there was not significant data to support alternative over standard mattresses.
  - Of the 3 articles, 2 stated there was significant evidence in favor of alternative vs. standard mattresses. 1 article concluded there was not significant data to support alternative vs. standard mattresses.
  - Alternative mattresses significantly reduce pressure ulcers compared to standard mattresses.

**EVIDENCE-BASED PRACTICE RECOMMENDATIONS**
- The Iowa Model of Evidence-Based Practice was the framework for the integrated review.
- Current practice is progressing towards the use of alternative mattresses over standard, based on the emerging evidence that alternative is more specific at preventing PU's.
- We would recommend further high-quality research on the prevention of PU's with mattresses.

**LIMITATIONS**
- Standard mattress is not clearly defined.
- Only 2 of the 10 articles were conducted in the United States.
- Classification of a PU varied in literature. Some counted grade 2 PU's while other studies included research with grade 1 PU's.

**REFERENCES**