

O3_A2_A_Scientific Evidence

REPOSITIONING TO PREVENT PRESSURE ULCER

Pressure ulcers commonly occur in patients who are elderly and/or less mobile, and carry significant human and economic impacts. Immobility and physical inactivity are considered to be major risk factors for pressure ulcer development and the manual repositioning of patients in hospital or long-term care is a common pressure ulcer prevention strategy. Often the repositioning of patients is combined with pressure-redistributing devices.

Q1	What are the effects of repositioning on (the prevention of) pressure ulcers in adult patients?
Patients	adults, regardless of risk or in-patient setting
Intervention	different repositioning regimens
Comparator	alternate schedules or standard practice pressure-redistributing devices
Outcome	Core outcome measures: Absence of pressure ulcers (any degree)
Methodology	Practice guidelines Systematic reviews

Studies:

One practice guideline (2013)
One Cochrane systematic review (2014)

Indications:

Immobility (in bed and/or wheelchair) and physical inactivity of adult patients

Conclusion:

The lack of robust evaluations of repositioning frequency and position for pressure ulcer prevention mean that great uncertainty remains but it does not mean these interventions are ineffective since all comparisons are grossly underpowered [1,2].

Recommendations:

- Repositioning is an integral component of pressure ulcer prevention and treatment; it has a sound theoretical rationale, and is widely recommended and used in practice [1].
- The use of pressure-redistributing devices (low-tech constant low pressure surfaces or high-tech support surfaces) is recommended for patients who have a pressure ulcer. Redistributing devices should be used in combination with regular repositioning [2].
- As clinical studies did not demonstrate the superiority of one pressure redistributing device over another (e.g. air-fluidised therapy, alternating-pressure mattress), decisions about which pressure redistributing device to use should be based on an overall assessment of the patient, including wound evolution and offloading possibilities, level of risk, comfort and general health state [2].

References:

1. Gillespie BM, Chaboyer WP, McInnes E, Kent B, Whitty JA, Thalib L. Repositioning for pressure ulcer prevention in adults. Cochrane Database of Systematic Reviews, 2014. DOI: 10.1002/14651858.CD009958.pub2

2. Beeckman D, Matheï C, Van Lancker A, Vanwalleghem G, Van Houdt S, Gryson L, Heyman H, Thyse C, Toppets A, Stordeur S, Van Den Heede K. A national guideline for the treatment of pressure ulcers. Good Clinical Practice (GCP) Brussels: Belgian Health Care Knowledge Centre (KCE). 2013. KCE Reports 203. D/2013/10.273/30.
3. Gillespie BM, Repositioning for pressure ulcer prevention in adults (Protocol) *The Cochrane Library* 2012, Issue 7

Q2	What is the most effective repositioning for preventing pressure ulcers in adults?
Patients	adults, regardless of risk or in-patient setting
Intervention	30° tilt
Comparator	standard 90° position
Outcome	Core outcome measures: Prevention of pressure ulcers
Methodology	Systematic reviews

Studies:

One Cochrane systematic review comparing 30° tilt with the standard 90° position (2014).

An economic analysis of repositioning for the prevention of pressure ulcers

Conclusions:

Current evidence is small in volume and at risk of bias and there is currently no strong evidence of a reduction in pressure ulcers with the 30° tilt compared with the standard 90° position or good evidence of an effect of repositioning frequency [1]

Repositioning every 3 hours, using 30° tilt, has been shown to be more effective in less costly in terms of nurse time compared with standard care [2].

Repositioning individuals at risk of pressure ulcer development makes both economic and clinical sense, thereby supporting the EPUAP/NPUAP 2009 guidelines [2].

References:

1. Gillespie BM, Chaboyer WP, McInnes E, Kent B, Whitty JA, Thalib L. Repositioning for pressure ulcer prevention in adults. *Cochrane Database of Systematic Reviews*, 2014. DOI: 10.1002/14651858.CD009958.pub2
2. Moore Z, Cowman S, Posnett J. An economic analysis of repositioning for the prevention of pressure ulcers. *J Clin Nurs*. 2013 Aug;22(15-16):2354-60. DOI: 10.1111/j.1365-2702.2012.04310.x
3. Tayyib, N. and F. Coyer (2016). "Effectiveness of Pressure Ulcer Prevention Strategies for Adult Patients in Intensive Care Units: A Systematic Review." *Worldviews on Evidence-Based Nursing* 13(6): 432-444.
4. Gillespie BM, Repositioning for pressure ulcer prevention in adults (Protocol) *The Cochrane Library* 2012, Issue 7

Q3	Does structured use of risk assessment tools reduce the number of pressure ulcers?
Patients	Patients in any health care setting
Intervention	Structured, systematic pressure ulcer risk assessment tools
Comparator	Unstructured pressure ulcer risk assessment; no formal risk assessment
Outcome	Core outcome measures: incidence of new pressure ulcers of any degree
Methodology	Systematic reviews

Use of pressure ulcer risk assessment tools or scales is a component of the assessment process used to identify individuals at risk of developing a pressure ulcer. The use of a risk assessment tool is recommended by many international pressure ulcer prevention guidelines, however it is not known whether using a risk assessment tool makes a difference to patient outcomes.

Studies:

Two Cochrane systematic reviews

Conclusions:

To date, there are no studies to suggest that the use of risk assessment tools, reduces the number of new pressure ulcers that develop [1]. However, interventions relating to hospital nurse staffing models may improve some patient outcomes, particularly the addition of specialist nursing and specialist support roles to the nursing workforce. Butler et al. (2011) found that the addition of specialist nurses to nursing staff is likely to result, amongst other outcomes, in reductions in new pressure ulcers [2].

References:

1. Moore ZEH, Cowman S. Risk assessment tools for the prevention of pressure ulcers. Cochrane Database of Systematic Reviews, 2014. DOI: 10.1002/14651858.CD006471.pub3
2. Butler M , Collins R, Drennan J, Halligan P, O'Mathúna DP, Schultz TJ, Sheridan A, Vilis E. Hospital nurse staffing models and patient and staff-related outcomes. Cochrane Database of Systematic Reviews, 2011. DOI: 10.1002/14651858.CD007019.pub2
3. Tayyib, N. and F. Coyer (2016). "Effectiveness of Pressure Ulcer Prevention Strategies for Adult Patients in Intensive Care Units: A Systematic Review." Worldviews on Evidence-Based Nursing **13**(6): 432-444.
4. Gillespie BM, Repositioning for pressure ulcer prevention in adults (Protocol) *The Cochrane Library* 2012, Issue 7