Comprehensive programs for preventing pressure ulcers: a review of the literature

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CRD summary
The review concluded that comprehensive, multidisciplinary programmes could be successful in reducing pressure ulcers prevalence or incidence rates in acute-care and long-term care settings. The review had some methodological shortcomings and the quality of the evidence base was uncertain, so caution is warranted when interpreting the authors’ conclusions.

Authors’ objectives
To examine the evidence supporting the combined use of interventions to prevent pressure ulcers in acute-care and long-term care facilities.

Searching
MEDLINE and CINAHL were searched from January 1995 up to December 2010 for articles in English. Search terms were reported. Reference lists were checked. Clinical experts were contacted.

Study selection
Studies of multidisciplinary programmes to prevent pressure ulcers that were implemented in acute-care or long-term care facilities were eligible for inclusion. Studies had to report the prevalence or incidence rates of pressure ulcers before and after the programmes were implemented. No limitations were placed on site-specific pressure ulcers.

The included studies were longitudinal before and after studies. Most studies were conducted in acute care settings; most were single site, but a few were multi-site studies. Treatment teams were generally multidisciplinary, and comprised of nurses, physicians, physical therapists, wound experts, educators, managers, and directors (where specified). The components of the programmes included staff education, pressure ulcer prevention best practices, clinical monitoring and feedback, skin care champions, strategies to sustain efforts and other elements. All except study were published from 2000 onwards. Most studies were conducted in North America or Western Europe. No patients characteristics were provided.

The authors did not state how many reviewers performed study selection.

Assessment of study quality
The authors did not state if quality assessment was undertaken.

Data extraction
Data were extracted on prevalence and incidence of pressure ulcers, care processes and other outcomes.

The authors did not state how many reviewers extracted the data.

Methods of synthesis
A narrative synthesis was presented.

Results of the review
Twenty-four studies were included in the review. Study sample sizes were not reported.

Prevalence of pressure ulcers (20 studies): Eleven studies saw a decrease in the prevalence of pressure ulcers after programme implementation. Two studies reported no difference. Seven studies did not sufficiently report information to provide meaningful inferences.

Incidence of pressure ulcers (10 studies): Eight studies reported a decrease in decrease in rates between baseline and follow-up. One study reported unsustainable results. One study reported an increase in the incidence rates between project year one and year four.
Some studies reported benefits including increased staff awareness and knowledge, and process measures.

**Authors' conclusions**
Comprehensive, multidisciplinary programmes could be successful in reducing pressure ulcer prevalence or incidence rates in acute-care settings and long-term care facilities.

**CRD commentary**
Inclusion criteria for the review were broadly defined. Two relevant databases were searched. There may have been the potential for language bias, as only English language studies were included. Publication bias was not assessed and could not be ruled out. No attempts to minimise reviewer error and bias were reported.

Quality assessment of included studies was not undertaken and patient sample sizes were not reported, which made it difficult to assess the reliability of the evidence base. However, the authors did note that none of the studies were randomised and that description of methods within the studies was often neglected. No patient details were provided, which made it difficult to assess the generalisability of results. A narrative synthesis was presented, which seemed appropriate given the type of evidence, but merely categorising the studies according to their findings without providing information on the size of effects made the results difficult to interpret.

The review had some methodological shortcomings and the quality of the evidence base was uncertain, so caution is warranted when interpreting the authors' conclusions.

**Implications of the review for practice and research**
Practice: The authors stated that making too many changes at once may affect the sustainability of the programme. They also noted that what works in one setting may not work elsewhere.

Research: The authors stated that sites should be encouraged to rigorously evaluate their programmes (successful or not) and to publish their results.

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