Prevalence and treatment of pain in older adults in nursing homes and other long-term care institutions: a systematic review

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Authors' objectives
To assess the effectiveness of pain treatment in older adults in nursing homes.

Searching
The authors searched MEDLINE (January 1966 to May 1997), HEALTH (January 1975 to May 1997), CINAHL (January 1982 to April 1997), AGELINE (January 1978 to May 1997) and the Cochrane Library (Issue 1, 1997) using MeSH terms and textwords: 'nursing home', 'chronic care hospital', 'health services for the aged', 'pain', 'analgesic', and 'analgesia'. The authors also scanned the reference lists of relevant individual studies, chapters in textbooks and journal review articles for additional studies. There were no language restrictions.

Study selection
Study designs of evaluations included in the review
Studies of any design were included in the review (randomised controlled trials (RCTs), comparative studies with non-randomised contemporaneous controls, and non-comparative studies).

Specific interventions included in the review
Interventions for the treatment of pain including attention, verbal praise to facilitate exercising, viewing humourous movies, and a relaxation training programme.

Participants included in the review
Elderly patients in nursing homes or other long-term care institutions.

Outcomes assessed in the review
The measurement of pain using:

1. Number of pain medications prescribed "as required".
2. Number of pain-related behaviours.
3. Number of activities.
5. A 5-point visual analogue scale.

How were decisions on the relevance of primary studies made?
Two individuals with research background but no expertise in the treatment of pain or involvement in the clinical care of older adults independently reviewed each of the eligible studies for inclusion. Papers were masked to conceal the authors' names and affiliations, publication year, and journal.

Assessment of study quality
Only studies published in peer-reviewed journals were considered for this review.

Studies were classified as randomised controlled trials, non-randomised comparative studies with contemporaneous controls, non-randomised comparative studies with historical controls and non-comparative studies (including surveys and case series). The strength of the evidence was assessed independently by the same two individuals.
Data extraction
Two individuals with research background but no expertise in the treatment of pain or involvement in the clinical care of older adults independently extracted data for the categories of: study design, number of patients, type of institution, main outcomes measured, methods used to identify and detect pain, prevalence, severity and types of pain, predominant painful condition, and interventions used to treat pain. Information on the proportion of non-communicative residents was also extracted.

After completing data extraction, the two individuals met to discuss and reach a consensus on the data.

Methods of synthesis
How were the studies combined?
The results of the three included studies were reported narratively in the discussion and summarised in a table.

How were differences between studies investigated?
The authors do not state how differences between the studies were investigated.

Results of the review
Three studies with 30 participants were included in the review (1 RCT (4 participants), 1 comparative study with non-randomised contemporaneous controls (13 participants), and 1 non-comparative study (13 participants).

The three included studies found no evidence of effectiveness for any of the interventions (2 studies not tested for statistical significance of results, and 1 study was found to be not statistically significant).

Authors' conclusions
Despite the high prevalence of pain in residents of nursing homes, there is a lack of studies evaluating interventions to relieve their pain.

CRD commentary
The authors have clearly stated their research question and their inclusion (but not exclusion) criteria. The literature search is very good although the authors have not reported whether they restricted their searches to published studies.

The quality of the included studies was not formally assessed although the studies were categorised by the authors. The authors have reported on how the articles were selected, and how many of the reviewers were involved in the data selection and extraction.

The data extraction is reported in tables and text and the narrative pooling was appropriate given the differences between the study designs. There were no tests for homogeneity.

The authors have discussed some limitations of their review but their conclusions appear to follow from the results although these should be viewed with caution because of the lack of data in the review.

Implications of the review for practice and research
Practice: The authors do not state any implications for practice.

Research: The authors state that the priority is to design and execute studies to evaluate both pharmacological and non-pharmacological interventions in these settings and these should be RCTs. A systematic review of the type and effectiveness of interventions for treating pain in older adults living in the community might also be helpful.

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