Multidisciplinary care for tracheostomy patients: a systematic review
Garrubba M, Turner T, Grieveson C

CRD summary
This review concluded that tracheostomy care given by multidisciplinary outreach teams was more effective than standard care in reducing time to decannulation, length of hospital stay and adverse events. Given the potential for missed studies, limitations of the review, and methodological weaknesses of the included studies, the authors justifiably stated that their conclusions should be treated with caution.

Authors' objectives
To identify whether care given to patients with tracheostomy by multidisciplinary outreach teams leads to reduced time to decannulation and length of stay in acute settings, improved quality of care, or decreased adverse events.

Searching
MEDLINE, EMBASE, CINAHL, and EBM (Evidence Based Medicine) resources were searched for articles published in English, from 1980 to June 2009; search terms were reported.

Study selection
Studies of patients of any age with tracheostomy in a hospital ward setting, who received multidisciplinary care compared with standard care, were eligible for inclusion. Outcomes of interest were average time to decannulation, length of stay, quality of care, and adverse events.

All included studies recruited adult patients with tracheostomy, discharged from an intensive care unit to a general ward. Common components of the interventions were a physiotherapist and speech therapist, but the interventions varied considerably; no two studies had the same comparison. One study was conducted in the UK and two in Australia. No detailed patient characteristics were reported.

Two reviewers selected the studies in consultation with colleagues.

Assessment of study quality
The quality of the included studies was assessed using the standard critical appraisal questions developed by the Centre for Clinical Effectiveness. The quality domains and how they were assessed were reported. Risk of risk of bias in the included studies was classified as low, moderate or high.

Two reviewers assessed quality of the included studies in consultation with colleagues.

Data extraction
The difference between pre-treatment and post-treatment outcome was extracted. Where necessary, the primary study authors were contacted for clarification or for missing data.

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

Methods of synthesis
The studies were combined in a narrative synthesis, with each study described in detail in the text. It appeared that the authors assessed the impact of intervention by calculating mean differences with p-values.

Results of the review
Three studies (n=403 patients) met the inclusion criteria. All were cohort studies with historical controls. All studies had a moderate to high risk of bias.
All the three studies found that the multidisciplinary care reduced the average time to decannulation for tracheostomy patients discharged from the intensive care unit to the general ward. Two studies showed that multidisciplinary care reduced the overall length of stay in hospital, as well as the length of stay following intensive care unit discharge.

Authors’ conclusions
Care given by a dedicated multidisciplinary team for tracheostomy patients discharged from the intensive care unit to general ward showed reductions in time to decannulation, length of hospital stay and adverse events compared with standard care.

CRD commentary
This review addressed a clear research question, with potentially reproducible inclusion criteria. The search included appropriate electronic databases, but was restricted to English. No apparent attempts were made to review reference lists of retrieved papers or retrieve unpublished studies. This meant that language and publication biases could not be ruled out. To minimise bias and errors during the review process, two reviewers selected studies and assessed the quality of the included trials, but it was unclear how many reviewers extracted data.

Study quality was assessed using standard criteria; the overall level of risk of bias in each study was reported. However, conclusions about how the overall risk of bias was classified were not reported. The included studies were considered to be generally poor quality. Data were pooled in a narrative synthesis, which was appropriate given the clinical heterogeneity.

Given the potential for missed studies, limitations of the review process, and methodological weaknesses of the included studies, the authors’ conclusions that their results should be treated with caution is justifiable.

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

Research: The authors stated that high-quality evidence from well-controlled studies is needed to determine the true effectiveness of care delivered by multidisciplinary teams for tracheostomy patients.

Funding
Not stated.

Bibliographic details

PubMedID
19895690

DOI
10.1186/cc8159

Original Paper URL
http://ccforum.com/content/13/6/R177/abstract

Indexing Status
Subject indexing assigned by NLM

MeSH
Australia; Humans; Intensive Care Units; New Zealand; Patient Care Team; Patients' Rooms; Tracheostomy /adverse effects /mortality /statistics & numerical data
AccessionNumber
12010003374

Date bibliographic record published
23/06/2010

Date abstract record published
10/11/2010

Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.