Effectiveness of structured discharge process in reducing hospital readmission of adult patients with community-acquired pneumonia: a systematic review

Domingo GR, Reyes FC, Thompson FV, Johnson PM, Shortridge-Baggett LM

CRD summary
This review found no evidence to support the use of structured discharge processes in patients with community-acquired pneumonia. The conclusions appropriately reflect the limited evidence found.

Authors’ objectives
To assess the evidence for the effectiveness of structured discharge processes in reducing hospital readmission of adults with community-acquired pneumonia.

Searching
The authors searched approximately 15 databases including PubMed, CINAHL, EMBASE and Cochrane Central Register of Controlled Trials (CENTRAL). Full search strategies were presented but search dates were not reported. The search was restricted to studies available in English. Additional studies were sought by searching sources of grey literature, checking reference lists and contacting authors of relevant studies.

Study selection
Randomised controlled trials (RCTs) and quasi-experimental studies of structured discharge from hospital for patients with community-acquired pneumonia were eligible. Structured discharge was defined to include interventions such as early patient engagement, patient-caregiver dyad intervention, transitional care, co-ordinated care and a multidisciplinary team approach. The comparator was usual care. Trials had to report hospital readmissions, emergency department visits or unscheduled visits to a healthcare provider after discharge.

Details of interventions in included studies varied but all of them included medication reconciliation and follow-up telephone calls. Patients were generally aged over 65 years. All the trials were in USA or Canada.

The authors did not state how many reviewers selected studies for the review.

Assessment of study quality
Two independent reviewers assessed quality using the Joanna Briggs Institute critical appraisal tool. Discrepancies were resolved with the help of a third reviewer.

Data extraction
Data were extracted using a standardised form from the Joanna Briggs Institute. Data on numbers of participants and events were used to calculate odds ratios and 95% confidence intervals for each outcome.

The authors did not report how many reviewers performed data extraction.

Methods of synthesis
A narrative synthesis was presented.

Results of the review
Three studies were included: two RCTs (69 participants) and one quasi-RCT (146 participants). The RCTs met all quality criteria except that outcome assessors were not blinded in one trial. None of the trials reported a statistically significant difference between the structured discharge and control groups for any of the outcomes measured (readmission at 30, 90 or 180 days or emergency department visits at 30 days). Unscheduled visits to healthcare providers were not reported in any of the trials.

Authors’ conclusions
The limited evidence found did not support use of structured discharge processes in patients with community-acquired pneumonia.
pneumonia.

**CRD commentary**
The review question and inclusion criteria were clear. The search was very thorough and included efforts to locate unpublished trials. Search dates were not reported. Limiting the search to studies in English meant that relevant studies may have been overlooked. Study quality was assessed by two reviewers using standard criteria for RCTs. Other review processes were not always fully reported so errors or bias affecting study selection or data extraction could not be ruled out. A narrative synthesis was appropriate in view of the different interventions in the included trials.

The authors' conclusions reflected the limited evidence found and seem appropriate. The implications for research may be overstated in view of the lack of evidence that structured discharge was superior to usual care.

**Implications of the review for practice and research**
**Practice:** The authors stated that medication reconciliation and follow-up telephone calls after discharge may help to foster patient safety.

**Research:** The authors did not state any specific implications for research beyond saying that further research was needed.

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