Improving patient handovers from hospital to primary care: a systematic review

CRD summary
The authors concluded that many interventions had positive effects on discharge quality and the safety of handovers between hospitals and primary care providers, but these interventions and the outcome measures were complex, and the best option was unclear. The authors' conclusions are likely to be reliable, but of limited value to decision-makers.

Authors' objectives
To evaluate interventions to improve patient discharge from hospital to primary care.

Searching
The authors searched PubMed, CINAHL, PsycInfo, The Cochrane Library and EMBASE for studies in English, published between 1990 and 1 March 2011. Search terms were reported in an appendix. References of selected studies were checked to identify additional articles.

Study selection
Studies had to be randomised controlled trials (RCTs) published as full-text articles or as dissertations. They had to involve patients and care providers, during hospital discharge, in interventions to improve the transition of care from hospital to primary care or home care, within a country. Trials of patients with a psychiatric diagnosis, those aged under 18 years, or pregnant women were excluded. There had to be at least one outcome measure that investigated the quality or safety of the handover process or outcomes of handovers within the first three months after discharge from hospital.

Trials mainly involved elderly patients, with a variety of diagnoses, in a variety of settings. Most trials were conducted in the USA or Canada; two were in the UK. Most of the trials had multi-component interventions and the profession of those who delivered the interventions varied. The comparator tended to be usual care. Various outcomes were reported including: hospital use; continuity of care; adverse events; use of primary care; and patient, health care provider and caregiver status.

Two reviewers independently assessed study eligibility, with any disagreements resolved through discussion or reference to a third reviewer.

Assessment of study quality
Two reviewers independently assessed the quality of the included trials and resolved disagreements through discussion. They used a modified form of the Cochrane guidelines to assess selection bias, performance bias, attrition bias and detection bias. Poorer quality trials, with three or fewer positive features out of 10, were excluded.

Data extraction
Two reviewers extracted data, using a standardised form, with any disagreements resolved by discussion or referral to a third reviewer.

Methods of synthesis
Interventions were grouped based on whether they addressed information provision, co-ordination of care or communication. A narrative summary of results was presented, including the proportion of trials, in each group, that showed a statistically significant positive effect of the intervention.

Results of the review
Two trials had quality scores of three or less and were excluded. Thirty-six trials were included in the review, with approximately 15,000 participants. Quality scores ranged from four to nine. Sixteen trials involved an intervention group of fewer than 100 participants. In 12 trials outcome assessors were not blinded and in 10 trials blinding status was unclear. In 10 trials the intervention and control groups had baseline differences, and in 10 trials the characteristics of those lost to follow-up were not reported.
There were statistically significant effects in favour of the intervention in 25 of the 36 trials. For 14 of the 22 trials of improving the quality of information, there was a statistically significant improvement in one or more of the following: continuity of care; hospital use; patient status; errors, near misses or adverse events; and primary care use. In 20 of the 27 trials of improving co-ordination of care and in 22 of the 31 trials of improving communication, there was a statistically significant improvement in one or more of these outcomes, except adverse events. No single intervention was consistently associated with positive effects for a specific outcome.

**Authors' conclusions**
Many interventions had positive effects on discharge quality and the safety of handovers between hospitals and primary care providers, but these interventions and the outcome measures were complex, and the best option was unclear.

**CRD commentary**
This review had defined inclusion criteria and a range of relevant sources was searched. Trials published in languages other than English were excluded, as were unpublished trials, leaving the possibility of both language and publication bias. Trial quality was assessed using appropriate criteria, but the assessment tool was not designed to produce a quality score. Low quality trials were excluded. More than one reviewer was involved in the processes of study selection, data extraction, and quality assessment minimising the possibility of bias and error. A narrative synthesis was appropriate given the diversity of the trial interventions and outcome measures, but all trials were given equal emphasis without accounting for their quality or size.

The authors’ conclusions are likely to be reliable, but the diversity of the interventions, the reporting limitations of the included trials, and the inclusion of only two UK trials, limit the value of the review for decision-making.

**Implications of the review for practice and research**

**Practice:** The authors did not state any implications for practice.

**Research:** The authors stated that standardised measures of continuity of care were needed to better evaluate and compare discharge interventions. A clearer description of the interventions and a clearer focus on the care provider's attitudes and training was needed.

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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.