Transitional interventions to reduce early psychiatric readmissions in adults: systematic review

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CRD summary
The review concluded transitional care interventions with pre-discharge, post-discharge or bridging components may reduce early psychiatric readmission and when effective the magnitude of effects appeared to be clinically meaningful. The authors’ conclusions reflect the evidence presented but small sample sizes, variable quality and variation between studies mean the authors’ conclusion may not be reliable.

Authors’ objectives
To evaluate the effectiveness of interventions applied during the transition from in-patient to outpatient care in preventing early psychiatric readmission.

Searching
MEDLINE, CINAHL, EMBASE, PsycINFO and The Cochrane Library were searched to January 2012 for published peer-reviewed articles in English. Search terms were reported. Bibliographies of articles and reviews were examined.

Study selection
Eligible studies were controlled studies that evaluated interventions that aimed to assist in the transition from in-patient to outpatient care for adult in-patients on psychiatric units. Interventions could be implemented during in-patient admission, early post-discharge or span the transition from in-patient to outpatient care. Studies of intensive case management programmes or interventions directed at treating a specific psychiatric disorder were eligible only if a transitional intervention component was included. Studies exclusively in populations with substance use disorders or interventions of an involuntary nature were excluded (details provided). The primary outcome of interest was psychiatric readmission.

More than half of the included studies were restricted to participants with schizophrenia or schizoaffective disorder diagnoses; the other studies had participants with mood, psychosis or depressive disorders or who were at risk of homelessness. The proportion of prior admissions for the participants varied widely between studies. Intervention components varied between studies and included pre-discharge (including psychosocial skills training, medication reconciliation or education, discharge planning needs assessment or follow-up schedule), post-discharge (including telephone follow-up, psychoeducational interventions, home visits) and bridging (including discharge plan communicated to provider, transition manager meets outpatient provider). Most of the studies were conducted in USA. Single studies conducted in each of Finland, Scotland, Germany, Canada, China and Israel.

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

Assessment of study quality
Study quality was assessed using an adaptation of the Cochrane Effective Practice and Organisation of Care Risk of Bias tool with criteria for randomisation, allocation concealment, baseline differences between groups, treatment of missing data, objectivity of outcome assessment, risk of contamination, risk of selective outcome reporting and other sources of bias.

Two reviewers independently assessed study quality. Disagreements were resolved by recourse to a third reviewer.

Data extraction
Data were extracted independently by two reviewers to calculate the absolute risk reduction in readmission rates in percentage points or days in hospital during the follow-up period for each intervention. Interventions were categorised depending on whether components were implemented pre-discharge, post-discharge or bridged the transition from inpatient to outpatient care. Studies were consigned to categories by consensus among all the reviewers.
Methods of synthesis
Due to substantial clinical variation between the studies a narrative synthesis was conducted.

Results of the review
Fifteen studies (4,369 participants, range 13 to 1,819) were included in the review: eight randomised controlled trials (RCTs), five controlled clinical trials and two cohort studies. One RCT scored 8 out of a maximum of 9 points for quality, one study scored 7 points, one scored 6 points, six scored 5 points, three scored 4 points and three scored 3 points. Adequate randomisation was reported in four of the eight RCTs and allocation concealment in only one RCT. Follow-up ranged from three months to 24 months.

Three month readmission rates ranged from 7% to 23% for intervention groups and 13% to 36% for control groups. Six- to 24-month readmission rates ranged from zero to 63% for intervention groups and 4% to 69% for control groups. Seven studies reported statistically significant reductions in readmission rates (range 13.6% to 37%).

Interventions with pre-discharge components (seven studies): Statistically significant reductions in readmission rates were reported for pre-discharge psycho-education intervention components (two RCTs) and one out of three multicomponent studies with a structured pre-discharge needs assessment component. The other studies found no statistically significant differences between groups.

Interventions with post-discharge components (11 studies): Statistically significant reductions in readmission rates were reported in three out of four studies with post-discharge psycho-educational components. One of these studies also reported a statistically significant effect for telephone follow-up and efforts to ensure timely follow-up. One of five studies reported statistically significant results for an intervention with a home visit component. One of two studies with structured post-discharge needs assessment reported statistically significant positive findings. No studies that assessed patient hotlines (two studies) or family interventions (three studies) reported significant findings.

Interventions with bridging components (nine studies): One out of six studies reported statistically significant reductions in readmission rates for an intervention involving a transition manager. The remaining studies reported no significant differences between groups.

Authors' conclusions
Transitional care interventions with pre-discharge, post-discharge or bridging components may reduce early psychiatric readmission. When they were effective, the magnitude of effects appeared to be clinically meaningful.

CRD commentary
The review question and inclusion/exclusion criteria were broadly defined. Several relevant sources were searched. The limitation to peer-reviewed articles published in English meant that some data may have been missed. Study quality was assessed and results were reported in full. Appropriate methods were used to reduce reviewer error and bias during quality assessment and data extraction; it was unclear whether similar methods were used during study selection.

A narrative synthesis was appropriate given the differences between studies in intervention components and participants. Adequate study details were reported but no details of controls groups were reported so it was unclear whether these were active or inactive groups. Data for readmission rates were largely reported in the text but levels of statistical significance were stated. The authors stated limitations of the evidence including the USA-setting of most studies (so the findings may not generalise to other health systems) and that most studies had small sample sizes (which are likely to be underpowered to detect a clinically relevant effect).

The authors’ conclusions reflect the evidence presented but the small sample sizes, variable quality and variation between studies means the authors’ conclusion may not be reliable.

Implications of the review for practice and research
Practice: The authors stated that structured implementation of transitional intervention components in discharge planning might ensure that psychiatric patients receive optimal quality of care with resultant reduction in readmission risk among other positive outcomes.

Research: The authors stated a need for further high quality studies to evaluate transitional interventions aimed at
reducing early readmission in psychiatry.

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