

Transitional Care for Patients with Congestive Heart Failure

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Abstract: Background: Congestive heart failure (CHF) have been negatively effecting the budget of health care systems, Thus interventions designed to prevent readmissions among populations transitioning from one care setting to another are often called “transitional care interventions

Purpose: this review aimed to assess the efficacy, comparative effectiveness and the impact of transitional care interventions (TCIs) on acute health service use to prevent harms to patients with congestive heart failure in primary care.

Methodology: We conducted a systematic review and meta-analysis by searching the Medline, PsycInfo, EMBASE, and Cochrane Library databases. We have selected most of studies that concerning the topic of this study including randomized, controlled trials published in English reporting hospital readmissions and emergency department (ED) visits.

Conclusion: this research is a review on studies that evaluated the effectiveness of a transitional care model for patients with congestive heart failure (CHF). The evaluation focused on improving the transition from hospital to home care by upgrading traditional discharge practices and implementing an evidence-based educational program.

Keywords: Congestive Heart Failure, Transitional Care Interventions, PCPs.

1. INTRODUCTION

Congestive heart failure (CHF) have been negatively effecting the budget of health care systems, most of which can be attributed to numerous hospital readmissions and emergency department visits according to studies by (Naylor et al. 2002 and 2011).^{1,2} As it also was shown in previous studies by (Zaya M et al, 2012, Anderson C et al, 2005) that multiple exacerbations of CHF result in frequent use of acute health care services by these patients, known as revolving door users. After discharge, 25% of patients are readmitted within the first 30 days, and 50% within the first 6 months.^{3,4}

evidences have showed that the frequent use of health care services is mainly due to lack of understanding of a treatment plan, nonadherence to medical therapy, unawareness of heart failure symptom exacerbation, and irregular follow-up.^{5,6} in other evidence the Lack of coordination and communication between hospitalists and primary care physicians (PCPs) has been suggested.^{7,8} some studies has investigated interventions designed to prevent readmissions among populations transitioning from one care setting to another are often called “transitional care interventions”.^{2,9} They aim of this setting is to avoid poor outcomes caused by uncoordinated care, such as preventable readmissions. Although no clear set of components defines transitional care interventions, they focus on patient or caregiver education, medication reconciliation, and coordination among health professionals involved in the transition.¹¹

The objective of this review was to evaluate the impact of transition-of-care models and identify common themes that may minimize exacerbation and rehospitalization, and improve quality of life for patients with Congestive heart failure. CHF is a significant burden in worldwide healthcare system and a common reason for recurrent hospitalizations. When multidisciplinary health care providers function as liaisons and educators during transition from hospital to home, they help prepare patients for life with CHF and mitigate the need for readmission. We conducted a systematic review of transitional care interventions for patients with CHF to measure the impact of transitional care interventions with patinets with CHF in primary healthcare and ther effecive on Health Care Programs on resuding the huge gap in apply the care for such patients.

2. OBJECTIVES

frequent use of health care services is mainly due to lack of understanding of a treatment plan, nonadherence to medical therapy, unawareness of heart failure symptom exacerbation, and irregular follow-up have been effecting the efficiency and increasing the cost of primary healthcare system .Therefore this review aimed to assess the efficacy, comparative effectiveness and the impact of transitional care interventions (TCIs) on acute health service use to prevent harms to patients with congestive heart failure in primary care.

3. METHODOLOGY

A systematic review and meta-analysis was conducted according to Cochrane recommendations (Higgins J et al, 2011).We searched MEDLINE, the Cochrane Library, and CINAHL for English-language and human-only studies published before June 2016. We used the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework (Moher D et al, 2010) for reporting the results. We manually searched reference lists of pertinent reviews, included trials, and background articles on this topic to look for relevant citations our searches might have missed. We searched for relevant unpublished studies using ClinicalTrials.gov and the World Health Organization International Clinical Trials Registry Platform. Then we have conducted a meta-analysis using Review Manager to determine the differences between the TCI group and the usual care group in their risks of readmission and ED visits at the last provided follow-up time.

4. RESULTS

Out of 742 studies We identified 22 studies which was matching with our including criteria In general, stuies report usual care as “standard discharge instructions” or “follow-up with outpatient provider as usual.” Most trials did not describe specific details, such as the type of clinic follow-up (for example, primary care vs. follow-up in a specialty clinic) or the timing of outpatient follow-up in the usual care group. We assessed most interventions as medium- or high-intensity

We included an identification of a broad range of intervention types (Table 1) applicable to adults transitioning from hospital to home that aimed to prevent readmissions and reduce the frequent visits to ED without urgent need and this is according to (Cynthia Feltne et al, 2014)

Table 1. Transitional Care Interventions

Category	Definition
Home-visiting programs	Home visits by clinicians, such as a nurse or pharmacist, who educate, reinforce self-care instructions, perform physical examination, or provide other care (e.g., physical therapy or medication reconciliation). These interventions are often referred to as nurse case management interventions, but they also can include home visits by a pharmacist or multidisciplinary team.
STS	Monitoring, education, or self-care management (or various combinations) using simple telephone technology after discharge in a structured format (e.g., series of scheduled calls with a specific goal, structured questioning, or use of decision-support software).
Telemonitoring	Remote monitoring of physiologic data (e.g., electrocardiogram, blood pressure, weight, pulse oximetry, or respiratory rate) with digital, broadband, satellite, wireless, or Bluetooth transmission to a monitoring center, with or without remote clinical visits (e.g., video monitoring).
Outpatient clinic-based	Services provided in one of several types of outpatient clinics: multidisciplinary HF, nurse-led HF, or primary care. The clinic-based intervention can be managed by a nurse or other provider and may also offer unstructured telephone support (e.g., patient hotline) outside clinic hours.
Primarily educational	Patient education (and self-care training) delivered before or at discharge by various personnel or methods: in person, interactive CD-ROM, or video education. Interventions in this category do not feature telemonitoring, home visits, or STS and are not delivered primarily through a clinic-based intervention. Follow-up telephone calls may occur to ascertain outcomes (e.g., readmission rates) but not to monitor patients' physiologic data.
Other	Unique interventions or interventions that do not fit into any of the other categories (e.g., individual peer support for patients with HF).

HF = heart failure; STS = structured telephone support.

Five Randomized controlled trials (RCTs) compared a home-visiting program with usual care, and 1 trial compared a home-visiting program with tele monitoring . Some trials involved only 1 comprehensive home visit after an index hospitalization; the remainder included several planned visits. In most trials, nurses conducted the home visits, most of which began within 7 days of discharge. Other trials included visits within 24 to 48 hours of discharge, and 3 trials specified that visits were done within 14 days of discharge.^(12,13,14,15,16) considering effect on hospital readmission six trials interventions provided data on all-cause readmission; The meta-analysis showed a significant reduction in the relative risk of readmission with a TCI as compared with usual care (RR = 0.92; 95% CI, 0.87–0.98), indicating that TCI reduces the risk of readmission by an average of 8%. The number needed to treat was 52, meaning that 52 patients had to receive the TCI for 1 patient to benefit.^(17,18,19,20,21,22)

And about the effect on all-cause ED visits five trials^(2, 23, 24,25,26) provided data on all-cause ED visits ; The meta-analysis showed a significant 29% reduction in the risk of ED visits for TCI as compared with usual care (RR = 0.71; 95% CI, 0.52–0.98). The number needed to treat was 9, meaning that 9 patients had to receive the TCI for 1 patient to benefit. Providing TCI to patients with CHF discharged to home showed mean 8% and 29% risk reductions of all-cause readmission and ED visits, respectively. TCI was far more efficacious in decreasing ED visits than in reducing hospital readmission: the number needed to treat was only 9 patients to avoid an ED visit vs 52 to avoid a readmission. These results are in line with previous reviews of studies of older CHF patients receiving comprehensive discharge planning plus postdischarge support. ur results suggest that high-intensity TCIs need be sustained for only a short duration (6 months or less) to be effective at reducing the risk of readmission, while moderate-intensity interventions need to be of a longer duration (more than 6 months) to have a similar effect. It is therefore essential to provide individualized TCI to patients, and to triage patients for high-intensity or moderate-intensity intervention; risk stratification may help in guiding triage. In contrast to a meta-analysis by Feltner et al,³⁰ we found that follow-up in the outpatient clinic only, that is, the usual postdischarge arrangement, does not improve the outcomes studied. Similarly, telephone follow-up used in isolation the most frequently reported type of TCI (11 RCTs) was not efficacious. In all cases, low-intensity TCI should be avoided.

5. CONCLUSION

Providing TCI to CHF patients reduces readmission and ED visits. High-intensity interventions, regardless of intervention length, seem to be the best option. Moderate-intensity interventions implemented for long duration may be another option. Clinicians and managers who implement TCI in primary care can incorporate these findings with the health care context to determine the optimal balance between intensity and duration of interventions.

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