August 2016 – SUPPORT Summary of a systematic review

What are the impacts of discharge planning from hospital?

Discharge planning is the development of an individualised plan for patients prior to leaving hospital. Discharge planning should ensure that patients are discharged from hospital at an appropriate point in their care and that, with adequate notice, the provision of other services is adequately organised. Discharge planning is a frequent feature of health systems in many countries and is aimed to improve patient outcomes and contain costs.

Key messages

➔ **In high-income countries:**

- Discharge planning probably reduces unscheduled readmission rates at 3 months for patients admitted with a medical condition and the length of hospital stays.
- Discharge planning may lead to increased satisfaction for patients and healthcare professionals.
- The effect of discharge planning on unscheduled readmissions for patients admitted to hospital following a fall and the costs or savings of discharge planning are uncertain.

➔ **The effects of discharge planning in low-income countries are uncertain since no studies were conducted in these settings.**

- The impacts of discharge planning on the length of hospital stays, unscheduled readmission rates, and health outcomes might depend on the availability of community care and the capacity of health professionals in the hospital to prepare and implement discharge plans based on individual patient needs.

Who is this summary for?

People making decisions concerning discharge planning from hospital

! This summary includes:

- **Key findings** from research based on a systematic review
- **Considerations about the relevance of this research** for low-income countries

X Not included:

- Recommendations
- Additional evidence not included in the systematic review
- Detailed descriptions of interventions or their implementation

This summary is based on the following systematic review:

Gonçalves-Bradley DC, Lannin NA, Clemson LM, et al. Discharge planning from hospital. Cochrane Database of Systematic Reviews 2016, Issue 1. Art. No.: CD000313.

What is a systematic review?

A summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise the relevant research, and to collect and analyse data from the included studies

SUPPORT was an international project to support the use of policy relevant reviews and trials to inform decisions about maternal and child health in low- and middle-income countries, funded by the European Commission (FP6) and the Canadian Institutes of Health Research.

Glossary of terms used in this report: www.supportsummaries.org/glossary-of-terms

Background references on this topic: See back page

Background

Discharge planning includes five components: pre-admission assessment, case finding on admission, individual inpatient assessment and discharge preparation, and the implementation, documentation and monitoring of the discharge planning process.

Discharge planning may influence both the length of hospital stays and patterns of care within the community. Factors that can delay discharge from hospital include: inadequate patient assessment by health professionals, including a lack of knowledge about patients' social circumstances; poor logistics, e.g. the transport services to take a patient home; and insufficient communication between the hospital and community service providers. Patient and family involvement in medical decision-making has been shown to play an essential role in informal post-discharge care. Early and effective discharge planning is important given the pressure to discharge patients early.

How this summary was prepared

After searching widely for systematic reviews that can help inform decisions about health systems, we have selected ones that provide information that is relevant to low-income countries. The methods used to assess the reliability of the review and to make judgements about its relevance are described here: www.supportsummaries.org/how-support-summaries-are-prepared/

Knowing what's not known is important

A reliable review might not find any studies from low-income countries or might not find any well-designed studies. Although that is disappointing, it is important to know what is not known as well as what is known.

A lack of evidence does not mean a lack of effects. It means the effects are uncertain. When there is a lack of evidence, consideration should be given to monitoring and evaluating the effects of the intervention, if it is used.

About the systematic review underlying this summary

Review objective: To determine the effectiveness of planning the discharge of patients from hospital to home compared to usual care.

Types of	What the review authors searched for	What the review authors found
Study designs & Interventions	Randomized trials of planned discharge that included: 1) pre-admission assessment, 2) case finding on admission, 3) inpatient assessment and preparation of a discharge plan based on the individual needs of a patient, 4) implementation of the discharge plan consistent with the assessment and documentation of the discharge planning process, and 5) monitoring	30 randomized trials that evaluated broadly similar interventions that included all five components, although 7 of the trials did not describe a monitoring phase
Participants	All patients in hospital irrespective of age, gender or condition	21 trials recruited patients with a medical condition (6 of them heart failure patients), 5 trials with a mix of medical and surgical conditions, 2 trials recruited older people (> 65 years), and 2 from an acute psychiatric ward. The average age of patients recruited to 10 of the trials was >75 years; between 70 and 75 years in 7 trials, and <70 years in the remaining trials. They were < 50 years in the two trials recruiting participants for a psychiatric hospital.
Settings	Acute, rehabilitation or community hospitals	United States (13 trials), United Kingdom (5), Canada (3), France (2), Australia (1), Denmark (1), the Netherlands (1), Slovenia (1), Sweden (1), Switzerland (1), and Taiwan (1).
Outcomes	Length of stay in hospital, readmission rate to hospital, complication rate, place of discharge, mortality rate, patient health/psychological status, patient/carer satisfaction, psychological health of caregivers, cost of community care/healthcare, use of medications	Length of stay in hospital (15 trials), readmission rate to hospital (18), place of discharge (3), mortality rate (9), patient health/psychological status (14), patient/carer satisfaction (4), cost of community care/healthcare (7), use of medications (2). Follow-up times varied between 2 weeks and 9 months.
Date of most recent search: October 2015		
Limitations: This is a well-conducted systematic review with only minor limitations		

Gonçalves-Bradley DC, Lannin NA, Clemson LM, et al. Discharge planning from hospital. Cochrane Database of Systematic Reviews 2016, Issue 1. Art. No.: CD000313.

Summary of findings

30 trials comparing discharge planning to usual care with no structured discharge planning recruited participants from high-income countries.

- **Discharge planning probably reduces unscheduled readmission rates at 3 months for patients admitted with a medical condition and the length of hospital stays. The certainty of this evidence is moderate.**
- **Discharge planning may lead to increased satisfaction for patients and healthcare professionals. The certainty of this evidence is low.**
- **The effect of discharge planning on unscheduled readmissions for patients admitted to hospital following a fall and the costs or savings of discharge planning are uncertain because the certainty of this evidence is very low.**

About the certainty of the evidence (GRADE) *

⊕⊕⊕⊕
High: This research provides a very good indication of the likely effect. The likelihood that the effect will be substantially different† is low.

⊕⊕⊕◯
Moderate: This research provides a good indication of the likely effect. The likelihood that the effect will be substantially different† is moderate.

⊕⊕◯◯
Low: This research provides some indication of the likely effect. However, the likelihood that it will be substantially different† is high.

⊕◯◯◯
Very low: This research does not provide a reliable indication of the likely effect. The likelihood that the effect will be substantially different† is very high.

* This is sometimes referred to as 'quality of evidence' or 'confidence in the estimate'.

† Substantially different = a large enough difference that it might affect a decision

See last page for more information.

Effect of discharge planning on patients admitted to hospital with a medical condition

People Patients admitted to hospital with a medical condition
Settings Hospital
Intervention Discharge planning
Comparison Usual care

Outcomes	Absolute effect*		Relative effect (95% CI)	Certainty of the evidence (GRADE)
	Without discharge planning	**With discharge planning**		
Unscheduled readmission within 3 months of discharge from hospital	Study population admitted with a medical condition		RR 0.87 (0.79 to 0.97)	⨁⨁⨁◯ Moderate
	254 per 1000	221 per 1000		
	Difference: 33 fewer per 1000 patients (Margin of error: 8 to 54 fewer)			
	Study population admitted following a fall		RR 1.36 (0.46 to 4.01)	⨁◯◯◯ Very low
	93 per 1000	126 per 1000		
	Difference: 33 more per 1000 patients (Margin of error: 50 fewer to 278 more)			
Hospital length of stay Follow-up 3 to 6 months	Study population admitted with a medical condition		–	⨁⨁⨁◯ Moderate
	From 5.2 to 12.4 days	From 4.5 to 11.7 days		
	Difference: 0.73 fewer days on average per patient (Margin of error: 0.12 to 1.33 fewer days)			
Satisfaction	Discharge planning may lead to increased satisfaction for patients and healthcare professionals.		–	⨁⨁◯◯ Low
Costs	A lower readmission rate for those receiving discharge planning might be associated with lower health service costs in the short term. Differences in use of primary care varied.		–	⨁◯◯◯ Very low

Margin of error = Confidence interval (95% CI) RR: Risk ratio GRADE: GRADE Working Group grades of evidence (see above and last page)

* Unscheduled readmissions and length of stay WITHOUT the intervention are based on the study populations. The corresponding values WITH the intervention (and the 95% confidence interval for the difference) is based on the overall relative effect (and its 95% confidence interval).

Relevance of the review for low-income countries

➔ Findings	▷ Interpretation*
APPLICABILITY	
➔ **No included studies were conducted in a low-income country.**	▷ *The applicability of the available evidence to low-income countries is uncertain because the effects of discharge planning might depend on the availability of community care. They may also depend on the capacity and type of health professionals available in the hospital (for example, doctors, nurses or lay health workers) to prepare and implement discharge plans based on individual patient needs.* ▷ *A high level of communication between the discharge planner and the providers of services outside the hospital is not always available in low-income settings.*
EQUITY	
➔ **The included studies provided little data regarding the differential effects of the interventions for disadvantaged populations.**	▷ *It is uncertain what, if any, impacts discharging planning might have on inequities. Considering the shift from secondary to primary care as a result of discharge planning, the effects might depend on the potential for discharge planning to address the limited availability of community care and the capacity of health professionals providing care for disadvantaged populations.*
ECONOMIC CONSIDERATIONS	
➔ **The trials assessing the effects of discharge planning on the costs of healthcare or the use of medication compared to usual care showed that discharge planning might slightly reduce hospital care costs.**	▷ *Both the resources required and the potential impacts on the use of acute care and community services in low-income countries are uncertain.* ▷ *It is not clear if costs are reduced or shifted from secondary to primary care as a result of discharge planning.*
MONITORING & EVALUATION	
➔ **There were no trials of discharge planning in low-income countries.**	▷ *The effects of discharge planning, with or without additional interventions, should be rigorously evaluated in cluster-randomized trials before scaling-up in low-income countries and should include patient health outcomes such as patient quality of life, impacts on informal care givers, and healthcare and non-healthcare resource utilisation as outcomes.* ▷ *Studies should provide details of the intervention to assess how some components of the process operate and describe the context in which it was delivered.*

*Judgements made by the authors of this summary, not necessarily those of the review authors, based on the findings of the review and consultation with researchers and policymakers in low-income countries. For additional details about how these judgements were made see: www.supportsummaries.org/methods

Additional information

Related literature

This systematic review provides evidence about satisfaction, patients' quality of life and readmission rates for elderly patients:
Preyde M, Macaulay C, Dingwall T. Discharge planning from hospital to home for elderly patients: a meta-analysis. J Evid Based Soc Work. 2009 Apr;6(2):198-216.

These systematic reviews address comprehensive discharge planning as part of a broader package of care for older patients:
Ellis G, Whitehead MA, O'Neill D, Langhorne P, Robinson D. Comprehensive geriatric assessment for older adults admitted to hospital. Cochrane Database Syst Rev. 2011 (7):CD006211. PubMed PMID: 21735403.

Phillips CO, Wright SM, Kern DE, Singa RM, Shepperd S, Rubin HR. Comprehensive discharge planning with postdischarge support for older patients with congestive heart failure: a meta-analysis. JAMA. 2004 Mar 17;291(11):1358-67.

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Conflict of interest

None declared. For details, see: www.supportsummaries.org/coi

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The summary should be cited as

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About certainty of the evidence (GRADE)

The "certainty of the evidence" is an assessment of how good an indication the research provides of the likely effect; i.e. the likelihood that the effect will be substantially different from what the research found. By "substantially different" we mean a large enough difference that it might affect a decision. These judgements are made using the GRADE system, and are provided for each outcome. The judgements are based on the study design (randomised trials versus observational studies), factors that reduce the certainty (risk of bias, inconsistency, indirectness, imprecision, and publication bias) and factors that increase the certainty (a large effect, a dose response relationship, and plausible confounding). For each outcome, the certainty of the evidence is rated as high, moderate, low or very low using the definitions on page 3.

For more information about GRADE:
www.supportsummaries.org/grade

SUPPORT collaborators:

The Cochrane Effective Practice and Organisation of Care Group (EPOC) is part of the Cochrane Collaboration. The Norwegian EPOC satellite supports the production of Cochrane reviews relevant to health systems in low- and middle-income countries .
www.epocoslo.cochrane.org

The Evidence-Informed Policy Network (EVIPNet) is an initiative to promote the use of health research in policymaking in low- and middle-income countries. www.evipnet.org

The Alliance for Health Policy and Systems Research (HPSR) is an international collaboration that promotes the generation and use of health policy and systems research in low- and middle-income countries.
www.who.int/alliance-hpsr

Norad, the Norwegian Agency for Development Cooperation, supports the Norwegian EPOC satellite and the production of SUPPORT Summaries.
www.norad.no

The Effective Health Care Research Consortium is an international partnership that prepares Cochrane reviews relevant to low-income countries. www.evidence4health.org

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