




The effect of transitions intervention to ensure patient safety and satisfaction when transferred from hospital to home health care—A systematic review

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Abstract

Aim: The aim of this systematic review is to describe and evaluate the effectiveness of transition interventions to safeguard patient safety and satisfaction during patients' transition from hospital to home health care.

Design: Systematic review.

Data Sources: MEDLINE, Ovid Nursing Database, PsycINFO, EMBASE, CINAHL, Clinical Trials and SveMed+ was systematic searched in January 2019 and September 2020 to identify peer-reviewed papers. No language, geographical or publication date restrictions.

Review Methods: Cochrane Handbook for Systematic Reviews of Interventions was used. Data analysis focused on aggregated data and a descriptive synthesis. Risk of bias was rated using Cochrane risk-of-bias tool.

Results: In total, 10,524 references were identified in the literature search, twenty-six articles were included. The interventions were divided into three main groups: (i). systematic patient education pre-discharge; (ii). establishment of contact with the local healthcare services pre-discharge and (iii). follow-up initiated by nurses from the hospital at home post-discharge. The studies either used one intervention or combined two or three interventions. We considered the intervention to improve patient safety or satisfaction when they reported statistically significant results. Only four interventions increased both patient safety and satisfaction, seven interventions increased patient safety and thirteen increased patient satisfaction. Interventions that appear to be quite similar, with the same duration, measured different effects on patients' satisfaction and safety. Interventions that ensured patient safety did not necessarily facilitate patient satisfaction and vice versa.

Conclusion: Interventions can improve patient safety and satisfaction during transfer. However, interventions that improve patient safety or satisfaction do not always match.

Impact: This review suggests that transition interventions can improve patients' safety and satisfaction. However, to compare the impact of future interventions is it important to use standardized measurement tools of satisfaction. There is a need to try out tailored interventions, where interventions are customized to the needs of each patient.

KEYWORDS

discharge, literature review, nursing, nursing intervention, systematic review, transfer, transition

1 | INTRODUCTION

The average length of hospital stay in Europe has been reduced (OECD/European Union, 2018). In the case of patients still in need of care, a shorter hospital stay entails an increased number of transitions between different levels and locations of healthcare settings. Consequently, healthcare professionals hailing from different healthcare service domains may be involved in the care of one single patient, which, in turn, results in increased fragmentation of care (Haggerty et al., 2003; Wohlaer, 2012). Being seriously ill, and in need of advanced specialized health care, the quality of transitions between different healthcare settings is of major importance for patients' health and well-being (Asif et al., 2020; Ellingsen et al., 2014, 2015; Kyte et al., 2019; Oksholm et al., 2018; World Health Organization (WHO), 2016).

Several studies have shown that the transfer from one healthcare setting to another is associated with the risk of missed patient care (Coleman & Berenson, 2004; Danielsen et al., 2018; Ellingsen et al., 2013, 2015; Flink & Ekstedt, 2017; Kyte et al., 2019; Oksholm et al., 2018; Tandjung et al., 2011). An overview of reviews report that communication and information sharing at the discharge planning stage are areas where misses in healthcare happened (Chaboyer et al., 2021).

The WHO recommend patients' involvement in designing their own care in order to improve patient transition (WHO, 2016). The involvement of the patients' opinions in the transfer of care could help bridge the gaps between different care levels and increase patients' safety levels (Chen et al., 2021; Uhrenfeldt et al., 2013). Studies report patients being unprepared for their roles in their next healthcare setting, their lack of understanding regarding essential steps in the management of their condition and lack of knowledge on how to contact appropriate clinicians for assistance (Bucknall et al., 2020; Flink & Ekstedt, 2017; Hellesø et al., 2005).

Interventions to improve transfer, such as pre-discharge education, telephone support and standardization of procedures and checklists, have been investigated by other researchers (Coffey et al., 2019; Mai Ba et al., 2020). Previous reviews, which evaluated the impact of transition interventions, focused on factors associated with patient safety, such as reduced number of 30-day readmission, reduced number of patients' deaths and correct use of medications (Coffey et al., 2019; Leppin et al., 2014). Although patient safety is central, it is also important with users' participation and users' voice

in the designing of interventions that concern themselves. Patient satisfaction is one way evaluate transition intervention, which has only been limited focus on. There is, therefore, a critical need to perceive both patients' safety and satisfaction to improve the quality of patients' transfer.

2 | BACKGROUND

Transitions of care refer to the various points in a healthcare setting where a patient moves to, or returns from, a physical location or makes contact with a healthcare professional to receive health care (WHO, 2016). Thus, transition interventions comprise activities that help ensure quality of care and patient satisfaction and safety during patient transfer and patient discharge. According to Meleis' theory about transitions (Meleis et al., 2010), the transition experience is characterized by the following five essential properties: (i) perception, knowledge and recognition of a transition experience; (ii) level of engagement in the process; (iii) change and difference, which indicate that all transitions involve changes and can lead to differences, for example, divergent expectations; (iv) duration of the transition; and (v) departure from the hospital. All these properties can affect patients' transition experience and contribute to different effects from seemingly similar interventions. Furthermore, Meleis et al. (2010) describe facilitators and inhibitors that influence patients' transition experience and emphasizes the need to uncover the personal and environmental conditions that facilitate or hinder the transition process (Meleis et al., 2010).

WHO defines patient safety as: "A framework of organized activities that creates cultures, processes, procedures, behaviors, technologies and environments in health care that consistently and sustainably lower risks, reduce the occurrence of avoidable harm, make errors less likely and reduce the impact of harm when it does occur" (World Health Organization, 2021). Safety is one indicator of quality care; another factor is the concept of patient satisfaction. Patient satisfaction responds to how well the patients perceive being cared for during transition and at discharge. The concept is commonly used as a critical indicator in the evaluation of healthcare service quality. However, there are no globally accepted formulations of patient satisfaction or measurement systems for patient satisfaction (Batbaatar et al., 2017). A systematic review (Batbaatar et al., 2017) reports that patient satisfaction increases compliance

with doctors' recommendations and follow-up appointments, which, in turn, results in improved health outcomes.

Based on the changes in the organization of a healthcare system and findings from previous research studies, there is an urgent need to evaluate patients' safety and satisfaction in relation to different transition interventions to improve the quality of patients' post-transfer follow-ups.

3 | THE REVIEW

3.1 | Aim

The aim of this systematic review is to describe and evaluate the effectiveness of interventions to safeguard patient safety and satisfaction during patients' transition between different levels and locations of health care.

3.2 | Design

This systematic review was conducted using the Cochrane Handbook for Systematic Reviews of Interventions (Higgins, Thomas, et al., 2019). This handbook describes the methods recommended for use when performing a review, such as planning a review, searching and selecting studies, assessing the risk of bias and analysing and writing the results. The study protocol for this review was registered on PROSPERO with reg number CRD42019114927 (Oksholm et al., 2019).

3.3 | Search method

The main search was conducted in January 2019 using the following databases: MEDLINE, Ovid Nursing Database, PsycINFO and EMBASE (all at OVID), CINAHL (at EBSCO), Clinical Trials and SveMed+. An updated search was conducted in September 2020.

Several terms describe the concept of patient transfer in relation to whether the transfer is interfacility or intrahospital, from hospitals or other health facilities or from one healthcare professional to another. The main search words comprised different words, which expressed patient discharge or transfer in combination with key-words such as patient safety, security, confidence and satisfaction.

The following search strategy was used in MEDLINE using the Medical Subject Headings terms along with text words: Patient Transfer OR Patient Discharge OR Patient Handoff OR handover AND Transitional Care OR Patient Discharge Summaries OR Delivery of Health Care, Integrated OR from hospital to home OR (discharge AND [plan OR intervention OR communication]) OR follow-up AND Patient Safety OR (patient AND [safety OR security OR confidence OR outcome OR experience]) OR quality of transition OR patient satisfaction. The use of MeSH terms and text words was adapted to other databases (see Appendix S1 for the complete search strategies in all databases).

3.3.1 | Inclusion and exclusion criteria

No geographical or publication date restrictions were specified in the search. Studies were included if they comprised clinical trials or intervention studies and met the following inclusion criteria:

- Patient transfer or patient discharge or in transition between different locations and levels of health care
- Adults (aged 18 and over)
- Peer-reviewed articles published in English or a Scandinavian language
- Transition intervention to improve patient satisfaction and safety
- Measured patient satisfaction with transition intervention

Studies were excluded if they met the following exclusion criteria:

- Readmission studies, observational studies and pilot studies
- Review articles, official reports, book reviews, theoretical articles, dissertations, conference abstracts and editorials
- Children, youth or pregnant women
- Patient satisfaction not measured

3.4 | Search outcome

Our primary outcome was ensuring the satisfaction and safety of patients who had been discharged and were transitioning between different locations and levels of health care, such as hospitals or their homes. Transition interventions are interventions that ensure patient security and satisfaction during patient transfer and at patient discharge. Such interventions include discharge intervention, discharge planning, discharge plan, communication tool, post-discharge tool, post-discharge follow-up and patient discharge summaries.

All the search results were imported to Endnote (X8.2 Update, 2018). After automation and manual duplication control were completed, the references were imported to the screening tool Rayyan (<https://rayyan.qcri.org/>).

The process of screening the titles and abstracts was first conducted by all authors independently and then in pairs to identify potentially eligible studies. The conflicts in the screening were decided in each pair. A second screening was performed due to the huge number of articles, both included and in conflict. New four pairs were included in this screening process to better sort out the articles in conflict.

3.5 | Quality appraisal of studies

The risk of bias in the included studies was independently rated by the first and last authors. The revised Cochrane risk-of-bias tool for randomized trials (RoB 2) was used to assess the quality of the randomized trials (Higgins, Cumpston, et al., 2019) (Table 2). The assessment consisted of five domains, namely the risk of bias arising

from the randomization process, due to deviations from intended interventions, due to missing outcome data, in measurement of the outcomes and in selection of the reported results. ROBINS-I, a tool used for assessing the risk of bias in non-randomized studies of interventions, was utilized to assess non-randomized studies (Sterne et al., 2016; Table 3). This assessment consisted of seven domains, namely the risk of bias due to confounding, selection of participants in the study, classification of interventions, due to deviations from intended interventions, due to missing data, measurement of outcomes and selection of the reported results.

3.6 | Data abstraction

Data were extracted from included studies using a predesigned data collection form summary. The extracted data included the name of the first author, year of publication, country of origin, location for intervention, intervention, duration of intervention, measurement tools and result of intervention (Table 1).

3.7 | Data synthesis

Before conducting data analysis, all authors independently read through the interventions and discussed how to group them together. The synthesis focused on aggregated data and a descriptive synthesis was performed. The focus of the analysis was on interventions that had shown the most optimum effects or impact on patient satisfaction and safety. The interventions were divided into three groups: (i) systematic patient education pre-discharge (ii) establishment of contact with the local healthcare services pre-discharge and (iii) follow-up at home by nurses from the hospital post-discharge.

The first and last authors performed the last data synthesis together. We considered the intervention to improved patient safety or satisfaction when they reported statistically significant results. Initially, a meta-analysis of patient satisfaction was planned to determine the superior intervention. However, due to the use of 23 different instruments (Table 1) for measuring satisfaction, several of them were deemed to be self-developed, and, without describing the posed question, data pooling was considered inappropriate.

4 | RESULTS

In total, 10,524 references were identified in the literature search and imported to EndNote. After automatic and manual duplication check, 8217 unique references were imported to Rayyan for screening (Figure 1). Rayyan is a web and mobile application used for systematic reviews, which facilitates abstract and title screening and enables one to collaborate on the same review (Ouzzani et al., 2016). In total, 26 articles were included in the study, thereby resulting in a total of 5596 patients, and the number of patients varied from 536 (Boter, 2004) to 28 (Fletcher et al., 2019). Diagnoses of the patients

varied; however, most patients had advanced and serious diseases (for example, stroke, cardiac disease, COPD and kidney transplant). Patients from 13 different nationalities were included in the studies. Eleven studies were conducted in America (that is, 7 USA, 4 Canada) and Asia (6), and the rest were performed in Europe (5), Middle East (2) and Australia (2). All studies were approved by an ethics committee or a similar authority.

The majority of the 26 studies used standardized interventions (Table 1). Although several studies helped the patients develop individual goals for the period after discharge, only four studies tailored the intervention according to the patients' need, such as by increasing the number of follow-ups or referring them to an outpatient clinic, if needed (Enguidanos et al., 2012; Naylor et al., 1999; Sawatzky et al., 2013; Wakefield et al., 2009). Tailoring is the process of customizing health follow-ups to match specific characteristics for each patient (Ryan & Lauver, 2002).

Several studies (Abad-Corpa et al., 2013; Boter, 2004; Cajanding, 2017; Clari et al., 2015; Gould, 2011; Kangovi et al., 2014; Li et al., 2014; Naylor et al., 1999; Preen et al., 2005; Salmany et al., 2018; Sawatzky et al., 2013; Sindhupakorn et al., 2019; Wakefield et al., 2009; Wong et al., 2005; Zhao & Wong, 2009) focused on the impact of interventions on a variety of additional factors, such as enhanced quality of life, self-rated health, reduced symptom burden, functional status, spiritual factors, health-related lifestyle, medical-related problems and correct medicine use. These results are reported in Table 1. As the focus for this review is the patients' satisfaction and safety, this will be emphasized in the presentation of results.

4.1 | Quality assessment

Patient satisfaction and safety during transition (interventions) were reported as the main outcomes of this study. Eighteen different measurement tools were used to measure patient satisfactions (Table 1). Thirteen studies used a self-developed tool to measure patient satisfaction, thereby making it challenging to compare intervention outcomes. The risk of bias varied in the reported studies (Tables 2 and 3).

4.2 | Findings

The interventions used in the studies could be divided into the following three main groups: (i) systematic patient education pre-discharge (for example, through structured discharge planning program, tailored patient information and written discharge materials); (ii) establishment of contact with the local healthcare services pre-discharge and (iii) follow-up at home by nurses from the hospital post-discharge (that is, through home visits, telephone calls and contact established through mobile applications). The studies used either one intervention or combined two or three interventions, as shown in Table 4.

TABLE 1 Characteristics of the included studies.

Author, year	Country Location	Aim	Design Sample (size) Patient group	Intervention Duration of intervention	Measurement tools	Results
1. Abad-Corpa et al. (2013)	Spain In hospital and in local primary health care centre	Aim: To evaluate the effectiveness of protocolised intervention for hospital discharge planning and follow-up in the primary care of patients with COPD.	Quasi-experimental with a control group Pre- and post-test Chronic obstructive pulmonary disease (COPD)	At the hospital, a nurse visited each patient in the experimental group every 24 h to identify the main caregiver, provide information about the disease, explain treatment, identify care problems and needs and facilitate communication. 24 h after discharge, the coordinating nurses informed the primary care nurses about patient discharge. The two nurses made the first home visit together. There were follow-up phone calls at 2, 6, 12 and 24 weeks after discharge. Duration: 24 weeks	Satisfaction measure: Monica-Oberst Patient Satisfaction test (LOPSS12) St. George's Respiratory Questionnaire Nursing Outcomes Classification with a 5-point Likert scale	There were no effects on patient satisfaction with care, readmission rate, use of healthcare services or mortality
2. Boter (2004)	Netherlands Hospital	To assess the effect of an outreach nursing program.	Multicentre randomized controlled trial Pre- and post-test Sample (size): N = 536 Stroke patients	1. Three nurse-initiated telephone contacts, 1 to 4, 4 to 8, and 18 to 24 weeks after discharge 2. Visit to the patients in their homes (10 to 14 weeks after discharge). 3. The nurses used a standardized checklist on information. Nurses supported patients and carers according to their individual needs. 4. Brochures on stroke or informal care were distributed when appropriate. Duration: 24 weeks	Satisfaction measure: Satisfaction- With-Stroke-Care questionnaire (SASC-19) Short form 36 (SF-36) Hospital Anxiety and Depression Scale (HADS) Barthel Index; scale 0 to 20, Modified Rankin Scale, Caregiver Strain Index (CSI) Sense of Competence Questionnaire (SCQ), Social Support List-Discrepancies (SSL-D)	There was no significant difference in patient's satisfaction, number of deaths, number of readmission or the use of healthcare services
3. Braun et al. (2009)	Israel Hospital	To study whether tight Telephone follow-up (TFU) would increase patient satisfaction, improve compliance and reduce re-hospitalization rate.	A randomized clinical trial Pre- and post-test Sample (size): N = 400 Medical patients	Telephone follow-up after 1 week, 1 month and 3 months. They were how they followed the recommendations and their compliance with the subscribed medications. Duration: 1 month	Satisfaction measure: Self-developed questionnaire	The intervention increased satisfaction ($p < 0.001$). There was no difference in number of readmissions.

TABLE 1 (Continued)

Author, year	Country Location	Aim	Design Sample (size) Patient group	Intervention Duration of intervention	Measurement tools	Results
4. Cajanding (2017)	Philippines. Hospital	To determine the effectiveness of a nurse-led structured discharge planning program.	A Randomized Controlled Study Pre- and post-test Sample (size): N = 143 Acute myocardial infarct patients	A 3-day structured discharge planning program implemented by a cardiovascular nurse practitioner, which is comprised of a series of individualized lecture-discussion, provision of feedback, integrative problem solving, goal setting, and action planning Duration: Before discharge	Satisfaction measure: Short-Form Patient Satisfaction Questionnaire (SF-PSQ-18) Minnesota Living With Heart Failure Questionnaire (MLHF) Cardiac Self-efficacy Questionnaire (CSE)	The intervention increased patients satisfaction scores ($p < 0.01$) and reduced readmission rates ($p < 0.01$).
5. Clari et al. (2015)	Italy. Hospital	To evaluate the effectiveness of a follow-up telephone call to reduce the number of issues after hospital discharge.	Double-blind, randomized controlled trial. A post-test only design. Sample (size): N = 129 Orthopaedic patients	A follow-up telephone call was made 24–96 h after discharge by a nurse to assess the overall health of the patient in the period after discharge by identifying experienced and potential problems. Duration: 96 h	Satisfaction measure: Self-developed questionnaire	There was no significant difference in patient's unplanned use of healthcare services or overall satisfaction.
6. Englander et al. (2014)	USA Hospital medical centre.	To evaluate the impact of a multicomponent transitional care improvement program.	Clustered randomized controlled trial Sample (size): N = 382 Medical and cardiac patients	The intervention began before hospitalization and continued through 30 days post-discharge. Including: 1. Transitional nurse coaching and education 2. postdischarge phone calls and/or home visits for high risk patients 3. provision of 30 days of medications at discharge 4. post-hospital primary care linkages Duration: 30 days	Satisfaction measure: 3-item Care Transitions Measure (CTM-3) Patient Health Questionnaire-2 - Screening Depression (PHQ2) EQ-5D Health Questionnaire (EQ5D) Charlson-Deyo comorbidity index.	The intervention was associated with significant increased satisfaction with transitional care ($p < 0.05$) and reduced mortality ($p = 0.02$). There was no difference in 30-day readmission or emergency room visits.
7. Enguidanos et al. (2012)	USA Hospital	Evaluate the impact of a brief nurse practitioner (NP) intervention on care transitions among older hospitalized adults discharged to home	Randomized controlled trial Pre- and post-test Sample (size): N = 199 Older patients (>50)	Home visit or telephone call within 72h after discharge. Checklist about what to address The NP provided one to three home visits with one to two follow-up telephone calls as needed in 6 months. They assessed the participant's needs and identifying resources, services, and programs to contact. Duration: 6 months	Satisfaction measure: Adapted version of the Home Care Satisfaction Measure (HCSM) Self-efficacy survey developed by Lorig, Sobel, Ritter, Laurent, and Hobb	Intervention participants reported improved satisfaction with medical care ($p = 0.008$) and had fewer primary care visits ($p = 0.036$), but no change in hospital readmissions rate.

TABLE 1 (Continued)

Author, year	Country Location	Aim	Design Sample (size) Patient group	Intervention Duration of intervention	Measurement tools	Results
8. Fletcher et al. (2019)	UK University Hospitals	Evaluate patient experience and their level of satisfaction with the Home Parenteral Nutrition (HPN) transition model	Observation study, no control group Post-test only Sample (size): N = 28 Patients receiving home parenteral nutrition	Pretransition: HPN Patient Passport was developed to facilitate sharing of information: The passport summarized key details for each patient. Duration: Before discharge	Satisfaction measure: Self-developed questionnaire	One group. The transition model used was successful, with the majority of patients "very satisfied".
9. Forster et al. (2005)	Canada Hospital	To determine the effect of introducing clinical nurse specialists to the general medical teams on patient outcomes	Randomized trial Pre- and post-test Sample (size) = 361 Medical patients	Patient education before and after discharge. Facilitating patient discharge by arranging follow-up visits Telephoning patients 3 day after discharge from hospital to answer questions and address early problems. Duration: 3 days after discharge	Satisfaction measure: Self-developed questionnaire Charlson Comorbidity Index	The addition of a clinical nurse specialist to a medical team did not significantly improve patient satisfaction with care, reduce readmission rate or mortality.
10. Gould (2011)	USA Hospital and community care centre	To examine a discharge nursing intervention aimed at promoting self-regulation of care.	Randomized controlled trial Pre- and post-test Sample (size): N = 129 Cardiac patients	Written discharge materials Telephone follow-up by an expert cardiovascular nurse within 24 h. Duration: Before and 24 h after discharge	Satisfaction measure: Revised Illness Perception Questionnaire (IPQ-R) Self-reported Medication-Taking Scale of Morisky et al.	Adding additional nursing support post procedure did not influence medication adherence, use of healthcare services or patient satisfaction.
11. Hu et al. (2020)	China Hospital	To evaluate the effectiveness of a transitional care program in improving discharge readiness, transitional care quality, health services utilization and patient satisfaction.	Randomized controlled trial Pre- and post-test Sample (size) N = 198 Kidney transplant patients	Risk assessment for early readmission Health education from admission to predischarge. Individualized discharge planning Telephone follow-up once per week for 1 month Duration: 1 month	Satisfaction measure: Care Transition Measure-15 (CTM-15) Readiness for Hospital Discharge Scale	The intervention group showed significantly lower readmission rate ($p = 0.013$), and better satisfaction with transitional care ($p < 0.001$). No effects on the unplanned use of healthcare services

TABLE 1 (Continued)

Author, year	Country Location	Aim	Design Sample (size) Patient group	Intervention Duration of intervention	Measurement tools	Results
12. Kangovi et al. (2014)	USA Community	To determine whether a tailored community health worker (CHW) intervention would improve post hospital outcomes among low- socio-economic status patients.	Randomized controlled trial Sample (size) N = 446 Medical patients	Community health workers (CHWs) worked with patients to create an individualized action plans for achieving patients' stated goals for recovery. The CHWs provided support tailored to patient goals for a minimum of 2 weeks. Duration: 14 days	Satisfaction measure: Patient Satisfaction Questionnaire Short Form (PSQ-18). The Hospital Consumer Assessment of Healthcare Providers and Systems survey question The Morisky Medication Adherence scale Patient Activation Measure 12-Item Short Form Health Survey instrument	There were no significant differences between groups in satisfaction, 30- day readmission.
13. Keng et al. (2020)	Canada, Hospital	To perform an initial assessment of patient uptake, outcomes and satisfaction with an integrated discharge monitoring system called Home to Stay	Prospective, cross-sectional survey Sample (size) N = 93 Patients after colorectal surgery	Home to Stay Program using a mobile app platform that was developed. The features on the app include (1) a "Daily Health Check," at day 1, 14, 21, and 30 for the patients to report on their postoperative recovery; (2) picture taking capability for patients to photograph their incisions and stoma to share with their health-care providers and (3) educational information on postoperative care and self-management at home. After the check's patients received tailored recommendations. Duration: 30 days	Satisfaction measure: Self-developed questionnaire The Quality of Recovery (QoR-15) questionnaire. The Daily Health Check consisted of 27 questions for patients with no stoma and 33 questions for patients with a stoma.	One group. The programme was successful based on patient satisfaction scores. Decrease in the 30-day readmission rate compared with normal admission rate
14. Knier et al. (2015)	USA Rehabilitation unit	To develop and test the DePART intervention	A quantitative survey design. Sample (size): 36 patients pre- and 31 patients post-discharge Rehabilitation patients	Identification of a discharge date and the primary family caregiver. Patients given the opportunity to practice and troubleshoot strategies with the therapist at home. Writing physician orders 48–72 h before discharge. Predischarge scheduling of physician and outpatient therapy appointments to occur within 1 week after discharge. Implementing a patient discharge preparation checklist. Nursing following-up with patients 24–48 h and 14 days after discharge by phone Duration: 14 days	Satisfaction measure: Press Ganey Patient Satisfaction Quality of Discharge Teaching (QDTS) Readiness for Hospital Discharge Scale (RHDS).	The intervention improved patient satisfaction ($p < 0.05$).

TABLE 1 (Continued)

Author, year	Country Location	Aim	Design Sample (size) Patient group	Intervention Duration of intervention	Measurement tools	Results
15. Li et al. (2014)	China Hospital	To develop an original nurse-led telephone support model for peritoneal dialysis patients in mainland China who are discharged from the hospital to home.	Randomized controlled trial Sample (size): N 135 Patients with chronic kidney disease	Education before discharge and nurse-led telephone support Duration: 6 weeks	Satisfaction measure: The kidney Disease Quality of Life Short Form (KDQOL-SF) Blood chemistry	Patients were significantly more satisfied ($p = 0.01$) and had reduced use of healthcare services at 12 weeks ($p = 0.039$) No effects on readmission rate
16. Lundby et al. (2020)	Denmark University Hospital	To develop and test a medication-focused patient counselling intervention at hospital discharge.	Randomized controlled trial Sample (size): N 64 Gastrointestinal patients	The intervention comprised preparing information for the discharge counselling, medication reconciliation, counselling with physician, patient report to primary care physician and phone follow-up three days after discharge. Duration: 3 days	Satisfaction measure: Self-developed questionnaire	The intervention did not result in improved patient satisfaction.
17. McInnes et al. (1999)	Australia Hospital	The impact of hospital visits for the purpose of discharge planning by GPs on their frail, aged patients.	Randomized controlled trial Sample (size): N = 364 Frail aged patients	GPs of patients randomized to the test group were invited by the geriatrician to make a pre-discharge visit, 1–5 days after contact with the geriatrician. A consultation sheet was issued requesting written information from the GP specific to the individual patient. The GP was able to talk to medical and allied health staff if required. Duration: Before discharge	Satisfaction measure: Self-developed questionnaire Activities of Daily Living scale Mini-Mental Status Examination (MMSE)	Significantly more of the intervention group were satisfied with care ($p = 0.03$) No effects on readmission rate

TABLE 1 (Continued)

Author, year	Country Location	Aim	Design Sample (size) Patient group	Intervention Duration of intervention	Measurement tools	Results
18. Naylor et al. (1999)	USA Hospital	To examine the effectiveness of an advanced practice nurse-centred discharge planning and home follow-up intervention for elders at risk for hospital readmissions	Randomized Clinical Trial Sample (size): N = 363 Patients over 65 years, different departments	Patients (and their caregivers) received a standardized discharge planning and home follow-up protocol. APN visits at least every 48 h during the hospitalization. At least 1 home APN visits within 48 h after discharge and a second visit 7–10 days after discharge Additional APN visits based on patients' needs. APN telephone availability 7 days a week. Weekly APN-initiated telephone contact with patients or caregivers. Duration: 4 weeks	Satisfaction measure: Self-developed questionnaire The Enforced Social Dependency Scale Center for Epidemiologic Studies Depression Scale Short Portable Mental Status Questionnaire.	The intervention significantly decreased 30 days readmission rate ($p < 0.01$) but did not decrease the number of acute care visits or increase patient satisfaction.
19. Preen et al. (2005)	Australia Hospitals	To determine the impact of a hospital-coordinated discharge care plan, involving a multidisciplinary team of primary health care providers, included both patient and general practitioner.	Randomized, controlled, clinical trial Sample (size): N = 189 Patients with cardiorespiratory disease	Patients received a discharge care plan which included: problems identified, goals developed and agreed upon with the patient/caregiver and interventions and community service providers who met patient needs. The care plan was completed 24–48 h before discharge and sent to the patient's general practitioner. General practitioners scheduled a consultation (within 7 days post-discharge). Duration: Before discharge	Satisfaction measure: Self-developed questionnaire Medical Outcomes Study Short Form 12 (SF-12)	The intervention had no effects on patient satisfaction
20. Salmany et al. (2018)	Jordan Hospital	To determine the impact of telephone follow-up calls on satisfaction in oncology patients after hospital discharge.	Randomized, controlled, clinical study Sample (size): N = 149 Oncologic patients	Telephone follow-up (TFU) by a pharmacist within 72 h of discharge with the standardized questions. Duration: 72 h	Satisfaction measure: Self-developed questionnaire	There was no difference in the overall satisfaction or readmission between groups.

TABLE 1 (Continued)

Author, year	Country Location	Aim	Design Sample (size) Patient group	Intervention Duration of intervention	Measurement tools	Results
21. Sawatzky et al. (2013)	Canada Hospital	To describe and compare the outcomes of a nurse practitioner managed cardiac surgery follow-up model of care with the standard model of primary care provider follow-up	Randomized, controlled, study Sample (size): (N = 200) Patients after cardio surgery	Telephone follow up (TFU) approx. 3 days post-discharge. Patients with significant issues/concerns were seen in the Nurse Practitioner Follow Up Clinic Based on the initial assessment, additional TFU contact by the NP was required for 50%. The average number of calls per participant was two. Patients were encouraged to contact the NPFU Clinic with any additional cardiac surgery-related issues. Duration: 6 weeks	Satisfaction measure: Client Satisfaction Questionnaire (CSQ-8) HRQL measured by SF-36 The Health Care Resources Utilization (HCRU) Questionnaire A Symptom Inventory Charlson Comorbidity Index New York Heart Association (NYHA) functional classification	At 2- and 6-weeks post-discharge, the intervention group was significantly more satisfied with the quality of the services ($p = 0.003$). No effects on readmission rate, use of healthcare services or mortality
22. Sindhupakorn et al. (2019)	Thailand Hospital	Would home visits improve the satisfaction after total knee replacement (TKR).	Randomized, controlled, study Sample (size) N = 48 Patients after total knee replacement	Home visit program. 1. To provide patients and families with confidence and self-reliance in providing health care at home. 2. To learn about how the family lives and takes care of the patient at home. 3. To assess the impact of both disease and illness on the patient and the family. 4. To continue a good long-term relationship between the with the patients and families. Duration: 6 weeks	Satisfaction measure: Self-developed questionnaire Pain intensity scores (VAS) Range of motion (ROM), WOMAC, knee scores and functional scores as a primary objective.	The intervention increased patient satisfaction ($p < 0.001$).
23. Soong et al. (2014)	Canada Hospital	To determine the impact of post-discharge phone calls on the patient experience.	Cluster-randomized control trial Sample (size): N = 214 Medical patients	Patients received a post-discharged phone call from the patient navigator. Standardized intervention phone script was designed to solicit information on general health status, comprehension of discharge instructions and to reinforce instructions provided. Duration: 3–5 days	Satisfaction measure: Care Transition Measure (CTM-3) score Self-reported adherence to medication and follow-up plans	The intervention increased satisfaction ($p = 0.01$) but had no effect on patient readmission rate.

TABLE 1 (Continued)

Author, year	Country Location	Aim	Design Sample (size) Patient group	Intervention Duration of intervention	Measurement tools	Results
24. Wakefield et al. (2009)	USA Hospital	To evaluate the efficacy of two telehealth applications, delivered by telephone, for improving outcomes patients following hospital discharge.	Randomized, controlled trial Sample (size): N = 148 Patients with heart failure recurrence	Telephone follow-up every week for 90 days. During intervention contacts, the study nurses assessed patients using a standardized symptom review checklist. When patients reported symptoms, the nurses reviewed patients' reported data, reinforced the plan of care and made referrals or contacted the patient's physician for care plan adjustments. Duration: 90 days	Satisfaction measure: Self-developed questionnaire Self-efficacy to manage disease in general Self-efficacy to manage Symptoms.	There were no significant differences between the groups in medication compliance or satisfaction with care.
25. Wong and Yeung (2015)	China Hospital and Community	To test the effects of a transitional care program (TCP)	Randomized controlled trial Sample (size): N = 108 Stroke patients	The intervention group received the TCP which was commenced before discharge and lasted for 4 weeks after discharge with three key components: 1. The holistic care intervention component 2. The transitional care tracks 3. The holistic care managers Duration: 4 weeks	Satisfaction measure: Patient satisfaction questionnaire (PSQ-HK) Quality of life SF-36 a Quality of Life – Spirituality, Religion and Personal Beliefs (WHO-QOL-SRPB). Modified Barthel Index (MBI). Center for Epidemiological Studies for Depression Scale (CES-D)	The intervention increased patient satisfaction ($p < 0.001$), but had no effect on 30 days readmission rate.
26. Zhao and Wong (2009)	China Hospital	To test the effects of a transitional care program among patients with coronary heart disease.	Randomized controlled trial Sample (size): N = 200 Patient with heart disease	Post-discharge transitional care program, which consisted of pre-discharge assessment, structured home visits and telephone follow-ups within 4 weeks after discharge. Duration: 4 weeks	Satisfaction measure: Self-developed questionnaire	The intervention decreased the unplanned use of healthcare services ($p = < 0.05$). There was no difference in hospital readmission. The study group was very satisfied with the care (no comparison).

A total of 22 studies used the interventions: follow-up at home by nurses from the hospital post-discharge. In eight studies (Boter, 2004; Braun et al., 2009; Clari et al., 2015; Enguidanos et al., 2012; Salmany et al., 2018; Sawatzky et al., 2013; Sindhupakorn et al., 2019; Wakefield et al., 2009), follow-up at home post-discharge was the only intervention. Nine studies combined systematic patient education pre-discharge with follow-up by nurses from the hospital post-discharge (Forster et al., 2005; Gould, 2011; Hu et al., 2020; Keng et al., 2020; Li et al., 2014; Lundby et al., 2020; Naylor et al., 1999; Song et al., 2011; Wong & Yeung, 2015). Finally, five studies combined interventions from all three intervention groups, that is, follow-ups at home by nurses from the hospital post-discharge, follow-ups by nurses from the hospital with systematic patient education and establishment of contact with the local healthcare services pre-discharge (Abad-Corpa et al., 2013; Englander et al., 2014; Kangovi et al., 2014; Knier et al., 2015; Zhao & Wong, 2009).

4.2.1 | Follow-up at home by nurses from the hospital post-discharge

In five of the eight studies, which used follow-up by nurses from the hospital post-discharge as the only intervention, patients were contacted by telephone (Braun et al., 2009; Clari et al., 2015; Salmany et al., 2018; Sawatzky et al., 2013; Wakefield et al., 2009). Patients were contacted once (Clari et al., 2015; Salmany et al., 2018; Sawatzky et al., 2013), twice (Braun et al., 2009) or up to 14 times (Wakefield et al., 2009), and the total duration of the follow-up varied from 72 h (Salmany et al., 2018) to 3 months (Wakefield et al., 2009). None of the interventions in these five studies improved patients' safety (Table 4); however, two interventions increased patients' satisfaction (Braun et al., 2009; Sawatzky et al., 2013). Braun et al. (2009) telephoned the patients one-week and 1-month post-discharge and asked the patients about different aspects associated with healthcare recommendations at discharge ($p < 0.001$). In the study conducted by Sawatzky et al. (2013), the patients were telephoned two to 3 days after cardiac surgery following a structured interview guide. Depending on the answers, the patients received medical advice or were referred to further follow-ups by the primary care provider or surgeon or further telephone follow-ups ($p = 0.003$).

Two studies combined home visits and telephone calls (Boter, 2004; Enguidanos et al., 2012). In the study conducted by Enguidanos et al. (2012), nurse practitioners carried out home visits and telephone calls for vulnerable older adults for up to 6 months. The nurses assessed the needs of the vulnerable older adults and identified resources, services and programs to contact, for example, primary care physicians, family and friends. These interventions led to increased satisfaction ($p = 0.008$) and reduced use of healthcare services ($p = 0.036$) (Table 4). In Boter's (2004) study, in the case of stroke patients, follow-ups were performed through three nurse-initiated telephone contacts and two visits to the patients in their homes. However, this study did not report any impact on patients' safety or satisfaction.

The last of the eight studies investigated the impact of a home visit program versus a non-home visit program on patients who had

undergone total knee replacement, and it was observed that patients who received a home visit were more satisfied with the care ($p < 0.001$) (Sindhupakorn et al., 2019).

4.2.2 | Combined systematic patient education pre-discharge and follow-up by nurses from the hospital at home post-discharge

Nine studies combined systematic patient education pre-discharge with follow-ups by nurses from the hospital at home post-discharge (Forster et al., 2005; Gould, 2011; Hu et al., 2020; Keng et al., 2020; Li et al., 2014; Lundby et al., 2020; Naylor et al., 1999; Song et al., 2011; Wong & Yeung, 2015). In these studies, the main focus was on different follow-up interventions post-discharge, and only limited information was provided about the pre-discharge intervention.

Four studies investigated follow-ups being initiated for patients through one telephone call approximately one to 3 days post-discharge (Forster et al., 2005; Gould, 2011; Lundby et al., 2020; Soong et al., 2014). Two of these studies reported no impact on patients' satisfaction and safety (Gould, 2011; Lundby et al., 2020) and one study reported an impact on some satisfaction factors (Forster et al., 2005); however, no effect was observed on the readmission rate or the unplanned use of healthcare services. In the last study, patients were satisfied with follow-up ($p = 0.01$), but the intervention did not reduce the readmission rate (Soong et al., 2014).

Four studies (Hu et al., 2020; Li et al., 2014; Naylor et al., 1999; Wong & Yeung, 2015) reported follow-ups, which continued over a period of time, from four to 24 weeks. In one study, telephonic follow-ups were performed for patients on a weekly basis for the duration of 1 month. In addition, patients also had the opportunity to contact healthcare personnel through an application (Hu et al., 2020). This study report increased patients' satisfaction ($p < 0.001$) and secured a reduction in the readmission rate ($p = 0.013$); however, the results show no impact on the unplanned use of healthcare services. Another study followed up with the patients through weekly home visits and telephone calls for 1 month (Wong & Yeung, 2015). The study reported increased satisfaction ($p < 0.001$); however, no impact on readmission rate was observed. Patients in the third study received at least two home nurse visits and weekly nurse-initiated telephone contact, and nurses were available for these patients through telephone 7 days a week (Naylor et al., 1999). A reduced readmission rate ($p < 0.01$) was reported; however, no impact on patients' satisfaction or the unplanned use of healthcare services was observed. In the fourth study, follow-ups were performed for patients through weekly telephone calls for 6 months (Li et al., 2014). The study report increased satisfaction ($p = 0.01$) and reduced the unplanned use of healthcare services at 12 weeks ($p = 0.039$); however, no impact on the readmission rate was observed.

The last of the nine studies was a one group study, and patient follow-up was performed by a mobile application (Keng et al., 2020). The features on the application requested patients to perform a "Daily Health Check" between days 1 and 14, at day 21 and at day 30 to report on their postoperative recovery. After the checks were

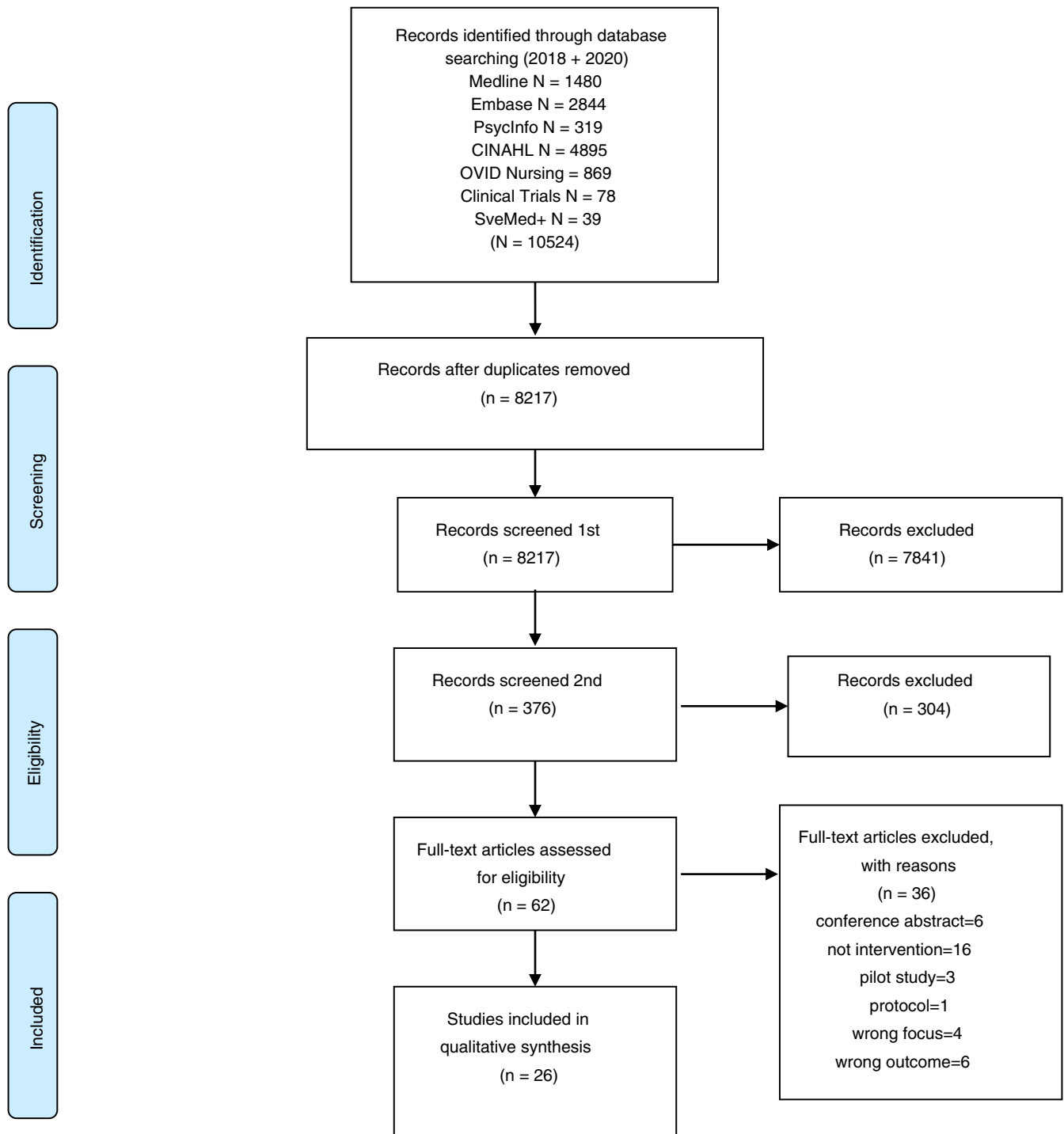


FIGURE 1 Flow chart, literature search and selection.

completed, the patients received tailored recommendations. In total, 92 per cent of the patients who tried out the application reported overall satisfaction as good or excellent.

4.2.3 | Combination of interventions from all groups

Five studies (Abad-Corpa et al., 2013; Englander et al., 2014; Kangovi et al., 2014; Knier et al., 2015; Zhao & Wong, 2009) combined

systematic patient education, establishment of contact with the local health care services pre-discharge and follow-up interventions by nurses from the hospital post-discharge. In the first study (Englander et al., 2014), post-discharge phone calls and/or home visits were initiated for high-risk patients over the course of 30 days. The intervention increased patient satisfaction ($p < 0.05$) and reduced mortality ($p = 0.02$); however, it had no impact on the readmission rate.

In the second study (Knier et al., 2015), extensive preparation was undertaken for the discharge and scheduling of physician and

TABLE 2 Cochrane risk-of-bias tool for randomized trials.

Author, year	Domain 1. Risk of bias arising from the randomization process	Domain 2. Risk of bias due to deviations from	Domain 3. Risk of bias due to missing outcome data	Domain 4. Risk of bias in measurement of the outcome	Domain 5. Risk of bias in selection of the reported result
Abad-Corpa et al. (2013)	High risk	Low risk	Low risk	Low risk	Low risk
Boter (2004)	Some concern	Low risk	Low risk	Low risk	Some concern
Braun et al. (2009)	Some concern	High risk	High risk	High risk	Some concern
Cajanding (2017)	Low risk	Low risk	Low risk	Low risk	Low risk
Clari et al. (2015)	Low risk	Low risk	Low risk	Low risk	Low risk
Englander et al. (2014)	Low risk	Low risk	Low risk	Low risk	Low risk
Enguidanos et al. (2012)	Low risk	Some concern	Low risk	Low risk	Low risk
Fletcher et al. (2019)	Low risk	Low risk	Low risk	Low risk	Low risk
Forster et al. (2005)	Low risk	Low risk	Low risk	Low risk	Low risk
Gould (2011)	Some concern	High risk	Low risk	Low risk	Some concern
Hu et al. (2020)	Low risk	Low risk	Low risk	Low risk	Low risk
Kangovi et al. (2014)	Low risk	Low risk	Low risk	Low risk	Low risk
Li et al. (2014)	Some concern	Some concern	Low risk	Some concern	Low risk
Lundby et al. (2020)	Low risk	High risk	Low risk	Low risk	Some concern
McInnes et al. (1999)	Low risk	High risk	High risk	High risk	Low risk
Naylor et al. (1999)	Low risk	Low risk	Low risk	Low risk	Low risk
Preen et al. (2005)	Some concern	Some concern	Some concern	Some concern	Some concern
Salmany et al. (2018)	Low risk	Some concern	Low risk	Some concern	Low risk
Sawatzky et al. (2013)	Some concern	Low risk	Low risk	Low risk	Low risk
Sindhupakorn et al. (2019)	Some concern	Some concern	Low risk	High risk	Some concern
Soong et al. (2014)	High risk	Some concern	Low risk	High risk	Low risk
Wakefield et al. (2009)	Some concern	Some concern	Some concern	Some concern	Low risk
Wong and Yeung (2015)	Low risk	Low risk	Low risk	Low risk	Low risk
Zhao and Wong (2009)	Some concern	Low risk	Low risk	High risk	Low risk

outpatient therapy pre-discharge. In addition, nurses telephoned patients 24–48 h and 14 days post-discharge. The patients were satisfied with the discharge preparation ($p < 0.05$); however, safety was not measured. The third study (Zhao & Wong, 2009) used structured home visits and telephone follow-ups within 4 weeks post-discharge. The intervention reduced the use of healthcare services ($p < 0.05$); however, the intervention did not affect the readmission rate or patient satisfaction.

The fourth (Abad-Corpa et al., 2013) and fifth (Kangovi et al., 2014) studies showed no difference in the patients' satisfaction or safety.

4.2.4 | Other interventions

While most of the interventions used in the studies, which have been included in this review, consisted of either follow-up by nurses from the hospital or at home post-discharge, three studies used a combination of improved patient education and establishment of *contact with the locale health care services pre-discharge*

(Fletcher et al., 2019; McInnes et al., 1999; Preen et al., 2005). Another study used improved *patient education pre-discharge* (Cajanding, 2017). This study investigated the efficacy of a three-day education program pre-discharge (Cajanding, 2017) for improving patient satisfaction ($p < 0.01$) and 30-day reduced readmission rate ($p < 0.01$). The observational study conducted by Fletcher et al. (2019) developed a *Patient Passport*, which summarized the key details for each patient to facilitate sharing of information in the context of home health care. The patients said they were very satisfied with the intervention. In a third study (McInnes et al., 1999), the *general practitioner (GP) was invited to make a pre-discharge visit at hospital to receive information and prepare patient discharge*. The patients were satisfied with the intervention ($p = 0.03$); however, the intervention had no impact on the readmission rate. In the case of the last study in this group (Preen et al., 2005), the patients and their general practitioners received a *discharge care plan* approximately between 24 and 48 h before the anticipated discharge. General practitioners scheduled a consultation within 7 days post-discharge. The intervention did not affect patient satisfaction, and patient safety was not measured.

TABLE 3 Risk of bias assessment for cohort-type studies.

Author, year	Domain 1. Risk of bias due to confounding	Domain 2. Risk of bias in selection of participants into the study	Domain 3. Risk of bias in classification of interventions	Domain 4. Risk of bias due to deviations from intended interventions	Domain 5. Risk of bias due to missing data	Domain 6. Risk of bias in measurement of outcomes	Domain 7. Risk of bias in selection of the reported result
Keng et al. (2020)	No information	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Knier et al. (2015)	Low risk	Moderate risk	Moderate risk	Low risk	Low risk	Low risk	Low risk

5 | DISCUSSION

The aim of the review was to describe and evaluate the effectiveness of interventions to improve the quality of care among patients transitioning between different locations of healthcare settings. We identified three main groups of interventions, which describe and evaluate patient transfer and patient discharge, follow-ups by nurses from the hospital post-discharge, systematic patient education pre-discharge and establishment of contact with local healthcare services pre-discharge. The included studies either used one intervention or combined two or three of these interventions.

5.1 | Uncertain impact of interventions

Only four of the included studies increased both patient safety and satisfaction (Cajanding, 2017; Englander et al., 2014; Enguidanos et al., 2012; Hu et al., 2020). In total, seven of the twenty-six interventions used in this review increased patient safety (that is, the number of readmissions, use of healthcare services and mortality), three interventions decreased the number of readmissions (Cajanding, 2017; Hu et al., 2020; Naylor et al., 1999), three interventions decreased the use of healthcare services (Enguidanos et al., 2012; Li et al., 2014; Zhao & Wong, 2009) and one intervention reduced mortality (Englander et al., 2014). These findings are in line with another systematic review, which assessed the impact of the practice of nurses telephoning the patients at home on patients' safety, that reported how a few of the interventions influenced patients' safety (Woods et al., 2019). The reason behind the limited impact of the interventions on patient safety may be attributed to the fact that this impact was measured shortly after the interventions (for example, 1 month). Thus, a longer follow-up duration may be needed to perceive a decrease in factors, such as the number of readmissions, use of healthcare services and mortality.

The positive impact of the interventions on satisfaction was clearer, as 13 of the 26 studies increased patient satisfaction. However, the most effective intervention was not evident due to the use of 18 different patient satisfaction measurement tools (Table 4). This indicated that it was not possible to perform a meta-analysis and highlighted the diversity of different interventions.

Another factor was that even interventions that appear to be quite similar, with the same duration, measured different effects on patients' satisfaction and safety. Like the studies conducted by Abad-Corpa et al. (2013) and Englander et al. (2014), who combined follow-ups by nurses from the hospital post-discharge, systematic patient education pre-discharge and establishment of a contact with the local healthcare services pre-discharge. While the study conducted by Englander et al. (2014) had a positive impact on patients' safety and satisfaction, the study conducted by Abad-Corpa did not. This may be attributed to the fact that different patient groups potentially have different needs for follow-up requirements in their home care settings. The fact that seemingly similar transition

TABLE 4 Interventions used in the different studies.

Author, year	Group 1 Improved patient education pre-discharge	Group 2 Establish contact with locale health care services pre-discharge.	Group 3 Follow-up by nurses' post-discharge
Abad-Corpa et al. (2013)	X	X	X
Boter (2004)			X
Braun et al. (2009)			X
Cajanding (2017)	X		
Clari et al. (2015)			X
Englander et al. (2014)	X	X	X
Enguidanos et al. (2012)			X
Fletcher et al. (2019)	X	X	
Forster et al. (2005)	X		X
Gould (2011)	X		X
Hu et al. (2020)	X		X
Kangovi et al. (2014)	X	X	X
Keng et al. (2020)	X		X
Knier et al. (2015)	X	X	X
Li et al. (2014)	X		X
Lundby et al. (2020)	X		X
McInnes et al. (1999)	X	X	
Naylor et al. (1999)	X		X
Preen et al. (2005)	X	X	
Salmany et al. (2018)			X
Sawatzky et al. (2013)			X
Sindhupakorn et al. (2019)			X
Soong et al. (2014)	X		X
Wakefield et al. (2009)			X
Wong and Yeung (2015)	X		X
Zhao and Wong (2009)	X	X	X

interventions have different effects on patient safety has also been confirmed in a previous review (Coffey et al., 2019).

Interventions that secured patients' safety did not necessarily facilitate patient satisfaction and vice versa. Another explanation behind this phenomenon may be that interventions that reduced 30-day readmission, reduced patients' emergency room visits or/and reduced mortality did not necessarily improve patient satisfaction. Satisfaction is a complex concept that includes many different factors, which are linked to prior satisfaction with healthcare, respondents' predisposition, utilization and the granting of patients' desires (Batbaatar et al., 2017; Crow et al., 2002).

5.1.1 | Reason behind the uncertain impact of interventions

There can be several reasons behind why the interventions used in this review show a limited impact on patients' safety and

satisfaction. In light of Meleis' transition theory, the reason behind the different effects of seemingly similar interventions may be attributed to undiscovered facilitators and inhibitors (Meleis et al., 2010). For example, the studies did not describe the social support and context before the intervention. None of the studies controlled for differences with support from informal caregivers, family, friends and home healthcare facilities. The patients' state of health, life situation, context, presence of relatives and health expertise varied, and when the starting point was different and not adjusted for, it proved difficult to compare the effects of an intervention. According to Meleis et al. (2010), transition conditions include personal, community or societal factors that may expedite or hinder the processes and outcomes of healthy transitions (Meleis et al., 2010).

Another reason behind the limited effect of the interventions can be that standard care has not been described. If standard care and the intervention is too similar, then little difference may be experienced between those two (Crow et al., 2002). The limited effect

on patients' safety may be a result of primarily standard interventions being used in the included studies; this entails that all patients received the same intervention. Only four studies tailored the interventions to the patients' need, such as increasing the number of follow-ups or referring patients to an outpatient clinic (Enguidanos et al., 2012; Naylor et al., 1999; Sawatzky et al., 2013; Wakefield et al., 2009).

Tailoring is the process of customizing health information to match selective characteristics for each person (Ryan & Lauver, 2002). Transition is a complex process, which indicates that offering the same interventions to different patients with different needs may contribute to different results. The fact that recognition and knowledge of all transitions involve changes and can lead to differences is a good starting point in addition to an ongoing engagement on behalf of healthcare professionals to improve the transition process for patients (Meleis et al., 2010). There is consistent evidence across settings that the most important health service factor affecting satisfaction is the patient-practitioner relationship (Suhonen et al., 2012). Tailored interventions save resources, make the patients feel that they are cared for and indicate an association between individualized nursing care and patient satisfaction (Suhonen et al., 2012).

5.2 | Strengths and limitations

One strength of this review is that two authors in pair independently have read all the abstracts and the articles identified in the extensive and systematic search of literature for this review. However, we did not search for grey literature or thesis. Another strength is the assessment of the quality of the included articles performed by the first and last authors, both independently and together.

As the studies used different measurement tools, and many questions were not described, it was impossible to perform a meta-analysis. The fact that many articles did not describe standard care made it difficult to measure the differences between the interventions.

6 | CONCLUSION

There is an urgent need to ensure a safe and satisfactory transition for patients. Interventions such as follow-up by nurses from the hospital post-discharge, systematic patient education pre-discharge and establishment of contact with the local healthcare services pre-discharge can improve patient safety and satisfaction at transfer and at discharge. However, few interventions increased patient safety, and future research needs to address this finding. Interventions that improve patient safety or satisfaction do not always coincide, and it is, therefore, important to measure both concepts to ensure high-quality patient transfer intervention. To compare the impact of future interventions to improve patient transfer and patient

discharge, it is important to use standardized measurement tools of satisfaction.

CONFLICT OF INTEREST STATEMENT

The authors have declared no conflict of interest.

PEER REVIEW

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No data are available.

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