

Experiences of interventions to reduce hospital stay for older adults following elective treatment: Qualitative evidence-synthesis

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Abstract

Background and Objectives: Hospitals streamline treatment pathways to reduce the length of time older adults admitted for planned procedures spend in hospital. However patient perspectives have been poorly evaluated. This systematic review aimed to understand the experiences of older patients, carers, families and staff of multi-component interventions intended to improve recovery following elective treatment.

Research Design and Methods: Bibliographic databases searched in June 2021 included MEDLINE ALL, HMIC, CENTRAL, CINAHL, AMED and ProQuest Dissertations and Theses. We conducted citation searching and examined reference lists of reviews. Two reviewers independently undertook screening and data extraction, resolving disagreements through discussion. We used an adapted Wallace checklist for quality appraisal and meta-ethnography to synthesise data. Clinician, carer and patient views were incorporated throughout the review.

Results: Thirty-five papers were included in the synthesis. Thirteen studies were conducted in the UK, with patient views the most frequently represented. We identified six overarching constructs: 'Home as preferred environment for recovery', 'Feeling

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safe', 'Individualisation of structured programme', 'Taking responsibility', 'Essential care at home' and 'Outcomes'.

Discussion and Implications: Findings explore the support patients, families and carers need throughout hospital admission, and may inform commissioning of services to ensure patients and carers receive appropriate follow-up support after hospital discharge. The findings may help hospital and community-based health and social care staff provide person-centred care based upon assessments of emotional and physical wellbeing of patients and family/carers. Research is needed to establish a core-set of patient-reported outcome measures which capture aspects of recovery which are meaningful to patients.

KEYWORDS

meta-ethnography, planned treatment, surgery, systematic review

1 | BACKGROUND AND OBJECTIVES

By 2030 one in six people will be aged 60 years or over, with the pace of population aging increasing over time—particularly within low- and middle-income countries. (World Health Organisation, 2017) This age group experiences increasingly complex health needs alongside pre-existing long-term conditions, including frailty and cognitive decline. (OPH, 2023) Whilst health status varies greatly across individuals, people over the age of 65 use healthcare services more than in other age groups. (Institute of Medicine (US) Committee on the Future Health Care Workforce for Older Americans, 2008) Seventeen percent of Americans within this age group requiring hospital admission per year, compared to 8% of adults aged 45–64. (Mattison, 2021).

Following admission, older people are at increased risk of hospital-acquired harms, such as urinary infections or falling, (Edwards & Lewis, 2015; Healey & Oliver, 2006) which can increase their length of hospital stay (LOS). Increased LOS can have a detrimental impact on their physical and mental functioning, reducing mobility and ability to complete self-care activities, (Care, 2016) and increasing risk of delirium which can have long-term effects on their cognitive functioning, including increasing risk for dementia. (OPH, 2023) In 2016, the National Health Service (NHS) spent approximately £820 million treating older adults who no longer needed to be in hospital. (Care, 2016) This places additional pressure on NHS resources alongside the reduced number of general and acute care hospital beds, which has fallen by 44% since 1987/88, (Kingsfund, 2021) and growing waiting lists for elective treatment following the COVID-19 pandemic. (Flinders, 2022).

Hospitals can relieve pressure on resources and reduce delayed discharge for older adults by streamlining patient recovery processes through utilising a variety of strategies such as prehabilitation and/or enhanced recovery pathways (ERPs) following elective procedures such as hip/knee arthroplasty and colorectal surgery. A recent systematic review evaluating the effectiveness of such strategies for older adults admitted for planned surgery indicates that whilst ERPs and prehabilitation interventions significantly reduced

What does this research add to existing knowledge in gerontology?

- Hospitals use various strategies to streamline patient recovery processes for those undergoing planned surgery, but the impact of these strategies on patients and carers is poorly understood.
- This systematic review highlights the extent to which these strategies meet the needs of older adults admitted for planned surgery, and their families/carers.

What are the implications of this new knowledge for nursing care with older people?

- Findings will help hospital and community-based nursing staff provide person-centred support for individuals recovering from planned surgery and their family/carers, providing opportunity to optimise quality of life for both groups.
- Staff may tailor structured recovery programmes to meet the needs of patients and carers. It is crucial to carer/patient wellbeing that appropriate support is in place following discharge.
- Findings explore how staff can promote the involvement of family and/or carers and adapt protocolised hospital interventions to the needs of individual patients, to help them reach recovery goals.

How could the findings be used to influence policy or practice or research or education?

- Findings may be useful to inform the delivery of services to ensure that patients and carers/families receive appropriate support before, during and following discharge.

- Our findings underline the importance of hospital and community-based health staff basing support upon assessments of patient and family/carer emotional and physical wellbeing, before, during and after a hospital stay.
- Commissioning of further research is required to establish a standardised set of patient reported outcome measures used to evaluate services and patient experience, particularly with respect to post-discharge outcomes.

hospital length of stay within certain patient groups, without apparently adversely affecting other clinical outcomes, the long-term effects were poorly evaluated and patient and carer reported outcomes, both during admission and after discharge, were largely unknown. (Nunns et al., 2019) With 15% of older people discharged from hospital being readmitted within 28 days, (Society, 2023) it is important to explore to what extent hospital processes to reduce patient LOS meet the needs of the patients being treated.

This systematic review aimed to understand the experiences of older patients, carers, families and staff of multi-component interventions intended to improve recovery and/or reduce hospital LOS following elective treatment. This review represents part of a broader linked-evidence synthesis, the findings of which are reported elsewhere. (Kinsey et al., 2023).

2 | RESEARCH DESIGN AND METHODS

This systematic review was conducted in accordance with guidelines for the conduct and reporting of systematic reviews and qualitative evidence syntheses. (Centre for Reviews and Dissemination, 2008; Tong et al., 2012) Our protocol was registered on PROSPERO prior to the commencement of searches. (Shaw et al., 2021).

2.1 | Identification of evidence

We searched MEDLINE ALL and HMIC (both via Ovid), AMED and CINAHL (both via EBSCO) and ProQuest Dissertations and Theses (via ProQuest). The search terms included terms for older people

or interventions commonly undergone by older people, combined using the AND Boolean operator with terms for multi-component interventions or terms that describe reducing length of stay, for example, 'length' adjacent to 'stay' adjacent to 'reducing'. A qualitative study design filter was applied with adaptations to increase the sensitivity (Wong et al., 2004) The MEDLINE search strategy is reproduced in Appendix A. Searches were run in June 2021. We have not updated these searches, as this review utilises an interpretative, configurative approach to synthesis; additional studies are unlikely to significantly alter our findings.

We conducted backwards and forwards citation chasing for all included studies using the Science Citation Index (Web of Science, Clarivate Analytics) and Scopus (Elsevier) and checked the included studies of topically similar systematic reviews identified by the searches. Due to the high number of studies identified through our search strategy, we did not search Google Scholar or relevant websites as initially specified in our protocol.

We applied our inclusion criteria (Table 1) to the title and abstract of each article identified through our search strategy. This was conducted independently by two reviewers, with disagreements resolved through discussion or referral to a third reviewer. Full texts were screened in the same way. All references were downloaded to and screened within Endnote 20 (Clarivate Analytics, Philadelphia, USA).

2.2 | Data extraction and quality appraisal

Summary data was extracted using Microsoft Excel for all included studies by one reviewer and checked by a second (DK, DC) (Data S1). Due to the high number of studies eligible for inclusion in the review, we deviated from the synthesis plan specified in our protocol and used a sampling approach to prioritise studies with the highest quantity of interpretative data relevant to our research questions for synthesis. For studies representing patient experience, we used the summary data to identify studies from different countries, across different clinical procedures and interventions to reduce LOS. These studies were prioritised for full data extraction, quality appraisal and inclusion in the qualitative evidence synthesis. Studies representing the voices of families/carers and staff were fewer in number and were all included in the synthesis.

TABLE 1 Review inclusion criteria.

| PICo element | Criteria |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Population | Patients with mean/median age of sample of ≥ 60 years, undergoing planned overnight hospital admission for any surgical procedure |
| Phenomenon of interest | Experiences of/attitudes toward multi-component interventions aiming to enhance recovery and/or reduce hospital LOS following a planned procedure. Includes views of patients, family, carers or health/social-care staff |
| Geographical context | High-income countries (defined by World Bank list) (World Bank, 2021) |
| Study design | Empirical studies based upon interviews and focus groups |
| Date limit | None |

Abbreviation: LOS, length of stay.

For full data extraction, one reviewer extracted first and second-order construct data relevant to the research question from the results and discussion sections of each prioritised article, alongside further detail regarding participant and intervention characteristics and study methods using Microsoft Word (DK). This was checked by a second reviewer (DC). We used an adapted version of the Wallace Checklist to assess the quality of the conduct and reporting of each article using the same process. (Moore et al., 2019; Wallace et al., 2004).

2.3 | Synthesis

We summarised characteristics of participants, interventions and methodological detail in tables and described these narratively.

Synthesis of first- and second-order data representing experiences of patients, families, carers and/or staff followed the principles of meta-ethnography. (Atkins et al., 2008) This method focuses on developing new interpretations, or third-order constructs, across all included studies through reciprocal translation and refutation.

Three reviewers completed line-by-line coding of prioritised articles within NVIVO (DK, DC, LS), with a sample of this coding checked by a second reviewer (DK). One reviewer (DK) merged similar concepts and ideas to form descriptive themes, with existing coding being checked where this process yielded new interpretations or ideas. Following identification of these preliminary themes, a sample of the non-prioritised articles which represented the views of populations or interventions not already included were incorporated into the synthesis. The stage at which the prioritised papers entered the synthesis is described in Data S1. During this iterative, interpretative process, conceptually similar themes were grouped together to form overarching constructs. We discussed the evolving synthesis as a team throughout development. The relationship between the overarching constructs and the themes contributing to them is explored within a line of argument.

3 | RESULTS

Bibliographic database searches identified 6172 records. Following de-duplication, we screened the title and abstracts of 4820 bibliographic database records. We sought the full texts for 295 records identified via bibliographic database searches and other methods; eight records could not be retrieved, resulting in the full text screening of 287 records. Two-hundred and forty-four records were excluded (see Figure 1). Forty-two studies (43 articles) were eligible for inclusion. (Archer et al., 2014; Barker et al., 2020; Berg et al., 2019; Berthelsen et al., 2014; Berthelsen & Frederiksen, 2017; Berthelsen & Kristensson, 2017; Bin Sheeha et al., 2020; Blazeby et al., 2010; Churchill et al., 2018; Collaco et al., 2021; den Bakker et al., 2019; Evans et al., 2021; Fecher-Jones & Taylor, 2015; Galli et al., 2015; Ganske, 2006; Haas et al., 2020;

Heaton et al., 2000; Heine et al., 2004; Hovik et al., 2018; Hunt, 2009; Jansson et al., 2020; Jorgensen & Fridlund, 2016; Judge et al., 2020; Kadiri et al., 2019; Kocman et al., 2019; Krogsgaard et al., 2014; Lie et al., 2012; Lyon et al., 2014; Orpen & Harris, 2010; Phillips et al., 2019; Rattray et al., 2021; Reay et al., 2015; Samuelsson et al., 2018; Short et al., 2016; Sjoveian & Leegaard, 2017; Specht et al., 2016; Specht et al., 2018; Strickland et al., 2018; Thomsen & Holge-Hazelton, 2017; Uhrenfeldt & Hoybye, 2015; van Egmond et al., 2015; Vandrevale et al., 2016; Westby & Backman, 2010).

3.1 | Study characteristics

Thirty-four studies (35 articles) were prioritised for synthesis. The most common countries represented were studies from the UK ($n=13$), (Archer et al., 2014; Barker et al., 2020; Blazeby et al., 2010; Collaco et al., 2021; Fecher-Jones & Taylor, 2015; Hunt, 2009; Judge et al., 2020; Kocman et al., 2019; Orpen & Harris, 2010; Phillips et al., 2019; Short et al., 2016; Strickland et al., 2018; Vandrevale et al., 2016) and Denmark ($n=6$), (Berthelsen et al., 2014; Berthelsen & Frederiksen, 2017; Berthelsen & Kristensson, 2017; Krogsgaard et al., 2014; Specht et al., 2016; Specht et al., 2018; Thomsen & Holge-Hazelton, 2017).

Seven studies represented the experiences of staff, (Barker et al., 2020; Berthelsen & Frederiksen, 2017; Collaco et al., 2021; Haas et al., 2020; Kocman et al., 2019; Lyon et al., 2014; Westby & Backman, 2010) four those of carers, (Berthelsen et al., 2014; Berthelsen 2017; Churchill et al., 2018; Ganske et al., 2006) and 25 represented patient experiences. (Archer et al., 2014; Barker et al., 2020; Berg et al., 2019; Blazeby et al., 2010; Churchill et al., 2018; Collaco et al., 2021; Evans et al., 2021; Fecher-Jones & Taylor, 2015; Galli et al., 2015; Heine et al., 2004; Hovik et al., 2018; Hunt, 2009; Jansson et al., 2020; Judge et al., 2020; Krogsgaard et al., 2014; Orpen & Harris, 2010; Phillips et al., 2019; Reay et al., 2015; Samuelsson et al., 2018; Short et al., 2016; Specht et al., 2016; Specht et al., 2018; Strickland et al., 2018; Thomsen & Holge-Hazelton, 2017; van Egmond et al., 2015; Vandrevale et al., 2016) The most common reasons for admission was total hip or knee arthroplasty (THA/TKA) ($n=17$). (Barker et al., 2020; Berg et al., 2019; Berthelsen et al., 2014; Berthelsen & Frederiksen, 2017; Churchill et al., 2018; Haas et al., 2020; Heine et al., 2004; Hovik et al., 2018; Hunt, 2009; Jansson et al., 2020; Judge et al., 2020; Orpen & Harris, 2010; Reay et al., 2015; Specht et al., 2016; Specht et al., 2018; Strickland et al., 2018; van Egmond et al., 2015; Westby & Backman, 2010).

The most common interventions received were fast-track, ERP or Enhanced Recovery After Surgery (ERAS) pathways ($n=27$ papers). (Archer et al., 2014; Berg et al., 2019; Berthelsen et al., 2014; Berthelsen & Frederiksen, 2017; Blazeby et al., 2010; Churchill et al., 2018; Collaco et al., 2021; Evans et al., 2021; Fecher-Jones & Taylor, 2015; Galli et al., 2015; Heine et al., 2004; Hovik et al., 2018; Hunt, 2009; Jansson et al., 2020; Judge et al., 2020; Krogsgaard et al., 2014; Lyon et al., 2014; Phillips et al., 2019; Reay et al., 2015;

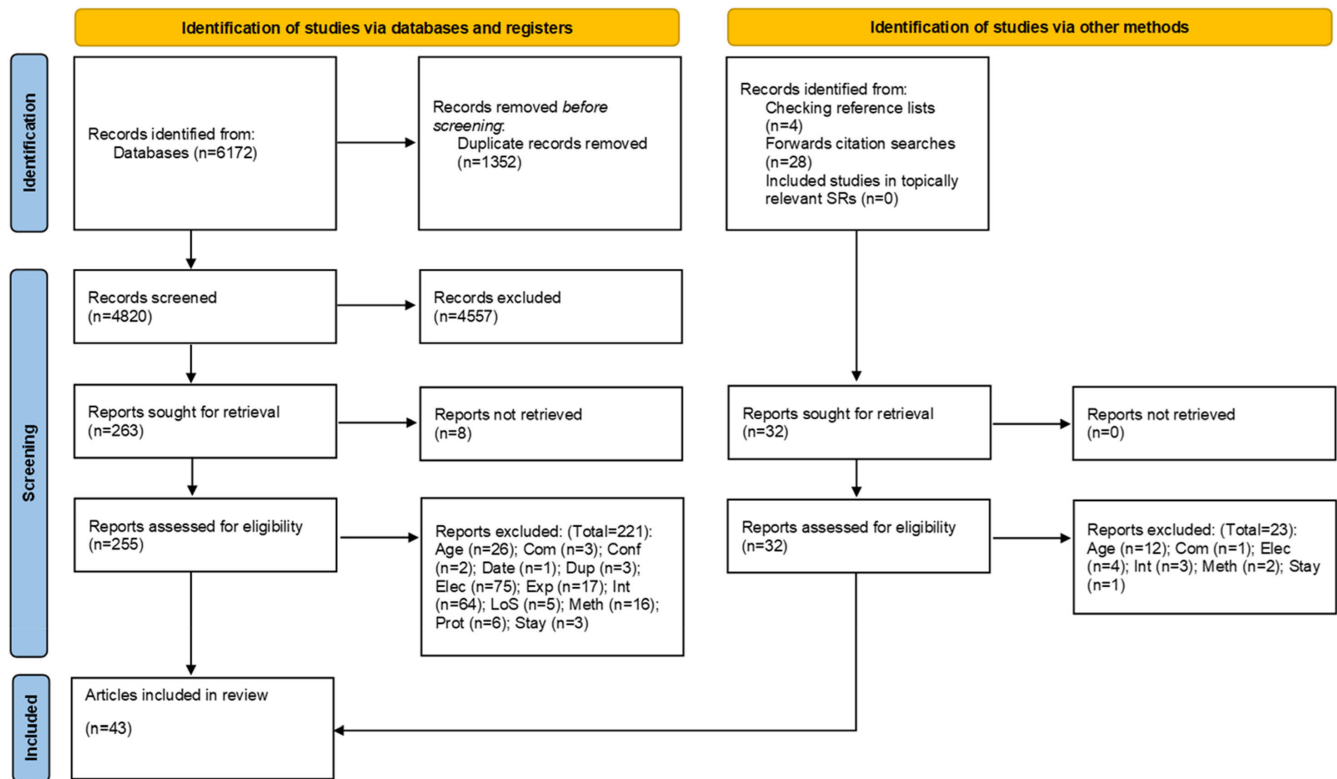


FIGURE 1 PRISMA diagram.

Samuelsson et al., 2018; Short et al., 2016; Specht et al., 2016; Specht et al., 2018; Strickland et al., 2018; Thomsen & Holge-Hazelton, 2017; van Egmond et al., 2015; Vandrevalla et al., 2016).

3.2 | Quality appraisal

The number of items on which papers scored positively on the Wallace checklist ranged from 8 ($n=2$), (Churchill et al., 2018; Kocman et al., 2019) to the maximum of 14 ($n=14$), (Galli et al., 2015; Hovik et al., 2018; Jansson et al., 2020; Orpen & Harris, 2010; Specht et al., 2016) with the mode and medium being twelve ($n=10$). (Berthelsen et al., 2014; Berthelsen & Frederiksen, 2017; Blazeby et al., 2010; den Bakker et al., 2019; Evans et al., 2021; Fecher-Jones & Taylor, 2015; Hunt, 2009; Judge et al., 2020; Thomsen & Holge-Hazelton, 2017; Vandrevalla et al., 2016).

A full description of the participant, intervention, methods and quality characteristics of the prioritised studies can be found elsewhere. (Kinsey et al., 2023).

3.3 | Line of argument synthesis

The translation of first- and second-order data across the 35 studies prioritised for the framework synthesis resulted in six overarching constructs: Home as the preferred place for recovery; Feeling safe; Essential care at home; Taking responsibility; Individualisation of a

structured programme and Measuring patient and carer outcomes. Figure 2 illustrates the relationship between the overarching constructs and themes contained within them. The number of studies contributing to each overarching construct is provided in Data S1.

3.3.1 | Home as the preferred place for recovery

This construct contains broader, more systemic concepts which impact on all aspects of patient, carer, and staff experience, thus underlying all the other constructs, and illustrates how most patients, carers, and staff viewed home as the preferred environment for recovery. (Archer et al., 2014; Blazeby et al., 2010; Evans et al., 2021; Hovik et al., 2018; Reay et al., 2015; Specht et al., 2018; Vandrevalla et al., 2016) Some patients felt home provided a safe and familiar environment which promoted recovery through enhancing feelings of control by managing their own eating habits, (Evans et al., 2021) increasing access to support, (Barker et al., 2020; Reay et al., 2015; Strickland et al., 2018; Vandrevalla et al., 2016) and improved rest. (Barker et al., 2020) (Strickland et al., 2018) (Archer et al., 2014).

3.3.2 | Feeling safe

Whilst the risk of catching infections, noise leading to lack of sleep, lack of choices, and lack of privacy within the hospital environment contributed to patients' desire to recover at home, (Berg et al., 2019;

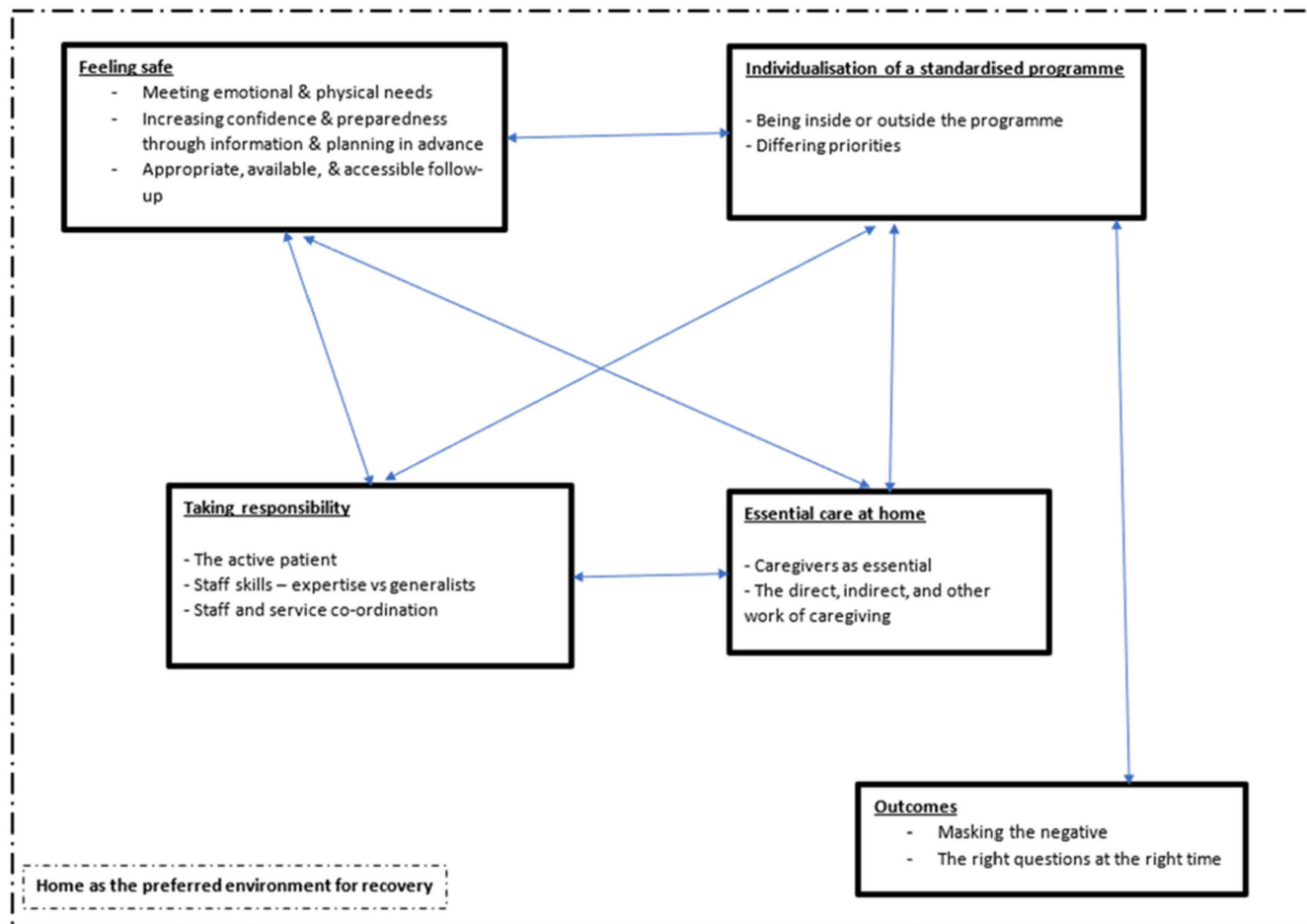


FIGURE 2 Line of argument synthesis.

Berthelsen & Frederiksen, 2017; Blazeby et al., 2010; Churchill et al., 2018; Evans et al., 2021; Galli et al., 2015; Hovik et al., 2018; Judge et al., 2020; Reay et al., 2015; Short et al., 2016; Strickland et al., 2018; Vandrevalla et al., 2016) this was contingent on patients feeling well and safe enough to transition out of hospital: (Blazeby et al., 2010; Churchill et al., 2018; Evans et al., 2021; Fecher-Jones & Taylor, 2015; Heine et al., 2004; Vandrevalla et al., 2016).

...like in hospital I feel safe because I know I just have to ring a buzzer and someone will be there. At home it's not going to be like that... [Patient, THA] (Heine et al., 2004)

This feeling of safety did not necessarily mean being medically or physically safe, though having complications or side-effects did lead to feelings of insecurity; patients and carers also needed their *emotional* needs to be met. (Archer et al., 2014; Barker et al., 2020; Berthelsen et al., 2014; Blazeby et al., 2010; Collaco et al., 2021; Evans et al., 2021; Fecher-Jones & Taylor, 2015; Galli et al., 2015; Ganske, 2006; Heine et al., 2004; Hovik et al., 2018; Hunt, 2009; Judge et al., 2020; Orpen & Harris, 2010; Phillips et al., 2019; Short et al., 2016; Specht et al., 2016; Strickland et al., 2018; Thomsen & Holge-Hazelton, 2017; Vandrevalla et al., 2016) One patient stated:

There was no room for questions and one is also a bit fearful. I don't just need general information or that the doctor gives his specific message. I also need to be asked: 'How are you feeling?' [Patient, Colorectal cancer surgery] (Thomsen & Holge-Hazelton, 2017)

The above quote suggests that staff need to provide the opportunity for patients to ask questions; highlighting the tension felt by both patients and the staff providing their care between the need to deliver a protocolised programme whilst considering individual patient needs.

One Physiotherapist stated:

From my perspective, allied health services are more directed at discharge planning to allow patient flow. Resources currently are more focused toward getting people home than providing a rehabilitation service [Staff, Physiotherapist, LLA] (Haas et al., 2020)

These quotes indicates staff may find it difficult, or not have time, to identify when patients are struggling and/or provide individualised support. Patients and carers appreciated knowing who would be caring for them and/or having a specific staff member

with whom they could build a relationship, (Barker et al., 2020; Berthelsen & Kristensson, 2017; Collaco et al., 2021; Heine et al., 2004) with the perceived ability of staff to empathise, listen, and connect to the patients and/or carers being seen by the latter as more important than staff seniority or role within the team. (Barker et al., 2020; Berthelsen & Kristensson, 2017; Collaco et al., 2021; Heine et al., 2004; Phillips et al., 2019; Short et al., 2016).

Patients and carers also needed to feel safe at home when managing complications or side-effects. Involvement of patients and carers with discharge planning and repeated provision of accessible information prior to leaving hospital helped increase their confidence, align their expectations with those of medical staff and reassure them they have the skills and support needed to cope at home. Follow-up care allowed for medical concerns to be identified and/or addressed, with both patients and carers finding opportunities to ask questions reassuring. Unfortunately, the availability and accessibility of the follow-up care could vary, with some patients reporting difficulty in booking or attending appointments, (Hovik et al., 2018; Westby & Backman, 2010) something staff recognised as a key issue preventing patients accessing appropriate services post-discharge:

The other thing that's non-existent for the most part is home physical therapy for...the patient who is unable to get transportation somewhere or has social issues that would preclude them from [getting there]. Those patients fall through the cracks...[Staff, surgeon, LLA] (Westby & Backman, 2010)

3.3.3 | Essential care at home

Twenty-two studies highlighted that having a home caregiver as essential for successful earlier discharge and recovery at home by patients, their family and professionals. (Archer et al., 2014; Barker et al., 2020; Berg et al., 2019; Berthelsen et al., 2014; Berthelsen & Frederiksen, 2017; Berthelsen & Kristensson, 2017; Blazeby et al., 2010; Churchill et al., 2018; Evans et al., 2021; Galli et al., 2015; Heine et al., 2004; Hovik et al., 2018; Hunt, 2009; Judge et al., 2020; Orpen & Harris, 2010; Reay et al., 2015; Specht et al., 2016; Specht et al., 2018; Strickland et al., 2018; Thomsen & Holge-Hazelton, 2017; van Egmond et al., 2015; Vandrevala et al., 2016; Westby & Backman, 2010) The tasks directly associated with caregiving, such as providing support with medications, changing dressings, or providing transportation to appointments, are also associated with work which is not always observable or predictable, such as making appointments and learning new skills. The transition home can be difficult for both the people providing and those receiving care, due to role changes and the stress associated with the additional workload of caregiving and/or being dependent on others for support. (Archer et al., 2014; Berthelsen & Kristensson, 2017; Thomsen & Holge-Hazelton, 2017).

There was one time when I wasn't quick enough to provide assistance and then she was mad at me...I wasn't close by to help her...but we had just agreed that the house needed cleaning so I was...hoover[ing]...I didn't hear her [Carer, spouse, THA replacement] (Berthelsen & Kristensson, 2017)

Four studies (four articles) indicated that some patients felt a burden to their home carer, or worried about how they would cope with the tasks of caregiving. (Blazeby et al., 2010; Heine et al., 2004; Reay et al., 2015; Vandrevala et al., 2016) One patient discussed her concerns around how both she and her partner would cope following discharge after surgery for colorectal cancer:

I felt a little bit lacking in confidence of coming home...I was just a little bit worried about how I was going to cope...how (my partner) was going to cope with this...I was afraid of putting pressure on him [Patient, Colorectal cancer] (Blazeby et al., 2010)

Five studies highlighted that in-order to fulfil their caring responsibilities and maintain their wellbeing, the carers themselves also needed support. (Berthelsen & Frederiksen, 2017; Berthelsen & Kristensson, 2017; Churchill et al., 2018; Ganske, 2006; Hunt, 2009) Support for home caregivers included receiving relevant information and training from the hospital, (Churchill et al., 2018) and support from other family members, friends and healthcare staff. Follow-up appointments provided an opportunity to supply practical and emotional support to caregivers to enable them to manage their caregiving role.

3.3.4 | Taking responsibility

Shorter hospital LOS places greater responsibility for recovery onto patients, who must take charge of their own care. The experience of pain and pain management was an important specific feature of being an 'active patient', with some patients and carers being reluctant or uncertain how to manage prescriptions. (Berg et al., 2019; Berthelsen & Kristensson, 2017; Churchill et al., 2018; Ganske, 2006; Hovik et al., 2018; Hunt, 2009; Jansson et al., 2020; Judge et al., 2020; Krogsgaard et al., 2014; Phillips et al., 2019; Specht et al., 2016; Specht et al., 2018; Strickland et al., 2018; Thomsen & Holge-Hazelton, 2017; Westby & Backman, 2010) Whilst being an 'active patient' could be empowering, it could make people feel vulnerable. (Archer et al., 2014; Blazeby et al., 2010; Churchill et al., 2018; Collaco et al., 2021; Fecher-Jones & Taylor, 2015; Galli et al., 2015; Hovik et al., 2018; Hunt, 2009; Krogsgaard et al., 2014; Orpen & Harris, 2010; Samuelsson et al., 2018; Specht et al., 2016; Thomsen & Holge-Hazelton, 2017; Vandrevala et al., 2016; Westby & Backman, 2010).

Good staff and service co-ordination, particularly after discharge, was essential. It ensured patients and carers received consistent information and knew who they needed to contact if they

had difficulties. However, views amongst staff differed regarding whether you needed a specialist for particular components of a programme, or if generalists could be trained to do them, (Barker et al., 2020; Haas et al., 2020; Kocman et al., 2019; Westby & Backman, 2010) with some staff/services disagreeing about who had primary responsibility for patients following discharge:

I called the...nurse who said...I should ring the primary care centre, but they say that the operation was the hospital's responsibility. Then they said: let's not concern ourselves about this anymore; from now on you can fix this yourself [Patient, colorectal cancer surgery] (Samuelsson et al., 2018)

Having a staff member co-ordinate care helped individualise care, as well as support the emotional needs of the patients and carers, helped them to feel safe and increased the accessibility of follow-up care.

3.3.5 | Individualisation of a structured programme

Some patients find comfort in the structured, predictable nature of a structured intervention pathway. (Evans et al., 2021) (Galli et al., 2015) However, patients with more complex needs or those who experienced complications, did not always fit within the pathway. (Berthelsen & Frederiksen, 2017; Blazeby et al., 2010; Evans et al., 2021; Galli et al., 2015; Kocman et al., 2019; Lyon et al., 2014; Reay et al., 2015; Samuelsson et al., 2018; Vandrevalla et al., 2016) This caused stress for patients and carers, who worried they were missing key milestones. One patient described her anxiety:

The only problem with that (milestone) of course is if that doesn't happen, because then you can get anxious because you're thinking...if I didn't match up to it I could feel myself thinking, oh maybe there's something wrong [Patient, liver resection surgery] (Vandrevalla et al., 2016)

Having a procedure, or being discharged, around the weekend was another reason for being 'outside' the programme due to reduced availability of post-discharge hospital and community services. (Ganske, 2006; Haas et al., 2020; Lyon et al., 2014) When patients had an operation on a Friday, their discharge could be delayed, not because of complications, but because required teams were not working over the weekend. Staff discussed lower staffing levels over the weekend meaning they had to spend less time with each patient, prioritising those who would be discharged soonest: (Haas et al., 2020; Lyon et al., 2014).

On weekends, we have less staffing for the same number of patients. The exact quantity is slightly different for different professions. And the way we normally prioritise is

dependent on whether they (the patients) are going to go home over the weekend [Staff, Occupational therapist, LLA] (Haas et al., 2020)

When patients did not fit the standardised programme, there was variation in whether patients felt staff met their individual needs, even within the same study. (Blazeby et al., 2010; den Bakker et al., 2019; Evans et al., 2021; Galli et al., 2015; Hovik et al., 2018; Jansson et al., 2020; Judge et al., 2020; Reay et al., 2015; Samuelsson et al., 2018) Busy staff workloads could prevent individualisation of care, as they did not have the time for longer discussion or additional care tasks. (Berthelsen & Frederiksen, 2017; Samuelsson et al., 2018; Westby & Backman, 2010) This was noticed by patients, who then avoided requesting this kind of care:

You can see that the staff has a lot to do, so you feel reticent even though you need to ask a question [Patient, colorectal cancer surgery] (Samuelsson et al., 2018)

Staff may find it hard to identify with patient feelings of vulnerability. In one study, staff placed the blame on the patients themselves for being unprepared, weak, or problematic:

Those 'I live alone' (voice quivering)...well you have known about this for a long time. Don't you tell me...you haven't put food in your freezer and you haven't talked to your neighbour and family? Don't you have any friends? [Nurse, LLA] (Berthelsen & Frederiksen, 2017)

The above quote not only suggests some staff can struggle to empathise with the feeling of vulnerability that can come with living alone, but also that patients may need support to consider resources they do have available to them. One study suggested a pre-op visit in the patient's home could help individualise care, as staff could better understand and empathise with each patient's context and specific needs and adjust plans accordingly: (Barker et al., 2020).

In a...sterile clinic or environment...it doesn't bear that much resemblance to somebody's house...I think seeing people in their own home...being able to relate more to what the patient's saying 'cause you can see it, it's not just a theoretical problem...[Physiotherapist, TKA] (Barker et al., 2020)

When LOS was the primary goal, it was not always possible to individualise care where this would increase time spent in hospital, or time spent with the patient if there were heavy workloads. The following quotes from staff members highlight some of the difficulties in trying to balance competing priorities:

He was in worse shape than we thought. He...needed to function better than he did when he was discharged...So

the individual considerations can sometimes disappear [Staff, nurse, LLA] (Berthelsen & Frederiksen, 2017)

It's weighing up those completely incongruous goals...Bugger the breach targets, but spend the time and get the patient ready, so their operation recovery are better. Or do we do it as quick as we can,...hit the targets, bugger the patient? [Site lead, CGA implementation] (Kocman et al., 2019)

3.3.6 | Measuring patient and carer outcomes

This construct highlights how services may receive an overly optimistic picture of a patient's recovery journey due to patient reluctance to report concerns or appear critical of the care they receive:

...even though they say that if you've got any problems you can ring us, well I know...I don't like to bother people, and I probably wouldn't have phoned unless I was really, really worried [Patient, Gynaecological cancer surgery] (Archer et al., 2014)

Patient and carer views and experiences may also change over the course of the recovery journey, necessitating the need for repeated follow-up by services. (Galli et al., 2015; Ganske, 2006) Some staff found it could be challenging to obtain an accurate picture of patient recovery over time:

... it would be nice for people to actually use the same outcome measures pre-operatively, immediately post-op ... so you could actually see a difference [Staff, Physiotherapist, LLA] (Westby & Backman, 2010)

I don't ask patients to fill out questionnaires. That's highly inefficient [Staff, Surgeon, LLA] (Westby & Backman, 2010)

This relates to content presented within the construct 'Individualisation', as organisations, staff, and patients may have differing priorities, which cause differences between what organisations measure and what feedback patients want to give or what is important to them. Additionally, being inside or outside of the programme could impact how patients viewed the programme, suggesting the importance of considering complications when evaluating outcomes, and of including patients with co-morbidities in studies to understand the views of those who may not fit as easily within the structure of the intervention. This in turn could impact the extent to which hospital programmes can meet patient needs, as excluding more complex patients from studies means it is not clear what this group of patients, who may be more likely to fall outside the programme, may need or what adaptations to protocols may be most appropriate.

4 | DISCUSSION AND IMPLICATIONS

This systematic review of qualitative research aimed to explore the experiences of patients aged sixty or above, family/carers and staff of multi-component interventions to enhance recovery and/or reduce hospital LOS following admission for a planned procedure. In total 42 studies (43 articles) met the inclusion criteria, with 34 studies (35 articles) prioritised for full data extraction, quality appraisal and synthesis.

Our synthesis used a meta-ethnographic approach to develop six constructs.

'Home as the preferred environment for recovery' indicates that many patients, carers and staff perceived the patient's home as providing the most appropriate environment to facilitate patient recovery. However, this was contingent on patients and carers receiving the support needed prior to and following discharge. 'Feeling safe' highlights that the emotional and physical needs of patients and their family/carers need to be met through provision of information, supportive relationships with staff, involvement in discharge planning and accessible, appropriate follow-up care. 'Essential care at home' highlights the vital role of informal caregivers in supporting patients within their own home post-discharge and the need to ensure they are provided with support to enable them to fulfil their caregiving role. 'Taking responsibility' explores how patients can be supported to become more actively involved in their own care, encompassing issues relating to pain management, service co-ordination and expert versus generalist staff. 'Individualisation of a standardised programme' discusses the importance of tailoring structured programmes to the needs of individual patients, highlighting the challenges comorbidities, complications, weekend staffing levels and pressure experienced by staff to reduce hospital LOS pose to the patient-centred process. The final construct 'Measuring patient and carer outcomes' examines how patients/carers may not always be asked about aspects of their care or recovery that are most meaningful to them, at the right time, which may limit the extent hospital staff can respond to individual patient needs during and after discharge.

Our findings align with earlier systematic reviews which did not specifically examine the experiences of older patients. One qualitative evidence synthesis exploring experiences of ERAS programmes following surgery for a range of conditions in adults 18 years of age or over, highlighted the importance of sharing information, the dilemma presented by the need to provide individualised treatment within standardised care, the balance needed to manage burdensome symptoms during a rapid recovery and the importance of a sense of security at discharge and the role of professional support in helping patients continue their recovery plan and achieve planned discharge. (Sibbern et al., 2017) Another systematic review exploring staff perceptions of ERAS programmes after surgery highlighted the importance of communication and collaboration within and between services, and challenges of implementing protocol-based care and managing knowledge, and expectations of staff. (Cohen & Goberman-Hill, 2019) One difference between this review and

ours is that Cohen et al. (2019) also highlighted the theme 'resistance to change', describing how some staff can be reluctant to implement new working practices. This was apparent in our review to a limited extent, with Kocman et al (2019) finding that one reason the attempted implementation of the CGA into pre-operative assessment failed was due to the competing priorities of services and staff within an already very busy service pathway, which could be interpreted as a type of 'resistance' at a service, rather than specific staffing, level. It may also not have been apparent in our review due to the limited number of included studies from a staff perspective. Cohen et al (2019) particularly highlight the need for an ERAS co-ordinator for staff, which complements the recommendation from our review of a similar co-ordinator for patients. Given that staff workloads and services are increasingly stretched with increasing numbers of patients and longer waiting lists due to the Covid-19 pandemic, (BMA, 2022) a staff co-ordinator may ease some of the burden on other members of staff, which may also support provision of the individualised care we recommend in this review.

4.1 | Strengths and limitations

Whilst the findings of this synthesis were drawn from research representing the views of those with experience of interventions to reduce LOS for patients aged sixty and over following a planned procedure, it is probable that individuals from/representing other populations with experience of other types of hospital interventions may also be able to relate to aspects of our findings. The synthesis represents the views of patients admitted for a diverse range of procedures, who experienced a variety of different types of interventions. Five of the six constructs identified in the final synthesis were supported by at least 21 high to moderate quality studies. The exception to this was the construct 'Outcomes' which was supported by 14 studies, of which 13 were of high/moderate quality.

Whilst views of ERP/ERAS style interventions dominated the synthesis, we incorporating views of other types of interventions early in the synthesis and by comparing and contrasting experiences across different types of interventions. Most of the articles included within the synthesis represented the views/experiences of patients. The views of carers/families and staff may be under represented as a consequence of poor reporting of patient characteristics in studies which seek to explore the views and experiences of these groups.

This systematic review was conducted and reported in accordance with best-practice guidelines. The high number of studies eligible for inclusion meant we prioritised the studies with the highest quantity of interpretative data across different population and intervention groups for inclusion in the synthesis. This meant that eight articles were not quality appraised or included in the line of argument. The analysis of these eight studies were primarily descriptive in nature and represented experiences of patients of interventions already included within the synthesis, thus their results are unlikely to alter our main findings.

4.2 | Implications for research and practice

Our findings may be useful to inform the delivery of services to ensure that patients and carers/families receive the appropriate support before, during and following discharge. Findings highlight that the period post-discharge is when patients/carers feel most vulnerable, particularly patients with multiple comorbidities and/or those who experience complications or are isolated. It is also when patients and carers have the most responsibility, and experience variable support from health and social care services. Further patient-centred, post-discharge support from health/social care service is needed, with our results indicating that involving patients and carers with planning for to the post-discharge period, alongside clarification of the core responsibilities of hospital and community staff is needed, with consideration of how these could be adapted to the needs of individual services.

Our findings underline the importance of hospital and community-based health and social care staff providing support based upon an assessment of emotional and physical wellbeing of both patients and their family/carers before, during and after a hospital stay. The findings explore how staff can promote the involvement of family and/or carers and adapt protocolised hospital interventions to the needs of individual patients, to help them reach clinical and personal recovery goals. Further consideration by individual health and social care organisations and research commissioners on how the culture within staff teams may influence staff behaviour and thus the integration of patient and carer centred care into daily practice may also be required.

To support the delivery of patient-centred care and individualised carer support, standardisation of patient reported outcome measures used to evaluate services and patient experience is needed to ensure that these measure capture recovery outcomes which are meaningful to both carers and patients. Commissioning of further research may be required to establish this dataset, particularly with respect to post-discharge outcomes. Additional research is needed on the adaptations required and how they can be implemented to meet the needs of patients and carers with more complex needs, who may be at greater risk of experiencing complications pre- or post-discharge.

5 | CONCLUSION

This qualitative evidence synthesis explores the experiences of patients, families/carers and staff of interventions to reduce the length of hospital stay for older patients admitted for planned procedures. Key findings highlight the support patients and carers need throughout the patient care-pathway and may inform commissioning of services to ensure patients and carers receive appropriate follow-up support after hospital discharge. They may help hospital and community-based health and social care staff provide person-centred care based upon assessments of emotional and physical wellbeing of patients and family/carers. Research is needed to establish a core-set of patient-reported outcome measures which capture aspects of recovery which are meaningful to patients.

AUTHOR CONTRIBUTIONS

Debbie Kinsey: Drafted content on which methods, results and discussion section of manuscript are based. Led searching, screening, data extraction and synthesis and PPIE involvement. Approved final manuscript. Daniele Carrieri: Contributed to screening, data extraction and synthesis. Contributed to writing implications for further research and practice. Approved final manuscript. Simon Briscoe: Co-led development of review protocol. Led searches. Supported screening and writing of results section. Approved final manuscript. Sam Febrey: Supported screening and synthesis. Co-led patient and public involvement. Reviewed draft manuscript and approved final version. Dylan Kneale: Co-led development of review protocol. Supported synthesis. Reviewed draft manuscripts and approved final version. Chris Lovegrove: Co-led development of review protocol. Supported synthesis and provided expert clinical input. Reviewed draft manuscripts and approved final version. Michael Nunns: Co-led development of review protocol. Supported screening and synthesis. Reviewed draft manuscripts and approved final version. Jo Thompson Coon: Co-led development of review protocol. Contributed to writing and reviewing draft manuscripts and approved final version. John McGrath: Co-led development of review protocol. Supported synthesis and provided expert clinical input. Reviewed draft manuscripts and approved final version. Anthony Hemsley: Co-led development of review protocol. Supported synthesis and provided expert clinical input. Reviewed draft manuscripts and approved final version. Liz Shaw: Co-led development of review protocol. Drafted content on which Background section of manuscript are based and revised methods, results and discussion sections. Supported searching, screening, data extraction and synthesis. Responsible for revising draft manuscript and approving final version.

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CONFLICT OF INTEREST STATEMENT

Anthony Hemsley has a pre-existing relationship with the NIHR Applied Research Collaboration South West Peninsula. Jo Thompson Coon has a pre-existing relationship with NIHR HS&DR programmes and NIHR Applied Research Collaboration Southwest Peninsula, both of which have made payments to the University of Exeter.

DATA AVAILABILITY STATEMENT

Data available from corresponding author upon reasonable request. For the purposes of open access, the author has applied a Creative Commons Attribution (CC BY) license to any Author Accepted Manuscript version arising.

ETHICS STATEMENT

This study represents secondary research and did not require ethical approval.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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APPENDIX A

Search strategy for MEDLINE

Database: MEDLINE ALL.

Host: Ovid.

Hits: 8446.

Strategy:

1. ((older or frail or elderly) adj2 (person* or people or patient* or population* or adult*)),tw.
2. geriatric*.tw.
3. *aged/
4. *'Aged, 80 and over'/
5. *frail elderly/
6. *Geriatrics/
7. or/1–6
8. ((eye* or sclera or iris or retina or cataract or ophthalmol*) adj3 (surgery or surgical* or procedur*)),tw.
9. exp *ophthalmologic surgical procedures/
10. ((heart or cardiac or coronary) adj3 (surgery or surgical* or procedur* or transplant* or angiography or angioplasty or bypass)).tw.
11. (aortic adj3 (replacement or surgery or surgical* or procedur*)),tw.
12. (carotid adj3 endarterectomy).tw.
13. ((arterial or artery or arteries) adj3 (bypass or surgery or surgical* or angioplasty or embolectomy)).tw.
14. *coronary artery bypass/
15. ((urinary or urologic* or genitourinary or bladder or prostate) adj3 (surgery or surgical* or procedur*)),tw.

16. (urethrotomy or prostatectomy).tw.
17. exp *Urologic Surgical Procedures/
18. (meningioma* adj3 (surgery or surgical* or procedur*)).tw.
19. craniotomy.tw.
20. *craniotomy/
21. ((lung or thoracic or thorax or cardiothoracic or pulmonary or chest or diaphragm) adj3 (surgery or surgical* or resection* or procedur*)).tw.
22. (thoracotomy or pneumonectomy).tw.
23. *Thoracic Surgery/
24. ('bile duct' adj3 (resection* or surgery or surgical* or procedur*)).tw.
25. ((pancreas or pancreatic) adj3 (surgery or surgical* or resection* or procedur*)).tw.
26. (pancreatectomy or pancreaticoduodenectomy).tw.
27. *Pancreatectomy/
28. 'endovascular aortic aneurysm repair*'.tw.
29. 'endovascular abdominal aneurysm repair*'.tw.
30. ((hip or knee or 'lower limb*') adj3 (replacement* or restructur* or arthroplasty or hemiarthroplasty or surgery or surgical* or procedur*)).tw.
31. *arthroplasty, replacement, hip/
32. *arthroplasty, replacement, knee/
33. ((colorectal or colon or colonic or rectal or rectum or bowel or intestin*) adj3 (surgery or surgical* or resection* or procedur*)).tw.
34. Colorectal Surgery/
35. or/8-34
36. 7 or 35
37. ('enhanced recovery after' adj3 surgery).tw.
38. ERAS.tw.
39. ((enhanced or early or earlier) adj3 (recovery or mobilization or ambulation or rehab*)).tw.
40. ERP.tw.
41. ('proactive care' adj2 'older people').tw.
42. POPS.tw.
43. ('fast track' adj3 (surgery or surgical* or program* or management or 'patient care')).tw.
44. (multimodal adj3 (rehab* or perioperative or postoperative or 'post-operative' or optimization or care or convalesc*)).tw.
45. (optimal adj2 ('preoperative assessment' or 'preoperative management')).tw.
46. ((accelerated or optimized or rapid or 'fast track') adj3 (care or rehab* or recovery or mobilization or ambulation or convalesc*)).tw.
47. ((improved or improving) adj2 recovery).tw.
48. 'comprehensive geriatric assessment*'.tw.
49. 'short acting anesthetic*'.tw.
50. ((integrated or managed) adj1 'care pathway*').tw.
51. ((multidisciplinary or 'multidisciplinary') adj1 assessment*').tw.
52. ((physiotherap* or exercise*) adj3 (augment* or increas* or 'higher frequency')).tw.
53. ('pressure ulcer*') adj3 'risk assessment').tw.
54. ((nutrition* or feed* or eat*) adj3 support*).tw.
55. *Nutritional Support/
56. ((support* or community) adj3 discharg*).tw.
57. (discharg* adj3 plan*).tw.
58. (rehab* adj3 (home or community)).tw.
59. or/37-58
60. ((length or duration) adj4 stay adj8 (reduce* or reduction* or reducing or shorter or shortening or 'positive effect*' or prolong* or increas* or decreas* or improve* or improving or 'patient outcome*' or 'clinical outcome*' or 'clinical indicator*' or 'outcome measure*')).tw.
61. (hospital* adj3 stay adj8 (reduce* or reduction* or reducing or shorter or shortening or 'positive effect' or prolong* or increas* or decreas* or improve* or improving or 'patient outcome*' or 'clinical outcome*' or 'clinical indicator*' or 'outcome measure*')).tw.
62. (time adj3 discharg*).tw.
63. *'Length of Stay'/
64. or/60-63
65. 59 or 64
66. (randomis* or randomiz* or randomly).tw.
67. rct*.tw.
68. (trial* or controlled or 'control group*' or 'intervention group*').tw.
69. ((single or doubl* or tripl* or treb*) and (blind* or mask*)).tw.
70. ('4 arm' or 'four arm').tw.
71. ((before adj4 after) or 'BA stud*' or 'CBA stud*').tw.
72. ('pre post' or 'pre-test*' or pretest* or posttest* or 'post-test*' or (pre adj3 post)).tw.
73. (interrupt* adj2 'time series').tw.
74. ('time points' adj3 (over or multiple or three or four or five or six or seven or eight or nine or ten or eleven or twelve or month* or hour* or day* or 'more than')).tw.
75. (('quasi experiment*' or quasiexperiment* or 'quasi random*' or quasirandom* or 'quasi control*' or quasicontrol*) adj3 (method* or stud* or design*)).tw.
76. randomised controlled trial.pt.
77. controlled clinical trial.pt.
78. or/66-77
79. (quality adj2 (life or wellbeing or 'wellbeing')).tw.
80. (hql or hqol or 'h qol' or hrqol or 'hr qol').tw.
81. 'Quality of Life'/
82. (qaly* or qald* or qale* or qtime*).tw.
83. quality-adjusted life years/
84. ('disability adjusted life' or daly*).tw.
85. (sf36 or 'sf 36' or 'short form 36' or 'shortform 36' or 'sf thirtysix' or 'sf thirty six' or 'shortform thirtysix' or 'shortform thirty six' or 'short form thirtysix' or 'short form thirty six').tw.
86. (sf6 or 'sf 6' or 'short form 6' or 'shortform 6' or 'sf six' or sfsix or 'shortform six' or 'short form six').tw.
87. (sf12 or 'sf 12' or 'short form 12' or 'shortform 12' or 'sf twelve' or sftwelve or 'shortform twelve' or 'short form twelve').tw.
88. (sf6D or 'sf 6D' or 'short form 6D' or 'shortform 6D' or 'sf six D' or sfsixD or 'shortform six D' or 'short form six D').tw.

89. (sf20 or 'sf 20' or 'short form 20' or 'shortform 20' or 'sf twenty' or sftwenty or 'shortform twenty' or 'short form twenty').tw.
90. (euroqol or 'euro qol' or eq5d or 'equation 5d' or 'eq 5d 3l' or 'eq 5d 5l').tw.
91. AQoL.tw.
92. ('health* year* equivalent*' or hye or hyes).tw.
93. (utilit* adj3 (analys* or assess* or estimat* or scor* or valu*)).tw.
94. ('health utility index' or hui or hui1 or hui2 or hui3).tw.
95. disutili*.tw.
96. 'standard gamble*'.tw.
97. ('time trade off' or 'time tradeoff' or tto).tw.
98. or/79-97
99. 78 or 98
- 100.36 and 65 and 99