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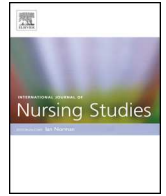
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## Review

## Supportive care for older people with frailty in hospital: An integrative review

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## ABSTRACT

**Background:** Growing numbers of older people living with frailty and chronic health conditions are being referred to hospitals with acute care needs. Supportive care is a potentially highly relevant and clinically important approach which could bridge the practice gap between curative models of care and palliative care. However, future interventions need to be informed and underpinned by existing knowledge of supportive care.

**Aim:** To identify and build upon existing theories and evidence about supportive care, specifically in relation to the hospital care of older people with frailty, to inform future interventions and their evaluation.

**Design:** An integrative review was used to identify and integrate theory and evidence. Electronic databases (Cochrane Medline, EMBASE and CIHAHL) were searched using the key term 'supportive care'. Screening identified studies employing qualitative and/or quantitative methods published between January 1990 and December 2015. Citation searches, reference checking and searches of the grey literature were also undertaken.

**Data sources:** Literature searches identified 2733 articles. After screening, and applying eligibility criteria based on relevance to the research question, studies were subject to methodological quality appraisal. Findings from included articles (n = 52) were integrated using synthesis of themes.

**Results:** Relevant evidence was identified across different research literatures, on clinical conditions and contexts. Seven distinct themes of the synthesis were identified, these were: Ensuring fundamental aspects of care are met, Communicating and connecting with the patient, Carer and family engagement, Building up a picture of the person and their circumstances, Decisions and advice about best care for the person, Enabling self-help and connection to wider support, and Supporting patients through transitions in care. A tentative integrative model of supportive care for frail older people is developed from the findings.

**Conclusion:** The findings and model developed here will inform future interventions and can help staff and hospital managers to develop appropriate strategies, staff training and resource allocation models to improve the quality of health care for older people.

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**What is already known about the topic?**

- Growing numbers of older people with frailty are being referred to hospitals with acute care needs. However, people with frailty receive suboptimal care in terms of clinical outcomes and patient and family caregiver's experiences.

- Supportive care is becoming more commonly used in different clinical settings, to bridge the practice gap between curative models of care and provision of palliative care. Supportive care provides patients and their carers with multi-disciplinary, holistic care to ensure the best possible quality of life whilst living with live-limiting illness.
- Supportive care can improve the quality of care provided, appropriateness and coordination of care, leading to better patient outcomes and experiences of care.

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### What this paper adds

- The paper draws together theory and evidence of supportive care and integrates it in such a way that it can inform interventions for older people with frailty in the hospital setting.
- An integrated model of supportive care is developed which provides an accessible framework to inform future development and evaluation of interventions for older people with frailty.

## 1. Background

Health care systems internationally are facing the challenges of provide care to an ageing population (Christensen et al., 2009). Part of the challenge is that growing numbers of frail older people are being referred to hospitals with acute care needs (Finnbakk et al., 2012). Frailty is recognised as a life-limiting condition, strongly associated with increased patient mortality, co-morbidity, longer periods of hospitalisation and repeat admissions (Karunanathan et al., 2009; Clegg et al., 2013). People with frailty are likely to be living with multiple long-term conditions (Parker et al., 2006) which can mean they have a high level of physical, emotional or social support needs (Jorgensen et al., 2012) and an unpredictable illness trajectory (Gill et al., 2010).

Acute care providers need to be prepared to recognise and respond to the needs of older people with frailty (Gardiner et al., 2013). Although there is a high and growing demand for health care from this group, frail older people in hospital receive suboptimal care compared to other patient groups (Patterson et al., 2011). Care is deficient in terms of clinical outcomes such as mortality and morbidity compared to other groups of older people (Finnbakk et al., 2012). Quality of the experience of care is also poorer, as reported in studies of patient and carer experiences of hospital care (Tadd et al., 2011).

Supportive care is becoming more commonly used in different areas of clinical practice, to bridge the gap between curative models of care and provision of end-of-life care (Cramp and Bennett, 2013). There can be differences in the way the concept is used internationally, for example some professionals and organisations use it to mean a transition in care to palliative or end-of-life care (King et al., 2015), and others use it to mean holistic care for people with life limiting illness (Brinkman-Stoppelenburg et al., 2015). The findings of the present review help to identify countries that are using supportive care.

Supportive care provides patients with multi-disciplinary holistic care based on the circumstances of individual patients, their families and carers. The definition that we began with in this review was 'the multi-disciplinary holistic care of patients with malignant and non-malignant chronic diseases and serious illness, and those that matter to them, to ensure the best possible quality of life' (Cramp and Bennett, 2013; p. 5). Supportive care adapts care to the individual, to take into consideration the person's abilities, strengths, relationships, social connections, experience, and needs.

In cancer care, the benefits of supportive care are known to include improved clinical outcomes and patient experiences of care (Fincham et al., 2005; Fitch, 2008). These benefits have been reported in other settings, for example people with coronary heart disease (Goodlin et al., 2004; Cortis and Williams, 2007) and renal failure (Noble et al., 2007). There is good reason to believe that these benefits can be extended to other patient groups and care settings, however this review focuses on older people with frailty. The main reasons why this group of people stand to benefit so significantly from supportive care are described below.

### 1.1. Frailty in the hospital context

Supportive care for older people with frailty could help to address deficits in hospital care quality and provision internationally (Finnbakk et al., 2012). However, it is essential to take into consideration the context in which any intervention or program of supportive care is developed and evaluated (Cramp and Bennett, 2013). In relation to frailty in the hospital context, there are a number of challenges reported in the research literature that influence the type of care that is required. These challenges are: managing complex conditions, uncertainty of care planning, patient safety/risk management, and continuity through transitions in care. These challenges are described below.

#### 1.1.1. Complex conditions

Frailty is a complex health condition that involves management of multiple co-morbidities and medication regimes. Staff ability to respond to complex conditions, disability, frailty, and comorbidity (Fried et al., 2004), including dementia (Sampson et al., 2009) or delirium (Milisen et al., 2005) is a challenge within the context of hospital care that is oriented towards treating specific presenting medical or surgical problems (Patterson et al., 2011). Frailty requires staff to adapt acute care according to comorbidities (Tadd et al., 2011) and to understand multiple medication regimes and polypharmacy (Runganga et al., 2014). Optimal hospital treatment for the frail patient typically includes coordinated assessment and multidisciplinary team interventions using preventive, life-prolonging, rehabilitative, and palliative measures in varying proportion and intensity based on the individual patient's needs (Goldstein et al., 2012; Nicholson et al., 2012). However, hospital staffing levels, skill mix and volumes of work (Griffiths et al., 2014), together with the fast pace and organisation of hospital care, and organisational cultures (O'Hare, 2004) can mean the clinical skills and time required to work with older people with frailty are undervalued (Patterson et al., 2011).

#### 1.1.2. Uncertainty of care planning

Older people with frailty face uncertain futures which is a challenge for hospital care planning and co-ordination of care (Cornwell et al., 2012). The dying trajectories of older people with frailty are characterised by prolonged dwindling (Lunney et al., 2003) often with the individual living at a relatively low functional level for many years (Covinsky et al., 2003). There is no clearly identifiable terminal phase but rather periods of instability when decline or recovery are both possible outcomes (NHSIQ, 2015). This clinical ambiguity militates against a clear set of clinical criteria around prognostication or use of end-of-life pathways (Gott et al., 2013). Furthermore, lack of resources and education for staff about care needs in older age (Goodrich and Cornwell, 2008; Tadd et al., 2011), as well as a prevailing belief that palliative care is appropriate only for the dying (Gardiner et al., 2011), can lead to a continuation of intentionally curative treatment, without involvement of palliative care staff until the very late stages of life (Zhi and Smith, 2015). The implications of these issues, for quality of care is that patients, carers and families require sensitive and enabling conversations with staff to support relationship-centred care (Dewar and Nolan, 2013) and carer engagement (Morrow and Nicholson, 2016). Strategies for dealing with uncertainty can include discussions relating to preferences around future care (Abba et al., 2013). Older hospital patients are known to value such relational care (Patterson et al., 2011), especially when staff express compassion (Firth-Cozens and Cornwell, 2009) and offer emotional support (Bridges et al., 2010).

### 1.1.3. Patient safety/risk management

Ensuring patient safety and recognising and minimising risk are significant challenges when providing hospital care to older people with frailty (Campbell et al., 2004). As a person with frailty gradually loses their in-built reserves, they become vulnerable to dramatic, sudden changes in health, triggered by seemingly small events, such as a minor infection or a change in medication or environment (Karunanathan et al., 2009). Vulnerability to sudden changes in health status means that older patients with frailty are at greater risk of requiring emergency care and hospital readmission (Karunanathan et al., 2009). While in hospital older people with frailty are at risk of falls, pressure ulcers and functional decline (Patterson et al., 2011; Tadd et al., 2011; McCusker et al., 2002). Research has also consistently identified risks to dignity associated with everyday hospital practices (Ariño-Blasco et al., 2005; Gallagher et al., 2008; Kinnear et al., 2014), particularly for older people with cognitive impairment (Naylor et al., 2005). The implications for hospital care is that there is a need for staff to understand the impact of life-limiting conditions (Skilbeck and Payne, 2005) and to explore with patients their physical capacities and functions (Sampson et al., 2009). Models of proactive care that involve carers and families can enable older patients to maintain their activities of daily living and to adjust to loss or moderate effects of ill health (Dewar and Nolan, 2013; Shaller, 2007).

### 1.1.4. Continuity through care transitions

Supporting older people through transitions in care is internationally recognised as both of paramount importance and a challenge for hospitals (Coleman, 2003; Enderlin et al., 2013). The issues include improving patient transitions between care settings to ensure continuity of care across service boundaries (JRF, 2012; Ellins et al., 2012) and better integration of services for older people, which includes integrating health and social care planning (NICE, 2015). Outside hospital, older people with frailty are likely to receive support from informal or formal carers and there can be tensions about their roles and responsibilities when a person is admitted, or discharged, from hospital (Bauer et al., 2009). Within hospitals, older patients are highly likely to experience transitions between departments or units, or changes in the level of care provided (Enderlin et al., 2013), such as a move from curative to palliative care. In terms of care delivery, it is a challenge to create a sense of community, connection and identity through the multiple transitions older people are likely to experience (Tadd et al., 2012).

Supportive care, is potentially, a highly relevant and clinically important approach, to address deficits in acute care for older people with frailty. However, future interventions need to be underpinned by existing knowledge of supportive care and take into consideration the specific challenges of the context of care.

## 2. Aims

The aim of this review was to identify and integrate theory and evidence on supportive care, in such a way as to inform the development and evaluation of supportive care interventions for older people with frailty in the hospital context. A review was needed to build a framework to underpin supportive care interventions for older people with frailty in practice. It was necessary to adapt and develop existing knowledge, to suit the context, and the patient group, rather than expecting a pre-existing disease-specific or general model of supportive care to fit the context.

The review was undertaken as part of a larger study which aimed to develop and test a supportive care package with patients and carers in English hospitals. The review provides an informed position for developing supportive care interventions for older people with frailty, as a distinct patient group. At a later date the

findings of the review could also be used by health service researchers and managers as a framework to evaluate the effectiveness of programs and the experiences of patients and carers receiving supportive care.

The main question that the review sought to address was: what are the core components of supportive care and how can they be meaningfully applied to the care of older people with frailty? Owing to the fact that the review aimed to integrate theory and evidence we did not set out with detailed specific sub-questions or an overall framework of questions to answer. Instead we sought to answer the main review question by exploring topics and themes within the literature through an iterative process. The methods of the review are described in the following section.

## 3. Design

### 3.1. Approach

Through our experiences of research and practice in hospitals we were aware that supportive care is used successfully with some patient groups, but not with others, including older people with frailty. We were also aware that, some aspects of supportive care are well defined in the research literature, for example, through accounts of supportive interventions and observational studies of supportive practices (Cramp and Bennett, 2013). We wanted to make use of these developments in practice and research evidence to improve care for older people with frailty.

An integrative review was chosen, as it is a broad research review method that can guide the identification and integration of concepts and themes (Cooper, 1984). The approach was suitable for theory building and the simultaneous inclusion of experimental and non-experimental research (Cooper, 1984; Broome, 1993; Whittemore and Knaf, 2005). In this integrative review, we followed the method described by Whittemore and Knaf (2005) and Gough et al. (2012). The emphasis was on generating new insights from existing evidence and theory as reported in the research literature. Three researchers (EM, JF, AH) undertook the literature searches and screening, overseen by the principal investigator (CN). The literature searches aimed to find sufficient cases to explore patterns, and so did not necessarily attempt to be exhaustive in the searches (Gough et al., 2012). Implications for the searches were to achieve a degree of homogeneity of data around the concept using iteration in the review method. This mainly took the form of iteratively refining inclusion and exclusion criteria over time and themes within the data. The PRISMA framework (Moher et al., 2009) is used below to explain the review method and illustrated by Fig. 1.

### 3.2. Identification

Searches of databases were performed using the key term “supportive care” [in Title] AND English [in Language]. The complete term was used rather than two separate keywords (‘supportive’ and ‘care’) to focus on identifying the most relevant articles (Gough et al., 2012). In terms of validity, ‘supportive care’ was considered sufficiently well defined in the health literature to capture information relevant to the research aim (confirmed by the high number of returns in the searches,  $n = 2733$ ). Specificity of the searches, was further enhanced, by using keyword filters (NOT children NOT paediatric NOT best supportive care NOT chemotherapy NOT young adults NOT maternal Not labour NOT community [in Title]); and date of publication (1990-date) [Date of publication]. The reason for using this starting date is that this is when the term begins appear in the research literature (Davies and Oberle, 1990). Having a specific focus for the review facilitated a structured search strategy based on the target group; the concept;

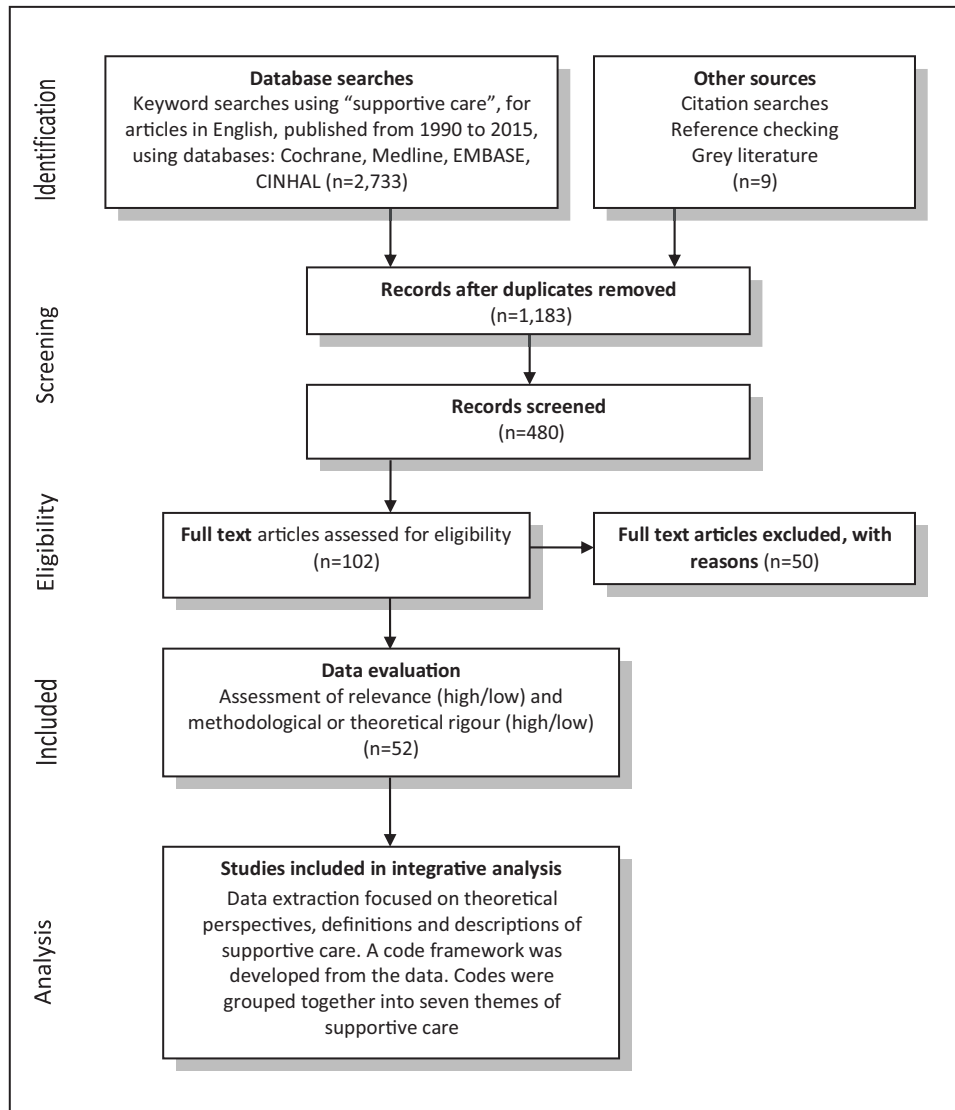


Fig. 1. Flow chart of integrative review method.

and the context (Whittemore and Knaf, 2005). Searches were undertaken using Cochrane; EMBASE; CINHAL; and Medline electronic databases (using PubMed for retrieval of the most up to date records). In addition; citation searches; reference checking and web-based searching (using Google Scholar) were used to identify grey literature (see Fig. 1).

### 3.3. Screening

A theoretical approach to sampling was used to identify a sufficient and appropriate range of studies based on the existing body of literature (Gough et al., 2012) (akin to purposive sampling in primary research). Through initial reading and familiarisation

Table 1

Inclusion/exclusion criteria.

- i **Included:** articles about the concept or definition or description of SC, defined as “the multi-disciplinary holistic care of patients with malignant and non-malignant chronic diseases and serious illness, and those that matter to them, to ensure the best possible quality of life”. Including articles reporting on unmet SC needs or carers or family SC needs where these concern older people's care in hospital settings.  
**Excluded:** articles only reporting on supportive pharmacological interventions or drug treatments, conservative management, palliative chemotherapy or end-of-life sedation.
- ii **Included:** articles about staff perspectives or views about providing SC care to hospitalised older people, defined as “people over 65 years of age” receiving hospital treatment or care for any type of disease or physical illness including multiple morbidities, cancer, stroke, elective or emergency medical or surgical treatment, renal, respiratory or palliative care, and/or dementia.  
**Excluded:** articles reporting on SC in paediatrics, children or young people, child birth or maternal health; articles about patients or clients receiving hospital treatment or care for non-age related mental health conditions such as schizophrenia.
- iii **Included:** articles relating to SC practice, organisation or delivery of hospital care, assessment or care planning, including articles about SC provided during transitions in and out of hospital (admission or discharge) and within hospital settings.  
**Excluded:** articles about SC processes or practices of health or social care provided outside of the hospital (e.g. primary care, community or long term residential care).
- iv **Included:** articles using research methods, including quantitative studies using randomised and controlled methods, comparative evaluations or assessments of effectiveness; qualitative studies, including ethnographic, observational, grounded theory approaches; meta-analyses, systematic review, literature review; service evaluation or audits; studies using consensus methods or consultation.  
**Excluded:** articles based on commentary or opinion.

with the returned articles (EM read article titles) a framework for inclusion/exclusion was developed and discussed between the two reviewers (EM/CN). As screening progressed the criteria were further refined in an iterative process of reading, modifying the criteria and screening. Detailed inclusion/exclusion criteria developed are shown in (Table 1).

### 3.4. Eligibility

A broad age category (65 years and over) was used to include articles about the young-old and the old-old, and to include patients on elderly care wards as well as general in-patient settings (Cornwell et al., 2012). Review studies were included as well as primary sources where these provided a distinct contribution or theoretical perspective about SC. A second stage of screening (EM read the abstracts in full) led to 43 articles being identified that met all of the inclusion criteria. A further 9 articles were identified through other sources (see Fig. 1).

### 3.5. Included articles

The final sample (n=52) included empirical and theoretical articles. Empirical reports included a wide variety of methods: case study, cross-sectional, grounded theory, phenomenology, and instrument development designs. Due to the diversity of primary sources, articles were considered according to two criteria: methodological or theoretical rigour (high or low) and data relevance (high or low). As the focus was to explore and build knowledge, rather than to review evidence of effectiveness, no article was excluded based on methodological criteria alone. However, in general, articles of high rigour and relevance were given more attention in the analysis and contributed more to the results.

### 3.6. Analysis

The focus of the analysis was on identification and integration of information about SC, rather than meta-analysis of the findings of studies (Denzin and Lincoln, 2000). Data were extracted from primary sources (patient group, country, study aims, research methods and clinical context) using structured tables in Microsoft Word. Data extraction also focused on retrieving information about: definitions, types of care described, and aspects of the process of providing supportive care (reflecting the criteria in Table 1). A code framework was developed from the data to define

patterns in the data and to distinguish between various components identified. Codes were then grouped together into potential themes which were reviewed to ensure that the overall code framework reflected the aim of the study and the content of the data set (Braun and Clarke, 2006). Data tables were used to display the coded data from each article by category and were iteratively compared. The reviewers together discussed their decisions and interpretations throughout the process. A synthesis in the form of a model was developed to portray the findings in a comprehensive way that can inform future interventions and program development. Descriptions for each component were developed and relevant data from primary sources was summarized to create an overview of the included literature.

## 4. Results

### 4.1. Overview of the findings

Characteristics of the final 52 included articles are summarized in Table 2.

Articles from cancer (42%) and palliative/end-of-life care (29%) were by far the most common, but there were also articles relating to heart failure/cardiovascular, kidney failure/renal, stroke, older patients in general, delirium, and complementary therapies in the acute care setting. The location of authors suggests that supportive care is understood as being a distinct approach to care in the United Kingdom, United States of America, Canada, Australia and some European countries. In the 43 articles that reported on research studies, the subjects of the research were most often patients over 65 years of age (81% of the included articles) reflecting our inclusion criteria, with the remaining studies reporting on family caregivers (9%), clinical staff (5%) and managers (5%). The underpinning research most often used reviews (meta-analysis, literature review), qualitative (case study, interview, grounded theory, ethnography), quantitative (cross-sectional, quasi-experimental, survey), or mixed-method approaches. Although there are several recent good quality systematic reviews about supportive care (Candy et al., 2011; Cramp and Bennett, 2013; King et al., 2015), the quality of the underpinning evidence is limited by the low number of studies using randomization and controlled methods (Ahmed et al., 2015; Booth et al., 2011).

Through coding and iterative comparison seven themes were identified, which are conceptually distinct elements of supportive care for older people in the acute care setting. We refer to these themes as principles of care. Table 3 summarizes the principles and

**Table 2**  
Characteristics of included articles.

Subjects		Study design	
Patients (over 65 years of age)	35	Review	19
Family carers, relatives or caregivers	4	Qualitative (survey, interviews, observation)	13
Clinicians	2	Quantitative (experimental, randomized controlled trial, survey)	
Service managers	2	Guidance based on expert opinion	10
None/SC concept	9	Mixed methods	
Location of authors		Condition/setting	
UK	26	Cancer	22
USA	12	Palliative/end-of-life care	15
Canada	4	Kidney failure/renal	4
Australia	3	Heart failure/cardiovascular	4
Germany	2	Stroke	3
Sweden	1	Older patients/no specific clinical group	2
Netherlands	1	Delirium	1
Italy	1	Complementary therapies	1
Europe	1		
Global (World Health Organization)	1		

**Table 3**  
Supportive care for older people with frailty.

Principle of care	Type of care provided	Relevant research evidence, frameworks or guidance	
1. Ensuring fundamental aspects of care are met	Symptom control	Support for physical needs associated with disease and illness (Ahmedzai et al., 2001; NCI, 2015; Sanson-Fisher et al., 2000; SCPV, 2011; Payne et al., 2004; Goodlin et al., 2004; Levy et al., 2004; Cramp and Bennett, 2013; Hughes et al., 2013; Hui et al., 2013; Ward and Gillespie, 2008) Easing the physical burden of the condition or suffering (Sutton and Coast, 2014)	
	Managing side effects	Advice about side-effects and support to manage them (Cortis and Williams, 2007; Fitch, 2008; NCI, 2015) Support to maximise the benefits of treatment or care (NCHSPCS, 2015; NICE, 2004; Hui et al., 2013) Managing complications of treatment (Murphy and Deng, 2015) (King et al., 2015) Delirium prevention (Young and Inouye, 2007)	
	Pain management	Support to alleviate pain (De Cicco et al., 2002; Fitch, 2008; Daly et al., 2013; Sepúlveda et al., 2002; Levy et al., 2004; Cramp and Bennett, 2013)	
	Physical function	Improving the ability to function (Cramp and Bennett, 2013) Reducing the impact of disability (Cramp and Bennett, 2013) or impairment (Murphy and Deng, 2015; Ward and Gillespie, 2008)	
	Patient comfort	Helping patients feel physically comfortable (NHSIQ, 2015) Dealing with feeling tired (Hall et al., 2015) or breathlessness (Booth et al., 2011) Creating a supportive environment for patients: experiencing welcoming, recognising oneself in the environment (e.g. personal items), creating and maintaining social relations, experiencing a willingness to serve, and experiencing safety (Edvardsson et al., 2005; Oishi et al., 2014)	
	Hydration/nutrition	Nutritional support and hydration (De Cicco et al., 2002) Detection and support for malnutrition and healthy eating (De Cicco et al., 2002)	
	Oral care	Maintaining oral care and dental health (Davison and Jhangri, 2010)	
2. Communicating and connecting with the patient	Information provision	Timely and appropriate provision of patient information about illness/disease, treatment or care (Fincham et al., 2005; Sanson-Fisher et al., 2000; SCPV, 2011; Cramp and Bennett, 2013; Hughes et al., 2013; King et al., 2015) Information about service provision, what to expect from services or from staff, such as named contacts (Fincham et al., 2005) Honesty about prognosis and impact of disease (Noble et al., 2007) Recognizing anxiety, fear or psychological distress (Ahmedzai et al., 2001; Sanson-Fisher et al., 2000; SCPV, 2011; Goodlin et al., 2004; Hughes et al., 2013) Supporting patients through diagnosis (Fincham et al., 2005; NCI, 2015) Finding meaning and ways to help patients and families/carers to cope with continuing illness or treatment (NCHSPCS, 2015; Davies and Oberle, 1990; NICE, 2004; Sepúlveda et al., 2002) Patients feeling safe, cared for and well informed (Sanson-Fisher et al., 2000) Help to adjust and find ways forward through illness or treatment (Fitch, 2008)	
	Psychological support	Support to cope with personal, emotional or sexual problems (Fitch, 2008; Sanson-Fisher et al., 2000; King et al., 2015; NCHSPCS, 2015) Helping patients to cope with feelings of sadness or depression (Davison and Jhangri, 2010) Valuing, empowering and preserving patient's personal integrity (Davies and Oberle, 1990) dignity or self-respect (Sutton and Coast, 2014) Showing compassion for patients or understanding of subjective wellbeing (Kohlmann et al., 2013) Supporting patients to cope with worry or fears about their family or dependents (Davison and Jhangri, 2010; Watson et al., 2015) Supporting patients to cope fears or concerns about uncertainty (Watson et al., 2015)	
	Emotional support	Support to express personal or cultural beliefs about disease, illness or caregiving (NCI, 2015) Support to discuss or practice spiritual or religious beliefs (Daly et al., 2013; Fitch, 2008; Ahmedzai et al., 2001; Sepúlveda et al., 2002; Davison and Jhangri, 2010; Hughes et al., 2013) Support to understand personal views about death or dying (Davison and Jhangri, 2010) Support with family communication (Davison and Jhangri, 2010) and family relationships (Fincham et al., 2005; Hughes et al., 2013) Enabling patients to experience love and affection/being with people who care (Sutton and Coast, 2014) Carer/family involvement in care decisions and choices (Richardson et al., 2007; NHSIQ, 2015) and patient caregiving (King et al., 2015)	
	Cultural support	Assessment of carer/family support needs and provision of information or support (Richardson et al., 2007; MacIsaac et al., 2011; Goodlin et al., 2004; Levy et al., 2004; Noble et al., 2007; Sklenarova et al., 2015) Carer/family support to cope with caregiving (Candy et al., 2011; Sepúlveda et al., 2002; MacIsaac et al., 2011) and maintain quality of life (Cramp and Bennett, 2013) Carer/family support for bereavement and grief (Candy et al., 2011; NCHSPCS, 2015) Training or education for carers e.g. massage therapy courses (Kozak et al., 2013)	
	Carer and family engagement	Carer/family communication	
	4. Building up a picture of the person and their circumstances	Clinical assessment	Using a supportive care plan to record patient needs, wishes and preferences (Thompson-Hill et al., 2009) Inclusion of supportive care needs in comprehensive geriatric assessment (Balducci, 2003) or holistic assessment (NHSQI, 2010) Palliative and supportive care needs assessment (Ahmed et al., 2015) Using registers or triggers to provide managed care (NHSMA, 2004) Screening patients for distress (Hammer et al., 2015)
		Level of function	Understanding level of function and helping to maintain physical function and daily living (Fitch, 2008)
Quality of life		Supporting patients to maintain their interests and activities (Levy et al., 2004; Cramp and Bennett, 2013; Hui et al., 2013)	
5. Decisions and advice about best care for the person	Shared decision-making	Supporting patients and carers with guidance and information about clinical decisions (Watson et al., 2015) Having a sense of choice about care (Fincham et al., 2005; Noble et al., 2007; Sutton and Coast, 2014)	
	Care planning	Shared decision-making or care planning with patients and/or carers (Daly et al., 2013) Individualized care coordination (Daly et al., 2013) Discussing and planning for possible changes in health status (Davison and Jhangri, 2010)	
6. Enabling self-help and connection to wider support	Self-management	Health skills development (Fitch, 2008; SCPV, 2011) and self-help (Cramp and Bennett, 2013; King et al., 2015) Strategies to self-manage pain (Davison and Jhangri, 2010)	

Table 3 (Continued)

Principle of care	Type of care provided	Relevant research evidence, frameworks or guidance
7. Supporting patients through transitions in care	Rehabilitation/prevention	Health education (Daly et al., 2013; Cortis and Williams 2007) Relaxation/stress management techniques (Davison and Jhangri, 2010) Linking patients to post-treatment care or rehabilitation (MASCC, 2015; NCHSPCS, 2015) Restorative care (Noble et al., 2007) or rehabilitation (Daly et al., 2013) Providing advice or information for disease prevention (MASCC, 2015)
	Support groups/networks	Survivor or peer support groups (Daly et al., 2013; MASCC, 2015; Cortis and Williams, 2007; King et al., 2015) Patient networks or initiatives e.g. creative/life story projects (Rosenbaum et al., 2004) Provision of informational lectures, website or newsletters for patients (Rosenbaum et al., 2004)
	Bereavement care	Supporting access to bereavement care (Sepúlveda et al., 2002; NCHSPCS, 2015; NICE, 2004)
	Social/practical advice	Providing information about voluntary organisations or support groups (Fitch, 2008; SCPV, 2011) Linking patients and families/carers to sources of social or practical support (NCI, 2015; Richardson et al., 2007; Cramp and Bennett, 2013; Hughes et al., 2013) Helping to access financial/benefits advice (Cramp and Bennett, 2013) Timely and well-coordinated admission to hospital (Hammer et al., 2015)
7. Supporting patients through transitions in care	Hospital admission	
	Specialist care/referral	Referral to specialist therapy e.g. physiotherapy, speech therapy (Murphy and Deng, 2015) or music therapy (Gallagher, 2011) Providing information or referral to complementary therapies (Tavares, 2003; Cortis and Williams, 2007; Hammer et al., 2015), massages or exercise classes (Rosenbaum et al., 2004)
	Discharge planning	Communication and follow-up with community health practitioners (Murphy and Deng, 2015)
7. Supporting patients through transitions in care	Transition to end-of-life	Provision of care through a supportive care pathway (Main et al., 2006) Support with end-of-life decisions (Daly et al. 2013; Brinkman-Stoppelenburg et al., 2015) or advanced care planning (Da Silva-Gane and Farrington, 2014; NHSIQ, 2015) Provision of specialist end-of-life care (Brinkman-Stoppelenburg et al., 2015) or/palliative care (Daly et al., 2013; Cramp and Bennett, 2013) Coordination of hospital-hospice patient care and partnership working (Twaddle et al., 2003)

subthemes emerging from the analysis. The following sections of the results describe each principle in turn and the evidence and theory that support it.

#### 4.1.1. Ensuring fundamental aspects of care are met

Ensuring fundamental aspects of care are met relates to such terms and practices as – “symptom control”, “managing side-effects”, “pain management”, “physical function”, “patient comfort”, “hydration/nutrition” and “oral care”, all of which describe situations in which patients are supported by staff throughout their treatment and care in hospital. This theme includes substantial high quality research studies on interventions to address patients’ physical symptoms and needs (Ahmedzai et al., 2001; NCI, 2015; Sanson-Fisher et al., 2000; SCPV, 2011; Payne et al., 2004; Goodlin et al., 2004; Levy et al., 2004; Hughes et al., 2013; Ward and Gillespie, 2008, such as the use of equipment and medication. Research in this area aims to maximise the benefits of treatment or care (NCHSPCS, 2015; NICE, 2004; Hui et al., 2013) by alleviating the physical burden of the condition or suffering (Sutton and Coast, 2014) and managing the side-effects of treatment (Cortis and Williams, 2007) (Fitch, 2008; NCI, 2015). It includes addressing complications of treatment (Murphy and Deng, 2015; King et al., 2015) and prevention of delirium (Young and Inouye, 2007). There are strong links in the literature between supportive care interventions and improved pain management (De Cicco et al., 2002; Fitch, 2008; Daly et al., 2013; Sepúlveda et al., 2002; Levy et al., 2004; Cramp and Bennett, 2013); improved physical function or reduction of impairment (Cramp and Bennett, 2013; Murphy and Deng, 2015; Ward and Gillespie, 2008); and patient’s physical comfort (NHSIQ, 2015; Hall et al., 2015; Booth et al., 2011) in the hospital environment (Edvardsson et al., 2005; Oishi et al., 2014). Fundamental aspects of care also include providing support for nutrition, hydration (De Cicco et al., 2002) and oral care (Davison and Jhangri, 2010).

#### 4.1.2. Communicating and connecting with the patient

Communicating and connecting with the patient relates to terms and practices such as “information provision”, “psychological support”, “emotional support”, and “cultural support”, all of which describe situations in which staff communicate with patients, carers and families as individuals. This theme includes research on giving patients information about illness, disease, treatment or care (Fincham et al., 2005; Sanson-Fisher et al., 2000; SCPV, 2011; Cramp and Bennett, 2013; Hughes et al., 2013; King et al., 2015), and information about what to expect from hospital services (Fincham et al., 2005). The literature suggests that supportive care supports timely communication of information to patients with clarity, sensitivity and honesty (Noble et al., 2007). As well as meeting information needs, there is a reasonable amount of good quality research (quantitative or observational methods) to show that supportive care provides psychological support (Ahmedzai et al., 2001; Sanson-Fisher et al., 2000; SCPV, 2011; Goodlin et al., 2004; Hughes et al., 2013), which can enable patients and families or carers to cope (Fincham et al., 2005; NCI, 2015), find ways forward (Fitch, 2008), and feel safe, cared for and well informed (NCHSPCS, 2015; Davies and Oberle, 1990; NICE, 2004; Sepúlveda et al., 2002; Sanson-Fisher et al., 2000). There is also good evidence (from qualitative research) to show supportive care supports patients with their emotional needs (Fitch, 2008; Sanson-Fisher et al., 2000; King et al., 2015; NCHSPCS, 2015), such as feelings of sadness or depression (Davison and Jhangri, 2010), as well as supporting patients’ subjective sense of integrity and wellbeing (Davies and Oberle, 1990; Sutton and Coast, 2014; Kohlmann et al., 2013). Emotional support may include helping patients with concerns about their family or dependents (Davison and Jhangri, 2010; Watson et al., 2015) or uncertainty about the future (Watson et al., 2015). A further aspect of this theme, which has been studied to a lesser extent in the hospital context, is the provision of cultural support, including enabling patients to express their beliefs about illness or care (NCI, 2015), spiritual or religious beliefs (Daly et al., 2013; Fitch, 2008; Ahmedzai et al.,



2001; Sepúlveda et al., 2002; Davison and Jhangri, 2010; Hughes et al., 2013), and views about death or dying (Davison and Jhangri, 2010).

#### 4.1.3. Carer and family engagement

Carer and family engagement relates to such terms and practices as “carer and family communication”, “carer and family support” and “carer education”, all of which describe situations in which staff engage with families and carers in patient care. This theme includes research about how staff can best communicate with carers and families (Davison and Jhangri, 2010; Fincham et al., 2005; Hughes et al., 2013) and enable patients to feel supported by the people who care about them (Sutton and Coast, 2014). It also includes the more formal role of carers and families in care decisions and choices (Richardson et al., 2007) (NHSIQ, 2015) and patient caregiving (King et al., 2015). There is substantial research evidence that supportive care can help to assess and address carer and family support needs (Richardson et al., 2007; MacIsaac et al., 2011; Goodlin et al., 2004; Levy et al., 2004; Noble et al., 2007; Cramp and Bennett, 2013; NCHSPCS, 2015) which can improve carer and family coping and ability to support the patient (MacIsaac et al., 2011; Sklenarova et al., 2015; Candy et al., 2011; Sepúlveda et al., 2002). There is relatively little research on carer training or education in the hospital setting (Kozak et al., 2013).

#### 4.1.4. Building up a picture of the person and their circumstances

Building up a picture of the person and their circumstances relates to such terms and practices as “clinical assessment”, “level of function” and “quality of life”, all of which describe situations in which patients are supported by staff to express their needs and

maintain what is important to them. There is some good quality evidence from intervention studies to show supportive care enables more holistic assessment of patient needs (Thompson-Hill et al., 2009; Balducci, 2003; NHSQI, 2010; Ahmed et al., 2015). However, research on patient registers (NHSMA, 2004) and screening tools (Hammer et al., 2015) for supportive care is in its early stages. The focus of research on this theme is assessing a patient’s level of function (Fitch, 2008) or quality of life (Levy et al., 2004; Cramp and Bennett, 2013; Hui et al., 2013) in order to be able to recognise and respond to changes in the patient’s health status.

#### 4.1.5. Decisions and advice about best care for the person

Decisions and advice about best care for the person relates to such terms and practices as “shared decision-making”, “care planning” and “social/practical advice”, all describing situations in which patients are supported by staff to discuss the available choices for care and support and to establish the best care for the person. There is a moderate amount of research to show supportive care enables patients, families and carers to be involved in clinical decisions (Watson et al., 2015), choices about care (Fincham et al., 2005; Noble et al., 2007; Sutton and Coast 2014) and care planning (Daly et al., 2013). Supportive care may support individualized care coordination (Daly et al., 2013) and appropriate service responses to changes in patient health status (Davison and Jhangri, 2010).

#### 4.1.6. Enabling self-help and connection to wider support

Enabling self-help and connection to wider support relates to such terms and practices as – “self-management”, “rehabilitation/prevention”, “support groups/networks”, and “bereavement care” all of which involve situations in which patients, carers and families are supported by staff to access and build support for

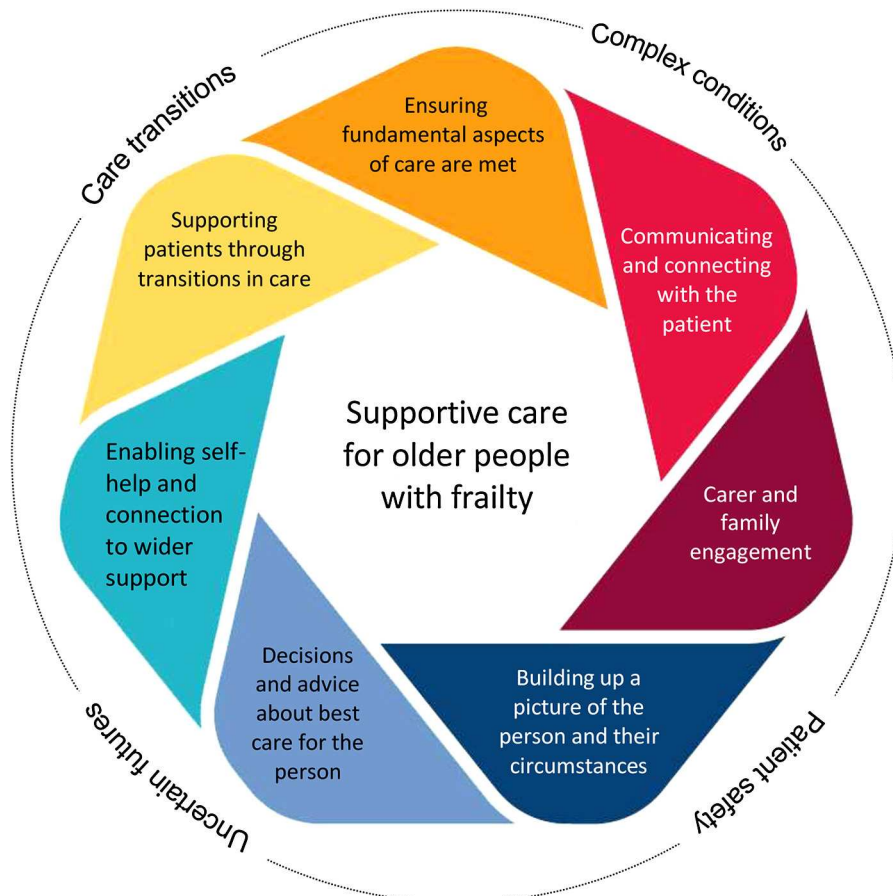


Fig. 2. Supportive care for older people with frailty.

themselves. Research on self-management suggests supportive care can improve patients' health skills (Fitch, 2008; SCPV, 2011), knowledge of illness/disease (Daly et al., 2013; Cortis and Williams, 2007) and ability to manage pain or stress (Davison and Jhangri, 2010). Supportive care may support rehabilitation (NCHSPCS, 2015; Noble et al., 2007; Daly et al., 2013) or disease prevention (MASCC, 2015), or connect patients into peer-support or patient networks relevant to their age group or health status (Daly et al., 2013; MASCC, 2015; Cortis and Williams, 2007; King et al., 2015; Rosenbaum et al., 2004) or access to bereavement care (Sepúlveda et al., 2002; NCHSPCS, 2015; NICE, 2004). There is strong evidence (intervention studies and reviews) to show supportive care can connect patients, carers and families with sources of social and practical advice beyond hospital or health needs (Fitch, 2008; SCPV, 2011; NCI, 2015; Richardson et al., 2007; Cramp and Bennett, 2013; Hughes et al., 2013).

#### 4.1.7. Supporting patients through transitions in care

Supporting patients through transitions in care relates to such terms and practices as “hospital admission”, “specialist care/referral”, “discharge planning” and “transition to end-of-life”, all of which concern staff supporting patients to enable them to transition to the type or level of care needed. Supportive care can support timely and well-coordinated admission to hospital (Hammer et al., 2015) by linking hospital care to care provided in residential or nursing home settings and by community practitioners. Supportive care can also provide a structure for hospital staff to refer patients to therapists (Murphy and Deng, 2015; Gallagher, 2011) or complementary therapies (Tavares, 2003; Cortis and Williams, 2007; Hammer et al., 2015; Rosenbaum et al., 2004). There is relatively little evidence about supportive care in relation to hospital discharge planning and follow up with community health practitioners (Murphy and Deng, 2015). There is stronger evidence for the role of supportive care in supporting patient transitions to end-of-life, for example using supportive care pathways (Main et al., 2006), support with end-of-life decisions (Daly et al., 2013; Brinkman-Stoppelenburg et al., 2015), advanced care planning (Da Silva-Gane and Farrington, 2014; NHSIQ, 2015) and transfer to specialist end-of-life care (Brinkman-Stoppelenburg et al., 2015) or palliative care (Daly et al., 2013; Cramp and Bennett, 2013; Twaddle et al., 2003).

## 5. Discussion

The key strength of this review is its focus on supportive care for older people with frailty. Previous studies have generally taken cancer or other diagnostic categories as their point of reference for developing supportive care. Here, we have taken into consideration the known challenges of delivering hospital care to the growing number of older people who require hospital care. The review intentionally did not draw on evidence from supportive home care, hospice care, or nursing homes so the findings may not relate to these specific care contexts. The main limitation of the searches was that only articles written in the English language were considered which could mean relevant international perspectives were excluded.

This integrative review has identified seven principles of supportive care that apply to older people with frailty. The links between the principles, derived from the frailty literature, are the focus on complex conditions, uncertain futures, patient safety and care transitions. The review describes supportive care in a way that can usefully inform the provision of appropriate care to older people with frailty. With this purpose in mind, we have developed the findings into a tentative integrated model of supportive care. The model is illustrated by Fig. 2, which provides an accessible framework to inform future development and evaluation of

interventions for older people with frailty. The model shows the seven principles of supportive care for older people with frailty. By showing that these principles are linked, the model emphasises the connecting functions of supportive care, in terms of an underpinning ethos of care directed towards the organisation of appropriate care around the person living with frailty. This model is consistent with existing definitions of supportive care (Cramp and Bennett, 2013; Hui, 2014; NCHSPCS, 2015) yet it provides the necessary specificity for the care of older people with frailty.

The model of supportive care is flexible enough to accommodate the fact that different patients have different abilities, strengths, relationships, social connections, experience, and needs. Not all patients, may need all components of SC, all of the time. The model offers a practical framework to consider and revisit individual supportive care, on an ongoing basis. This could include, medication reviews or planned discussions about possible transitions in the level of supportive care provided. At an organisational level, it could be that the model can help to organise care by coordinating the work of different staff groups, such as nursing, medical, specialists and other staff groups. Supportive care may also help to integrate specialist care with acute care. For example, specialist palliative care staff meeting older people earlier in hospital, and broadening end-of life expertise to older people with frailty. If implemented successfully, supportive care may improve patient experiences of transitions in care by maintaining caring relationships, between patients, carers, families and staff.

Supportive care can help hospital staff to address the challenges of complexity of frailty through more holistic assessments of patient and carer/family needs, rather than focusing on treating a specific presenting medical and/or surgical problem (Patterson et al., 2011). More coordinated multidisciplinary assessment based on the concept could underpin treatment and care for comorbidity (Tadd et al., 2011) medication regimes and polypharmacy (Runganga et al., 2014). Defining supportive care helps to identify essential practices in the challenging context of hospital staffing pressures (Griffiths et al., 2014), potential undervaluing of staff skills, knowledge of older people's care (Patterson et al., 2011) and resource accountability (O'Hare, 2004). Supportive care could help to address uncertainties in care planning and co-ordination of care (Cornwell et al., 2012) by building up a picture of the person and their circumstances, in order to be able to recognise and respond to subtle or gradual changes in the patient's health status (Lunney et al., 2003; Covinsky et al., 2003).

An integrated model of supportive care could enable staff to initiate relationships between patients, carers, families and specialist palliative care specialists (Morrow and Nicholson, 2016) without making a prognosis or transfer to palliative care services (Gardiner et al., 2011; Zhi and Smith, 2015). Supportive care may also address some of the challenges of ensuring patient safety (Campbell et al., 2004; Karunanathan et al., 2009) for older people with frailty by engaging carers and families in patient care. Carers and families may help staff to understand the impact of life-limiting conditions (Skilbeck and Payne, 2005) and to explain patients' physical capacities and functions (Sampson et al., 2009; Dewar and Nolan, 2013; Shaller, 2007). It is less clear whether supportive care can protect patient dignity (Ariño-Blasco et al., 2005; Gallagher et al., 2008; Kinnear et al., 2014). Supportive care could help to support older people with frailty through transitions in care (Coleman, 2003; Enderlin et al., 2013), in particular transitions between care settings (hospital admission and discharge planning), transitions between types of care (e.g. general to specialist care), or the focus of care (e.g. curative or palliative care). Supportive care may help to create a sense of community, connection and identity through the multiple transitions older people are likely to experience (Tadd et al., 2012).

### 5.1. Future research and development

Current evidence is still in the early stages of development and there is much to learn about assessment of needs; the impact of supportive care on patient outcomes; patient, carer and family experiences of care; and the financial costs associated with supportive care. In this review, the two main factors considered were patient age and frailty. More nuanced understandings could be developed by considering different patient demographics, cultural backgrounds and support networks. The review adds to the evidence base and could inform national strategies for improving health care for older people with frailty. Future research is needed to consider strategies for organisational assessment or improvement for supportive care. Further reviews could examine international differences in hospital services to provide supportive care to older people with frailty, and cultural differences in supportive care, or explore how organisational factors such as leadership, management or multidisciplinary team working influence supportive care. Hospital-based research is needed to develop targeted interventions based on an integrated model of supportive care and to support their implementation of supportive care. Given the need for involvement of carers and families in supportive care, research that uses partnership approaches with hospital staff, patients and carers could help to identify possible changes and improvements in care to tailor supportive care interventions to local needs.

## 6. Conclusions

Older people with frailty and their carers and families could benefit from supportive care if existing evidence and theory can be used in a meaningful way that takes into consideration the specific context of care. The findings and model developed here could help staff and hospital managers to develop appropriate strategies, staff training and resource allocation models to improve the quality of care of older people with frailty in hospital. Further research can use this model to develop and evaluate supportive care interventions in hospitals. It is important to reflect the principles of supportive care in the development of interventions, this includes involving patients and carers at every step of the process.

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### Ethical approval

National Research Ethics Service Committee South Central – Berkshire B-13/SC/0434.

### Competing interests

None declared.

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