



National Institute for
Health Research

NIHR Dissemination Centre

THEMED REVIEW

COMPREHENSIVE CARE

Older people living with frailty in hospitals



FOREWORD

Over my twenty years in clinical practice, we have made great inroads into reducing premature deaths from disease and more people are living longer. By 2040, nearly one in seven people are projected to be over 75. We have also begun to understand more about the condition of frailty. Frailty is associated with age, but not all older people are living with frailty and not all people with frailty are old. Frailty is much more effective than age as a means of identifying people who may be at greater risk of future hospitalisation, care home admission or death. NHS England has characterised frailty as a long-term condition that can be routinely identified and managed to improve a person's quality of life and wellbeing and to support them to live well for longer. This gives us a great opportunity for the NHS to take action to improve the care and support of older people living with frailty, as set out in the Five Year Forward View and Next Steps on the Five Year Forward View.

At some point in their journey of care, many people living with frailty will experience an admission to hospital. As the research described in this review shows, admission to hospital for people living with frailty can be an important step in building or sustaining their resilience, but can also be associated with problems. Good early identification and communication between all members of the health and social care team can avoid potential problems being realised and support people to live well and independently for as long as possible.

The new GP contract in England aims to respond positively to frailty and the challenges it poses through the routine identification of frailty. This information could be shared with hospitals to alert them to this group's special needs. This review provides a valuable and timely round up of the evidence around hospital based comprehensive geriatric assessment, clinical interventions and timely discharge planning. It also describes how busy hospital wards can ensure that their environments are caring and person centred.

Of course, more research needs to be undertaken to better understand how to manage frailty both in hospital and in people's own homes, so that people are only taken to hospital when it is completely necessary and that they are treated swiftly and return to their homes as soon as possible.

I hope that this review will help clinical staff, managers and commissioners to be aware of what we already know, so that practice is based on the best available current evidence and provide a strong foundation for future developments in this most important area.

Dr Dawn Moody

Associate National Clinical Director (older people), NHS England



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EVIDENCE HIGHLIGHTS

People are living longer and many are enjoying healthy lives. But it is also true that a significant percentage of older people are particularly vulnerable to relatively minor changes in their circumstances which can lead to a deterioration in their health and ability to live independently. A hospital stay itself can trigger a crisis. This review looks at the concept of 'frailty' in older people and what can be done to raise awareness amongst hospital staff, so that they identify and manage the needs of this group of people and avoid known potential problems. With the right support, patients can continue to live well at the end of their hospital stay.

This review features 53 studies funded by the National Institute of Health Research, which was set up to address the needs of the NHS. Thirty three of these studies have been published and have already changed the way hospital staff care for older people living with frailty. Twenty other projects are ongoing and will give us new understanding of how we can improve services for people living with frailty.

Whilst there are gaps in our evidence base and not all relevant research is captured here, this review should help healthcare staff make decisions with older people living with frailty. It may be of particular interest to staff in secondary care hospitals who do not have specialist training in older people's care but look after patients with frailty on a day to day basis. It may also be useful to hospital managers, designing systems and allocating resources. This overview also paints a picture of what sort of research is taking place in the NHS and areas which need further investigation.

ASSESSMENT

- » Researchers have developed and tested a tool that uses data collected in GP practices to identify the most vulnerable older people living with frailty. Including this in the Summary Care Record could allow all secondary care hospitals to immediately identify the most vulnerable older people who come into their care.
- » Comprehensive Geriatric Assessment (CGA) by a multidisciplinary team and follow-on care planning reduces the number of people who are unexpectedly readmitted to hospital. CGA also increases the likelihood that an older person will be living in their own home up to twelve months later. For every 20 people assessed in this way, one long-term care home placement can be avoided.
- » Older people living with frailty can present to hospital with atypical symptoms and complex needs. Research shows that because of this, assessment in emergency departments can take more than four hours and models of care that reflect this may be more appropriate.

IDENTIFYING AND MANAGING SYMPTOMS ASSOCIATED WITH FRAILTY IN HOSPITAL

- » Awareness of some of the symptoms associated with frailty, such as delirium, is very variable among acute hospital staff. Research is currently exploring how simple assessment tools might help with this.
- » A number of studies show that people living with frailty have better experience when cared for on specialised wards following CGA. There is mixed evidence about the impact on outcomes.



When older frail people are admitted to hospital they risk deterioration, and we know that the environment and the way they are treated significantly impacts both on the patient's experience and on their recovery. Research and evidence are crucial in ensuring organisations can be confident they are delivering really good care and achieving the best possible outcomes.

Lesley Carter, Age UK



- » Helping people to keep moving in acute hospitals is critical but challenging and researchers are looking at how using volunteers may help with this.
- » Preventing falls is complex and although technology such as pressure sensors can help, these devices do not make a difference unless it is part of a wider plan around how staff work with people at high risk of falls.
- » Older people are at risk of developing pressure ulcers and previous NIHR research has shown that many dislike alternating pressure mattresses, which are very often recommended as a result of risk assessments. A current randomised study is exploring whether high specification foam mattresses provide the same benefits.
- » Medication errors in prescription and administration can cause problems and pharmacist review of medicines within 24 hours of admission has been found to reduce inappropriate medication usage.

DISCHARGE PLANNING

- » Researchers found that hospital staff need more support and training to assess the mental capacity of older people with cognitive impairment before their discharge.
- » Research co-produced with patients found that poor discharge planning caused considerable stress to families, and they recommend a mutually agreed written discharge plan.
- » There appears to be little difference in the cost or functional outcomes between older people's rehabilitation schemes (although not stroke rehabilitation where a difference has been shown) in hospitals, care homes or a person's own home,

although researchers have found it difficult to compare different types of environment. More research is needed in this area.

CARING ENVIRONMENTS

- » Older people living with frailty easily lose their independence in hospital, and staff must be vigilant around nutrition and hydration. Researchers have taken a simple, quick questionnaire originally designed for use in people's own home and validated its use in hospitals. The questionnaire does not require physical measures such as height and weight which can be challenging to undertake with older people living with frailty. The results appear promising but it needs further testing.
- » Person-centred care that focuses on respecting the person's identity, creating relationships and sharing decision making is important to provide high quality care. Creating therapeutic relationships allows support staff to manage the emotional climate of the ward, stimulating it when it becomes flat and dampening it down when stress rises. Only one third of NHS trusts provide training to healthcare assistants on building positive relationships with patients, and a number of researchers have developed and tested training interventions for unregistered staff.
- » Researchers have found that tested interventions that help to create caring environments need organisational support, and hospitals need to consider how they develop the capacity to create and maintain caring environments in the face of increasing operational pressures.

QUESTIONS TO ASK ABOUT THE CARE OF OLDER PEOPLE WITH FRAILITY IN HOSPITALS

QUESTIONS FOR BOARDS RUNNING HOSPITALS

- » How does my organisation use information from previous admissions and shared by other health and social care providers to identify older people living with frailty coming into our hospital(s)?
- » Do we audit the number of people over 65 who have a Comprehensive Geriatric Assessment?
- » Do we have specialist teams and wards for older people living with frailty?
- » Do our staff have the time to care in a way that focuses on maintaining independence in older frail people and building up both their physical and mental capacity?
- » Do we offer all staff who come into contact with patients training on person centred and relational care?
- » What sort of improvement projects are we running for people living with frailty and how are we measuring their impact?
- » What kind of intermediate care for people living with frailty is on offer locally which could enhance our services – including virtual wards, hospital at home schemes, and other admission avoidance or supported discharge schemes?
- » Have we audited the number of older people in our care who have an Advance Care Plan?

QUESTIONS FOR STAFF CARING FOR OLDER PEOPLE

- » Do we use screening tools to help us identify people with syndromes related to frailty (e.g. delirium) or who are at particularly high risk of harms, such as falls and pressure ulcers?
- » Are we training our staff to consider that people who present in atypical and nonspecific ways may be living with frailty?
- » How do we ensure that older people living with frailty keep moving whilst in hospital?
- » How often do we review medications for older people living with frailty?
- » How can we encourage people living with frailty to maintain active minds?



QUESTIONS FOR FAMILIES AND CARERS OF PEOPLE LIVING WITH FRAILITY

- » Has my friend or relative had a comprehensive assessment of their needs and is a detailed care plan in place?
- » Have I been actively involved in the assessment, planning and delivery of care?
- » Have I been able to share with hospital staff the important preferences and needs of my loved one to make sure there is continuity with their routines at home?
- » Do they seem to be eating and drinking enough and are the staff checking? Is appropriate assistance being given both at mealtimes and throughout the day?
- » Do I know who to speak to if I have concerns about the plans or the care itself?
- » Have I been involved in discussing the plan for care after discharge from the hospital and am I confident it will be safe?
- » Is there anything I can do as I start to see my loved one become frail to help them live well?

INTRODUCTION

WHAT IS FRAILTY?

There is no universally agreed, single definition of frailty but most people recognise that it is a state of increased vulnerability to adverse health outcomes. Older people living with frailty are less able to adapt to stressors such as acute illness or trauma or even changes in social conditions. Frailty is associated, but not synonymous, with disability, ageing and multiple long-term conditions. There is some evidence to suggest that frailty as a term might not resonate with older people or their family members and caregivers¹, but it is a concept that does capture the special needs of a particular population.

Better identification of frailty and better understanding of how to support people to live well with frailty is increasingly recognised as one of the key challenges for health systems in the 21st century.

In England, support for older people living with frailty is acknowledged as one of three priority areas for the NHS, along with mental health and cancer².

Much work is focused on managing people with frailty in their own homes. However, the number of older people being admitted to hospital as an emergency has grown rapidly in the last five years. In addition, older people living with frailty may need planned admissions both to treat symptoms directly related to their frailty and to treat conditions unrelated to it. It is important that we can identify these people early and give them the right care in hospital and at home to ensure that they live well with frailty and avoid any of the known risks. This matters because admission to hospital can be disruptive and can bring its own problems for someone who is showing signs of frailty.



Living with frailty – key facts

Frailty is a specific state of health that is more prevalent as people age. Whereas only 5% of people aged 60-69 live with frailty this figure rises to 65% in people aged over 90.

It is estimated that there are 1.8 million people aged over 60 living with frailty in England, of whom almost half are people aged over 80 (ELSA 2016)²

ABOUT THIS REVIEW

Unless stated otherwise, all research featured in this report is funded entirely or substantively by the National Institute for Health Research (NIHR) through project, programme or infrastructure support. The NIHR was set up in 2006 to provide research focused on the needs of patients and the public and the research is primarily conducted within the NHS. This report is therefore not a systematic review of all the research that has been conducted, but we believe that collecting evidence from research undertaken largely in the NHS can provide a helpful view about what works in the NHS and highlights areas where further study is required.

This review highlights both completed and ongoing studies and should be relevant to commissioners, provider organisations and health care professionals, with a particular focus on the audience of staff involved in direct clinical practice. It covers what we know from this body of research about best practice in secondary care for older people living with frailty.

We hope that the review will be particularly useful for hospital nurses, doctors and therapists who have not received specific training in the care of older people. It may also be of interest to older people living with frailty themselves and to their carers and family.

WHY DID WE UNDERTAKE THIS REVIEW?

This review brings together recent evidence relevant to older people living with frailty who need to receive treatment in secondary care hospitals. The long-term ambition is to provide more treatment for older people living with frailty in their own community, but there will always remain a number of people who need either emergency or planned care that cannot be carried out in other settings. We know that frailty can cause an unusual and severe response to even the most apparently straightforward reason for admission to hospital, sometimes leading to a dramatic deterioration and a much longer recovery phase than other people would experience. We also know that admission to hospital, if not well managed, can trigger a rapid decline in ability to perform everyday activities. Whilst frailty can be described, managing frailty is not yet well understood and the evidence base for caring for people living with frailty in hospitals is developing and incomplete. We want to establish the current state of knowledge, including the gaps, in order to both inform staff who are deciding how to treat people on a day to day basis and to inform the future research agenda.

We identified 53 NIHR funded studies which cover the journey through secondary care services. We looked at care provided at both emergency and elective attendances at hospital, and at the five syndromes associated with frailty (delirium, falls,



immobility, continence problems and medicine management, (see below) together with the experience of care. The review explores how people working in secondary care services become aware that an older person is living with frailty (whether this is established before admission or on presentation at hospital), how the decision to admit is taken and how current needs are assessed. Whilst it does not provide a review of planned end of life care (as this was covered by an earlier NIHR Dissemination Centre review, *Better Endings*), the review does discuss older people living with frailty who present at secondary care settings at the end of their lives. It also considers alternatives to hospital admission after presentation at emergency departments and planning for the next stage in the care journey, including discharge and continuing care planning. The NIHR is funding a number of studies on community hospitals, including rehabilitation of older people after hospital stay, but these are not covered in detail here.

Similarly we know that some people with dementia are also living with frailty, but not all people with

dementia live with frailty. We have identified particular studies of people living with dementia that relate to frailty syndromes or other relevant aspects of acute hospital inpatient care in this review. NIHR has funded many studies on people with dementia in hospital and in other settings and a selection of the wider body of NIHR-funded evidence on dementia can be found at <https://www.journalslibrary.nihr.ac.uk/collections/dementia/>

Providing great care requires the right conditions. While this is not unique to caring for people living with frailty, their vulnerability means that the environment has a significant impact on their ability to cope with the challenges of hospitalisation. This includes having the right staff, sensitive organisational policies, culture, staff education and development together with person-centred, relational care. We report studies that have explored how to ensure staff have the skills and the resilience to promote and maintain person-centred care. We also look at the impact of culture on patient experience.

FRAILITY IS ASSOCIATED WITH FIVE SYNDROMES

People living with frailty commonly present with symptoms of at least one of five major syndromes:

- » Delirium (acute confusion, sudden worsening of confusion in someone with known dementia/memory loss)
- » Falls (collapse, legs gave way, found on floor)
- » Immobility (sudden change, 'off their legs')
- » Continence problems (new onset of worsening of urinary or faecal incontinence)
- » Medicines management challenges (including side effects and drug interactions)

Although it is possible to have any of the syndromes without experiencing frailty, observation of one of these should raise suspicion that the individual is living with frailty and trigger a full assessment.

STRUCTURE OF THE REPORT

The review follows a chronological decision pathway that covers best practice. This is divided into four sections:

CHAPTER 1 APPROACHING HOSPITAL

starting with identification of frailty before presentation at acute settings, assessment of frailty, progressing through care without inpatient admission, decision to admit, and alternatives to admission.

CHAPTER 2 DURING HOSPITAL STAY

exploring how current and changing needs are assessed, managing frailty alongside treatment for other conditions, and avoiding harms.

CHAPTER 3 LEAVING HOSPITAL

presenting the evidence on early discharge schemes, planning for quality discharge, and ensuring continuity of care.

CHAPTER 4 CARING ENVIRONMENTS

considering the context in which inpatient diagnosis and treatment is delivered



READ MORE

There are many people and organisations working on this challenge.

The Older People's Commissioner for Wales is an independent voice and champion for older people across Wales, and 1000 Lives Improvement Falls Prevention program for Older People supports NHS Wales.

<http://www.olderpeoplewales.com/en/Home.aspx>

HSJ Commission on Hospital Care for Frail Older People (November 2014)

<https://www.hsj.co.uk/download?ac=1292263>

The Acute Frailty Network and is a multi-professional initiative that seeks to optimise secondary care of frail older people in England. <https://www.acutefrailtynetwork.org.uk/>

The Royal College of Physicians partnered three NHS organisations across England and Wales with the specific aim of improving the care of frail older patients as part of its Future Hospital programme.

www.rcplondon.ac.uk/projects/future-hospital-programme

The British Geriatrics Society led a multi organisation that produced the Quality Care for Older People with Urgent and Emergency care Needs Silver Book which provides detailed advice on care for older people over the first 24 hours of an urgent care episode. http://www.bgs.org.uk/campaigns/silverb/silver_book_complete.pdf

National Voices, Age UK and UCL Partners produced I'm still me- a narrative for co-ordinated support for older people <https://www.nationalvoices.org.uk/publications/our-publications/im-still-me>

Skills for Health, NHS England, and Health education England are developing a core capabilities framework to support development of the workforce caring for older people living with frailty

<http://www.skillsforhealth.org.uk/services/item/607-frailty-core-capabilities-framework>

APPROACHING HOSPITAL

Key facts

People over 85 account for 25% of total bed days in hospital³.

After a hospital admission, 12% of people over 70 experienced a reduction in their ability to undertake activities of daily living between admission and discharge⁴.

Older people who saw a deterioration in their balance and mobility in the first 48 hours of hospital admission had a 17-fold increase in risk of death within fourteen days⁵.

Older people enter pathways for frailty at different levels and different times. Although not all people with long-term conditions are living with frailty, NICE guidelines on multi-morbidity (NG56)⁶ recommend that healthcare practitioners should consider assessing people with two or more long-term conditions for frailty. Some people living with frailty are already known to primary care and it is important

that this information is shared with hospital services before the person comes to hospital. Other people who have been living with frailty arrive at hospital without having had contact with health and social care services (or without those services having recognised their frailty). Still others arrive at hospital with something that challenges their resilience and reveals their frailty for the first time.

Sharing Assessment Data

The National Audit Office found that only a quarter of hospitals said that they had sufficient access to primary and social care information. This sometimes meant emergency department staff were not able to make a full assessment and therefore were more likely to admit an older patient⁷.

A new NHS England contract (October 2017) requires all primary care practices in England to identify people who are 65 years or older and who are living with moderate and severe frailty. The GP frailty assessment will form part of the enhanced summary care record and could be available to hospitals where patients have given their consent to sharing. This could go some way to communicating the presence of frailty; however all hospital staff need to be constantly alert to the possibility of frailty for older people.



The number of frail people accessing emergency care is increasing rapidly. Wherever possible we aim to return to the place they want to be – home. The more information we have regarding their health and social status the more likely it is that we will make the right decision for the individual. This will be as important as developing increasing expertise in geriatric emergency medicine.

Prof Matthew Cooke, Professor Clinical Systems Design, Warwick Medical School and former Department of Health National Clinical Director for Urgent and Emergency Care

ASSESSING FRAILITY

Frailty is complex and hard to define. This makes it difficult to categorise but there are assessment tools which can highlight people for whom a more detailed assessment is required. There are two principal models of frailty which underpin much of our current understanding of the condition. The first is known as the 'phenotype model'. This focuses on the physical characteristics of the condition, such as 'slowing down', weakness and fatigue. The second is known as the cumulative deficit model and considers frailty to be the result of a lifetime accumulation of a number of physiological, medical and functional deficits. A number of validated tools for the identification and measurement of frailty have been developed. Tools based on the cumulative deficit model usually result in a frailty index⁸.

Both these approaches are underpinned by considerable international research. The phenotype model is most often used in research and practice aimed at preventing, reversing or slowing the progression of ageing processes. The cumulative deficit model has proved easier to use in routine care by clinicians whose interventions tend to target the functional deficits that make up the frailty state.

PLANNING SERVICES FOR THOSE LIVING WITH FRAILITY

Knowledge of the prevalence of frailty can help commissioners and service providers consider how services are delivered within a locality, including hospital care. A number of studies have demonstrated the unmet needs of people and justified the increasing focus on frailty. [Study 1](#) used routine data and interviews to look at unplanned hospital admission rates for people aged 85 years in six localities and saw marked differences. Between 2007/08 and 2009/10, admission rates for people aged 85 or older rose by 5.5% in some sites and fell in other sites. The most striking difference between improving and deteriorating sites was not the presence or absence of specific services, but the extent to which integration within and between types of service had been achieved. There were also overwhelming differences in leadership, culture and strategic development at the system level. [Study 2](#) used qualitative methods to explore older people's perceptions about hospital admissions. Contrary to popular opinion, only 9% of older people thought they could have been cared for elsewhere (and even these older people still seemed very unwell at the time of their admission). In the view of participating GPs and hospital doctors, none of the admissions in the study could have been prevented. Rather than taking up hospital beds unnecessarily (as often portrayed in the media), a number of older people delayed seeking help for as long as possible, and seemed determined to do everything they could to stay out of hospital and avoid being a 'burden' on scarce NHS resources.

PRE-HOSPITAL NEEDS ASSESSMENT

Study 3 developed and validated an electronic frailty index (eFI) to grade the severity of frailty using data derived from existing electronic GP health care records of 931,541 patients. The researchers suggest it can be used at a local level to identify the most vulnerable patients for targeted care planning both in primary care and in secondary care. The eFI is now being used by many practices to support the new NHS England contractual requirement for GP surgeries to identify people who are 65 years or older and living with moderate and severe frailty. This assessment has the potential to be shared with hospitals to alert them to the most vulnerable patients.

Ageing Well in Wales

A programme led by the Older People's Commissioner

The programme, a five-year collaborative partnership between Local Government, the NHS in Wales, Public Health, the Third Sector, Welsh Government and other key partners, aims to ensure that, as the number of older people in Wales continues to grow, public services across Wales can meet people's needs, while also challenging the incorrect assumption that frailty and dependency are an inevitable outcome of growing older.

www.ageingwellinwales.com/en/home



AT HOSPITAL ASSESSMENT

Many older people living with frailty arrive at hospital with unclear needs as they often present in unanticipated or non-specific ways. [Study 4](#) explored the assessment and decision processes used by staff in emergency departments when older people presented with one or more of the syndromes associated with frailty (see page 10 on the five frailty syndromes). Because of the complex nature of the patients' needs and individual presentations, staff found that it can often take more than four hours to fully assess a person living with frailty. In order to conduct thorough assessments without the pressure of the access performance targets in NHS emergency departments, hospitals were developing clinical assessment units. Whilst there is increasing evidence of the need for specialist, geriatrician care for people living with frailty, this appears to be most successful

when part of a wide multidisciplinary team (MDT). [Study 5](#) compared specialist geriatrician assessment (but not full MDT assessment) of people discharged from hospital acute assessment units with a control group. This geriatrician only intervention was found to have no effect on health or service outcomes, illustrating previous findings that MDT working is central to comprehensive geriatric assessment. And [Study 6](#) is exploring the impact of specialist compared with generalist medical staff for all patients in smaller hospitals, in order to explore whether older people with complex co-morbidities but without frailty can be managed as well by general physicians. This study will have implications for resource allocations within hospitals and may support the need to distinguish between complex needs and frailty when designing workforce models.

HOW COMPREHENSIVE GERIATRIC ASSESSMENT (CGA) CHANGED ELSPETH'S LIFE

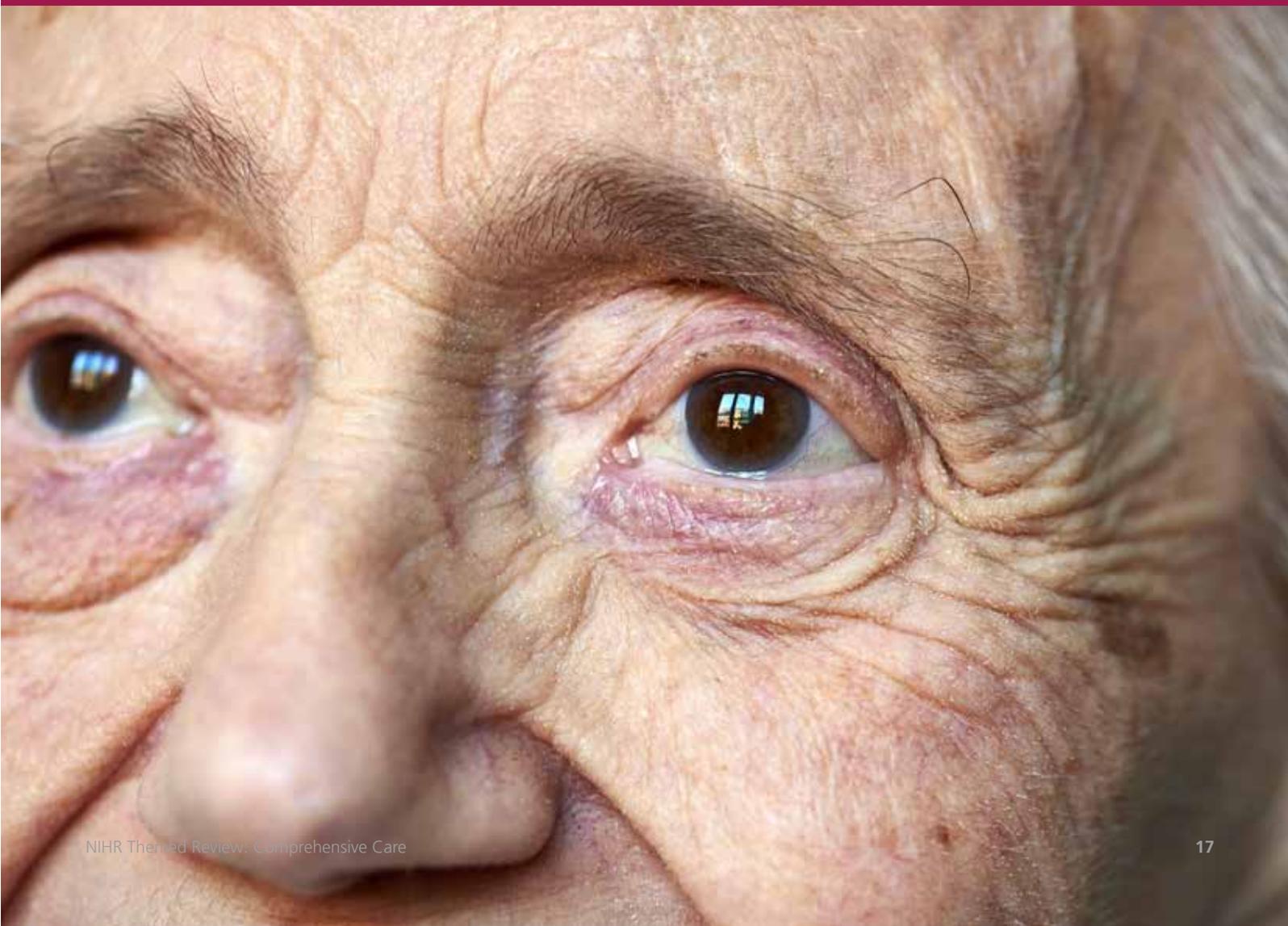
“Elspeth, aged 86, was admitted to the hospital four times in seven months. Significant postural hypotension was causing her to fall. It was medically treated but still causing significant problems before her last discharge and on this admission she had sustained lacerations and had been admitted for several days.

The CGA process started on the Acute Medical Unit with a comprehensive multidisciplinary assessment. The postural drop was making some members of the multidisciplinary team feel that Elspeth was not safe to return home. Elspeth was desperate to get home to her two dogs. The comprehensive team approach, which put at the centre Elspeth's wishes, planned her discharge home with the urgent response team, additional equipment and a follow up visit from a therapist.

Once settled at home, Elspeth was visited by an Advanced Clinical Practitioner from the hospital. The CGA process continued and identified that the planned endocrine appointment was causing Elspeth anxiety due to the need for a 24 hour urine collection requiring trips to the GP so home collection was arranged and the Advanced Clinical Practitioner checked that the planned falls monitor had been delivered. Elspeth was losing weight and nutritional supplements were discussed. Elspeth had been told to stop driving and was feeling isolated and lonely so the Advanced Clinical Practitioner made a request on her behalf to the AgeUK befriending service. Finally, the Advanced Clinical Practitioner contacted the community matron to discuss Elspeth's vulnerability and to request regular monitoring.

Elspeth had had no further falls or admissions 4 months later.”

Pippa Collins, Clinical Doctoral Research Fellow & Advanced Clinical Practitioner in Frailty University of Southampton & University Hospital Southampton



Comprehensive Geriatric Assessment

Many older people in secondary care settings will benefit from Comprehensive Geriatric Assessment (CGA), also known in some countries as Geriatric Evaluation and Management or GEM. It has been developed over the last 30 years in response to concerns that the needs of older people who required acute hospital level care are not being fully met. It provides a comprehensive, multi-disciplinary assessment of medical, functional, psychological and social capability to ensure that problems are identified, quantified and managed appropriately.

Research into how effective CGA is has looked at the number of people needed to treat (to be assessed) to demonstrate an advantage (NNT). This has demonstrated that for every 20 people assessed with CGA, one long-term care placement can be avoided. This is compared with NNT of 120 people who take an aspirin each day to prevent a single person having a stroke⁹. Despite the strong evidence for its use, the National Audit Office⁷ found in 2016 found that only a minority of hospitals (42%) were undertaking early geriatric assessments.

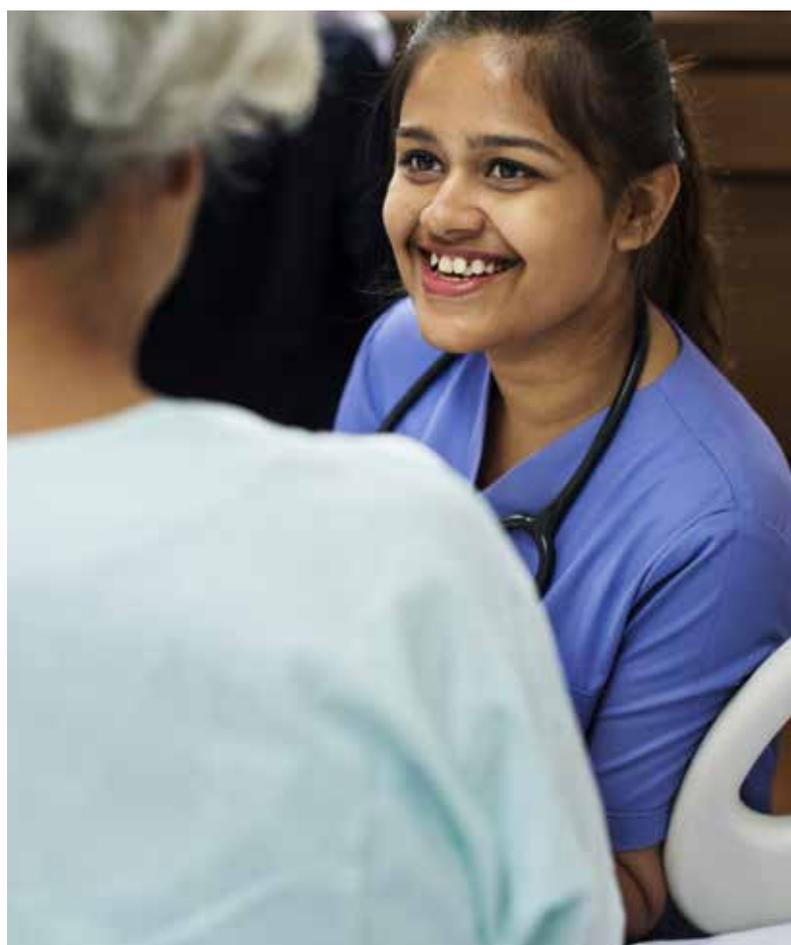
A Cochrane Review (Study 7) published in 2017 concluded that older people admitted as an emergency who had CGA and were admitted to a specialist ward were more likely to be living in their own homes three to 12 months later than those who received routine inpatient care on a general ward.

COMPREHENSIVE GERIATRIC ASSESSMENT

Comprehensive Geriatric Assessment (CGA) is a multi-dimensional, multi-disciplinary diagnostic and therapeutic process conducted to determine the medical, mental, functional and social needs of older people with frailty so that a co-ordinated, holistic and integrated plan for treatment and follow-up can be developed. CGA is widely accepted as the gold standard for assessing older people living with frailty. [Study 7](#) is a Cochrane review published in 2017. It found that older people living with frailty admitted to hospital as an emergency have an improved chance of living in their own home at up to a year after discharge if they receive specialist comprehensive geriatric assessment (CGA) and specialist inpatient care. This finding was reinforced in NICE guidelines on multi-morbidity⁶.

NIHR has commissioned a suite of studies to help target and implement CGA in UK hospitals. This included an updated evidence review on the benefits of CGA, using individual patient data, and a survey of different models of CGA ([Study 8](#)). A similar study ([Study 9](#)) is exploring how CGA is defined, organised and conducted on a hospital wide basis. The study aims to develop strategies and tools to help implementation of CGA across all areas of hospital care.

[Study 10](#) is investigating involving staff with mental health expertise as part of comprehensive geriatric assessment in Emergency Multidisciplinary Units (a partnership between primary and secondary care that



provides rapidly reactive care to frail complex older patients with acute medical illness). Study outcomes will include hospital admissions, the use of sedation, and subsequent care home placement.

DURING HOSPITAL STAY



THE ACUTE FRAILTY NETWORK

The Acute Frailty Network (AFN) supports hospitals to reconfigure and redesign services for older people living with frailty in urgent care settings. Each site participates in an improvement collaborative for 12 months, focusing on care in the first 72 hours and early discharge supported by the wider health and social care system. More details are available at: <https://www.acutefrailtynetwork.org.uk/>

FRAILTY SYNDROMES

Older people living with frailty are admitted to hospitals for many reasons. While they follow the pathways appropriate to their reason for admission, they have additional needs related to the frailty syndromes which can deplete their resilience and ability to perform activities of daily living. These syndromes may be the reason for admission or they may be triggered by, or exacerbated by, admission to hospital. Older people living with frailty are at high risk of harms related to these syndromes and their increased vulnerability means that they need person-centred care that considers all their needs and not just their primary diagnosis.

NICE guidelines on frailty syndromes

Falls in older people: assessing risk and prevention

Clinical guideline [CG161] June 2013 <https://www.nice.org.uk/guidance/cg161>

Delirium: prevention, diagnosis and management

Clinical guideline [CG103] July 2010 <https://www.nice.org.uk/guidance/cg103>

Faecal incontinence in adults: management

Clinical guideline [CG49] June 2007 <https://www.nice.org.uk/guidance/cg49>

Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes

Clinical guideline [NG5] March 2015 <https://www.nice.org.uk/guidance/ng5>



While older people living with frailty can experience altered cognitive states, it is important to distinguish between delirium (one of the syndromes associated with frailty), dementia, and cognitive impairment from other causes. In practice, dementia and cognitive impairment from other causes may increase the risk of frailty and a person living with frailty is at increased risk of developing delirium.

DELIRIUM

Delirium is characterised by acute and fluctuating inattention and alterations in level of consciousness. It is estimated that between 50 and 75% of delirium is undetected or misdiagnosed in secondary hospitals^{10,11}. The prevalence of delirium in people on medical wards in hospital is about 20% to 30%, and 10% to 50% of people having surgery develop delirium¹². Compared with people who do not develop delirium, people who do may need to stay longer in hospital and are at greater risk of hospital-acquired complications, such as falls and pressure sores. A small study from the USA found that people with delirium that had not resolved before they left hospital were nearly twice as likely to be in long-term residential care one year later than those in whom the delirium had resolved before discharge¹³. A study in South Wales¹⁴ found that delirium is

associated with high rates of institutionalisation and an increased risk of death up to 5 years after the index event. Prior to delirium, individuals seem to compensate for their vulnerability. The impact of delirium itself, directly or indirectly, may convert vulnerability into adverse outcome.

Delirium can be present before admission to hospitals and can develop after admission so it is important that hospital staff identify it correctly and promptly. [Study 11](#) found awareness of delirium was variable among ward staff in hospitals. Implementing a programme to target delirium risk factors was challenging, as busy ward staff focused on interventions related to the primary reason for admission rather than identifying concurrent problems. To address this finding, [Study 12](#) is testing a rapid screening tool for delirium (4ATs) that uses a combination of observation and a few short questions. Early indications suggest that this may be useful for busy staff in acute hospital settings. Details of the 4AT can be found here: <http://www.the4at.com/>

[Study 13](#) compared care of cognitively impaired older people (many of whom experienced delirium) on general wards with care on a specialist medical and a mental health ward in one university hospital.

Mental health needs were addressed more often on the medical and mental health unit than on standard care wards but most staff time was still taken up delivering physical care. The researchers concluded that care on the specialist ward was distinctly different to standard wards, but complex needs of the patients still provided challenges that impacted on good practice. Nonetheless, mental health expertise of staff can improve the quality of care for patients with cognitive impairments and this meant that despite the extra set up costs of the specialist unit, it was a cost-effective intervention. [Study 14](#) also compared a specialist unit for older people with dementia and delirium in a general hospital with routine care, recruiting 600 patients. The specialist unit improved the quality of experience of patients with delirium and dementia in general hospitals although there were no significant benefits in terms of mortality, mental or functional outcomes, or length of hospital stay. Technical economic assessment suggested this could be cost-effective despite lack of convincing health benefits over usual care, taking into account wider health and social care gains from better discharge planning, communication with families and care homes, referral to community services, and advance care planning. Larger trials are needed to replicate this study in order to understand the potential benefits of these sort of specialist units.

[Study 15](#) sought to understand staff experience of working with older people with cognitive impairment and also interviewed patients after discharge. The study revealed a core problem that admission to hospital is a disruption to people's normal routines. By introducing an 'about me' document to help to understand the individual's preferences, staff were able to practice person-centred care to reduce disruptions, recognising that behaviours can be a form of communicating distress. This empowered older people to regain control.

FALLS

Key facts

The most commonly reported incident to the National Reporting and Learning System by acute hospitals in 2015/16 was patient falls. NHS Improvement estimate that 77% of these falls occur in people aged over 65 years¹⁵.

NICE Guideline 161 provides specific guidance for preventing falls in older people during a hospital stay¹⁶.



A fall by an older person can be an indication of frailty and can also trigger referral to hospital services. [Study 16](#) is investigating the experience of people living with dementia who have experienced a fall and accessed health services, including use of emergency departments. [Study 17](#) is exploring a new, holistic care pathway for older people admitted with significant trauma injuries, supported by a training programme for staff. Patients will be offered daily ward-based assessments to monitor such things as whether they are well hydrated; eating and able to go to the toilet; are comfortable and that the risk of any infection is minimised. Results are due to be published by the end of 2017.

In research looking at preventing falls within ward settings, [Study 18](#) carried out a trial in one hospital to evaluate the effectiveness of bed and bedside chair pressure sensors linked to radio-pagers. There was no significant difference between the 'sensors' group and the control in relation to the time until the first bedside fall. Although the sensor technology can indicate movement, the researchers concluded that, on their own, they did not reduce inpatient bedside falls. It would appear that simply alerting staff as a person begins to mobilise is not sufficient to prevent a fall and there needs to be a more detailed plan to prevent the risk of falling.

CONTINENCE

Continence can be a significant issue for older people living with frailty, leading to significant distress and loss of dignity and more research in this area is clearly needed. Incontinence and urinary tract infections are challenges that can lead to an abnormally acute deterioration in people with severe frailty. NIHR has funded studies on continence within its wider portfolio. One example of ongoing research is [Study 19](#) which is exploring continence care for people with dementia in secondary care hospital settings, through detailed case studies in three acute hospitals.

IMMOBILITY

Older people can lose their mobility very quickly if they do not keep active. Healthy older adults show a 14% reduction in leg and hip muscle strength and a 12% reduction in aerobic capacity after ten days of bed rest¹⁷ and this is likely to be an issue for older people living with frailty. However, helping people to keep active in busy hospital settings is challenging. [Study 20](#) reviewed the evidence on using volunteers to help older people mobilise in hospital and concluded there was a lack of evidence; however quality improvement initiatives suggest it is feasible. [Study 21](#) is evaluating a programme in which volunteers are trained to encourage older people to walk or exercise in the chair for 15 minutes, twice a day.





MEDICINES MANAGEMENT

A number of studies have looked at the role of pharmacists in reconciling medicines on admission and discharge, including [Study 22](#) which was a Cochrane review of interventions to improve polypharmacy in older people. Although the quality of the research was low, there was some evidence that review in both in outpatient settings and wards had an impact on ensuring appropriate prescription, although it is uncertain what clinical significance this achieved. Similarly, [Study 23](#) reported a small medicines reconciliation trial in one hospital. Review

by a member of the pharmacy team within 24 hours of admission identified and resolved a significant number of discrepancies. These promising findings from a pilot trial will need testing in a larger study to examine the effect on health and service outcomes. [Study 24](#) is a large programme of work over five years, looking at the safety and continuity of medicines management for people with heart failure being discharged from hospital. Its findings are likely to be relevant to other older people, including those living with frailty.

Key facts

Medication error rates are high in older people living with frailty because of the multiple factors involved in both prescribing and administration and can lead to increased length of stay.⁹

NICE guidance suggests that regularly taking five or more drugs (polypharmacy) is associated with increased risks of unplanned hospital admission and mortality related to drug interactions and side effects. This risk rises as the number of medications increases. Taking 13 or more medicines is associated with increased risk of admission to a care home.⁶



AVOIDABLE HARMS

Pressure ulcers are painful and debilitating and can lead to extended stays in hospital. National data shows that people older than 70 are twice as likely to have pressure damage whilst in hospital. This is likely to be even higher for older people living with frailty, but there appears to have been little research specifically on the risks of pressure ulcer for this group.

Many hospitals use standardised pathways that assess the risk of developing pressure ulcers. These pathways recommend the use of mattress replacements for those most at risk. [Study 25](#) compared alternating pressure overlays (which are put over a normal mattress) with alternating pressure

mattresses (which replaced the normal mattress). This large trial study found no difference between the two in the proportions of patients developing a new pressure ulcer of grade 2 or worse. Overlays are about a quarter of the cost but more patients on the overlay requested a change owing to dissatisfaction than patients on the replacement mattress. Both of these devices have been seen as are more effective than 'low-tech' foam but there is little evidence to support this and [Study 26](#) is now carrying out a large randomised trial to investigate whether high specification foam mattresses (costing from £180-600) provide equal benefits to alternating pressure mattresses (from around £1000-5000) in preventing pressure ulcers.

Key facts

6.24% of hospital patients over 70 are reported as having a pressure ulcer, compared with 3.41% in all other age groups.¹⁸

NICE guidelines make a range of recommendations for the prevention of pressure ulcers¹⁹, but also state that there is a poor evidence base for prevention.

LEAVING HOSPITAL



Older people living with frailty have particular needs in the transition from hospital to home or to long-term residential or nursing home care. Effective and timely discharge arrangements are therefore critical. People experiencing one or more of the syndromes associated with frailty may need particular attention paid to discharge arrangements. Although the reason for admission may have resolved, the underlying state of vulnerability remains. [Study 27](#) explored how older people experience moving between services, and also going into and leaving hospital. Good communication helped patients make

sense of their situation. However, poor continuity in care and support arrangements was a frequently mentioned problem. [Study 28](#) concluded that staff need more support and training around assessing mental capacity prior to discharging people with cognitive impairment, particularly those with borderline mental capacity. [Study 29](#) was co-produced with public and patient co-researchers and found poor discharge planning caused considerable stress to some families of people with memory loss or dementia. They recommended a written mutually agreed discharge plan, a named coordinator of services, and improved home care services.

Medication management is one of a number of aspects of good discharge planning and [Study 30](#) was a small study that explored the use of a screening tool (STOPIT) to reduce inappropriate medicines for older patients discharged from acute hospitals to an independent rehabilitation unit. They found that 42% of patients needed to have at least one of the hospital-prescribed medicines stopped or adjusted.

Given the known risks of hospital stay, early discharge schemes seem to be a logical solution; however the evidence currently is equivocal. [Study 31](#) is a multi-centre trial comparing a specialist community service conducting comprehensive geriatric assessment (CGA) in an admission avoidance hospital at home setting, with a hospital admission based CGA. [Study 32](#) is a Cochrane review that set out to compare rehabilitation of people over 60 in residential and nursing care homes, with hospital and own home. The review was unable to reach any conclusions as no studies were available that compared the different types of environments. [Study 33](#) compared day hospital with home based rehabilitation schemes for older people and found no statistically significant differences in functional assessment between the two with similar costs for both settings. However, the authors cautioned that the original sample size was not achieved, so results were based on a smaller, less representative sample. [Study 34](#) also examined the effectiveness of medical day hospitals for older people and cautioned that published studies provided low quality evidence and further, more high quality trials are needed comparing different services and associated costs. Conversely, [Study 35](#) systematically reviewed alternatives to acute hospital admission for older people with acute illness or exacerbation of chronic disease and found that, with the exception of stroke, hospital at home was at least comparable to care in an acute hospital in terms of effectiveness and patient safety, although there was a lack of cost data and cost analysis for hospital at home interventions.

Most of the studies above looked at services for long-term conditions rather than at people with medium or severe frailty whose needs might be different. We know, for example, that the needs of stroke patients are best addressed in specialist units rather than at home (for further details about the evidence for stroke care, see our Themed Review, Roads to Recovery) and it is reasonable to assume that older people living with frailty (and those living with dementia) have their own particular needs that might make it inappropriate to generalise from studies looking at older people in general.

[Study 36](#) aims to improve the safety and experience of care for older patients as they transition from hospital to home by testing a patient-centred intervention that supports the involvement of older people and their families in decisions about their care. [Study 37](#) will evaluate a supported integrated discharge for patients aged 65 and over who have stayed in hospital for 14 days or more after an emergency admission in order to understand its impact on patients, carers, staff, and costs. [Study 38](#) is reviewing published evidence on how different methods of discharge planning for frail older people leaving hospital impact on health status, readmissions, length of hospital stay, and mortality. It will aim to identify the most beneficial discharge interventions together with areas where more research is needed.

TRANSITIONING TO END OF LIFE CARE

NIHR has commissioned important research on end of life care, from large studies on place of death to particular projects on caring for people with dementia dying in care homes. Details of these research projects can be found in the NIHR Themed Review, Better Endings.

Given the high level of vulnerability to adverse outcomes associated with frailty, end of life care is absolutely central to good frailty care. The transition between older people living with frailty and advanced disease, and those actively at the end of life is not always clear. [Study 39](#) used a mixed methods approach to investigate the transition to palliative care for older people in two acute hospitals. The researchers found that medical staff and nursing staff assessments had poor correlation with the Gold Standards Framework (GSF) and a case note review of 514 older people identified that a third of patients (185) met GSF criteria for palliative care need. Of those who met the criteria, only 33.0% (61) showed evidence of transition to a palliative care approach. This was measured by whether they met one or more indicators such as having a do not resuscitate order; referral to specialist palliative care; prescription of long-term opiates/syringe driver; or having a documented advance care plan.

[Study 40](#) also looked at transitions between care settings of people in their last year of life and found that a disjointed system was experienced by many, with reliance on carers and family members to fill the gaps between services.

CARING ENVIRONMENTS



Many studies examine interventions for specific symptoms; however there is increasing evidence that the manner in which care is delivered is as important as the clinical intervention itself. This includes the

actions of individual members of staff and also the culture of the ward and environment. Whilst this is not unique to older people living with frailty, their high level of vulnerability makes it especially important for this group.



The environment of care experienced by older people can have health benefits and be life enhancing. The therapeutic value extends beyond the material environment to both culture and individual interactions. The research highlighted in this review will help hospitals to consider how they can provide this environment in busy ward settings.

Dawne Garrett, Professional Lead - Older People and Dementia Care Royal College of Nursing



ACTIVITIES OF DAILY LIVING

Older people living with frailty need additional time and attention to ensure their dignity and comfort is maintained. Ensuring that hospital staff understand and are able to meet their different needs requires consideration with specific development and support.

The complexity of living with frailty can make activities of daily living within hospitals challenging. This includes good nutrition and hydration. While NIHR has not commissioned studies on this specifically related to frailty, studies with older people in general may inform practice in the absence of specific findings. [Study 41](#) tested the hospital use of a simple, brief appetite questionnaire, the Simplified Nutritional Appetite Questionnaire (SNAQ), which has been widely used in community settings. 42% of participants had a low SNAQ score indicating poor appetite. A low SNAQ score was associated with an increased risk of hospital acquired infection and with risk of death within six months. SNAQ is a simple and brief questionnaire to administer in both the hospital, thus it has an advantage over the Malnutrition Universal Screening Tool (MUST) which relies on height and weight (difficult in older people), weight loss (subject to recall bias and calculation error), and an acute disease. However as the study took place in a single hospital, further research is needed to explore the potential of SNAQ for use more widely.

[Study 42](#) assessed the feasibility of using trained volunteers as mealtime assistants for older people in hospitals. Fifty-nine potential volunteers were identified and 38 attended a training session, of whom 29 delivered mealtime assistance, including feeding, to 3911 ward patients during the year (mean duration of assistance 5.5 months) Focus groups with volunteers, patients, and ward staff showed the scheme was valued.

CULTURE AND CONTEXT

Older people and their families say that as well as good clinical care, they want acute hospital staff to meet three fundamental needs:

Maintaining identity: 'see who I am';

Creating community: 'connect with me';

Sharing decision making: 'involve me'.²¹

These key messages highlight the importance of the relationships between older people and their relatives with health care staff, however transient they may be. Despite the best intentions of staff, providing relationship based care within the busy, fast-paced environment of secondary care settings is challenging. A large programme ([Study 43](#)) found that hospital environments are not always friendly to older people and the authors concluded that secondary care design is mismatched to the needs of a large proportion of those who use it.



Trevor John Manners, Kate Sartain's father

IMPACT OF WARD CLIMATE

"I was with my father when he fell. We were almost at the date for his consultation with a psychiatrist which we knew would confirm his dementia and now I was faced with 999 and hospital! I was anxious. So began three weeks of hospital care that we could never have imagined. There was space for patients to move freely, an activities room, places to eat together, mental health nurses embraced within the ward team, places to sit more comfortably and a large sign displaying the day and the weather. Dad was a person as well as a patient and we were carers not just visitors and part of the team. A ward where we all knew end of life was near but where the staff's confidence in their own competence in delivering care to frail demented aged people was wonderful to witness. They were able to smile and so were we."

Kate Sartain, Nottingham

Royal College of Physicians Future Hospital programme

The Future Hospital Programme, developed from the Future Hospital Commission, aims to implement the vision of improving care for medical patients by bringing medical specialist care closer to the patient wherever they are, in hospital or in the community.

The work is underpinned by the 11 principles of patient care around which future healthcare services should be designed:

- » fundamental standards of care must always be met
- » patient experience is valued as much as clinical effectiveness
- » responsibility for each patient's care is clear and communicated – patients have effective and timely access to care
- » patients do not move wards unless this is necessary for their clinical care
- » robust arrangements for the transfer of care are in place
- » good communication with and about patients is the norm
- » care is designed to facilitate self-care and health promotion
- » services are tailored to meet the needs of individual patients, including vulnerable patients
- » all patients have a care plan that reflects their individual clinical support needs
- » staff are supported to deliver safe compassionate care and are committed to improving quality.

www.rcplondon.ac.uk/projects/future-hospital-programme

One way to address complex needs has been to provide more specialist staff. [Study 44](#) is a large trial to assess a new way of providing integrated and proactive care for all people with dementia, confusion, depression or anxiety in addition to a physical health need admitted to acute hospitals. [Study 45](#) reviewed the evidence for specialist dementia nurses and suggested that although there is a lack of evidence for the effectiveness of these roles, there are a number of areas where a nurse specialist role could make a contribution.

Others have focused on the culture of the care delivery setting and how this influences the behaviours of healthcare practitioners. [Study 46](#) found that meeting the complex health needs of older people within a target driven culture is challenging and often leads to delivery of 'the metrics rather than the meaning of care'. Findings from the survey confirmed the theorised link between climate for care (staff experiences of their work environment) and quality of care as reported by patients and carers. In [Study 47](#), researchers used observation on wards together with interviewing patients, carers and staff in four hospitals in England and concluded that strong leadership, being patient-centred and good communication are important in delivering good hospital care for older people.

[Study 48](#) is examining a workplace educational programme that enhances team capacity to provide compassionate care. The programme comprises of both leadership and team practices, including reflective learning, mutual support, role modelling, and staff huddles. Researchers found that ward staff were keen to participate in the programme and were able to implement many of the planned activities. Nonetheless, factors outside of the direct influence of the ward teams mediated the impact and sustainability of the intervention. These factors included an organisational culture focused on tasks and targets that constrained opportunities for staff mutual support and learning. The significance of the organisational factors on providing person centred care has also been highlighted in [Study 49](#), which evaluated a programme in five NHS trusts to improve person-centred care for people with dementia who are admitted to acute hospital wards. Early results show that three of ten wards did not attain the Royal College of Nursing staff/patient ratio for safe working on older people's wards (1:3.5); and most did not meet the recommended ratio of registered nurse to health care assistant of 65:35 or above, notwithstanding the level of medical acuity, complexity of patient need and prevalence and severity of cognitive impairment. The picture was

bleaker than this suggests: on several wards, staff complement was only maintained through use of bank and agency staff with consequences for staff morale, sustainability of a coherent care culture and availability of 'headroom' to engage in service improvement.

RELATIONAL AND PERSON-CENTRED CARE

Relationship-centred care

Whilst culture and context are important, the nature of individual interactions between older people living with frailty and healthcare staff are also key to good patient experience. Relationship-centred care focuses on the relationships between users, carers and providers needed to deliver person-centred care.

Study 50 found that only a third of NHS trusts provide training to healthcare assistants on developing good relationships. The researchers went on to demonstrate that brief, value-based training for support staff was well received and thought to be practical, although it was not evaluated for cost and clinical effectiveness. **Study 51** aims to

develop and test a training intervention to improve how healthcare professionals in acute hospitals communicate with patients with dementia. **Study 52** used in-depth observation by researchers working as health care assistants on hospital wards to gain insights into the invisible aspects of relationships. They concluded that as well as providing physical care for people with dementia, healthcare assistants also managed the emotional climate on the ward, stimulating the environment when it has become dull, and calming things down when stress levels rise. This aspect of care environments may have implications for older people with frailty as well and warrants further consideration.

Person-centred care

Study 53 is using ethnographic methods (where researchers working alongside staff) to observe how nursing staff and healthcare assistants respond to people living with dementia who refuse food, drink and medicines and how systems can be structured to support care delivery and improve experience and treatment effectiveness.

Research on compassion and culture in hospitals following the Francis report

NIHR responded almost immediately when the Public Inquiry into Mid Staffordshire was published in February 2013 highlighting failures in basic care for older people on the wards. See here for details

<http://webarchive.nationalarchives.gov.uk/20150407084003/http://www.midstaffspublicinquiry.com/>

Studies commissioned and not already mentioned in this review include:

Intentional rounding in hospital wards: What works, for whom and in what circumstances? Professor Ruth Harris, King's College London <https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/130787/#/>

Intending rounding is a system where nurses make regular (intentional) rounds to check the patients' comfort and wellbeing rather than just take observations of vital signs.

Information Systems: Monitoring and Managing from Ward to Board Chief Investigator: Professor Justin Keen, University of Leeds <https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/130768/#/>

A Longitudinal National Evaluation of Schwartz Centre Rounds®: an intervention to enhance compassion in relationships between staff and patients through providing support for staff and promoting their wellbeing Chief Investigator: Professor Jill Maben King's College London <https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/130749/#/>

Schwartz Rounds are a group reflective practice forum, which provide an opportunity for staff from all disciplines to reflect on the emotional aspects of their work.

An evaluation of a real-time survey for improving patients' experiences of the relational aspects of care Chief Investigator: Mr Chris Graham, Picker Institute Europe: www.journalslibrary.nihr.ac.uk/programmes/hsdr/130739/#/

CONCLUSION

Frailty is a condition that leaves older people vulnerable to rapid decline following events and illnesses that may be relatively minor for other people. It is important to recognise and support their resilience so that they can live well with frailty and to make sure that the well-intended actions of hospitals do not undermine that resilience. There are a number of tools, such as the Frailty Index, that can help hospital staff to identify the severity of needs and help to provide targeted support. There is increasing understanding that early recognition is important and there is good evidence that the Comprehensive Geriatric Assessment (CGA) is a reliable way of diagnosing and then meeting the needs of older people with input from different staff. This review should help make the case for hospitals to put in place processes and resources to flag older people with frailty and conduct comprehensive assessments on admission.

Identifying people living with frailty and assessing their needs is a critical step, but we need to better understand what to do once we have recognised frailty. Much of the current research focuses on admission avoidance, reducing length of stay and early discharge. There is less on how to care for older people living with frailty for whom acute hospital admission is entirely necessary and on the interventions that build resilience and prevent hospitalisation itself from triggering a dramatic deterioration.

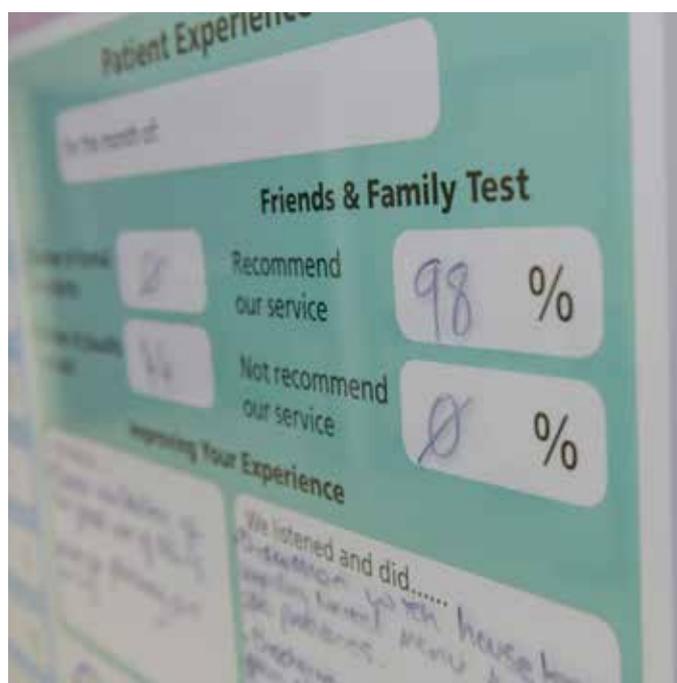
This review highlights some interesting work on how to meet these needs and provides pointers to where more research is needed. We need to consider whether research undertaken with older people in general – or with older people with specific diagnoses such as dementia – can be generalised to older people living with frailty. And we need to consider the extent to which we need to differentiate between frailty and long-term conditions.

More needs to be understood about ward-based management of syndromes related to frailty, such as delirium and falls, and on how we help people with frailty to maintain activities of daily living when their routines are disrupted by admission to hospital. We

also do not know enough about the needs of certain older people living with frailty, such as those from ethnic minority groups.

While this review shows some promising evaluations of workplace training and interventions, more research is needed on the effectiveness and cost-effectiveness of different models of delivering care, including specialist frailty assessment units and frailty inpatient wards. A number of studies have shown that the implementation of new models is constrained by the skills and the numbers of the workforce and one of the gaps to be filled by future research is understanding the workforce issues around caring for people living with frailty.

The NIHR is currently calling for new research across its programmes on older people with complex needs, including work on frailty (<https://www.nihr.ac.uk/news/nihr-theme-2017-complex-health-and-care-needs-in-older-people/6467>). This review has highlighted promising work in this area and identified some gaps in what we know about how best to care for these vulnerable people. We hope that by focussing on the secondary care of older people living with frailty, there will be more high quality research into this high priority area.



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STUDY SUMMARIES AND REFERENCES

REFERENCES

- 1 Age, U.K., British Geriatrics Society (2015) Frailty: Language and Perceptions—A report prepared by BritainThinks on behalf of Age UK and the British Geriatrics Society <https://www.nursingtimes.net/Journals/2015/07/23/o/e/e/Age-UK---BGS---Frailty-Final-Report.pdf>
- 2 NHS England (2016). Older People living with frailty. <https://www.england.nhs.uk/ourwork/lrc-op-eolc/older-people/frailty/>
- 3 NHS England (2013). Bed availability and occupancy. <https://www.england.nhs.uk/statistics/statistical-work-areas/bed-availability-and-occupancy/>
- 4 Covinsky, K. Loss of independence in activities of daily living in older adults hospitalised with medical illnesses *Journal of the American Geriatric Society* 20013;51(4):451-458. DOI: 10.1046/j.1532-5415.2003.51152.x
- 5 Hubbard RE, Eeles EM, Rockwood MR, Fallah N, Ross E, Mitnitski A, Rockwood K. Assessing balance and mobility to track illness and recovery in older inpatients. *Journal of General Internal Medicine* 2011;26(12):1471-1478. DOI: 10.1007/s11606-011-1821-7
- 6 NICE Guideline NG56 (2016). Multimorbidity: clinical assessment and management. <https://www.nice.org.uk/guidance/ng56>
- 7 National Audit office (2016). Discharging older patients from hospital. <https://www.nao.org.uk/report/discharging-older-patients-from-hospital/>
- 8 Clegg A, Young J, Iliffe S, Rikkert MO, Rockwood K. Frailty in elderly people. *The Lancet* 2013;381(9868):752-762. DOI: [http://dx.doi.org/10.1016/S0140-6736\(12\)62167-9](http://dx.doi.org/10.1016/S0140-6736(12)62167-9)
- 9 NHS England (2014). Safe, compassionate care for frail older people using an integrated care pathway. <https://www.england.nhs.uk/wp-content/uploads/2014/02/safe-comp-care.pdf>
- 10 Collins N, Blanchard MR, Tookman A, Sampson EL. Detection of delirium in the acute hospital. *Age and Ageing* 2009;39(1):131-135. DOI: 10.1093/ageing/afp201
- 11 Kean J, Ryan K. Delirium detection in clinical practice and research: critique of current tools and suggestions for future development. *Journal of Psychosomatic Research* 2008;65(3):255-259. DOI: 10.1016/j.jpsychores.2008.05.024
- 12 NICE guideline CG103 (2010). Delirium: prevention, diagnosis and management <https://www.nice.org.uk/guidance/cg103>
- 13 Cole MG, Ciampi A, Belzile E, et al. Persistent delirium in older hospital patients: a systematic review of frequency and prognosis. *Age and Ageing* 2009;38:19–26. DOI: 10.1093/ageing/afn253
- 14 Eeles EM, Hubbard RE, White SV, O'Mahony MS, Savva GM, Bayer AJ. Hospital use, institutionalisation and mortality associated with delirium. *Age and Ageing* 2010;39(4):470-475. DOI: 10.1093/ageing/afq052
- 15 NHSI (2017). The incidence and costs of inpatient falls in hospitals. London; NHS Improvement. <https://improvement.nhs.uk/resources/incidence-and-costs-inpatient-falls-hospitals/>
- 16 NICE Guideline CG161 (2013). Falls in older people: assessing risk and prevention. <https://www.nice.org.uk/guidance/cg161>
17. Kortebein P, Symons TB, Ferrando A, Paddon-Jones D, Ronsen O, Protas E, et al. Functional impact of 10 days of bed rest in healthy older adults. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences* 2008;3(10):1076-1081. <http://apps.einstein.br/revista/arquivos/PDF/1528-EC%20v7n3p140.pdf>
- 18 NICE guideline NG5 (2015). Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes. <https://www.nice.org.uk/guidance/ng5>
- 19 NICE Guideline CG179, (2014). Pressure ulcers: prevention and management. www.nice.org.uk/guidance/cg179/chapter/Patient-centred-care
- 20 Nixon J, Nelson EA, Cranny G, Iglesias C, Hawkins K, Cullum

N, et al on behalf of the Pressure Trial Group. Pressure Trial: Pressure RELieving Support SURfaces: a Randomised Evaluation. *Health Technology Assessment* 2006;10(22). <https://doi.org/10.3310/hta10220>

21 Bridges J, Flatley M, Meyer J. Older people's and relatives' experiences in acute care settings: Systematic review and synthesis of qualitative studies. *International Journal of Nursing Studies* 2010;47(1):89-107. DOI: 10.1016/j.ijnurstu.2009.09.009.

STUDY SUMMARIES

STUDY 1

Published 2015, Wilson

Establishing and implementing best practice to reduce unplanned admissions in those aged 85 years and over through system change

This study investigated system characteristics associated with unplanned hospital admission rates in those aged 85+. Six study sites were selected based on data from English primary care trusts, three of which had 'improving' rates and three had 'deteriorating' rates. The study looked at the partnerships between the linked Primary Care trust/Clinical Commissioning Group, the community health services and adult social care providers. Routinely collected hospital and patient data was collated, and 142 interviews were conducted. Between 2007/08 and 2009/10, admission rates for people aged 85+ rose by 5.5% annually in deteriorating sites and fell by 1% annually in improving sites. Improving sites had a lower proportion of admissions and discharge on the same day, and lower readmission rates. The most striking difference between improving and deteriorating sites was not the presence or absence of specific services, but the extent to which integration within and between types of service had been achieved. There were also overwhelming differences in leadership, culture and strategic development at the system level.

[Health Service Delivery Research 2015. https://dx.doi.org/10.3310/hsdr03370](https://dx.doi.org/10.3310/hsdr03370)

STUDY 2

Published 2016, Glasby

Who knows best? Older people's contribution to understanding and preventing avoidable hospital admissions

This study examined the emergency hospital admission of older people, placing particular emphasis on the contribution of older people themselves and of frontline staff in better understanding and responding to the challenges of rising emergency admissions. Interviews were held with 104 older people or their families in three case study sites within 4-6 weeks of their emergency admission, and surveys were sent to these people's GPs and a hospital-based doctor (with a total of 45 responses). The study also reviewed the previous literature in the UK and beyond, interviewed 40 health and social care professionals and explored the stories of some of the older people who took part in focus groups with 22 local frontline practitioners.

Contrary to popular opinion, this study found that the older people who participated typically needed to be in hospital, with no real scope for alternatives (both in their own view and in the view of their GP and/or a hospital-based doctor). Indeed, several participants even delayed seeking help, perhaps through fear of being perceived as a burden on scarce NHS resources, and seemed to be doing all they could to stay away from hospital until they had no other choice. During the research, older people, their families and frontline staff contributed lessons from their personal experiences around how we could develop more preventative health and social care services in the longer-run (these are summarised in a national good practice guide sent to every

hospital, CCG and Director of Adult Social Services). However, the research did not find large numbers of older people in hospital beds when they did not need the services provided there. Even where improvements and/or preventative approaches were suggested, there were few easy answers and little that would suggest a simple service, a new approach or a clear cut innovation that could easily reduce current numbers of emergency admissions. Ultimately, the research concluded that debates about emergency admissions are inherently complex and multi-faceted – and that any discussion of potential solutions needs to be equally multi-faceted and draw on the lived experience of older people and the practice wisdom of frontline staff.

Key outputs include:

Good practice guide: <https://www.birmingham.ac.uk/Documents/college-social-sciences/social-policy/SPSW/2016/good-practice-guide.pdf>

A national good practice guide sent to every Hospital trust, CCG and Director of Adult Social Service. School of Social Policy 2016. <http://www.birmingham.ac.uk/Documents/college-social-sciences/social-policy/HSMC/publications/2016/who-knows-best.pdf>

A free training video hosted by the Social Care Institute for Excellence <https://www.youtube.com/watch?v=tCSzs1qj0OE>

STUDY 3

Published 2016, Young

Development of an electronic Frailty Index (eFI)

This study developed and validated an electronic frailty index (eFI) that can be used in primary care to grade severity of frailty. The theoretical basis for the development of the index is the 'cumulative deficit model of frailty'. The eFI therefore defines frailty on the basis of the accumulation of a range of deficits, which include clinical signs (e.g. tremor), symptoms (e.g. breathlessness), diseases (e.g. hypertension) and disabilities. To develop and validate the eFI, researchers obtained anonymised primary care electronic health record data from 931,541 patients aged 65-95. Through a series of coding the characteristics of frailty, it was found that 36 deficit constructs best represented the data set. Deficits include activity limitation, diabetes, heart failure, osteoporosis and sleep disturbance. The eFI score is a robust predictor of those who are at greater risk of adverse outcomes such as mortality and hospitalisation. The researchers concluded that the routine use of the eFI in primary care with health data that is already collected could enhance the care of older people with frailty. This in turn could lead to improvements in secondary care and specialist services. The eFI is used in over a third of GP practices nationally, covering more than 25 million patients.

Age and Ageing 2016. DOI: 10.1093/ageing/afw039

<https://academic.oup.com/ageing/article/45/3/353/1739750>
Development-and-validation-of-an-electronic

STUDY 4

Published 2016, Pinkney

How can frontline expertise and new models of care best contribute to safely reducing avoidable acute admissions?

This study used multiple case study design to investigate decision-making around emergency admissions. Four hospitals in South West England were selected and two groups of patients were selected including those over 60 with 'typical presentations' such as acute confusion, falls, incontinence, and decreased mobility. Data was obtained from documentary analyses and interviews. Overall, patients' experiences of emergency care were positive, with carers being the most vocal about limitations in nursing care. Decision-making by staff increased rapidly as the four hour target was drawing closer. Patient journey times were similar, but there was considerable variability in waiting times. The meaning of

'admission' varied across sites. Admission and discharge decision-making was influenced by a variety of factors including medical complexities, patient safety, and target pressures. Clinical decision units were often used so that the patient was 'off the clock' during tests or observations and could be used to safely reduce avoidable admissions. The researchers concluded that the case studies highlighted how staff have to manage emergency care when under pressure through 'ground-up' initiatives.

Health Service Delivery Research 2016.
<https://dx.doi.org/10.3310/hsdr04030>

STUDY 5

Published, 2013 Edmans

This study randomised 433 patients aged 70 or over who were discharged within 72 hours of attending an acute medical assessment unit and at risk of decline as indicated by a score of at least 2 on the Identification of Seniors At Risk tool to either assessment by specialist physicians in geriatric medicine or usual care. The primary outcome was the number of days spent at home (for those admitted from home) or days spent in the same care home (if admitted from a care home) in the 90 days after randomisation. Secondary outcomes were determined at 90 days and included mortality, institutionalisation, dependency, mental wellbeing, quality of life, and health and social care resource use. The two groups were well matched for baseline characteristics, and withdrawal rates were similar in both groups (5%). Mean days at home over 90 days' follow-up were 80.2 days in the control group and 79.7 in the intervention group. The 95% confidence interval for the difference in means was -4.6 to 3.6 days (P=0.31). No significant differences were found for any of the secondary outcomes. The authors concluded that this specialist geriatric medical intervention applied to an 'at risk' population of older people attending and being discharged from acute medical units had no effect on patients' outcomes or subsequent use of secondary care or long-term care.

<http://www.bmj.com/content/347/bmj.f5874>

STUDY 6

Ongoing- Due to publish 2018, Vaughan

Models of generalist and specialist care in smaller acute hospitals: An exploratory study

This programme of research will investigate the impact of specialist compared with generalist medical staff for all patients in smaller hospitals, in order to explore whether older people with complex co-morbidities (but without frailty) can be managed as well by general physicians. It will explore processes and models of care, their alignment with patient case-mix, their impact on staff, patients, costs, and patient and staff preferences and explore their strengths and weaknesses from patient, professional and service perspectives. The study will cover all patients who present to smaller hospitals. This study will have implications for resource allocations within hospitals and may support the need to distinguish between complex needs and frailty when designing workforce models. Smaller hospitals will be surveyed to understand the levels of generalist and specialist doctors. Fifteen hospitals will be selected for greater analysis to better understand the care process and patient needs. The researchers will then determine what proportion of patients would benefit from generalist or specialist care and assess the costs of different types of medical care.

<https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/1419502/#/summary-of-research>

STUDY 7

Published 2017, Ellis

Comprehensive geriatric assessment for older adults admitted to hospital

This review examined the effectiveness of comprehensive geriatric assessment (CGA) on admission to hospital for older adults (over 65 years) in comparison to routine or general medical acute care in hospital. CGA is a multidimensional, interdisciplinary process to assess the medical, functional and psychological capabilities of an older person with frailty to develop a co-ordinated care plan for treatment, rehabilitation and long-term follow-up. This review compared inpatient CGA to usual care on a general medical ward. Patients were generally admitted for acute care or inpatient rehabilitation after an acute admission. The authors included 29 trials, involving 13,766 participants. Studies were based in nine countries (two in the UK). Overall, CGA increased the likelihood that patients were alive and in their own homes at three to 12 months follow up. CGA decreased the likelihood that patients would be admitted to a nursing home at three to 12 months follow up. CGA resulted in little or no difference in cognitive function, dependence (for example needing help with everyday activities) or mortality at three to 12 months follow-up. Healthcare costs per patient in the CGA group were approximately £234 higher than in the usual care group. However, the authors caution that the evidence on cost-effectiveness is of low quality and so further research is required. Research also needs to identify the specific elements of CGA that are most beneficial.

Cochrane Database of Systematic Reviews 2017. DOI: 10.1002/14651858.CD006211.pub3

http://www.cochrane.org/CD006211/EPOC_comprehensive-geriatric-assessment-older-adults-admitted-hospital

STUDY 8

Ongoing- Due to publish 2017, Shepperd

How best to deliver Comprehensive Geriatric Assessment in a cost-effective way

This programme of research used a range of methods to assess the effectiveness, cost, and organisational features of CGA; and the experience of implementing and receiving healthcare that was organised along the lines of CGA in hospital and community settings.

<https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/12500301/#/>

STUDY 9

Ongoing- Due to publish 2017/18, Parker

Acute hospital care for frail older people

The aim of this study is to assess how Comprehensive Geriatric Care (CGA) is defined, organised and delivered in NHS hospitals. The researchers will look at who receives CGA and who benefits the most. A series of work streams will be undertaken to achieve these objectives, with patient and public involvement throughout. The work streams will include a literature review, a survey of current CGA provision, the evaluation of toolkits to disseminate best practice in CGA and the development strategies and tools to help the commissioning and delivery of CGA on a hospital wide basis.

<https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/12500302/#/>

STUDY 10

Ongoing- Due to publish 2017/2018, Lasserson

Effectiveness of emergency multidisciplinary units

The researchers will explore how clinical decisions are made in Abingdon Emergency Multidisciplinary Units (EMU). This is a

partnership between primary and secondary care that provides rapidly reactive care to frail complex older patients with acute medical illness. EMUs provide assessment and treatment for adults close to the patients' homes, and patients can be referred to EMUs by their GP, community nurse or ambulance paramedic. The units aim to provide a faster and more convenient alternative to admission to an acute hospital. This project will investigate if integrating mental health expertise into comprehensive geriatric assessment delivered in interface settings reduce medical admission, bed usage, sedation, carer stress and subsequent care home placement.

<https://www.clahrcprojects.co.uk/impact/projects/effectiveness-emergency-multidisciplinary-units>

STUDY 11

Published 2013, Young

An investigation of the Hospital Elder Life Program (HELP) system of care in NHS acute trusts to prevent delirium

The Hospital Elder Life Program (HELP), developed and evaluated in the USA, successfully reduces delirium for hospital patients. HELP is a system for a skilled interdisciplinary team assisted by trained volunteers to implement standardised protocols targeted at six delirium risk factors: orientation, therapeutic activities, mobilisation, optimising vision and hearing, hydration and sleep enhancement. The study investigated whether HELP could be successfully delivered and sustained in NHS hospitals by investigating current delirium prevention strategies. Researchers took a 'participatory action research approach' involving staff, volunteers and patient and carer representatives in three northern NHS trusts in England. Findings indicated that the understanding of delirium was variable among staff. Busy wards meant focus was mainly on diagnosis, clinical observations and treatment. Whilst staff welcomed volunteers to engage in delirium prevention, there were limited systems in place to enable this. Significant resources would be needed to implement HELP; the researchers therefore proposed a collaborative approach (Prevention of Delirium Programme) that would directly involve staff and volunteers working together in a holistic way.

BMC Health Services Research 2013. DOI: 10.1186/1472-6963-13-341

<https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-13-341>

STUDY 12

Ongoing- Protocol published 2017, MacLulich

Development and validation of the 4AT: a new rapid screening tool for delirium

This study is evaluating a new screening tool for delirium. The "4 As Test" (4AT) has four items: alertness, orientation (from the Abbreviated Mental Test), attention and an assessment of whether the onset of the confusion was acute. The researchers will refine the 4AT, surveying doctors and nurses working in setting where delirium is common. They will then interview staff and observe assessments in emergency departments (EDs), medical and geriatric admissions to wards to evaluate existing assessments. The researchers will then evaluate the 4AT against a standard measure (Confusion Assessment Method - CAM) in EDs and wards across sites in Edinburgh, Sheffield and Bradford. Nine hundred patients over 70 will be randomised to be screened either by the 4AT or CAM by a research nurse. Outcomes will be measured at 12 weeks. Results are expected in 2017/2018.

Protocol: BMJ Open (In Press).

<http://eprints.whiterose.ac.uk/114635/>

STUDY 13

Published 2014, Goldberg

In a general hospital are older people with cognitive impairment managed better in a specialist unit?

This study was part of a larger randomised controlled trial (RCT) (Study 14) and used structured non-participant observations of a random sub-sample of participants and the recording of field notes to compare care on a Medical and Mental Health Unit (MMHU). It was designed to provide high quality care exclusively to older patients with cognitive impairments and care on standard wards in one hospital in England. Ninety trial participants were randomly subsampled for observation using the Dementia Care Mapping tool. In addition, 60 of the 90 patients were randomly selected for further, qualitative analysis of the researcher's field notes (30 in the MMHU and 30 of standard care wards). Each of the selected patients were observed for a period of five hours. The field note data were analysed using the constant comparison method. Mental health needs were addressed more often on the MMHU than on standard care wards but most staff time was still taken up delivering physical care. The researchers concluded that care on the MMHU ward was distinctly different to standard wards, but complex needs of the patients still provided challenges that impacted on good practice. Nonetheless, mental health expertise of staff can improve the quality of care for patients with cognitive impairments.

<https://www.ncbi.nlm.nih.gov/pubmed/24613652>

STUDY 14

Published 2015, Gladman

Medical crises in older people

This programme of research explored the care of three different groups of older patients: patients discharged from acute medical units (AMUs), patients with dementia and delirium admitted to general hospitals, and care home residents. For the AMUs work stream, the researchers developed and evaluated the intervention 'Acute Medical Unit Comprehensive Geriatric Assessment Intervention Study' (AMIGOS). Fifty-one percent of patients (222/433) recruited to the AMIGOS study were vulnerable enough to be readmitted within 3 months, however the trial showed no clinical benefit of interface geriatricians over usual care and they were not cost-effective. In another work stream, the researchers undertook a 'Trial of an Elderly Acute care Medical and mental health unit' (TEAM). The TEAM study recruited 600 patients and found no significant benefits of the specialist unit over usual care in terms of mortality, institutionalisation, mental or functional outcomes, or length of hospital stay. However there were significant benefits in terms of patient experience and carer satisfaction with care. The care home work stream found that the organisation of health care for residents was variable, due to differences in types and sizes of care home and levels of staff training, which left many residents at risk of poor health care.

Programme Grants for Applied Research 2015.

<https://dx.doi.org/10.3310/pgfar03040>

Detailed findings can be found at www.nottingham.ac.uk/mcop

STUDY 15

Published 2012, Gladman

Better mental health care for older people in general hospitals

This study aimed to understand staff experiences and concerns around working with older patients with cognitive impairment. The researchers undertook 60 interviews with staff from 11 acute hospital wards exploring their confidence, competence and training. These interviews revealed that there was a lack of training to recognise and manage older patients with confusion. This was further impacted by an inflexible system that set unrealistic targets and reduced staff ability to provide appropriate

care. The researchers also conducted an observational study of patients with co-morbid cognitive impairment. Seventy-two hours of non-participant observation on 11 wards was conducted. Thirty-four patients with mental health problems were interviewed after discharge, as well as four co-patients without mental health problems. The interview and observation study exposed a core problem that admission to hospital of a confused older person was a disruption from normal routine for patients, carers and staff. Better patient outcomes were associated with a person-centred approach so the patient could re-gain control, which was further enabled by staff recognising the importance of the relationship between patient and their family carer. The researchers concluded that all staff groups caring for older patients require adequate training and support, focusing on issues such as recognition of cognitive impairment, promoting patient independence and valuing the patient-carer relationship.

Report NIHR Service Delivery and Organisation programme 2012. <https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/081809227/#/summary-of-research>

STUDY 16

Ongoing- Due to publish 2018, Allan

Is it possible to develop a complex intervention to improve the outcome of fall-related injuries in people with dementia? (DIFRID)

This study is investigating the care pathway of fall-related injuries for individuals with dementia. After conducting a literature review, the researchers will follow the cases of individuals with dementia who have fallen and accessed health services. Participants will be recruited from three settings: GP consultations, those who call an ambulance and those who attend the emergency department because of a fall-related injury. Sixty participants will keep a diary of service usage for three months and their medical records will be accessed. Researchers will conduct interviews with patients, carers and staff. The researchers will then use this information to design and pilot a care package to improve the outcome of fall-related injuries in people with dementia.

<https://www.journalslibrary.nihr.ac.uk/programmes/hta/137802>

STUDY 17

Ongoing- Due to publish 2017/18, Raven

HECTOR – Heartlands Elderly Care, Trauma & Ongoing Recovery Project. A service-level evaluation of the programme designed to improve outcomes for elderly patients sustaining trauma injuries

This study is an evaluation of a pilot care pathway for elderly patients (over 65) who have been admitted to hospital with significant trauma injuries. The researchers will assess whether the new pathway can reduce patient complications. Hospital staff will be invited to participate in a structured training programme about the current evidence base for best practice. The HECTOR course is underpinned by trauma care being patient-centred. A key concept of the pathway is the holistic approach to care. Patients will be offered daily ward-based assessments to monitor such things as whether they are well hydrated; eating and able to go to the toilet; are comfortable and that the risk of any infection is minimised. Data collection has finished and the final results are expected to be available by the end of this year.

<https://www.clahrcprojects.co.uk/impact/projects/hector-%E2%80%93-heartlands-elderly-care-trauma-ongoing-recovery-project-service-level>

STUDY 18

Published 2013, Sahota

The REFINE (REducing Falls in IN-patient Elderly) Study

This study evaluated the effectiveness of pressure sensors in reducing falls in older patients admitted to acute medical wards in a UK hospital. The use of bed and bedside chair pressure sensors

were compared to standard care in 1839 patients (mean age 84.6 years; 918 patients randomly assigned to the intervention and 921 to the control group). A five second or more absence of pressure on the sensor triggered an alert and a central receiver on each ward recorded all alerts. There were 85 bedside falls in the intervention group producing a fall rate of 8.71 per 1000 bed days compared to 83 bedside falls in the control group, with a fall rate of 9.84 per 1000 bed days. There was no significant difference between the groups in relation to time to first bedside fall. The mean cost per patient in the intervention group was £7199 compared with £6400 in the control group. The authors concluded that the results indicate that bed and bedside chair pressures as a single strategy do not reduce bedside falls in hospital or time to first bedside fall, and are not cost-effective.

Age and Ageing 2014. <https://doi.org/10.1093/ageing/aft155>

STUDY 19

Ongoing- Due to publish 2020/2021, Featherstone

Understanding how to facilitate continence for people with dementia in acute hospital settings: raising awareness and improving care

This study will explore continence care for people with dementia in acute hospital wards. A systematic review will be undertaken to identify successful strategies for the organisation and culture of continence care. The researchers will then carry out detailed case studies of six wards in three acute hospitals in England and Wales. Research methods will include observation and in-depth interviews with staff to discuss the challenges of caring for a large number of people with dementia as well as with patients and their families about their experiences. Results from this project will be used to develop new training and information for hospital staff and families.

<https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/1513667/#/>

STUDY 20

Published 2016, Roberts

The use of volunteers to help older people mobilise in hospital: a systematic review

This review looked at the evidence for the use of volunteers to mobilise older acute medical inpatients. Two scientific studies and three reports were identified, one of which had not yet completed. The researchers therefore concluded that there is a lack of scientific evidence for the use of volunteers to mobilise older medical inpatients. However, the quality improvement initiatives suggest that it is feasible to have volunteers in these roles and is thus an area in need of further investigation. The benefits of maintaining mobility of older medical patients is well-known, but competing demands on staff time reduces their ability to achieve this. Volunteers could therefore play a pivotal role in supporting mobility, so an evidence-base is now required.

Journal of Clinical Nursing 2016. DOI: 10.1111/jocn.13317
<http://onlinelibrary.wiley.com/doi/10.1111/jocn.13317/abstract>
<http://onlinelibrary.wiley.com/doi/10.1111/jocn.13317/abstract>

STUDY 21

Ongoing- Due to publish 2017/8, Roberts

The Southampton Mobility Volunteer Programme to Increase Physical Activity Levels of Older Inpatients: A Feasibility Study (SoMoVe)

This study is evaluating the feasibility and acceptability of using volunteers to increase physical activity of older people in hospital. The researchers will train volunteers to encourage older inpatients (aged 70 and older) to mobilise or perform chair-based exercises. Patients will be encouraged to walk or exercise with the volunteers twice a day for about 15 minutes per session. Alongside quantitative measures such as physical activity levels,

mood and quality of life, the researchers will conduct interviews with patients, volunteers and staff to explore the acceptability of the intervention. The results will be used to inform the design of a future randomised controlled trial.

<https://clahrc-wessex.nihr.ac.uk/theme/project/36>

STUDY 22

Published, 2014, Patterson

Interventions to improve the appropriate use of polypharmacy for older people

Polypharmacy refers to the use of multiple medicines to treat different conditions and is common in older people as they often live with multiple conditions. This review aimed to determine which interventions were effective in improving the appropriate use of polypharmacy and reducing medication-related problems in older people (aged 65 years and older). Twelve studies were included, and the interventions were complex, multi-faceted pharmaceutical approaches. Of the seven studies (1489 participants) conducted in hospital settings, three were conducted in hospital outpatient clinics. The interventions often involved pharmacists identifying, preventing and resolving medication-related problems, and promoting correct medication use. Interventions were delivered by healthcare professionals such as prescribers and pharmacists. The interventions resulted in a reduction in inappropriate medication usage. However, the authors caution that the quality of the evidence overall was low to very low. They concluded that the review provided limited evidence that interventions such as pharmaceutical care may be successful in ensuring older people receive the correct medicine, but there is uncertainty as to whether this led to clinical improvements.

Cochrane Database of Systematic Reviews 2014. DOI: 10.1002/14651858.CD008165.pub3

<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD008165.pub3/abstract>

STUDY 23

Published, 2017, Cadman

Medicines reconciliation at the interface: A pilot randomised controlled trial to determine the costs and effects of a pharmacy provided service

This pilot study evaluated the effectiveness of a pharmacist-delivered service for medicine reconciliation (MR). MR is defined as "the formal process in which healthcare professionals partner with patients to ensure accurate and complete medication information transfer at the interfaces of care". The researchers recruited 200 patients from five adult medical wards in one hospital over a nine month period and randomised them to receive the intervention or usual care. All adults over 18 were eligible for inclusion, admitted with at least one prescribed medicine. Participants' mean ages were 67 (intervention) and 65 (control). The intervention consisted of MR within 24 hours of administration to hospital and at discharge. Usual care may sometimes include MR. Ninety-nine percent of patients in the intervention received MR within 24 hours of admission, whilst 61% of control patients received MR at some point during admission. The intervention resolved 250 of the 255 unintentional discrepancies (UDs) identified at admission. Two UD were identified in the intervention group at discharge compared with 268 in the control group. The researchers concluded that MR is a beneficial process and should now be tested in a larger randomised trial.

BMJ Open 2017. DOI: 10.1136/bmjopen-2016-013647
<http://bmjopen.bmj.com/content/7/3/e013647>

STUDY 24

Ongoing- Due to publish 2022, Blenkinsopp

Improving the safety and continuity of medicines management at

care transitions (ISCOMAT)

This programme of research aims to develop and evaluate a complex intervention to manage medicines and reduce harm for heart failure patients from hospital discharge and into primary care. The researchers will map and evaluate the cardiology medicines management pathway from discharge to primary care, and assess patient and staff needs at care transitions. The intervention, called Medicines at Transitions Toolkit (MaTT) will be evidence-based and designed in conjunction with staff and patients. The researchers will recruit patients with heart failure from 42 acute NHS trusts to evaluate the MaTT intervention on medicine management and patient outcomes.

<http://www.brad.ac.uk/research/faculties/life-sciences/pharmacy/med-opti/iscomat/>

STUDY 25

Published 2006, Nixon

Randomised, controlled trial of alternating pressure mattresses compared with alternating pressure overlays for the prevention of pressure ulcers: PRESSURE (pressure relieving support surfaces) trial

1972 people admitted to hospital as acute or elective patients and at risk of developing a pressure ulcer were randomised to an alternating pressure mattress (n = 982) or an alternating pressure overlay (n = 990). No difference was found between alternating pressure mattresses and alternating pressure overlays in the proportion of people who develop a pressure ulcer; however more overlay patients requested change owing to dissatisfaction (23.3%) than mattress patients (18.9%).

BMJ 2006. <https://doi.org/10.1136/bmj.38849.478299.7C>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1479673/>

STUDY 26

Ongoing- Due to publish 2018, Nixon

Pressure RELieving Support SURfaces: a Randomised Evaluation 2 (PRESSURE 2)

This study is comparing two types of specialist mattress - high specification foam mattresses (HSFM) and alternating pressure mattresses (APM), an electrically powered air-filled mattress with sections which inflate and deflate in an alternating cycle. Although both mattresses are available for use with high risk patients in the NHS, there is no evidence to indicate that the moving (alternating) system is better than the static system. All acute admission patients over 18 years will be eligible to participate. The researchers aim to recruit 2954 patients, who will be allocated to either HSFM or APM for 60 days, until discharge or are no longer at risk of pressure ulcers, whichever is soonest. Research nurses will measure the severity of any pressure ulcers on a standardised scale during the hospital stay, with a follow-up visit 30 days after study completion.

<https://www.journalslibrary.nihr.ac.uk/programmes/hta/113633>

STUDY 27

Published 2012, Glasby

Understanding and improving transitions of older people: a user and carer centred approach

The researchers of this project selected four study sites to understand the transitional experiences of four groups of older people: individuals with dementia, from ethnic minority communities, living in rural areas, and living in an area with a proportionally small older population. The research was conducted over two phases. In phase one, interviews were conducted with the service users and their carers, with a subsequent follow up six months later to discuss their changing needs following transition. Experiences of transition occurred at many levels including psychological, physical and social, and generally led to feelings of worry and uncertainty. Good communication with service providers helped patients make sense of their situation. However, poor

continuity in care and support arrangements was a frequently mentioned problem. In phase two, the researchers, alongside older people recruited as co-researchers, fed the findings back to the four study sites and worked with key stakeholders to reflect on and develop local practice. Two transition periods were examined – entry into and moving between dementia services, and going into and leaving hospital. Stakeholders across the study sites said the results were not surprising but hearing the patient voices enabled changes to be embedded into existing work programmes and initiatives.

Final report. NIHR Service Delivery and Organisation programme; 2012. <https://www.journalslibrary.nihr.ac.uk/programmes/hshr/081809228/#/>

STUDY 28

Published, 2014, Hughes

Assessment of capacity and best interests in dementia: on going home from hospital

This study investigated how decisions are made regarding discharge for patients with dementia following admission to an acute hospital. The researchers observed three wards (acute and rehabilitation) in two healthcare trusts in England over nine months. They reviewed medical records and conducted interviews and focus groups with a range of key individuals including patients, carers, doctors, nurses, physiotherapists, occupational therapists and social workers. The analysis revealed the complex nature of discharge decisions about a patient's capacity and place of residence for patients with dementia. Borderline capacity is of particular concern and requires careful assessment. Researchers found a tendency amongst many professionals is to conflate the assessment of capacity and judgements about best interests. The researchers indicated that more support and training is needed to facilitate decisions, alongside greater support for patients and families. Specifically, more training around the Mental Capacity Act (2005) is needed.

BMC Geriatrics 2014. DOI: 10.1186/1471-2318-14-56

[https://bmcgeriatr.biomedcentral.com/](https://bmcgeriatr.biomedcentral.com/articles/10.1186/1471-2318-14-56)

[articles/10.1186/1471-2318-14-56](https://bmcgeriatr.biomedcentral.com/articles/10.1186/1471-2318-14-56)

STUDY 29

Published 2016, Mockford

SHARED study (Services after Hospital: Action to develop REcommenDations): Carer and patient-led development of recommendations for people with dementia returning home from hospital: understanding what is important (SHARED study)

This project aimed to develop service user-led recommendations to enable a smooth transition for people living with memory loss from an acute hospital to the community. The researchers selected two NHS trusts in England and undertook semi-structured interviews with 15 pairs of carers and patients with memory loss. The patients were aged 65 years and older, experienced memory loss, had been an inpatient for at least 1 week. Interviews took place at discharge, six and 12 weeks post-discharge. Seventeen staff members who were involved in hospital discharge were recruited by snowball selection from hospital sites or from the community and were each interviewed once. Two focus groups of study participants, facilitated by co-researchers, met to shape and finalize recommendations, using the Framework analysis method. The researchers found that poor service delivery caused considerable stress to some families. Many families felt left out of the transition process. The three key recommendations comprised of a need for a written mutually agreed upon discharge plan, a named coordinator of services and improved home care services.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5433530/>

STUDY 30

Published 2014, Abdul-Saheb

Intermediate Care for the Elderly

This small study looked at how best to optimise medicine management in the rehabilitation setting for older people. The researchers adopted the STOPIT tool (The Screening Tool for Older People's Inappropriate Treatments), which facilitates a review of the patient's medicines by pharmacy staff and doctors. The tool was used to collect data prospectively over a period of five months on 36 patients. During this period, 15 patients had at least one pre-prescribed medicine stopped or adjusted by the multidisciplinary team. The researchers suggested that rehabilitation wards can be a better setting for medication reviews than the acute phase of hospitalisation. Patients are generally more stable in rehab wards making it easier to assess medication needs. The researchers concluded that this study highlights the beneficial use of STOPIT and recommend that primary and secondary care healthcare professionals work alongside pharmacists to actively review medicine use.

GM Journal 2014. https://www.gmjournals.co.uk/intermediate_care_25769807927.aspx

STUDY 31

Ongoing- Due to publish 2018, Shepherd

A multi-centre randomised controlled trial of Comprehensive Geriatric Assessment in an admission avoidance hospital at home setting

This multi-centre study is comparing Comprehensive Geriatric Assessment (CGA) in an admission avoidance Hospital at Home setting with hospital-based inpatient CGA for people over 65 with markers of frailty. Patients will be recruited from centres across England, Wales and Scotland. The researchers will assess health outcomes such as living at home, admission to residential care, death and quality of life as well as patient and carer experiences.

<https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/1220966/#/summary-of-research>

STUDY 32

Published 2008, Ward

Care home versus hospital and own home environments for rehabilitation of older people

This review compared care homes (including nursing homes, residential homes and nursing facilities), hospital environments and own home environments in the rehabilitation of older people (over 60 years). The reviewers concluded that there is insufficient evidence to compare the effects of the different environments. There are three main reasons; the first is that the description and specification of the environment is often not clear; secondly, the components of the rehabilitation system within the given environments are not adequately specified and; thirdly, when the components are clearly specified they demonstrate that the control and intervention sites are not comparable with respect to the methodological criteria. After an extensive search of the literature, there were no studies available that provided evidence to compare the effectiveness of these different types of environments. The authors concluded that more rigorous studies are needed in this area to better understand effectiveness.

Cochrane Database of Systematic Reviews 2008. DOI: [10.1002/14651858.CD003164.pub2](https://doi.org/10.1002/14651858.CD003164.pub2)

<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003164.pub2/pdf>

STUDY 33

Published 2009, Parker

Rehabilitation of older patients: day hospital compared to rehabilitation at home

This trial looked at the effectiveness of day hospitals compared to home-based rehabilitation for elderly patients. The researchers randomised 89 patients from four trusts in England to receive either home-based rehabilitation or day hospital rehabilitation. The minimum services of home-based rehabilitation include physiotherapy and occupational therapy, and could be specialised depending on the condition. Day hospital rehabilitation can include functional assessment as well as medical and nursing procedures, physical maintenance, social care and respite, and patients attend for a half to full day. The researchers measured functional health status of patients after six months (at this point, there were 32 patients in the home-based rehabilitation group and 33 patients in day hospital rehabilitation group). There were no statistically significant differences between the two types of rehabilitation on patients' functional health. The psychological well-being of patients' carers was also unaffected by place of rehabilitation. The researchers concluded that providing rehabilitation in patients' own homes did not disadvantage patients and carers, compared with day hospital rehabilitation. Costs were also similar for both settings. Rehabilitation providers could therefore consider place of care in light of local needs. However, the authors cautioned that the original sample size of 460 was not achieved, so results were based on a smaller, less representative sample.

Health Technology Assessment 2009.

<https://dx.doi.org/10.3310/hta13390>

STUDY 34

Published 2015, Brown

Medical day hospital care for older people versus alternative forms of care

This review examined the effectiveness of medical day hospitals for older people (60 and over) in preventing death, disability and institutionalisation. Day hospitals are outpatient facilities, where older patients can attend for a full day to receive multidisciplinary health care in one place. Included in the review were 16 trials (3689 participants) - including Study 32- that compared day hospital with comprehensive care (five trials), domiciliary care (seven trials) or no comprehensive care (four trials). There was no evidence of one type of care being better than another in terms of death or deterioration in activities of daily living (ADL), or in poor health outcomes (such as institutional care or dependency). There was some evidence that medical day hospitals were effective compared to no comprehensive care for the combined outcome of death or poor outcome, and for deterioration in ADL. However, the authors cautioned that studies provided low quality evidence and further, more robust trials are needed comparing different services and associated costs.

Cochrane Database of Systematic Reviews 2015. DOI: [10.1002/14651858.CD001730.pub3](https://doi.org/10.1002/14651858.CD001730.pub3)

<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001730.pub3/pdf>

STUDY 35

Published 2016, Purdy

Managing uncertainty to reduce emergency bed days in older patients

The researchers conducted a systematic review of controlled studies that evaluate alternatives to acute hospital admission for people over 65 years with acute illness or exacerbation of chronic disease and being considered for a potentially avoidable admission. They looked at the evidence relating to five different alternatives: interventions initiated by paramedics and other ambulance staff, alternatives delivered in hospital A&E/emergency departments, admission to a local community hospital, hospital-type services delivered in the patient's own home 'hospital at home', hospital-type services delivered in a nursing or care home. The researchers

found 19 trials and eight previous reviews. Most of the research they found related to 'hospital at home' covering a range of conditions, the most common being long-term heart and lung disease. The research team found that, with the exception of stroke, hospital at home appears to be at least comparable to care in an acute hospital in terms of effectiveness and patient safety. There is a lack of cost data and cost analysis for hospital at home interventions.

Centre of Academic Primary Care, University of Bristol. <http://www.bristol.ac.uk/media-library/sites/primaryhealthcare/documents/managing-uncertainty-PDG-evidence-report.pdf>

STUDY 36

Ongoing - Due to publish 2022, Lawton

Partners at Care Transitions (PACT): Improving Patient Experience and Safety at Transitions of Care Bradford Teaching Hospitals NHS Foundation Trust

The aim of this programme of research is to improve the safety and experience of care for older patients as they transition from hospital to home. The researchers will observe and interview patients during the transition process. They will also look at routinely collected data to identify wards and community teams who achieve low readmission rates. They will develop a measure of the quality of transitions. Finally, the researchers will develop and test the feasibility of a patient-centred intervention called Partners At Care Transitions that supports the involvement of older people and their families in care.

<https://yqsr.org/projects/pact/>

STUDY 37

Ongoing- Due to publish 2017, O'Connell Francischetto

Supported integrated discharge

The Heart of England Foundation Trust provides a system of supported integrated discharge for patients aged 65 and over following an emergency admission to hospital and a stay of 14 days or more. The discharge system aims to reduce the length of hospital stay by providing multidisciplinary rehabilitation and support services in the patient's home. This includes up to 14 days of therapy from the hospital trust, up to six weeks re-ablement from the local authority, community social work assessment and management to community services when needed. This project will use qualitative methods to evaluate the service to understand its impact on patients, carers and staff.

<https://www.clahrcprojects.co.uk/impact/projects/supported-integrated-discharge>

STUDY 38

Ongoing- Protocol published 2016, O'Connell Francischetto

Discharge interventions for frail older patients leaving hospital: a systematic meta-review

This review will look at the evidence for discharge planning for older patients leaving hospital. The researchers will analyse how different methods of discharge arrangements impact on important outcomes such as health status, readmissions, length of hospital stay and mortality. It will aim to identify the most beneficial elements of discharge interventions and identify areas where more research is needed.

<https://systematicreviewsjournal.biomedcentral.com/articles/10.1186/s13643-016-0222-8>

STUDY 39

Published 2013, Ingleton

Transitions to palliative care for older people in acute hospitals

The researchers used a mixed-methods study to investigate how the transition to palliative care was managed and experienced in two acute hospitals in England. The researchers carried out focus

groups and interviews with 58 healthcare professionals, a hospital survey with patients and medical staff, in-depth interviews with 15 patients with palliative care needs. A case note review of 514 hospital inpatient patients found that more than a third of hospital inpatients met one or more of the Gold Standard Framework (GSF) prognostic indicator criteria for palliative care. Agreement between medical staff and nursing staff and the GSF with respect to identifying patients with palliative care needs was poor. Of the 185 patients who met GSF criteria for palliative care need and for whom complete data were available, only 33% showed evidence of transition to a palliative care approach by meeting one or more indicator of adoption of a palliative care approach (DNAR order 29.0%, referral to specialist palliative care 8.2%, prescription of long-term opiates/syringe driver 4.9%, on LCP 1.1%, documented advance care plan 0.0%).

In a retrospective case note review of patients who has died, 7.2% of admissions (n = 35) were classified as potentially avoidable. The researchers found limited evidence that a managed transition to a palliative care approach was initiated within hospital settings. They concluded that there is a significant gap between NHS policy regarding palliative and end of life care management in acute hospitals in England and current practice.

Health Service Delivery Research 2013.
<https://dx.doi.org/10.3310/hsdr01110>

STUDY 40

Published 2014, Hanratty

Transitions between services at the end of life for older people - patient and provider perspectives

This study looked at the experience of people in their last year of life, focusing on transitions between care settings. Research included in-depth interviews with 30 patients over 75 years diagnosed with heart failure, lung cancer and stroke in their last year of life and 118 carers of those who had recently died. The results were used to develop case scenarios discussed with 43 providers and commissioners of care. The researchers also analysed hospital and mortality data in the last year of life for patients with heart failure or lung cancer. Overall, they found that a disjointed system was experienced by many, with reliance on carers and family members to fill the gap between services. GPs were seen as central figures in end of life transition. Out-of-hours GP services and care homes were seen as generating many (some avoidable) transitions at the end of life. The authors suggested that, compared with studies in other countries, the organisation of services and the way they were delivered were a greater cause of concern to patients and carers than other aspects, such as symptom control.

Health Service Delivery Research 2014.
<https://dx.doi.org/10.3310/hsdr02170>

STUDY 41

Published 2016, Pilgrim

Measuring appetite with the Simplified Nutritional Appetite Questionnaire identifies hospitalised older people at risk of worse health outcomes

This study evaluated the hospital use of Simplified Nutritional Appetite Questionnaire (SNAQ) which was designed to be used in community settings. One hundred and seventy-nine female patients (mean age 87 years) were recruited from the acute medicine for older people wards at one university hospital in England. Measurements taken included the SNAQ assessment, weight, body mass index, grip strength and geriatric depression scale. Follow-up measures were taken six months later. Forty-two percent of participants had a low SNAQ score indicating poor appetite. A low SNAQ score was associated with an increased risk of hospital acquired infection and with risk of death by follow-up. SNAQ is a simple and brief questionnaire to administer in both

the hospital, thus it has an advantage over the MUST nutritional screening tool which relies on measuring height (difficult in older people), weight loss (subject to recall bias and calculation error), and an acute disease score. The project demonstrated the beneficial use of the SNAQ tool in a hospital setting, and highlighted that poor appetite was common and associated with a higher risk of poor health outcomes.

Journal of Nutrition Health and Aging 2016. DOI: 10.1007/s12603-015-0533-9

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4778266/>

STUDY 42

Published 2014, Roberts

The feasibility and acceptability of training volunteer mealtime assistants to help older acute hospital inpatients: the Southampton Mealtime Assistance Study.

This study assessed the feasibility and acceptability of using trained volunteers as mealtime assistants for hospitalised older patients. A training programme was developed for volunteers who assisted female inpatients aged 70 years and over during weekday lunchtimes. The feasibility of using volunteers was determined by the proportion recruited, trained, and their activity and retention over one year. Volunteers were trained to identify difficulties with swallowing, understand the importance of nutrition and safe feeding practices. Fifty-nine potential volunteers were identified: 38 attended a training session, of whom 29 delivered mealtime assistance, including feeding, to 3911 (76%) ward patients during the year (mean duration of assistance 5.5 months). Overall, volunteers were positive about the training and ongoing support, and were highly valued by both patients and ward staff.

Journal of Clinical Nursing 2014. DOI: 10.1111/jocn.12573

<http://onlinelibrary.wiley.com/doi/10.1111/jocn.12573/abstract>

STUDY 43

Published 2011, Tadd

Dignity in Practice: An Exploration of Older Adults in Acute NHS Trust

This ethnographic study explored the experiences of dignity in the care of older people in four acute NHS trusts in England and Wales. Interviews were carried out with service users (aged 65 and over) and carers about their experiences with dignified care. Observations were conducted in 16 wards across the trusts and interviews were undertaken with a range of frontline staff and managers to explore organisational and cultural factors that facilitate or inhibit dignified care. Findings indicated that whilst staff were motivated to uphold patient interests, they were frequently compromised by systematic and organisational factors. Staffing levels and lack of resources had negative impact on continuity of care. Often, there was greater focus on getting the job done rather than the individual needs. Environments were not perceived to be friendly to older people and hostile to those with cognitive impairments.

Policy Research Programme Final Report. <https://drive.google.com/file/d/0BygJNnt0esAwdXdBM3ZzdFduazQ/edit>

NIHR Service Delivery and Organisation Programme; 2011. <https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/081819218/#/>

STUDY 44

Ongoing- Due to publish 2020/2021, Sharpe

The HOME Study

This study is evaluating a new type of psychiatry service that aims to reduce hospital stay in older medical inpatients by integrating psychiatry into medical care. Psychological problems, like dementia, confusion, depression and anxiety, are common in older patients and these are an important cause of longer hospital stays. These problems are often not identified or well managed in busy

hospital wards where the focus is on patients' physical illnesses. The researchers aim to recruit 3244 patients aged 65+, who have been admitted to acute medical wards and are likely to remain as a patient for at least two days. Participants will be randomly allocated to receive usual care or usual care plus the new service, called 'Proactive Liaison Psychiatry'. Proactive Liaison Psychiatry has four main components: early proactive assessment to identify psychiatric illness in all patients; creating a management plan to address these and overcome barriers to prompt discharge; proactive progress reviews; and proactive follow-through post-discharge. The researchers will study whether participants who receive Proactive Liaison Psychiatry spend fewer days spent as an inpatient in the month after entering the study than those who receive usual care. They will also measure participants' quality of life, experience of their hospital stay, cognitive function and discharge destination.

<https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/151116/#/>

STUDY 45

Published 2015, Griffiths

The role of the dementia specialist nurse in acute care: a scoping review

This scoping review searched for studies that evaluated the dementia nurse specialist role, or giving evidence of effectiveness of interventions/services that could be delivered by them to support patients with dementia during hospital admission. The researchers found a lack of robust evidence, finding only a single study evaluating the role of the dementia specialist nurse in an acute hospital. While direct evidence for the effectiveness of these roles is lacking, a number of areas were identified in which a nurse specialist role could make a contribution, including preventing adverse events and improving patient experiences and outcomes. There is a considerable body of evidence for the effectiveness of these interventions although the volume of evidence for specific interventions is not always significant.

Journal of Clinical Nursing 2015. DOI: 10.1111/jocn.12717

<http://onlinelibrary.wiley.com/doi/10.1111/jocn.12717/abstract>

STUDY 46

Published 2011, Patterson

Culture change, organisational performance, and quality of acute hospital care for older people

This programme of research evaluated factors that facilitated or inhibited cultural change in acute hospital care for older people, carers and staff. Several phases of work were carried out, including a systematic review, case studies in four trusts where cultural change was taking part in response to the National Service Framework for older people, and the development of a toolkit to promote cultural change. The research was underpinned by the Senses Framework, which sees the dynamics of a healthcare environment as a complex set of interdependent relationships. Findings indicated that providing high quality care for older people is complex in a fast-paced and ever-changing NHS environment that often seeks a 'quick-fix' solution. Meeting the complex health needs of older people in a target driven culture was also perceived to be challenging and often left staff unable to prioritise relationship building and maintaining dignity with patients. Case studies highlighted the importance of the ward manager in developing positive relationships between staff. The authors ask staff to assess the care environment, patient and carer experiences to facilitate change. Change can then occur within teams and across peer groups, although constraints will still exist from the broader pace driven culture.

Report for the National Institute for Health Research Service Delivery and Organisation programme, 2011.

www.journalslibrary.nihr.ac.uk/programmes/hsdr/08150193/#/

STUDY 47

Published 2012, O'Mahony

Organisational Culture in the NHS: A feasibility study to measure the impact on Older People

The study undertook interviews with patients discharged from hospital (four to eight weeks after discharge), carers and staff in four hospitals in England. The researchers also observed the wards and examined organisational factors. Strong leadership and staff morale also led to positive patient experience. However, care was found to be inconsistent with some patients describing bad care relating to delayed discharge, poor or fragmented access to care and poor communication. These failures were often underpinned by resource constraints such as low staff levels and inadequate training. The researchers found that care measures were often taken, such as mortality rates, readmission rates and appropriateness of care home admission, and that feedback from this information can be used to improve quality of care.

Policy Research Programme Final Report. <https://drive.google.com/file/d/0ByglNnt0esAwUHK2eFN3VUpmU3M/edit>

STUDY 48

Ongoing- Due to publish 2018, Bridges

Creating Learning Environments for Compassionate Care (CLECC): a feasibility study

This study looked at the quality of staff-patient relationships and assessed the feasibility of implementing CLECC (Creating Learning Environments for Compassionate Care) in acute hospital settings. CLECC is based on workplace learning theory, and aims to develop a sustainable work environment based on team communication, reflective learning, mutual support and role modelling. Four wards received the CLECC programme and were compared to two control wards. Measures such as quality of staff-patient interactions, patient evaluation of care and staff perceptions of empathy were taken two months before the intervention and eight months post-intervention. Researchers conducted interviews with staff, patients and carers, and collected contextual data such as ward staff levels. Results from this study will be used to refine CLECC further and inform a more definitive evaluation of benefit.

<https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/130748/#/>
Interim publication: *BMJ Quality & Safety* 2017. <http://qualitysafety.bmj.com/content/early/2017/09/15/bmjqs-2017-006702.full>

STUDY 49

Ongoing Due to publish 2018, Young

A multi-site evaluation of the Person, Interactions & Environment (PIE) tool to improve person-centred care for people with dementia admitted to acute hospital wards

The researchers developed the PIE programme to improve person-centred care for people with dementia in hospital and evaluated it in five NHS trusts (10 wards) over 18 months. Researchers will assess whether the tool changes staff practice and awareness of person-centred care for people with dementia. The PIE programme consists of training to use the tool to enable a process of change. The tool is intended for use by ward staff to identify and make step changes in practice. Early results show that three of ten wards did not attain the Royal College of Nursing staff/patient ratio for safe working on older people's wards (1:3.5); and most did not meet the recommended ratio of registered nurse to health care assistant of 65:35 or above, notwithstanding the level of medical acuity, complexity of patient need and prevalence and severity of cognitive impairment. The picture was bleaker than this suggests: on several wards, staff complement was only maintained through use of Bank and agency staff with consequences for staff morale, sustainability of a coherent care culture and availability of 'headroom' to engage in service improvement.

www.journalslibrary.nihr.ac.uk/programmes/hsdr/11101718/#/

STUDY 50

Published 2017, Arthur

Can Healthcare Assistant Training (CHAT) improve the relational care of older people? A development and feasibility study of a complex intervention

A scoping review of current education and training packages for HCAs found that only one third of NHS trusts is a telephone survey participants reported HCA training content that the researchers considered to be 'relational care'. Training for HCAs is variable across trusts and is focused on new recruits. Focus groups and interviews with HCAs, nurses, managers and community groups of older people informed the development of a brief value-based training intervention ('Older People's Shoes') for HCAs. The feasibility of this intervention compared to usual training for HCAs was tested in a randomised controlled trial conducted in three acute NHS trusts in England, chosen for having a large patient population over 70 years of age. One hundred and twelve HCAs took part. The authors concluded that the training intervention aimed at improving the relational care of older people in hospital was well received and feasible to conduct, and therefore warranted a definitive trial to assess the clinical and cost effectiveness.

Health Service Delivery Research 2017. <https://dx.doi.org/10.3310/hsdr05100>

STUDY 51

Ongoing- Due to publish 2018, Harwood

The development and testing of a communication skills training intervention for healthcare professionals caring for people with dementia in acute hospitals

This study aims to improve the communication skills of healthcare professionals working in acute hospitals and interacting with patients living with dementia. First, the researchers will video 40 staff-patient interactions. This data will be analysed using Conversational Analysis. The researchers will use these results to develop a communication skills training programme. The programme will include simulated conversations with actors, e-learning resources, video commentaries from patients and carers and real-life clips of successful communication. The researchers will then evaluate the package in a before-and-after study with healthcare staff, with confidence being assessed by researchers, carers and participants. Qualitative interviews will explore the acceptability and feasibility of the training.

<https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/1311493>

STUDY 52

Published 2010, Schneider

Inpatient care for people with dementia: implications for person-centred practice

This study aimed to understand the experiences of staff working on older people's wards. Three researchers were employed as Health Care Assistants (HCAs) in different inpatient settings for older people with dementia. They spent four months on the wards, recording and reflecting on their observations and experiences. The researchers conducted interviews and focus groups with staff and carers. The HCAs worked with empathy and commitment, often communicating with relatives. The HCAs maintained a consistent emotional climate on the ward, a previously overlooked aspect of their role. Being part of a team was a key aspect of the job to share the workload and minimise risk, and engage in mutual respect and emotional support. HCAs reported areas for improvement including increasing staff levels and training, appreciation and recognition of HCAs and opportunities for career development. The study team concluded that HCAs are skilled workers and their work may be better understood in a 'relationship-centred care' framework.

STUDY 53

Ongoing Due to publish 2017/8, Featherstone

MemoryCare: Investigating the management of refusal of care in people with dementia admitted to hospital with an acute condition

This study is taking an in-depth look at people with dementia who are admitted to hospital and refuse food and care and how this can be overcome. Researchers will select five UK hospitals known to have a high proportion of patients with cognitive impairments. The researchers will use ethnographic methods to observe the work of nurses and healthcare assistants and explore with them their response to food, drink and medicine refusals in patients with dementia. This information will identify ways in which systems can be structured to support nurses in delivering adequate nutrition and medicine adherence to improve patient care experiences and treatment effectiveness.

<http://www.nets.nihr.ac.uk/projects/hsdr/131080>

STUDY REFERENCES

Abdul-Saheb M, Jubraj B, Bovill I, Kuo S, Marvin V. Intermediate care. *GM Journal*. February 2014. https://www.gmjournals.co.uk/intermediate_care_25769807927.aspx (Study 30)

Arthur A, Aldus C, Sarre S, Maben J, Wharrad H, Schneider J, et al. Can Health-care Assistant Training improve the relational care of older people? (CHAT) A development and feasibility study of a complex intervention. *Health Service Delivery Research* 2017;5(10). <https://dx.doi.org/10.3310/hsdr05100> (Study 50)

Baczynska AM, Lim SE, Sayer AA, Roberts HC. The use of volunteers to help older medical patients mobilise in hospital: a systematic review. *Journal of Clinical Nursing* 2016;25:3102–3112. <http://onlinelibrary.wiley.com/doi/10.1111/jocn.13317/abstract> (Study 20)

Bridges J, May CR, Griffiths P, Fuller A, Wigley W, Gould L, Barker H, Libberton, P. Optimising impact and sustainability: a qualitative process evaluation of a complex intervention targeted at compassionate care. *BMJ Quality & Safety*. Published Online First: 15 September 2017. <http://qualitysafety.bmj.com/content/early/2017/09/15/bmjqs-2017-006702.full> (Study 48)

Brown L, Forster A, Young J, Crocker T, Benham A, Langhorne P, Day Hospital Group. Medical day hospital care for older people versus alternative forms of care. *Cochrane Database of Systematic Reviews* 2015, Issue 6. Art. No.:CD001730. DOI: 10.1002/14651858.CD001730.pub3 (Study 34) <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001730.pub3/pdf>

Cadman B, Wright D, Bale A, et al. Pharmacist provided medicines reconciliation within 24 hours of admission and on discharge: a randomised controlled pilot study. *BMJ Open* 2017;7:e013647. <http://bmjopen.bmj.com/content/7/3/e013647> (Study 23)

Clegg A, Bates C, Young J, Ryan R, Nichols L, Teale EA, Mohammed MA, Parry J, Marshall T. Development and validation of an electronic frailty index using routine primary care electronic health record data. *Age and Ageing* 2016;45(3): 353-360. <https://academic.oup.com/ageing/article/45/3/353/1739750/Development-and-validation-of-an-electronic> (Study 3)

Edmans J, Bradshaw L, Franklin M, Gladman J, Conroy S. Specialist geriatric medical assessment for patients discharged from hospital acute assessment units: randomised controlled trial. *Bmj*. 2013 Oct 8;347:f5874. <http://www.bmj.com/content/347/bmj.f5874> (Study 5)

Ellins J, Glasby J, Tanner D, McIver S, Davidson D, Littlechild R, Snelling I, Miller R, Hall K, Spence K and the Care Transitions

Project co-researchers. Understanding and improving transitions of older people: a user and carer centred approach. Final report. NIHR Service Delivery and Organisation programme; 2012. <https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/081809228/#/> (Study 27)

Ellis G, Gardner M, Tsiachristas A, Langhorne P, Burke O, Harwood RH, Conroy SP, Kircher T, Somme D, Saltvedt I, Wald H, O'Neill D, Robinson D, Shepperd S. Comprehensive geriatric assessment for older adults admitted to hospital. *Cochrane Database of Systematic Reviews* 2017, Issue 9. Art. No: CD006211. http://www.cochrane.org/CD006211/EPOC_comprehensive-geriatric-assessment-older-adults-admitted-hospital (Study 7)

Francischetto EO, Damery S, Davies S, Combes G. Discharge interventions for older patients leaving hospital: protocol for a systematic meta-review. *Systematic Reviews* 2016;5(46). <https://systematicreviewsjournal.biomedcentral.com/articles/10.1186/s13643-016-0222-8> (Study 37)

Gladman J, Harwood R, Conroy S, Logan P, Elliott R, Jones R, et al. Medical crises in older people. *Programme Grants for Applied Research* 2015;3(4). <https://dx.doi.org/10.3310/pgfar03040> (Study 14)

Gladman J, Porock D, Griffiths A, Clisset P, Harwood RH, Knight A, et al. Better mental health: care for older people with cognitive impairment in general hospitals. Final report NIHR Service Delivery and Organisation programme 2012. <https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/081809227/#/summary-of-research> (Study 15)

Glasby J, Littlechild R, Le Mesurier N, Thwaites R, Oliver D, Jones S, Wilkinson I. Who knows best? Older people's contribution to understanding and preventing avoidable hospital admissions. *School of Social Policy* 2016. <http://www.birmingham.ac.uk/Documents/college-social-sciences/social-policy/HSMC/publications/2016/who-knows-best.pdf> (Study 2)

Godfrey M, Smith J, Green J, Cheater F, Inouye SK, Young JB. Developing and implementing an integrated delirium prevention system of care: a theory driven, participatory research study. *BMC Health Services Research* 2013;13:341. <https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-13-341> (Study 11)

Goldberg SE, Whittamore KH, Pollock K, Harwood RH, Gladman JR. Caring for cognitively impaired older patients in the general hospital: a qualitative analysis of similarities and differences between a specialist Medical and Mental Health Unit and standard care wards. *International Journal of Nursing Studies* 2014;51(10):1332-43. <https://www.ncbi.nlm.nih.gov/pubmed/24613652> (Study 13)

Gott M, Ingleton C, Gardiner C, Richards N, Cobb M, Ryan A, et al. Transitions to palliative care for older people in acute hospitals: a mixed-methods study. *Health Services and Delivery Research* 2013;1(11). <https://dx.doi.org/10.3310/hsdr01110> (Study 39)

Griffiths P, Bridges J, Sheldon H, Thompson R. The role of the dementia specialist nurse in acute care: a scoping review. *Journal of Clinical Nursing* 2015;24(9-10):1394-405. <http://onlinelibrary.wiley.com/doi/10.1111/jocn.12717/abstract> (Study 45)

Hanratty B, Lowson E, Grande G, Payne S, Addington-Hall J, Valtorta N, et al. Transitions at the end of life for older adults: Patient, carer and professional perspectives. *Health Services and Delivery Research* 2014;2(17) <https://dx.doi.org/10.3310/hsdr02170> (Study 40)

Huntley A, Chalder M, Heawood A, Hollingworth W, Metcalfe C, Benger J, Purdy S. Evidence report: alternatives to acute hospital care for people over 65 years of age being considered for potentially avoidable admission. Centre of Academic Primary Care, University of Bristol. <http://www.bristol.ac.uk/media-library/sites/primaryhealthcare/documents/managing-uncertainty-PDG-evidence-report.pdf> (Study 35)

Mockford C, Seers K, Murray M, Oyeboode J, Clarke R, Staniszewska S, Suleman R, Boex S, Diment Y, Grant R, Leach J,

- Sharma U. The development of service user-led recommendations for health and social care services on leaving hospital with memory loss or dementia – the SHARED study. *Health Expectations* 2017;20:495-507. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5433530/> (Study 29)
- Nixon J, Cranny G, Iglesias C, Nelson EA, Hawkins K, Phillips A et al. Randomised, controlled trial of alternating pressure mattresses compared with alternating pressure overlays for the prevention of pressure ulcers: PRESSURE (pressure relieving support surfaces) trial. *BMJ* 2006;332:1413. <https://doi.org/10.1136/bmj.38849.478299.7C> (Study 25)
- O'Mahony S. Organisational Culture in the NHS: A feasibility study to measure the impact on Older People. Policy Research Programme Final Report, 2012. <https://drive.google.com/file/d/0BYglNnt0esAwUHK2eFN3VUpmU3M/edit> (Study 47)
- Parker SG, Oliver P, Pennington M, Bond J, Jagger C. Rehabilitation of older patients: day hospital compared to rehabilitation at home. A randomised controlled trial. *Health Technology Assessment* 2009;13(39). <https://dx.doi.org/10.3310/hta13390> (Study 33)
- Patterson SM, Cadogan CA, Kerse N, Cardwell CR, Bradley MC, Ryan C, Hughes C. Interventions to improve the appropriate use of polypharmacy for older people. *Cochrane Database of Systematic Reviews* 2014, Issue 10. Art. No.: CD008165. <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD008165.pub3/abstract> (Study 22)
- Patterson M, Nolan M, Rick J, Brown J, Adams R, Musson G. From metrics to meaning: Culture change and quality of acute hospital care for older people. Report for the National Institute for Health Research Service Delivery and Organisation programme, 2011. <https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/08150193/#/> (Study 46)
- Pilgrim AL, Baylis D, Jameson KA, Cooper C, Sayer AA, Robinson SM, Roberts HC. Measuring appetite with the Simplified Nutritional Appetite Questionnaire identifies hospitalised older people at risk of worse health outcomes. *Journal of Nutrition Health and Aging* 2016;20(1):3-7. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4778266/> (Study 41)
- Pinkney J, Rance S, Bengler J, Brant H, Joel-Edgar S, Swancutt D, et al. How can frontline expertise and new models of care best contribute to safely reducing avoidable acute admissions? A mixed-methods study of four acute hospitals. *Health Services and Delivery Research* 2016;4(3). <https://dx.doi.org/10.3310/hsdr04030> (Study 4)
- Poole M, Bon, J, Emmett C, Greener H, Louw SJ, Robinson L, Hughes JC. Going home? An ethnographic study of assessment of capacity and best interests in people with dementia being discharged from hospital. *BMC Geriatrics* 2014;14:56. <https://bmgeriatr.biomedcentral.com/articles/10.1186/1471-2318-14-56> (Study 28)
- Roberts HC, De Wet S, Porter K, Rood G, Diaper N, Robison J, et al. The feasibility and acceptability of training volunteer mealtime assistants to help older acute hospital inpatients: the Southampton Mealtime Assistance Study. *Journal of Clinical Nursing* 2014;23(21-22):3240-9. <http://onlinelibrary.wiley.com/doi/10.1111/jocn.12573/abstract> (Study 42)
- Sahota O, Drummond A, Kendrick D, Grainge MJ, Vass C, Sach T, et al. REFINE (REducing Falls in In-patienT Elderly) using bed and bedside chair pressure sensors linked to radio-pagers in acute hospital care: a randomised controlled trial. *Age and Ageing* 2014;43(2):247-253. <https://doi.org/10.1093/ageing/aft155> (Study 18)
- Schneider J, Scales K, Bailey S, Lloyd J. Challenging care: the role and experience of Health Care Assistants in dementia wards. Schneider J et al. Report for the NIHR Research Service Delivery and Organisation Programme. Sept 2010. <https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/081819222/#/summary-of-research> (Study 52)
- Shenkin SD, Fox C, Godfrey M, et al. Protocol for validation of the 4AT, a rapid screening tool for delirium: a multicentre prospective diagnostic test accuracy study. *BMJ Open*. ISSN 2044-6055 (In Press). <http://eprints.whiterose.ac.uk/114635/> (Study 12)
- Tadd W. Dignity in practice: An exploration of older adults in acute NHS Trust. Policy Research Programme Final Report. <https://drive.google.com/file/d/0BYglNnt0esAwdXdBM3ZzdFduazQ/edit> (Study 43)
- Tadd W, Hillman A, Calnan S, Calnan M, Bayer A, Read S. Dignity in Practice: An exploration of the care of older adults in acute NHS Trusts. NIHR Service Delivery and Organisation Programme; 2011. <https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/081819218/#/> (Study 42)
- Ward D, Drahotka A, Gal D, Severs M, Dean TP. Care home versus hospital and own home environments for rehabilitation of older people. *Cochrane Database of Systematic Reviews* 2008, Issue 4. Art. No.: CD003164. <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003164.pub2/pdf> (Study 32)
- Wilson A, Baker R, Bankart J, Banerjee J, Bhamra R, Conroy S, et al. Establishing and implementing best practice to reduce unplanned admissions in those aged 85 years and over through system change [Establishing System Change for Admissions of People 85+ (ESCAPE 85+)]: a mixed-methods case study approach. *Health Services and Delivery Research* 2015;3(37). <https://dx.doi.org/10.3310/hsdr03370> (Study 1)

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