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Feasibility study to reduce avoidable hospitalisations and promote Better Health in Residents in Care Homes (BHiRCH)

Submission date
11/09/2017

Recruitment status
No longer recruiting

Registration date
13/09/2017

Overall study status
Completed

Last Edited
05/03/2021

Condition category
Infections and Infestations

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Early detection and intervention for ill health in residents in care homes with nursing is problematic. People living in care homes can be admitted to hospital for conditions which, if noticed and treated earlier, could be managed in the care home. The Better Health in Residents in Care Homes (BHiRCH) programme aims to reduce rates of avoidable hospital admissions from care homes (with nursing) for respiratory infections, urinary tract infections, dehydration and acute exacerbation of chronic heart failure by ensuring early detection and early intervention. This has the potential to prevent an emergency presentation to hospital. This project is focused on these four conditions which are responsible for a large proportion of unplanned hospitalisations. Our Programme Development Grant identified multi-component interventions which, when tested in US nursing homes, showed promise in reducing avoidable admissions.

Who can participate?
Adults aged 18 and older who are residents of the care homes.

What does the study involve?
The BHiRCH programme comprises the following components: Early Warning Tool (Stop and Watch Early Warning Tool), Care Pathway (clinical guidance and decision support system), Structured method for communicating with primary care, Knowledge and skills development for care home staff and family members, close friends or care partners, Family members, close friends or care partners' involvement, and implementation support. The intervention and implementation guidance are tested in two care homes over a three-month period to optimise them for the further studies. Two nurses within each home become Practice Development Champions who are trained to implement the intervention, and these nurses are supported by a Practice Development Support Group. All staff members are involved in supporting the intervention, and any care partners of the residents are offered the opportunity to participate. The number of avoidable hospital admissions is recorded along with other data collected from staff, residents and care partners through questionnaires. Qualitative data is collected through focus group and qualitative interviews.

What are the possible benefits and risks of participating?
Participants may value speaking to the research team about their experiences. There are no direct risks however participants may become tired when answering the questionnaires. Participants are invited to let the researcher know and participants can take a break, re-schedule or stop taking part in the study.

Where is the study run from?
1. Norwood House Care Home (UK)
2. Well Springs Nursing Home (UK)

When is the study starting and how long is it expected to run for?
October 2016 to November 2016

Who is funding the study?
University College London (UK)

Who is the main contact?
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Contact information

Type(s)
Public

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Protocol serial number
34076

Study information

Scientific Title
Feasibility study of an evidence based intervention to reduce avoidable hospital admissions in residents in care homes (the Better Health in Residents in Care Homes) study

Acronym
BHiRCH

Study objectives
The Better Health in Residents in Care Homes (BHiRCH) programme is developing an intervention that aims to reduce rates of avoidable hospital admissions from care homes (with nursing) for respiratory infections, urinary tract infections, dehydration and acute exacerbation of chronic heart failure by ensuring early detection and early intervention. The aim of this feasibility study is to refine study procedures in two care homes in preparation for a pilot cluster randomised study.

Ethics approval required
Old ethics approval format

Ethics approval(s)
London - Queen Square Research Ethics Committee, 12/09/2016, ref: 16/LO/1361

Study design
Non-randomised; Interventional; Design type: Diagnosis, Prevention, Management of Care, Active Monitoring

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Specialty: Ageing, Primary sub-specialty: Ageing; UKCRC code/ Disease: Other/ General symptoms and signs

Interventions
The intervention is implemented at the level of the whole care home.

The BHiRCH programme is a complex intervention, with 6 key components. These are:
1. Early Warning Tool (Stop and Watch Early Warning Tool)
2. Care Pathway (clinical guidance and decision support system)
3. Structured method for communicating with primary care (SBAR)
4. Knowledge and skills development for care home staff and family members, close friends or care partners.
5. Family members, close friends or care partners' involvement.
6. Implementation support- practice development champions and support groups.

Early Warning Tool (Stop and Watch Early Warning Tool):
This tool is widely used in the US. It highlights simple signs and behaviours to identify common, but nonspecific changes in a resident's condition that seem out of the ordinary for the resident. The tool is intended to be used as an alert to determine if further assessment of a resident by a registered nurse (with the Care Pathway) is necessary. Care assistants or nurses use the Stop and Watch Early Warning Tool when: 1) they notice a change; or 2) anyone else in the care home (including residents, other staff and care partners) notices a change; at the latest by the end of the shift. Care assistants or nurses complete the paper-based Stop and Watch Early Warning

Tool, circling the changes they observed, and notify the nurse of this change, giving them the completed Stop and Watch Early Warning Tool. Practice Development Champions in collaboration with their Practice Development Support Group decide how best to provide care assistants and nurses with ready access to the Stop and Watch Early Warning Tool; and where completed forms are stored.

Care pathway: The Care Pathway
This is a clinical guidance and decision support system that includes Primary and Secondary assessment of respiratory infection, urinary tract infection, dehydration, and acute exacerbation of chronic heart failure. Primary assessment is the first level or initial assessment which comprises screening type questions and secondary assessment is the more detailed level of assessment of the person. The Care Pathway has been designed to facilitate early assessment and diagnosis of acute changes in health; and to prompt early intervention. Nurses use the Care Pathway, having been alerted to a change in a resident's health by care assistants as soon as possible. If the Primary or Secondary Assessment result in an ambiguous outcome, the Care Pathway should be administered repeatedly at 6-hour intervals, until such time as the nurse is satisfied from the evidence collected, that the issues of concern have resolved and/or appropriate intervention has been instigated. The nurse conducts the Primary and Secondary assessment following the steps of the Care Pathway, consequently the nurse records the outcome of the Primary and Secondary assessment and their implications for care practice (i.e. care plan) in the residents' care records The nurse then makes a clinical decision about the next course of action which includes one or more of the following actions:
a. If the assessment is inconclusive, but the nurse judges that the resident's condition is not an immediate concern they can:
i. Direct further general monitoring using the Stop and Watch Early Warning Tool (as often as deemed necessary), or
ii. Direct monitoring for specific symptoms of the resident's condition.
b. If the nurse determines that the resident's condition can be treated in the care home, they can initiate treatment.
c. If the assessment indicates a potential diagnosis, or there is immediate concern about a resident's condition, they can communicate with primary care using the SBAR process.
The nurse then feed back information about the course of action to the relevant staff on each shift, and to the domestic staff and family members, close friends or care partners, as appropriate. Copies of the completed Care Pathway are kept with the resident's record.

Structured method for communicating with primary care:
The SBAR (Situation, Background, Assessment, Recommendation) is a structured method for communicating critical information about residents to primary care. This contributes to appropriate action and increased resident safety. Nurses use the SBAR to communicate critical information about residents to primary care and out-of-hours staff. The nurse uses the SBAR when they want primary care input into the care of one of their residents who they have assessed using the Care Pathway as being at risk of decline. Before making a call to primary care, the nurse should organise the briefing information on paper using the four elements (Situation, Background, Assessment and Recommendation) in sequence. Only the most relevant data is included. Presenting the briefing in this format helps primary care staff to quickly understand the situation. The SBAR tool can be attached to the Care Pathway.

Knowledge and skills development:
The use of the Stop and Watch Early Warning Tool, Care Pathway and SBAR requires specific knowledge and skills. We have developed a matrix of the knowledge and skills that we have identified as important for any person using these tools. The matrix incorporates different sets of knowledge and skills for each of the different groups of people within the care home (nurses,

care assistants, domestic staff, and family members, close friends or care partners). Practice Development Champions (in collaboration with Practice Development Support Groups) use the knowledge and skills matrix to conduct a knowledge and skills gap analysis for all staff (nurses, care assistants and domestic staff) in the care home and care partners who wish to be involved. Practice Development Champions and Practice Development Support Groups use the knowledge and skills matrix to prioritise the most important gaps in knowledge and skills to address, using the Project Handbooks and following links to a range of learning resources; as well as identifying additional resources themselves. Links to useful resources are available from the project website.

Family members, close friends or care partners' involvement:
Family members, close friends and care partners differ in their preference for involvement in their relative's health care. Potential roles include: noticing changes, communicating these changes to staff, receiving feedback, making decisions.
It is important to be clear about the specific role or roles that each family member, close friend or care partner would like to have. The nurse seeks clarity from family members, close friends or care partners about how they wish to contribute to supporting the care of the resident. Identifying preferred roles should take place as soon as is practical after the start of the intervention, at one of the regular family-care home meetings.
The nurse will:
• Introduce the Stop and Watch Early Warning Tool and Care Pathway, and their application within the care home.
• Establish the roles that family members, close friends or care partners would like to have in the intervention.
• Record these preferences for involvement in the resident's care record.

Implementation support:
Creating sustainable change in care homes is challenging. This intervention includes a focus on support for implementing the changes. We have drawn on change management methodology including the use of champions and the Promoting Action on Research Implementation in Health Services (PARiHS) framework (which emphasises the relationship between context, evidence and facilitation). The care home manager and external facilitators identifies two nurses to serve as Practice Development Champions in the care home prior to the intervention. They are selected based on the person specification (see below). Practice Development Champions in turn select members of a Practice Development Support Group to support their work in the care home. Members of the Practice Development Support Group are selected following the two-day workshop attended by Practice Development Champions. Criteria for identification of Practice Development Support Group members are covered in the two-day workshop for Practice Development Champions.

Intervention Type
Other

Primary outcome(s)
The feasibility study seeks to address the following outcomes, all intended to assist in refining study procedures and the implementation of the intervention:
1. Recruitment is measured using recruitment numbers of staff, residents and care partners in the first three months of the study
2. Retention of participants is measured using final participant numbers at the end of the study (month three)
3. The delivery of the intervention is measured using analysis of uptake of intervention materials

and staff interviews at months one, two and three
4. Any necessary refinements to the implementation guidance are measured using staff interviews at months one, two and three
5. The feasibility of collecting data is measured using analysis of the completeness of case report forms at months one, two and three
6. Resource requirements for collection and analysis of data is measured using data capture on time taken to complete these tasks at months one, two and three

Key secondary outcome(s))
There are no secondary outcome measures.

Completion date
01/05/2017

Eligibility

Key inclusion criteria
1. The study implements an enhanced version of usual care and because of the clustered nature of the setting this will be implemented across the care home. All residents will be invited to be involved in the collection of individual level outcome data.
2. Aged 18 and older

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Sex
All

Key exclusion criteria
Residents receiving end of life treatment or palliative care or those who have stated they do not wish to be involved in research.

Date of first enrolment
19/10/2016

Date of final enrolment
28/11/2016

Locations

Countries of recruitment

United Kingdom

England

Study participating centre
Norwood House Care Home
Greenthwaite Close
High Spring Gardens
Keighley
United Kingdom
BD20 6DZ

Study participating centre
Well Springs Nursing Home
122 Leylands Lane
Bradford
United Kingdom
BD9 5QU

Sponsor information

Organisation
University College London

ROR
https://ror.org/02jx3x895

Funder(s)

Funder type
Government

Funder Name
National Institute for Health Research

Alternative Name(s)
National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

Funding Body Type

Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan
The data sharing plans for the current study are unknown and will be made available at a later date.

IPD sharing plan summary
Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/02/2021	05/03/2021	Yes	No
HRA research summary			28/06/2023	No	No
Participant information sheet	version V1	13/09/2021	13/09/2017	No	Yes
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Study website	Study website	11/11/2025	11/11/2025	No	Yes