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Tailoring an intervention to the educational needs of healthcare professionals in nursing homes: Does it have an impact on the use of an early warning score?

Submission date
22/01/2020

Recruitment status
No longer recruiting

Registration date
19/03/2020

Overall study status
Completed

Last Edited
12/09/2024

Condition category
Other

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

Plain English summary of protocol
Background and study aims
One major challenge in healthcare today is for healthcare professionals to stay up to date on the newest and most reliable research knowledge. Another is to implement new knowledge into complex and busy healthcare settings. This is a threat to patients, as they rely on healthcare professionals to provide them the best possible care. One solution to this, is to educate healthcare professionals in Knowledge Translation (KT) to provide them with skills and tools to handle these challenges.
The IMPAKT intervention bundle aims to first work with healthcare professionals in nursing homes to identify their educational needs related to KT. Secondly, tailored to these needs, the researchers will provide an educational program that addresses these needs. Then finally, researchers will support the nursing homes in applying what they learnt.

Who can participate?
Public nursing homes in a large municipality in Norway were eligible for inclusion.

What does the study involve?
The researchers will randomly allocate nursing homes to two groups: one group that will receive the IMPAKT intervention bundle, and one group that receives nothing. Then, after a year, the researchers want to see if there is a difference in care provided in the nursing homes that received this bundle, compared to patients in the comparison group. Care will be assessed at patient level outcomes.

What are the possible benefits and risks of participating?
The potential benefits of participating in this study, includes an increased level of awareness and competencies to stay up to date on research knowledge among healthcare professionals. Moreover, if healthcare professionals in this study succeed with the implementation process during the study period, then a potential benefit is that this may be applied again to different problems. For patients, a potential benefit is they receive care in line with the most reliable

research knowledge. In this case, nursing homes are implementing an early warning score, and another potential benefit for patients is a reduction in unnecessary transfer to acute care hospital, and maybe an increase in appropriate transfers.
Potential risks of participation is frustration in the staff, regarding inability either personally or organizationally to fulfil expectations of the educational program goals.

Where is the study run from?
The Western Norway University of Applied Sciences

When is the study starting and how long is it expected to run for?
January 2019 to October 2020

Who is funding the study?
1. The Research Council of Norway
2. Western Norway University of Applied Sciences (Norway)
3. The Municipality of Bergen, Division of Nursing Homes (Norway)

Who is the main contact?
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Additional identifiers

Protocol serial number
Project ID 256569 (The Research Council of Norway)

Study information

Scientific Title
The effectiveness of an integrated-KT intervention to implement NEWS2 in nursing homes

Acronym
IMPAKT

Study objectives
A tailored and integrated Knowledge Translation (KT) intervention works better than no intervention in implementing NEWS2 in nursing homes.

Ethics approval required
Old ethics approval format

Ethics approval(s)
1. Approved 23/09/2019, Regional Committees for Medical and Health Research Ethics (REC) - region South East (Gullhaugveien 1-3, N-0484 Oslo, Norway; +47 22845511; post@helseforskning.etikk.no), ref: 29321
2. Approved 09/12/2019, Norwegian Center for Research Data (Harald Hårfagres gate 29, N-5007 Bergen, Norway; +47 55582117; nsd@nsd.no), ref: 594767

Primary study design
Interventional

Study design
Single-blind interventional multicenter study using a cluster randomized controlled trial

Study type(s)
Other

Health condition(s) or problem(s) studied
Nursing home residents

Interventions
This intervention was developed in collaboration with staff and leaders in nursing homes to tailor the needs in nursing homes to implement NEWS2.

NEWS2 is the tool used for early identification of acute deterioration. The intervention arm involves the implementation of NEWS2 in nursing homes.

The paired cluster randomization process is done as follows: The eligible nursing homes at time of randomization are presented with size (number of beds) and type of beds (short-term versus long-term) to a statistician, who then pairs 20 nursing homes according to these factors. Within each pair, one nursing home is randomly allocated to the intervention arm, and the other to the control arm. The randomization sequence is generated using a random number generator function in IBM SPSS Statistics.

The IMPAKT intervention consists of two main and preset components, that will be developed and adapted according to the needs of practice development nurses (PDNs) and care staff in Nursing Homes (NHs). This is in line with the underlying integrated-knowledge translation (i-KT) approach, essentially aiming to engage end-users in the entire research process.

The first component is an educational component, addressing identified learning needs related to knowledge translation (KT). The second component is an implementation phase where PDNs in intervention NHs are expected to apply what they (and colleagues) learned in the first component, in planning and leading the implementation of a KT-project. Specifically, PDNs are expected to lead the implementation of National Early Warning Score (NEWS2), in their respective nursing homes, while applying the tools and competencies gained in the first component. During the implementation phase (second component), each of the intervention NHs are facilitated by researchers from distance.

Nursing homes from both arms participated in two development phases of the intervention, for each of the two intervention components. To develop the first component, interviews and observations took place, among stakeholders in the nursing homes. The idea of this development phase was to gain a clearer picture of the problems and educational needs related to implementing new knowledge in this setting and how the IMPAKT intervention may address them to reduce them. To develop the second component, a workshop was organized to gain an understanding of what clinical areas of practice nursing homes are struggling with, and where they believe there is potential for improvement. Based on the workshop, a list of potential areas to focus on in the implementation phase emerged, and was further integrated with the views of physicians and NH administration, before the decision to focus on NEWS2 for the KT-project was made.

Ahead of the educational component, a start-up meeting between each nursing intervention home’s Head of institution and PDN with the PI will be organized to provide information about the educational component, its aims and target participants. Each Head of Institution will have the choice to send as many additional participants as they can afford, other than the expected participation of their PDN.

The final aspect of the educational component is to write an action plan for the implementation of NEWS2 in each of the intervention nursing homes. The Action plan template is developed based on the steps of the knowledge-to-action model, namely to identify and document the practice gap, to identify stakeholders, adapt the NEWS2 to the specific context, identify barriers and facilitators and finally to suggest actions to prepare their nursing homes for the implementation endeavor. During the implementation phase, the intervention homes will be facilitated by regular meetings with researchers. Additional ad hoc adaptations may occur, according to the needs expressed by the PDNs.

The control NHs will not partake in any of the intervention components.

Intervention Type
Mixed

Primary outcome(s)
Degree of implementation of NEWS2. Data will be extracted from individual Electronic Patient Journals (EPJ). Monthly baseline measures with NEWS2 for eligible residents and the level of use of NEWS2 in clinical indication.

Key secondary outcome(s)
none

Completion date
31/10/2020

Eligibility

Key inclusion criteria
Inclusion happened at the level of institution. Public nursing homes in a large municipality in Norway were eligible for inclusion.

Participant type(s)
Health professional

Healthy volunteers allowed
No

Age group
Mixed

Sex
All

Key exclusion criteria
1. Public nursing home conceptually different from the typical facilities (facility for independently living patients discharged extra early from hospital ("a bed on the way home from hospital")
2. Public nursing homes considered unfit to participate in this intervention (as decided by the Municipality's Division of Nursing Homes)

Date of first enrolment
18/12/2018

Date of final enrolment
10/01/2019

Locations

Countries of recruitment
Norway

Study participating centre
Kolstihagen sykehjem
Kolstibotn 6
Bergen
Norway
5098

Study participating centre
Øvsttunheimen sykehjem
Solåsen 42
Bergen
Norway
5223 Nesttun

Study participating centre
Odinsvei bosenter og sykehjem
Odins veg 106
Bergen
Norway
5221 Nesttun

Study participating centre
Søreide sykehjem
Grunnane 71
Bergen
Norway
5251 Søreidgrend

Study participating centre
Hordnestunet sykehjem
Hordnesvegen 127
Bergen
Norway
5244 Fana

Study participating centre
Frieda Fasmers Minne
Vadmyrveien 85
Bergen
Norway
5172 Loddefjord

Study participating centre
Ladegården sykehjem
Ladegårdsveien 65
Bergen
Norway
50333 Bergen

Study participating centre
Ulset sykehjem
Salhusvegen 20
Bergen
Norway
5131 Nyborg

Study participating centre
Arna helseheim
Utløbakken 4
Bergen
Norway
5260 Indre Arna

Study participating centre
Midtbygda sykehjem
Åsane senter 1
Bergen
Norway
5116 Ulset

Study participating centre
Sentrumssykehjemmene ved Engensenteret
Teatergaten 43
Bergen
Norway
5010 Bergen

Study participating centre
Åstveit sykehjem
Åstveitveien 1

Bergen
Norway
5106 Øvre Ervik

Study participating centre
Fyllingsdalen sykehjem
Dag Hammarskjøldsvei 98
Bergen
Norway
5144 Fyllingsdalen

Study participating centre
Lyngbøtunet Bo og servicesenter
Lyngbøveien 89
Bergen
Norway
5164 Laksevåg

Study participating centre
Løvåsen sykehjem
Løvåsveien 26
Bergen
Norway
5145 Fyllingsdalen

Study participating centre
Gullstøltunet sykehjem
Øvre Kråkenes 111
Bergen
Norway
5142 Bønes

Study participating centre
Skjoldtunet sykehjem
Skjoldvegen 19
Bergen
Norway
5221 Nesttun

Study participating centre
Slettemarken sykehjem
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Study participating centre
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Øvre Fantoftåsen 56A
Bergen
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5072 Bergen

Sponsor information

Organisation
Western Norway University of Applied Sciences

ROR
https://ror.org/05phns765

Funder(s)

Funder type
Research council

Funder Name
Norges Forskningsråd

Alternative Name(s)
Forskningsrådet, Norwegian Research Council, Research Council of Norway, The Research Council of Norway

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
Norway

Funder Name
Western Norway University of Applied Sciences

Funder Name
The Municipality of Bergen, Division of Nursing Homes

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are not expected to be made available. The reason is that we are collecting data from people with limited ability to consent and were exempted from the requirement of informed consent.

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		11/09/2024	12/09/2024	Yes	No
Other publications	intervention optimization	21/06/2021	24/06/2021	Yes	No
Other publications	qualitative exploratory study exploring the experiences of PDN	29/11/2021	08/01/2024	Yes	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes