

# 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?

<b>Submission date</b> 22/01/2020	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 19/03/2020	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 12/09/2024	<b>Condition category</b> Other	<input type="checkbox"/> 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?

Dr Birgitte Graverholt

Birgitte.Graverholt@hvl.no

### **Study website**

<http://www.impact.no> (lay language) and <https://app.cristin.no/projects/show.jsf?id=550905> (scientific)

## **Contact information**

### **Type(s)**

Public

### **Contact name**

Dr Birgitte Graverholt

### **ORCID ID**

<http://orcid.org/0000-0002-1145-3801>

### **Contact details**

Sollien 62B

Bergen

Norway

5096

+47 55585800

bgra@hvl.no

### **Type(s)**

Scientific

### **Contact name**

Dr Birgitte Graverholt

### **Contact details**

Sollien 62B  
Bergen  
Norway  
5096  
+47 55585800  
bgra@hvl.no

## **Additional identifiers**

**EudraCT/CTIS number**  
Nil known

**IRAS number**

**ClinicalTrials.gov number**  
Nil known

**Secondary identifying numbers**  
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

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

**Primary study design**  
Interventional

**Secondary study design**  
Cluster randomised trial

**Study setting(s)**

Other

**Study type(s)**

Other

**Participant information sheet**

This study was exempted from informed consent. We have Public announcements in each of the or each of the 19 included nursing homes. Not available in web format, please use contact details to request details of this information.

**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 measure**

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.

### **Secondary outcome measures**

none

### **Overall study start date**

01/12/2018

### **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

### **Age group**

Mixed

### **Sex**

Both

**Target number of participants**

14 nursing homes (7 per arm)

**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**  
Adolph Bergs vei 33  
Bergen  
Norway  
5089 Bergen

**Study participating centre**  
**Fantoft omsorgssenter**  
Øvre Fantoftåsen 56A  
Bergen  
Norway  
5072 Bergen

## **Sponsor information**

**Organisation**  
Western Norway University of Applied Sciences

**Sponsor details**

Høgskulen på Vestlandet  
Postboks 7030  
Bergen  
Norway  
5020  
+47 55585800  
post@hvl.no

**Sponsor type**

University/education

**Website**

<https://www.hvl.no/en>

**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

**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

## Publication and dissemination plan

Titles and plan for publication:  
"Optimizing an integrated KT intervention: A qualitative formative study to capture KT needs in nursing homes", May 2020.  
"The effectiveness of an integrated-KT intervention to implement NEWS2 in nursing homes", December 2020.

## Intention to publish date

01/12/2020

## 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?
<a href="#">Other publications</a>	intervention optimization	21/06/2021	24/06/2021	Yes	No
<a href="#">Other publications</a>	qualitative exploratory study exploring the experiences of PDN	29/11/2021	08/01/2024	Yes	No
<a href="#">Results article</a>		11/09/2024	12/09/2024	Yes	No