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Implementing a bladder bundle intervention in elderly patients undergoing hip fracture surgery

Submission date
07/12/2021

Recruitment status
No longer recruiting

Registration date
23/12/2021

Overall study status
Completed

Last Edited
07/07/2025

Condition category
Urological and Genital Diseases

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

Plain English summary of protocol

Background and study aims
A condition called urinary retention is also common after anesthesia, and can increase the likelihood of a urinary tract infection (UTI). Urinary retention means that the bladder does not fully empty during urination, leaving urine sitting in the bladder longer than is normal
Urinary retention and UTIs are common adverse events that can occur after surgery.
We aimed to test if an intervention aiming to improve healthcare workers' knowledge, attitude, and clinical practice related to patient safety measures, would affect bladder distension in elderly patients undergoing acute hip fracture surgery.

Who can participate?
Registered nurses and nurse assistants working in the units caring for elderly patients undergoing acute hip fracture surgery.

What does the study involve?
Health care worker (registered nurses and nurse assistants) education:
-Preventing bladder distension including the use of appropriate indications and removal plan. Timely bladder scan according to the national voiding monitoring schedule to detect urinary retention and residual urine.
-Infection prevention measures
-Refreshment of patient assessment tools related to evidence-based catheter indications.
-E-learning test (online education material, film (how to perform aseptic catheterisation on men and women, quiz and a simulation test with instructors).

What are the possible benefits and risks of participating?
Potential reduction in healthcare related adverse events in hip fracture patients.
Risks: none

Where is the study run from?
Institute of Health Care Sciences, Sahlgrenska Academy, University of Gothenburg (Sweden)

When is the study starting and how long is it expected to run for?
December 2016 to April 2020

Who is funding the study?
Göteborg University (Sweden)
University of Gothenburg Center for Person-Centred Care, GPCC (Sweden)
Landstingens Ömsesidiga Försäkringsbolag (Löf) (Sweden)

Who is the main contact?
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Contact information

Type(s)
Scientific

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Additional identifiers

Clinical Trials Information System (CTIS)
Nil known

ClinicalTrials.gov (NCT)
NCT02983136

Protocol serial number
Nil known

Study information

Scientific Title
Theory driven implementation intervention co-creation of innovations to reduce bladder distension and urinary tract infections in elderly patients undergoing hip fracture surgery

Study objectives
A theory driven implementation intervention based on organisational learning, culture, and dialogue might reduce the incidence of bladder distention in elderly patients undergoing acute hip-fracture surgery.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 18/05/2018, Regional ethics review board (Box 401, SE 405 30 Gothenburg, +46 31-786 68 21), ref: 166-15 and amendment 327-17

Study design
Single centre longitudinal implementation intervention

Primary study design
Interventional

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Prevention of bladder distension in elderly patients undergoing acute hip-fracture surgery

Interventions
The implementation intervention addressed healthcare worker specific culture related to preventing bladder distension. The process consisted of:
-A logic model with the pre-planning of the intervention to identify enablers and barriers and set out goals.
-Selection of facilitators within the involved units.
-Creating a safe place for learning (called learning labs) through dialogue
-Co-creation of the nurse-driven protocol
-Introducing the national residual monitoring schedule. Bladder scanning with a tighter time interval.
-Educational meetings and learning in dialogue.
-Feedback on patient outcome

For evaluating the effect of the intervention on patient outcomes, data from the hospital's quality registry was used.

Intervention Type
Behavioural

Primary outcome(s)
Bladder distension (yes/no). Measured over five years using patient records on patients admitted for acute hip-fracture surgery.

Key secondary outcome(s))
Weekly reviews of the nurse-driven urinary catheterisation protocol were performed by two of the facilitators to ensure correct indications and removal plan for catheter treatment.
1. Urinary catheter-associated infections during hospital stay, Yes/No.
2. Registered nurses documented indication, yes/no
3. Registered nurses documented removal plan, yes/no
4. Involving patient in the catheter utilization, yes/no

5. Consulting a colleague to ensure appropriate indication, yes/no
6. Physician documented indication, yes/no
7. Physician documented removal plan, yes/no

Completion date
30/04/2020

Eligibility

Key inclusion criteria
Registered nurses and nurse assistants working in the emergency department, operating department, ortho-geriatric wards, postoperative care unit and intensive care unit

Participant type(s)
Health professional

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Total final enrolment
400

Key exclusion criteria
Registered nurses and nurse assistants caring for hip fracture patients in the orthopaedic ward.

Date of first enrolment
10/01/2018

Date of final enrolment
31/12/2018

Locations

Countries of recruitment
Sweden

Study participating centre
Mölndals hospital, Sahlgrenska university hospital, Sahlgrenska academy
Göteborgsvägen 31
Mölndal
Sweden
SE, 4431 80 Mölndal

Study participating centre
Institute of Health Care Sciences, Sahlgrenska Academy, University of Gothenburg
Arvid Wallgrens backe 1
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SE, 413 46 Gothenburg

Sponsor information

Organisation
University of Gothenburg

ROR
https://ror.org/01tm6cn81

Funder(s)

Funder type
University/education

Funder Name
Centrum fÖr Personcentrerad Vård

Alternative Name(s)
Centre for Person-centred Care, GPCC

Funding Body Type
Private sector organisation

Funding Body Subtype
Universities (academic only)

Location
Sweden

Funder Name
Landstingets övergripande försäkringsbolag (LÖF)

Results and Publications

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request (maria.frodin@gu.se)

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		12/10/2022	13/10/2022	Yes	No
Results article	Economic evaluation	03/07/2025	07/07/2025	Yes	No
Interim results article	Experiences	04/01/2018	20/06/2022	Yes	No