

Improving Preoperative Hip Fracture Care

In 2019 the Care of Older People Clinical Network (COPCN) partnered with five hospitals to address variation in the care of hip fractures focusing on pre-operative care. The project implemented a best practice hip fracture pathway for preoperative hip fracture management, to improve patient care and promote timely surgery.

BACKGROUND

Hip fractures place considerable burden on the wellbeing of the individual, their family and carers. Research has shown that surgery occurring within 48 hours of the fracture decreases mortality and perioperative complications, and surgery within 24 hours leads to better mobility and functional outcomes¹.

To address variation in hip fracture management in Victorian hospitals and to decrease time to surgery, an expert working group of two consumers and 23 clinicians was formed in June 2018. They developed a best practice pathway for pre-operative care, based on the Australian Commission of Safety and Quality in Health Care Hip Fracture Clinical Care Standard. This pathway outlines 7-time critical actions to promote high quality patient care and support timely surgery.

AIM

By September 2019, 95 per cent of patients at participating sites presenting with hip fracture will receive surgery within 24 hours.

IMPROVEMENT APPROACH

The Institute for Healthcare Improvement's (IHI) Model for Improvement was used as the quality improvement framework. Four learning sessions were held to teach skills in improvement science and facilitate collaboration. An action period was held between each learning session. Sites identified and tested change ideas to influence their process measure of focus. Monthly action period virtual calls were held for sites to collaborate and highlight progress made, brainstorm solutions to barriers, and learn about improvement science.

Results at a glance

Outcome measure

Percentage of patients per week with suspected hip fracture who received surgery within < 24 hours of arrival.

Process measures

Percentage of patients per week with suspected hip fracture who received:

- a pain assessment on presentation
- analgesia < 30 minutes upon arrival
- a goals of care discussion pre-operatively
- a nerve block < 2 hours of arrival
- an x-ray < 60 minutes of arrival
- a pre-operative cognitive screen using a validated tool
- an orthogeriatric or medical physician review pre-operatively.

Results

Increase in per cent of patients receiving surgery within 48 hours from 81 to 88 per cent.

Decrease in median time to surgery from 26.28 hours to 19.98 hours at project completion.

Other outcomes

Increased clinician knowledge and understanding of improvement science and use of PDSA cycles

KEY IMPROVEMENTS

Successful change ideas

The sites tested numerous change ideas and collected data to measure if the changes led to improvement. Improvements were seen across participating sites in the various process measures they elected to focus on during the project. Successful change ideas included:

- A nurse education program on how to administer the 4AT
- An amendment to the hip fracture pathway with a checkbox for 4AT completed
- Consistent orientation of new orthogeriatricians and their registrars of their role in pre-operative review and completing the Goals of Care for the patient
- Visual alert for the orthogeriatrician on the ward patient journey board.

Effective communication of the project goals and real-time data to the clinicians on the floor, and the executive sponsors also led to improvement in the process measures.

RESULTS

Data was collected from March 2019 to September 2019. Improvement was seen in the percentage of patients with suspected hip fracture who received surgery within 48 hours as a total of all five participating sites. At the start of the project the median percentage of patients with suspected hip fracture receiving surgery within 48 hours was 81% which increased to 88% upon completion of the project.

This median increase of 7% is the equivalent of 69 more patients receiving surgery within 48 hours compared to the beginning of the project.

Participating sites noted improvements across their elected process measures, with improvements seen in the use of cognitive screening tools, percentage of patients seen by an orthogeriatrician preoperatively and percent of patients with suspected hip fracture who receive an x-ray within 60 minutes of arrival.

KEY LEARNINGS

Key learnings from this project include:

- process measures will show improvement before outcome measures
- low patient numbers can mean change takes longer to demonstrate
- ensure your project team has representation from the area it aims to influence change
- involve quality improvement advisors and frontline clinicians in your project team early as they can influence change
- don't rely on one person to lead all of the changes, share the load
- be cautious about duplicating data collection (hard copy and electronic) as this can cause errors

NEXT STEPS

Future improvement work is recommended to implement the postoperative aspects of the Hip Fracture Clinical Care Standards in Victorian healthcare services.

REFERENCE

¹ Klestil, T., Roder, C., Stotter, C., Winkler, B., Nehrer, S., Lutz, M., Klerings, I., Wagner, G., Gartlehner, G. & Nussbaumer-Streit, B. (2018). Impact of timing of surgery in elderly hip fracture patients: a systematic review and meta-analysis. *Sci Rep*, 8: 13933.

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