



Case study: Improving KPI7: secondary fracture prevention, 120 day follow up and prescribing bone protection medication

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Background

Our local NHFD data for KPI7 demonstrated we were significantly below the national average for bone protection medication after a fracture - 24.9% compared to NHFD average of 41% (2023).

We were not following up any patients at 120 days post fracture due to lack of resources. Leicestershire does not have a Fracture Liaison Service and due to financial pressures, patients with hip fracture have not been receiving follow-up at 120-day since 2019. Follow up was previously undertaken via phone call.

The [national consensus document](#) published in July 2023 promoting the use of intravenous Zoledronic Acid (IV Zol) as a first-line treatment option kickstarted our Quality Improvement Project (QIP).

Aim

Our Quality Improvement Project (QIP) had 3 focus areas:

1. To introduce a new guideline for IV Zol as a first-line treatment after fragility hip fractures.
2. To streamline our data collection process.
3. To (re)introduce 120-day-follow-up (FU) to gather feedback for service improvement and support KPI7 performance.

Process

We formed a multidisciplinary action group, which was supported by senior management in trauma and orthopaedics, as well as a Quality Improvement Lead. The group consisted of a Consultant Orthogeriatrician and Registrar, Specialist Discharge Matron and an Advanced Specialist Pharmacist and support from a QI Lead

The orthogeriatrician team reviewed their local bone health prescribing data and decided to develop a new prescribing guideline to include rapid Vitamin D replacement for use within the trauma and orthopaedic unit.

A quality improvement approach was applied using Quality improvement method 6C methodology with the aim to improve our performance for KPI7 to the NHFD average by June 2024.

6C methodology

Concern/Aim: What are we trying to achieve

Current situation: How will we know a change is an improvement

Cause: What change can we make that will result in improvement

Countermeasures: PDSA cycle and improvement actions

Control methods: To maintain improvement

Cost improvement Programme: has the improvement made saved money

The first phase was to examine our current practice and promote the use of IV Zol as a first-line treatment option. This required collaboration with colleagues in the community hospitals, day-case units, and the orthopaedic wards.

Educational sessions were held and a checklist for IV Zol prescribing was introduced for use in the medical notes. The national consensus document was shared with all doctors and advanced nurse practitioners caring for patients with hip fracture, starting in December 2023.

An updated guideline for the use of IV Zol was approved in March 2024 by the Clinical Guideline Group.

We also generated a regular EMED (electronic prescribing system in the community hospitals) list of patients who had IV Zol administered to support our audit data submission and we used control charts to monitor change in the percentage of patients receiving IV Zol. The EMED system generates a fortnightly report for us that we can use to check the infusions were given as planned.

The platform we use for text messaging is accuryx. The feedback is that this takes small amounts of time to send out and collate making it an option with limited resource time and manpower.

We send questionnaires to all those eligible post hip fracture (at 120 days) via a mobile phone contact number

We utilised the questionnaire on the NHFD and customised it so we now get information about

1. Bone treatments they have changed to or confirm if still taking
2. Information about mobility status and readmissions to hospital
3. Feedback comments to help us find themes for improvement/action: for example we have found that pain relief could be improved upon and are looking to do some work on our fascia iliac nerve block rates
4. If they would recommend our service to their family or friends


In terms of the statistics the text messaging system uses the NHS spine so is sent via mobile phone number on the patients NHS record

Outcomes

Intravenous Zoledronic Acid is now being used as a first-line treatment option in both our acute hospital and community rehabilitation units. Rates of patients receiving appropriate secondary fracture prevention treatments have increased, with the latest figures now above the national average: 58.7% in May 2024, compared to 21.7% in May 2023.

The text messaging pilot is ongoing, and we are optimistic about its impact on our understanding of patient outcomes post-fracture and its potential for feedback and service development.

We have achieved our goal of offering more patients treatment to reduce the risk of further fractures. Working with data has been highly effective, and the feedback from colleagues has been very positive for



morale. The use of the text messaging follow-up questionnaire has provided valuable insights into our patients' experiences.

Collaborating closely with the quality improvement team and meeting regularly to monitor progress was key to delivering this work.

Using local data to drive improvements has proven to be highly effective for us. Forming a small stakeholder group that fed into our wider hip fracture group also enabled us to work in an agile manner.

Our next steps are

1. to consider sending postal questionnaires to those who don't have a mobile contact
2. Analyse themes from the free text feedback and report them to our monthly hip fracture meeting for action e.g. fascia iliac block rates and review of analgesic protocols etc

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