

Improving the Pathway for Older Patients with Rib Fractures: A Multidisciplinary Quality Improvement Initiative

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Introduction

Rib fractures in older adults are associated with significant morbidity, prolonged hospital stays, and increased risk of complications. Baseline stakeholder reviews identified variation in ward allocation, inconsistent pain management and fragmented multidisciplinary involvement. Care Pathways have been shown to improve outcomes for older patients (Jarman et. al, 2022). This project aimed to re-establish a coordinated MDT pathway to improve the care of patients >65 with rib fractures.

Aims

- To improve pain management and increase access to regional anaesthesia
- Ensure frailty-appropriate ward allocation
- Strengthen bone protection assessment and treatment
- Standardise MDT involvement across the pathway
- Establish consistent, cross-specialty audit processes to support ongoing improvement

Methodology

Standards were agreed across all specialties as part of the pathway design and audit planned to determine compliance:

- Emergency Department: early identification of patients >65 with rib fractures, rib fracture scoring to determine pathway (Cardiothoracics or dedicated Geriatric Ward), prompt analgesia
- Pain Team: timely review; increased use of regional anaesthesia; management algorithm
- Therapies: assessment <24 hours, ongoing review for 72 hours
- Orthogeriatrics / Bone Health: assessment of osteoporosis risk; initiation of bone protection where indicated, falls assessment

Discussion

The introduction of a co-ordinated MDT pathway has led to measurable improvements in several areas, including increased use of regional anaesthesia and early engagement of specialist teams. However, the project also highlighted significant variation in baseline audit activity across specialties. Data were collected inconsistently, often for different purposes, and not aligned to a shared set of standards. This limited the ability to fully evaluate pathway performance and compare outcomes over time.

Despite these challenges, the process of reviewing historical data helped re-engage stakeholders and re-establish a shared focus on older adults with rib fractures. The improvements observed to date reflect both the renewed MDT collaboration and the early impact of the new standards. Continued progress will depend on strengthening data collection processes and embedding routine audit across the pathway.

Conclusion

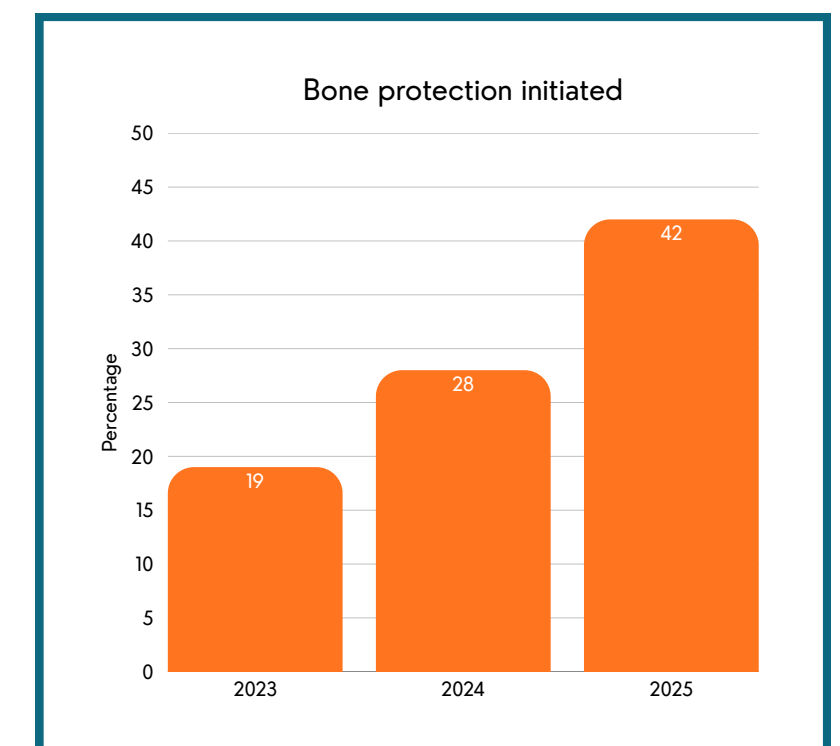
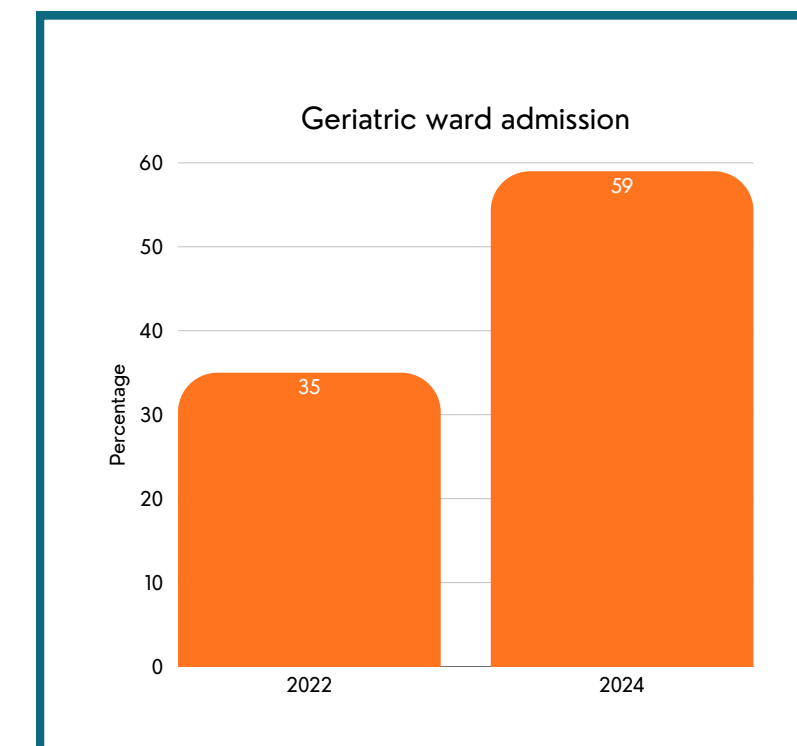
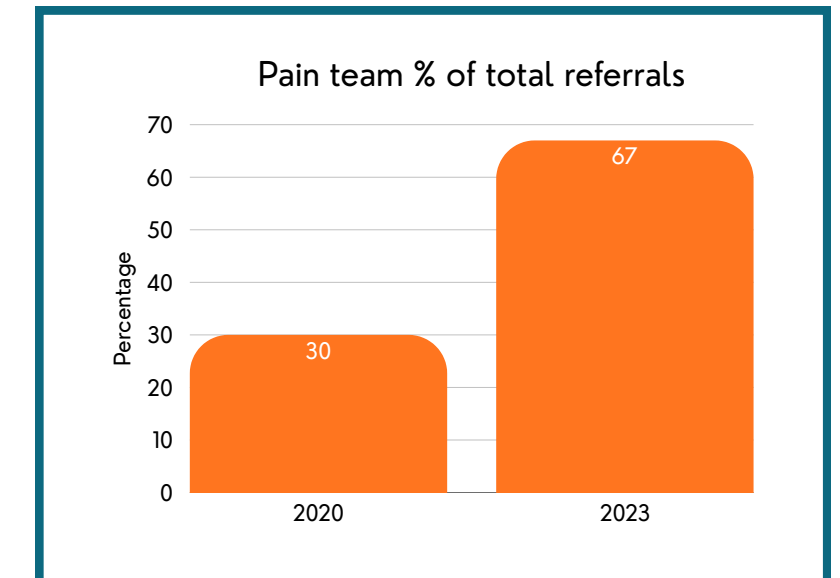
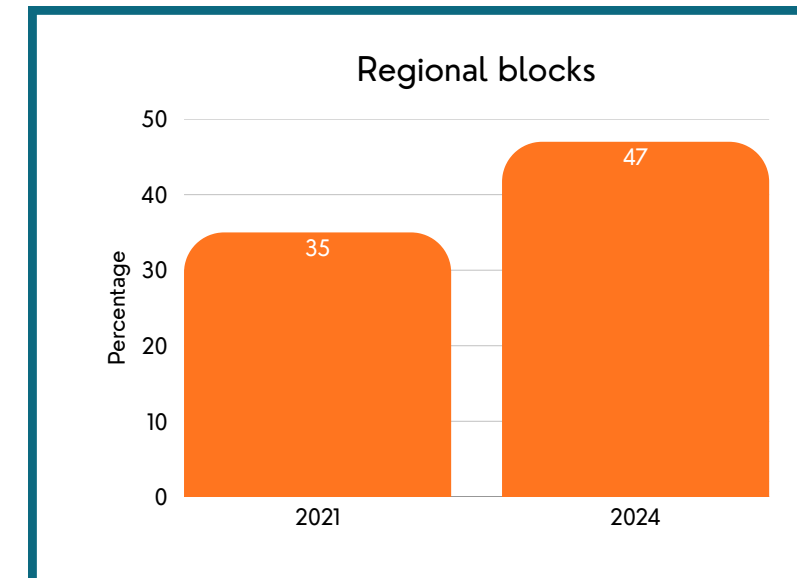
The re-established MDT pathway for older adults with rib fractures has already led to improvements in analgesia, ward allocation, and multidisciplinary engagement. By strengthening collaboration and embedding consistent standards, the pathway is now better positioned to deliver safer, more reliable care. Continued audit and iterative improvement will be essential to sustaining progress and refining the pathway further.

Results/Findings

- A 3-month audit in 2023 highlighted that FRAX scoring and initiation of bone protection was poor with wide variation in ward allocation. Repeat audits in 2024 and 2025 showed improvements and discussions helped re-engage stakeholders.
- Pain team data (2020–2024) were collected for a peer review rather than pathway specific. However, pain team cover expanded to 6 days, increasing the total number of rib fractures seen and achieving 40% for same day review. The analgesic algorithm was changed to be 'frailty-focused'.

Service insights

- Audit activity inconsistent across specialties
- Data collected at different time points and for different purposes
- No trust guidelines for bone protection and no Fracture Liaison Service
- 6 month therapy audit commenced in December 2025.
- ED data incomplete due to TARN system issues and lack of rib-fracture-specific coding.
- Complications and LOS part of National Audits [ERASER trial (Veenith, 2022), NCEPOD]



Future plans

- Develop local guidelines for bone assessment and management for all fragility fractures
- Strengthen communication between specialties to ensure consistent application of the new standards
- Establish a unified, cross-specialty audit schedule with standardised data definitions
- Improve ED coding to reliably identify patients >65 with rib fractures
- Continue the therapy audit through 2026 and integrate findings into pathway updates
- Plan PDSA cycles focusing on analgesia timing, frailty-appropriate ward allocation, and bone protection

References

Jarman, H., Crouch, R., Halter, M., Peck, G., & Cole, E. (2022). Provision of acute care pathways for older major trauma patients in the UK. *BMC geriatrics*, 22(1), 915. <https://doi.org/10.1186/s12877-022-03615-1>

Veenith, T. (2022). A two-arm pragmatic randomised control trial comparing the clinical and cost-effectiveness of serratus anterior plane block (SAP) in reducing the rate of respiratory infections 5 days post randomisation in patients with multiple rib fractures (MRF) when compared with the usual care in the NHS trauma setting. <https://doi.org/10.1186/ISRCTN16156075>