Major Trauma in Older People
British Geriatrics Society
Improving healthcare for older people
19 May 2026
IET Austin Court, Birmingham & Online
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Areas for Improvement in the Treatment of Fall-Related Intracranial Bleeding in Older Adults

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INTRODUCTION

Complications arising from head injuries obtained during falls, particularly intracranial bleeds (ICBs), are a **major cause of morbidity and mortality** in older people[1,2]. For older adults, the **most common mechanism of injury** leading to ICBs is falling[3], and these fall-related bleeds often lead to significant **long-term disability**[4]. How does our practice compare to guidelines[5], what difference does it make, and how can we improve?

OBJECTIVE

To compare practice to national guidelines relating to managing fall-related ICBs in older adults, and by doing so identify areas for improvement.

DATA COLLECTION + ANALYSIS METHODOLOGY

Identification
97 patient records from data quality team identified → 13 records excluded for lack of head injury or ICB

Data Cleaning
84 patients with head injury + ICB
100 variables collected for each patient
Data converted to quantitative scales / one-hot encoded

Analysis
Analysis in **Python v3.12.13** with numpy, pandas, and matplotlib/seaborn

Residence
0 = home
1 = assisted living
2 = home + carers
3 = residential home
4 = nursing home
(post) 5 = EOLC
(post) 6 = terminal event

Fall height
0 = unknown
1 = < standing
2 = standing
3 = > standing

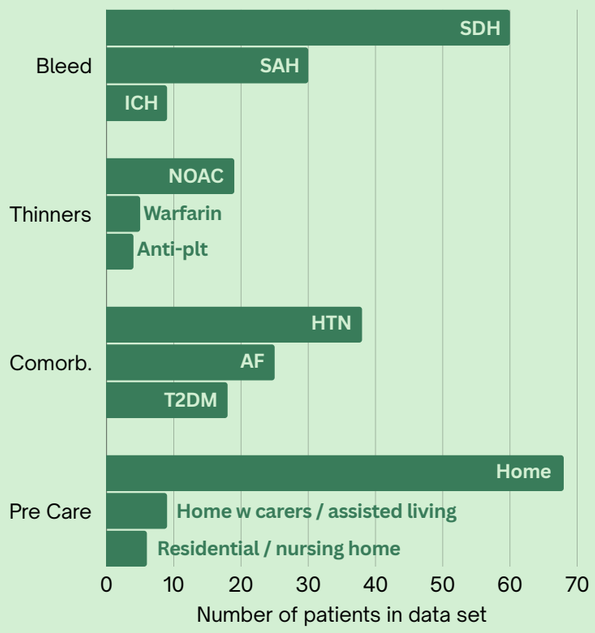
Mobility aids
0 = none
1 = aids to walk
2 = wheeled or transfer only

Dependence level of ALDS
0 = Independent
1 = carer less than OD e.g cleaners or carer
2 = carer OD/BD
3 = carers TDS or more

RESULTS/FINDINGS

Demographics

50 women, 34 men. Average age 82.8 ± 8.5



19 palliated, **11 died in hospital.**

Transfer to Neurosurgery

NG232 1.8.1

"Transfer would benefit anyone with a GCS <8 irrespective of the need for neurosurgery"

Finding: No patients with a GCS <8 were transferred. All 5 patients with GCS <8 received senior review and neurosurgical discussion. None were transferred; 4 received palliative care.

TXA

NG232 1.3.17

"For people with a head injury and a GCS <12 with no active extracranial bleeding, consider 2g IV TXA"

Finding: 56% of eligible patients did not receive TXA

Analgesia

NG232 1.3.11

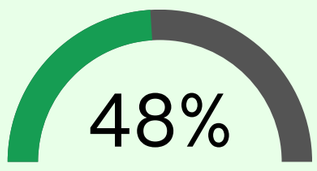
"Manage pain effectively because it can lead to a rise in ICP"

Finding: Only 2 patients were not given adequate analgesia.

Time to CT head

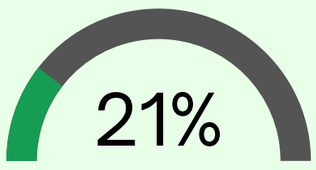
NG232 1.5.9

"Do a CT head scan within 8 hours of the head injury, or within the hour for someone presenting more than 8 hours after the injury."



Head CT within the correct time

Head CT within 1 hour (of those who met criteria)



Does it matter?

Overall, 46% of patients' care fully met national guidelines

Relative risk of...

Reduction in independence	> Median length of stay	Delirium in hospital
1.22	1.27	1.91

When comparing patients whose care met guideline to those for whom it did not.

HOW CAN WE IMPROVE CARE?

- Root cause analysis for CT head timings, TXA decisions and neurosciences transfers
  - target transfer rates for non-neurosurgical candidates
  - prioritise clear CT head timing decision at clerking
  - increase rate of prescribing of TXA at clerking for GCS <12
- Clear local guidelines explaining management policy for non-transfer patients.

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1. Office for National Statistics (ONS), released 20 May 2025, ONS website, statistical bulletin, Death registration summary statistics, England and Wales: 2024
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