National Audit of Inpatient Falls (NAIF)

Interim annual report

Spring 2021
Foreword

In 2018 I joined the RCP Falls and Fragility Fracture Audit Programme (FFAP) as a member of the Patient and Carer Panel. FFFAP comprises three workstreams, the Fracture Liaison Service Database (FLS-DB), the National Audit of Inpatient Falls (NAIF) and the National Hip Fracture Database (NHFD) with each having input from members of the Patient and Carer Panel. I decided to get involved with the NAIF workstream which provides information on inpatient hip fractures for the public, patients and carers in addition to reports for clinicians and healthcare stakeholders.

All FFFAP activities are guided by a proactive and engaged Patient and Carer Panel. I am one of the two panel members who sit on the NAIF advisory group and we have both actively contributed to the development of the NAIF audit datasets and reports. Following the 2020 report, the patient panel conceived, designed and led the development of a resource for hospital governors and non-executive directors. The NAIF resource, in the form of an infographic and animation, presents the findings of the report and gives suggestions for questions to ask to ensure good quality fall prevention and management in an organisation.

FFAP’s public information on hip fracture has been collated into a single online resource for carers.

My experience of being one of two Patient and Carer Panel representatives on NAIF has been very positive. I am of the view that another perspective often highlights areas that may need to be addressed. This has very much been the case within the NAIF project. My contributions and those of my fellow Patient and Carer Panel representative, Sue Doyle, have always been welcomed and seriously considered.

The effort put into ensuring that the audit is able to collect transparent data from NHS trusts and health boards is impressive as is the way data is analysed and presented in the annual report. All in all, it is an invaluable tool for identifying good practice in the care of individuals who sustain hip fractures while inpatients.

All of us have had our plans for 2020 drastically altered by COVID-19 and NAIF has not escaped its impact. At the start of the first wave, submission of audit data was made non-mandatory so that frontline healthcare professionals could focus on the acute COVID-19 response. To help organisations catch up with data inputting, NAIF extended the clinical audit deadline to the end of 2020. This means that instead of publishing a single report combining clinical and facilities data, this report focuses solely on facilities data and the clinical data report will be published in autumn 2021.

Despite its narrower focus, I invite you to read this year’s report as good practice in the care of individuals who sustain inpatient hip fractures continues to be demonstrated from the data provided by trusts and health boards throughout England and Wales.

Maggie Fielding, Patient and Carer Panel member
Report at a glance – key messages

This report covers 2020 England and Wales facilities audit data and is supported by National Hip Fracture Database (NHFD) clinical audit data from 1 January to 31 December 2019.

There was a slight reduction in the proportion of organisations participating in the audit compared with last year (74% vs 77%). This is still very encouraging in the context of the challenges posed by COVID-19.

The use of fall risk screening tools has increased (40%) compared with last year (32%).

In accordance with NICE guidance, organisations should not use screening tools and instead use multi-factorial risk assessment for all inpatients over the age of 65.

Seven-day access to walking aids has improved (64% of organisations) compared with last year (57% of organisations).

In a question asked for the first time, we found that half of organisations mandate training on the subject of falls for all frontline staff.

This is supported by data demonstrating more inpatient hip fractures recorded in the NHFD (n=2,016) than reported falls with severe harm (n=1,553) in the same reporting timeframe.

161 organisations (74% of those eligible) participated in this audit by submitting facilities audit data. There were 2,016 inpatient hip fractures reported in the NHFD during this period.

Hip fractures sustained in an inpatient setting continue to be associated with poorer outcomes including a two-fold increase in 30-day mortality.

Slightly fewer organisations claim to report all inpatient hip fractures as severe harm compared with last year (70% in 2020 compared with 76% in 2019).
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Recommendations

Clinical (for clinical teams)
1. Do not use screening tools to identify people at high risk of falls. Instead, offer a multi-factorial falls risk assessment (MFRA) to those over 65, and others over 50 who may be at higher risk.
2. Assessment and provision of appropriate walking aids must be available for all newly admitted patients, 7 days a week.

Organisational (for trust and health board executive teams)
3. Ensure your trust or health board participates in NAIF by registering and providing audit data.
4. Ensure availability on all sites of equipment to safely move patients with suspected spinal injury or hip fracture from the floor.
5. Record inpatient hip fractures as ‘severe harm’ in national reporting and learning systems.
6. Ensure your trusts or health board has a patient safety group which:
   > includes falls prevention in its remit
   > is overseen by a member of the executive and non-executive team
   > regularly reviews data on falls including harm and deaths
   > assesses their practice against the trends in falls, harm and death rates from falls and reports and discusses these outcomes with the board.
7. Ensure training in the assessment, prevention and management of inpatient falls is provided for relevant staff groups.

Background

Falls are the most common incident affecting hospital inpatients, and one of their most serious consequences is a hip fracture. A hip fracture is a painful and distressing injury and can be associated with poor outcomes including loss of mobility and independence, so that 30% of those who sustain the injury fail to return to their home or even die.¹

In our 2020 report we highlighted that inpatient hip fractures were associated with a greater risk of institutionalisation and higher mortality compared to hip fractures sustained out of the hospital; reflecting the fact that inpatients tend to be frailer or more acutely unwell. However, better post fall management could improve outcomes for this patient group.

The previous clinical audit assessed performance against NICE quality standard 86 and found that in England and Wales just under half of people who had an inpatient hip fracture were effectively assessed for injury before movement. Only 20% were moved from the floor using appropriate flat lifting equipment and just over half were reviewed by a doctor within 30 minutes of the fall. We recommend that trusts and health boards seek to improve performance against these standards, as they will be NAIF key performance indicators (KPIs) in the next clinical report.

In April 2020, due to the COVID-19 pandemic, submission of audit data was made non-mandatory. To help organisations catch up with data inputting we extended the clinical audit deadline to the end of 2020. This means that instead of publishing a single report combining clinical and facilities data, this interim report describes facilities data and further analysis of inpatient hip fractures from the NHFD. Clinical data will be published in a separate document in autumn 2021.
Quality improvement case study

The National Audit of Inpatient Falls (NAIF) team at Birmingham Healthcare NHS Trust is led by April Hawkins, deputy director of nursing.

The team in Birmingham have taken several steps to improve falls prevention and post-fall care over the last year. A key quality improvement initiative the team undertook was to focus on one area of the trust that they had identified as having abnormally high falls rates in comparison with similar units in the trust, an intermediate care unit.

The quality improvement work involved several initiatives with the impact of each quality improvement change being analysed using falls reporting charts, and latterly the NAIF Statistical Process Control charts.

Education was a central focus for the improvement work. The team found that there was a lack of understanding amongst staff regarding medication that would increase the risk of falls. As a result, the team worked with the pharmacist to identify which medications were associated with a higher risk of falls. An aide memoire was signed off by the medical safety committee and shared across the staff team. This project along with other complimentary quality improvement work throughout 2020 coincided with a reduction in falls rates in the period from April 2020 onwards. The team have a clear and consistent approach to reporting on falls and Statistical Process Control charts showed a drop in falls rates across the trust.

An engaged multidisciplinary team and strong leadership were highlighted as the key drivers in enabling the improvements described. The ward manager and matron in the intermediate care unit were involved in the process and supportive of new initiatives. The local inpatient falls audit team at Birmingham Healthcare NHS Trust are continuing this improvement work, despite the challenges COVID-19 presents throughout 2020 and into 2021.

Methods and case ascertainment

Analysis of 2019 data from the National Hip Fracture Database

Data from the National Hip Fracture Database (NHFD) collected in 2019 were used in two ways in this report (cohort: England and Wales):

1. To compare performance and outcomes between patients who sustained an inpatient hip fracture (IHF) and those who fractured elsewhere (non-IHF). This repeats the analysis performed on the 2018 NHFD data presented in the 2020 NAIF report.

2. To use alongside data submitted from the facilities audit to:
   a. Compare the IHFs recorded in the NHFD with the number of falls with severe harm reported by each trust and health board.
   b. To evaluate the feasibility of reporting an adjusted IHF rate for each trust and health board. This would enable us to identify and contact trusts and health boards with high and low IHF rates.
For more information on the NHFD visit: www.nhfd.co.uk.

The facilities audit

All trusts and health boards in England and Wales were invited to provide data about their organisation; this includes information about policies and protocols as well as leadership and service provision relating to falls management at the time of submission. Facilities data also included figures for occupied bed days, proportion of admissions by age group and falls reported to national reporting systems between 1 Jan to 31 December 2019. Data submission took place between March and August 2020.

Analysis of 2019 NHFD data

Outcomes and KPIs in inpatient hip fractures (IHFs) compared with non-inpatient hip fractures (non-IHFs)

The previous NAIF report demonstrated that people who had an IHF following a fall were frailer and more likely to have cognitive impairment. We have confirmed these findings using 2019 NHFD data and in addition found that those who sustained an IHF following a fall had a significantly longer length of stay (16 days (interquartile range 9–26) cumulative frequency 12 (interquartile range 8–18) for non-IHF) and double the 30-day mortality (14.7% cumulative frequency; 6.2% for non-IHF).

The reasons underlying this increased mortality were discussed in the previous report and in part reflect a frailer more acutely unwell population. The acuity of this group is confirmed by findings that patients with IHF were more than twice as likely to have their surgery delayed by a need for medical review, investigation or stabilisation compared to non-IHF (13.6% cf 6.3%). However, there may be factors relating to post-fall management that are unique to IHFs that also contribute to these poor outcomes.
Comparing reporting to national systems with NHFD inpatient hip fracture data

In the facilities audit, we requested information about falls entered into national reporting systems (eg NRLS in England). We asked each trust and health board for numbers of falls and falls with severe harm reported during 2019.

Falls rates in different trusts and health boards depend on a complex combination of reporting culture, individual trust characteristics (demographics and environment) as well as effective preventative activity. Therefore, NAIF will not be publishing comparative trust level falls data in this report.

NAIF recommends that all IHFs be reported as a ‘severe harm’. Data from the 2020 clinical report suggests that around a third of IHFs are not recorded as such. Comparing falls with severe harm reported to national learning systems to IHFs registered in the NHFD, provides another avenue by which the adequacy of harm reporting can be evaluated.

Since not all trusts and health boards are registered with the NHFD (ie those without an orthopaedic trauma unit), we could only perform these analyses using trusts and health boards registered with the NHFD. Next year, we plan to use the fall location data from NHFD and NAIF and include all trusts and health boards in this analysis.

Reported inpatient falls

Inpatient falls data were available from 153 trusts and health boards. In 2019, a total of 189,717 inpatient falls were reported across England and Wales. There were 2,016 inpatient hip fractures recorded in the same trusts and health boards by the NHFD. This suggests that just over 1% of inpatient falls result in a hip fracture.
Reported inpatient falls with severe harm

Data for these analyses were available from 152 trusts and health boards. A total of 1,553 falls with severe harm were reported in 2019. Since this figure is only three-quarters of the total figure for IHFs registered on NHFD by the same trusts and health boards (n=2,016), it is clear that not all inpatient hip fractures are being reported as causing severe harm, and that other forms of injuries must also be being missed by severe harm reporting (see figure 2).

NAIF continues to recommend that all inpatient hip fractures are recorded as severe harm in national reporting systems.

<table>
<thead>
<tr>
<th>Reported falls with severe harm</th>
<th>1,553</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHFs on the NHFD</td>
<td>2,016</td>
</tr>
</tbody>
</table>

Figure 2. Difference between reported falls with severe harm and IHFs

Calculating inpatient hip fracture rates

Occupied bed day (OBD) data and IHFs registered in the NHFD for 2019, were used to calculate an inpatient hip fracture rate (IHFR) per 1,000 OBDs for each trust. The mean IHFR was 0.06 per 1,000 OBDs, but rates varied between trusts and health boards from 0.007 to 0.16 per 1,000 OBDs. We expected some of this variability to be explained by the proportion of older inpatients and therefore studied IHFRs by proportion of admissions aged over 75. This does appear to be one explanatory factor as trusts and health boards with above average proportions of admissions for people aged over 75s had higher IHFRs.

However, data completeness and accuracy for OBD data was inadequate and it was not possible to link the hip fracture data for trusts and health boards without a hip fracture unit. Therefore, more work is needed before IHFR data can be presented as part of a NAIF report. Nevertheless, measurement of IHFR shows promise in being able to identify trusts and health boards with very high or low rates. See the additional methods paper (appendix) for more information as to how the quality of IHFR data was analysed and how it might be used in the future.

The facilities audit

Key performance indicator 1 – participation in NAIF

In 2020, 161 (74%) of the 215 eligible trusts and health boards completed the facilities audit and registered with NAIF. This is slightly lower than the 77% (168/217) who participated in 2019.

In England, 86% of acute trusts (n=112), 67% of community trusts (n=10), 38% of mental health trusts (n=3) and 8% (n=1) of specialist trusts participated. In Wales, all but two health boards (71%; n=5) took part. The definition of trust type is continuously changing with English trusts moving to an integrated approach that includes a combination of acute, community and/or mental health care. Therefore, a new category of integrated trust was included this year and 68% (n=30) of this trust type participated in NAIF (see figure 3). Twenty-one trusts and health boards
took part last year but not in 2020. However, there were 15 trusts who joined for the first time in 2020.

In our last report, our stated aim was to increase participation to 100% of all acute, 90% of community and 80% of mental health trusts. Participation in 2020 has been negatively impacted by COVID-19 across all the trust types. However, by the end of 2020, registration had already achieved these targets. We are confident that registered trusts and health boards will submit facilities data in 2021, providing that any disruption from further COVID-19 waves is no worse than that in 2020.

**Policies and procedures**

Most health boards and trusts (89%) have written information about falls made available for patients and families. This is unchanged from last year. However, in 2020 a ‘spot check’ was carried out in 25% of wards to determine whether the written information was readily available. Twelve per cent of trusts and health boards reported that written information was not available at any location while 36% found it in all the wards visited (see figure 4). Availability of written material may have been affected by infection control measures implemented to curb the spread of COVID-19. Also, some may be printable from trust sites.

**Recommendation 3**

Ensure your trust or health board participates in NAIF by registering and providing audit data.
Figure 5. Responses collected in the facilities audit: comparison of changes in percentage points (pp) from last data collected in 2019 and those reported in 2020

- **Screening tool**: 40% of facilities use a screening tool to identify those at high risk of falls – against NICE (CG161) guidelines. 
  - **Change**: +8pp from last year.

- **Assessing system**: 37% have a system for assessing the extent of the gap between actual and reported falls. 
  - **Change**: +8pp from last year.

- **Severe harm**: 70% report severe harm with regards to reporting of falls resulting in hip fracture. 
  - **Change**: -6pp from last year.

- **Bedrail use**: 52% report an audit of the clinical appropriateness of bedrail use for individual patients has been undertaken in the past 12 months. 
  - **Change**: +9pp from last year.

- **Walking aids**: 64% report access to walking aids is available for newly admitted patients 7 days a week. 
  - **Change**: +7pp from last year.

- **Lifting equipment**: 72% report access to flat lifting equipment on all sites. 
  - **Change**: +7pp from last year.
The use of risk screening tools

There was a slight increase in the number of trusts and health boards using a fall risk screening tool. This is despite NICE Clinical Guideline 161 specifically advising against this practice – a recommendation endorsed by NAIF. If you use a tool to decide if a patient is “high” or “low” risk, that is a screening tool and it is not recommended.

NICE guideline recommends that all inpatients aged over 65 should be considered at high risk and should be offered a multi-factorial fall risk assessment (MFRA)[3]. For more information on what constitutes a MFRA visit: https://www.rcplondon.ac.uk/projects/outputs/falls-prevention-hospital

Recommendation 1
Do not use screening tools to identify people at high risk of falls. Instead, offer a multi-factorial falls risk assessment (MFRA) to those over 65, and others over 50 who may be at higher risk. (NICE CG161)

Provision of walking aids

There have been improvements in the number of trusts and health boards that have access to assessment for and provision of walking aids for newly admitted patients 7 days a week (risen from 57 to 64%). Modest improvements can be observed in the proportion of trusts and health boards conducting bedrail audits, availability of flat lifting equipment and use of tools to assess gaps in reporting (see infographic).

Recommendation 2
Assessment and provision of appropriate walking aids must be available for all newly admitted patients, 7 days a week

Reporting of hip fractures

There has been a small reduction in the number of trusts stating they report all IHFs as severe harm (from 76% in 2019 to 70% in 2020). Reporting practices at a patient level are measured in the clinical audit which will provide more definitive data later in the year.

Recommendation 4
Ensure availability on all sites of equipment to safely move patients with suspected spinal injury or hip fracture from the floor

Recommendation 5
Record inpatient hip fractures as ‘severe harm’ in national reporting and learning systems

Leadership

There has been a modest improvement in the number of trusts and health boards with non-executive directors (NED) with a responsibility for falls compared to last year (increased from 42 to 49%). The proportion of trusts and health boards with executive directors with responsibility for falls increased by 1 percentage point to 87%.

There was a very small decrease since last year in the proportion of trusts and health boards who hold a multidisciplinary falls working group that discusses falls incidence (see figure 6). It is important that there is regular oversight of the patterns of falls and injuries and an evaluation of the efficacy of improvement measures within an organisation.
Figure 6. Sharing information regarding inpatient falls (change in percentage point (pp)) from data collected in 2019 and presented in 2020.

Recommendation 6
Ensure your trust or health board has a patient safety group which:

> includes falls prevention in its remit
> is overseen by a member of the executive and non-executive team
> regularly reviews data on falls, harm and deaths per 1,000 occupied bed days (OBDs)
> assesses the success of their practice against the trends in falls, harm and death rates per 1,000 OBDs
> reports and discusses the above outcomes with the Board

Training

Exactly half of English trusts and 40% Welsh health boards reported training in fall prevention and management as being mandatory for frontline staff.

NAIF recommends that all clinical staff who provide care for people aged over 65 should receive training on multi-factorial fall risk assessment and post-fall management.

Recommendation 7
Ensure training in the multi-factorial assessment, prevention and management of inpatient falls is provided for relevant staff groups.
Summary of findings

This report used NHFD data from 2019 to examine processes and outcomes for people with inpatient hip fracture (IHF) following a fall, and to compare these with to people who broke their hip outside hospital (non-IHF) following a fall.

NHFD performance indicators show that care continues to be significantly poorer for people who sustain their hip fracture in hospital, and 30-day mortality is twice as high for such people.

We are developing a mechanism to collect the accurate and reliable data needed to calculate trust IHF rates. This will allow NAIF to identify, inform and learn from trusts and health boards with particularly good or poor performance but there are no plans for this to be used for benchmarking purposes. Further work is needed before this data is ready to be provided to trusts and health boards.

Participation in the facilities audit fell slightly in 2020 but is still very encouraging considering the challenges posed by COVID-19 to data collection.

Improvements were observed in the availability of flat lifting equipment and walking aids. Unfortunately, there was a small rise in the number of organisations reporting using a fall risk screening tool. This may reflect the number of organisations new to the audit who have not previously received our recommendations on this.

There was also a small decrease in trusts reporting all IHFs as severe harm. The reason for this is unclear, but patient level data from the clinical audit will provide more detail on this later in the year.

The data presented in this report will help to identify areas in which the quality of care for people who sustain an IHF can and should be improved.

Clinical data for IHFs sustained during 2020 will be reported in the Autumn of 2021.

Next steps – 2021 to 2023

Reporting in the 2021-23 programme

- Spring 2021 interim national summary annual report published (2020 facilities audit results)
- Spring 2021 trust and health board level reports
- Autumn 2021 annual report (2019 and 2020 clinical audit data plus 2021 facilities audit). In this report additional fracture types will be included as clinical cases, in line with the increased scope of NHFD inclusion criteria implemented in 2020, detailed in NHFD online guidance.
- Autumn 2021 trust and health board level reports
- Autumn 2022 annual report (2021 clinical audit data and 2022 facilities audit)
- Autumn 2022 trust and health board level reports
References


6. Royal College of Physicians. National Hip Fracture Database guidance. Available at: https://www.nhfd.co.uk/docs/NHFD2020
National Audit of Inpatient Falls interim annual report 2021


This report was prepared by the National Audit of Inpatient Falls team:
Rosie Dickinson, FFFAP programme manager
Tim Bunning, Crown Informatics
Catherine Gallagher, FFFAP project manager
Sam Hawley, epidemiologist and statistician, University of Oxford
Antony Johansen, NHFD clinical lead, orthogeriatrics
Andrew Judge, professor and senior statistician, University of Oxford
Julie Whitney, NAIF clinical lead
Maggie Fielding, Patient and Carer Panel member, FFFAP

National Audit of Inpatient Falls (NAIF) advisory group
Teena Chowdhury, operations director, audit and accreditation, Royal College of Physicians
Rosie Dickinson, FFFAP programme manager
Sue Doyle, Patient and Carer Panel Member FFFAP
Maggie Fielding, Patient and Carer Panel Member FFFAP
Catherine Gallagher, FFFAP programme coordinator
David Harvey, Care Quality Commission
Sam Hawley, epidemiologist and statistician, University of Oxford
Khim Horton, independent nurse consultant and researcher
Sarah Howie, British Geriatrics Society
Antony Johansen, NHFD clinical lead, orthogeriatrics
Alice Kilby, Community Hospitals Representative
Daniel MacIntyre, Public Health England
Catherine Nolan, Royal College of Occupational Therapy
Michelle Parker, Royal College of Nursing
Kapila Sachdev, Royal College of Psychiatrists
Denise Shanahan, Wales NHS (Cardiff and Vale UHB)
Jamie Spofforth, Imperial College Healthcare NHS Trust
Christopher Tuckett, Chartered Society of Physiotherapy
Julie Whitney, NAIF clinical lead
Julie Windsor, NHS England & NHS Improvement Patient Safety

Data analysis by Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, University of Oxford www.ndorms.ox.ac.uk

NAIF data collection webtool and performance tables are provided by Crown Informatics www.crowninformatics.com

Falls and Fragility Fracture Audit Programme
The National Audit of Inpatient Falls (NAIF) is run by the Care Quality Improvement Department (CQID) of the Royal College of Physicians (RCP). It is part of the Falls and Fragility Fracture Audit Programme; one of three workstreams alongside the Fracture Liaison Service Database (FLS-DB) and the National Hip Fracture Database (NHFD). The programme is commissioned by the Healthcare Quality Improvement Partnership (HQIP).

Healthcare Quality Improvement Partnership
The National Audit of Inpatient Falls is commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). HQIP is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing, and National Voices. Its aim is to promote quality improvement in patient outcomes, and to increase the impact of clinical audit, outcome review programmes and registries on healthcare quality in England and Wales. HQIP commissions, manages and develops the National Clinical Audit and Patient Outcomes Programme (NCAPOP), comprising around 40 projects covering care provided to people with a wide range of medical, surgical and mental health conditions. The programme is funded by NHS England, the Welsh Government and, with some individual projects, other devolved administrations and crown dependencies www.hqip.org.uk/national-programmes

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11 St Andrews Place, London NW1 4LE www.rcplondon.ac.uk
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Get in touch
For further information please contact us – we want to hear from you.

www.rcplondon.ac.uk
ffap@rcplondon.ac.uk
@RCP_FFFAP