Royal College of Physicians

National Audit of Inpatient Falls (NAIF)

Don't stop moving

Optimising safety while staying active in hospital

The 2024 National Audit of Inpatient Falls (NAIF) report on 2023 clinical data

1 January – 31 December 2023

In association with

British Geriatrics Society
Improving healthcare for older people

British Orthopaedic Association

Royal Osteoporosis Society
Better bone health for everybody

Commissioned by

HQIP
Healthcare Quality Improvement Partnership

Report at a glance

In 2023, 1,959 people sustained a femoral fracture as an inpatient; 1,609 (82%) were due to a fall and included as cases in the National Audit of Inpatient Falls.

Proportion of patients with risk factor assessment

In this report, to address the potential for harm caused by hospital-acquired deconditioning, we present a new approach that focuses on promoting activity using assessments to ensure each patient is fit to move as safely as possible. As such, the name of KPI 1 will be changing from multifactorial falls risk assessment (MFRA) to multifactorial assessment to optimise safe activity (MASA).

High-quality MASA

In 2023: **39%** of patients had 5 or more risk factors assessed

In 2022: **37%**

Vision

In 2023: **57%**

In 2022: **45%**
In 2021: **52%**

LSBP

In 2023: **42%**

In 2022: **39%**
In 2021: **39%**

Medication review

In 2023: **78%**

In 2022: **74%**
In 2021: **74%**

Delirium

In 2023: **52%**

In 2022: **52%**
In 2021: **66%**

Mobility

In 2023: **92%**

In 2022: **92%**
In 2021: **92%**

Continence

In 2023: **84%**

In 2022: **82%**
In 2021: **83%**

Post-fall management

Checked for injury

In 2023: **77%**

In 2022: **74%**
In 2021: **77%**
In 2020: **71%**

Safe method for moving from the floor

In 2023: **33%**

In 2022: **32%**
In 2021: **29%**
In 2020: **26%**

Medical assessment within 30 minutes

In 2023: **65%** (30 mins)

In 2022: **74%**
In 2021: **60%**
In 2020: **62%**

Recommendations

1. Trusts and health boards (HBs) should review their policies and practice to ensure older hospital inpatients are enabled to be as active as possible.
2. NHS England and Welsh Government should implement national drivers to ensure that all older people are screened for delirium upon hospital admission using the 4AT and reviewed for changes suggestive of a new onset of delirium for the duration of their admission.
3. Trusts and health boards should ensure that there are robust governance processes in place to understand when post-fall checks fail to correctly identify a fall-related injury.
4. Trusts and health boards should have processes in place to hasten time to administration of analgesia after an injurious fall, to ensure patients who sustain a femoral fracture in hospital are given analgesia within 30 minutes of falling.
5. Trusts and health boards are encouraged to prepare for the audit expansion in January 2025.

The full FFFAP glossary is available on the RCP website.

The National Audit of Inpatient Falls

The National Audit of Inpatient Falls (NAIF) is a continuous audit of all inpatients who have a fall that results in a femoral fracture. Data are collected from health records to evaluate the fall prevention activities that occurred before the fall that caused the fracture, as well as immediate post-fall management. Data are presented in this report and in trust dashboards and resources have been developed to support organisations with improvement activities.

All NHS trusts in England and health boards (HBs) in Wales with inpatient beds are eligible to participate in NAIF.

Clinical audit – how cases are identified

- Patients who have a femoral fracture while in hospital are identified via the National Hip Fracture Database (NHFD) and referred to the local NAIF team.
- The NAIF team determine if the fracture was due to an inpatient fall.
- Patients are eligible for NAIF if they've had a femoral fracture that occurred as a result of an inpatient fall.
- This report presents the data from fall-related inpatient femoral fractures (IFFs) sustained between January and December 2023. Live data for the four KPIs are available on the Crown webtool.

Audit findings

Audit cases – key facts

Of the 1,959 femoral fractures classified in the NHFD as occurring in an inpatient setting (IFFs), 1,609 (82 %) were known to have occurred as a result of a fall, indicating eligibility for NAIF data collection. The proportion of inpatient femoral fractures identified by the NHFD and not thought to be due to a fall has remained at 18 % as reported in 2022 (see Fig 1).

As we would expect less than 5 % of such fractures to occur without a fall, this proportion may reflect underreporting of falls. Trusts are encouraged to review cases if more than 10 % femoral fractures in their organisation are not thought to be due to a fall.

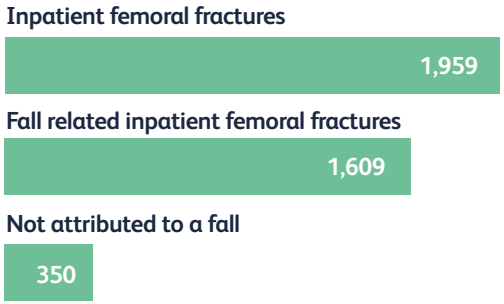


Fig 1. Audit cases in 2023

Data on completion of the audit can be found here.

Falls prevention activity should not focus solely on older people's wards

Fall-related IFFs occurred a median of 9 days after admission. In keeping with previous years, for 79 % of IFFs, it was the patient's first fall during that admission. Most falls occurred in acute trusts (1,216 IFFs) followed by integrated trusts (303 IFFS), community trusts (49 IFFs) and mental health trusts (36 IFFs). IFFs by trust and ward type are shown here.

- 49 % IFFs occurred on medical wards (including admissions units) (n=788).
- 23 % IFFs occurred on older people's/frailty wards (n=374).

Nearly half of all IFFs occur on general medical wards, almost twice the proportion of IFFs that happen in older people's wards. These proportions have remained the same since 2021 and are likely to reflect a larger bed-base in acute medicine.

Multifactorial assessment to optimise safe activity (MASA)

From this report onwards, we will be changing the terminology describing the assessments to support falls prevention activities that take place before the IFF. The section below sets out these plans and the rationale, before presenting the 2023 data.

Assessment to optimise safe activity

The NAIF team recognise that physical activity levels are very low in people admitted to hospital. Research suggests that inpatients spend 87–100% of the day in bed or sitting and on average, older inpatients take around 600 steps a day. This is a fraction of that recommended for good health and research has found that step count doubles the day after older people are discharged home.

The physical inactivity imposed by hospitalisation is associated with rapid deconditioning leading to functional decline, more readmissions and increased mortality. These effects are particularly pronounced in older people – the group of patients most likely to experience an inpatient fall.

Around 30% of older inpatients will experience hospital-acquired deconditioning (HAD) and it should be considered as a significant potential harm for older people in hospital.

The way in which hospital staff consider falls risk in the context of physical activity is a key driver of HAD. Due to the nature of the human movement (where there is a small base of support and high centre of gravity), standing up and walking notably increases the possibility a fall will occur. Therefore, an understandable instinct is to seek to reduce falls by limiting time spent upright and moving. However, this approach is flawed as the muscle weakness, loss of balance skill and reduction in general fitness caused by HAD will not only further increase the risk of falls, it will expose patients to similar if not greater levels of harm from the range of negative consequences.

Over the last 4 years NAIF has presented data on fall prevention actions undertaken prior to inpatient falls that result in femoral fracture. Despite our intentional decision not to publish and benchmark falls numbers and instead focus on prevention activity, feedback from stakeholders suggests many staff and organisations continue to focus on preventing falls at all costs using an approach focused on limiting opportunity for patients to fall by restricting activity.

To encourage trusts and health boards to appraise their approach to falls prevention, where the priority is to provide opportunities for patients to stay active, we are proposing a change in the way we refer to falls prevention assessment and intervention.

In this report and in future data collection, we will be changing the term multifactorial falls risk assessment (MFRA) to multifactorial assessment to optimise safe activity (MASA).

The purpose of this assessment is to prepare and encourage a hospitalised older adult to be as active as possible by identifying and addressing issues that may compromise their safety when moving around. We hope that positive communication concerning being active, rather than the more negative message of preventing a feared event (a fall), will enable staff, patients and families to feel confident in preventing HAD, while minimising falls.

Further recommendations on this can be found at the end of the report.

Multifactorial assessment to optimise safe activity (MASA)

The components of a MASA are the same as the MFRA described in previous reports and taken from NICE clinical guideline 161. A new version of our webtool resource has been produced alongside this report to reflect the change in approach. The MASA considers six factors that influence safe activity, which are potentially modifiable or require care plans to accommodate (Fig 2). Taking action after assessment is vital if safe activity is to be optimised. A link to an example of a MASA and required actions is provided at the end of this report.

KPI 1: High-quality multifactorial assessment to optimise safe activity (MASA)

This is a score calculated from adding together six assessment components for each patient (vision, lying and standing blood pressure (LSBP), medication, delirium, mobility, and continence). A maximum score of six indicates that all were completed for that patient. A high-quality MASA is defined as a score of five or more out of six.

- In 2023, 39 % of patients had a high-quality MASA (previously termed MFRA), a small increase from 2022.

Proportions of each assessment component completed are presented in Fig 2, alongside data from the previous 3 years for comparison.

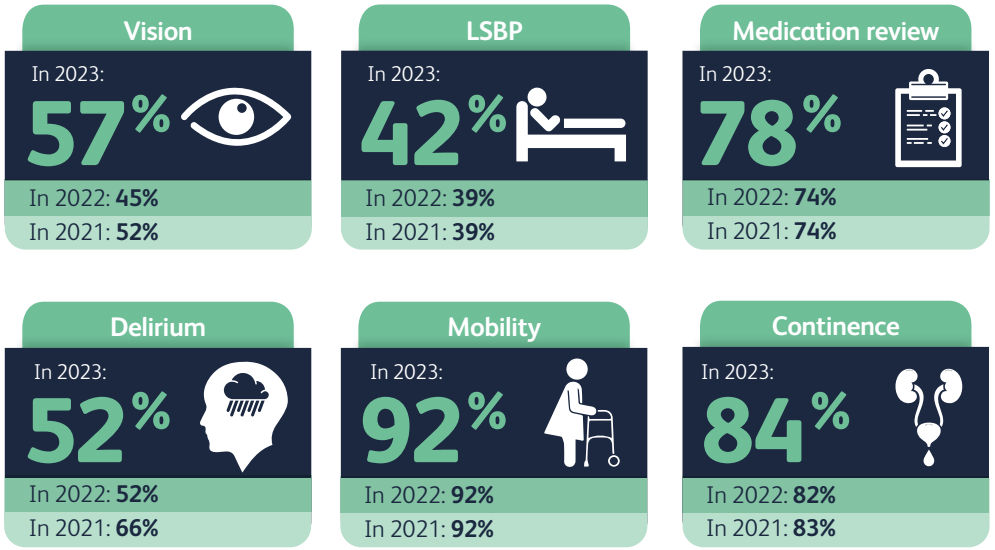


Fig 2. Proportion of cases with risk factor assessment

Clinical assessment in detail

In 2022, we started collecting clinical measurements for some of the assessment components that make up the MASA (LSBP and delirium). Entering actual measures from patient records into the audit webtool is a way of validating data entered in response to general 'yes / no' MASA questions. These data are presented in Table 1, alongside the answers to the more general audit questions. Table 2 presents the assessment findings.

Table 1. Proportion of cases with clinical assessment data recorded.

	2023	2022
Lying / standing blood pressure (lsbp)		
General question (in the audit webtool): Had the patient had a documented lying / standing blood pressure measurement during the admission when the fall that caused the femoral fracture occurred?		
LSBP not possible	13 %	13 %
LSBP recorded (where not impossible)	42 %	39 %
Actual clinical measurement data (entered into the audit webtool): date and time and BP and heart rate measures entered onto the webtool		
Date and time LSBP recorded	31 %	27 %
Measure recorded for 5min supine	18 %	15 %
Measure recorded for 1min standing	10 %	8 %
Measure recorded for 3min standing	6 %	5 %
Time from LSBP to fall (days)	5 days	6 days
Delirium assessment		
General question: Did the patient have a delirium assessment and corresponding care plan (if required) during the admission when the fall that caused the femoral fracture occurred?		
Delirium assessment recorded	52 %	52 %
Actual clinical measurement data: date and time and 4AT and 4AT score.		
Date and time of 4AT recorded	22 %	21 %
Time from 4AT to fall (days)	6 days	7 days

Collecting NEWS measures

In 2023, there was a new question collecting data on National Early Warning Scores 2 (NEWS2) prior to the fall. The time and date of the NEWS2 was inputted for **91% of patients**, which was a median of **4 hours** before the fall that caused the femoral fracture.

Table 2. Data from actual clinical measurement

	2023	2022
Orthostatic hypotension at 1 minute standing	28 %	28 %
Orthostatic hypotension at 3 minutes standing	22 %	22 %
Median 4AT score	3	3
4AT score ≥4	46 %	45 %
Median NEWS2	1	N/a
NEWS2 <4	98 %	N/a
New confusion on NEWS	4 %	N/a

The NEWS2 data were feasible to collect and indicated that 4 hours prior to the fall that caused the femoral fracture, patients' observations were normal, suggesting that medical acuity is unlikely to be the reason for falling.

There was a notable difference between the proportion of patients with a new confusion noted on NEWS2 compared with those where a validated 4AT delirium screening tool was used. **These data confirm the importance of using validated delirium screening tools to accurately identify delirium.**

Post-fall management

Actions taken after a fall have the potential to influence outcomes and patient experience. If a post-fall check indicates that there may be a femoral fracture, this should initiate the use of flat lifting techniques, rapid access to pain relief and prompt diagnosis and management of the fracture. Proportions for KPI 2, 3 and 4 are presented in Fig 3, alongside data from the previous 3 years for comparison.

KPI 2: Check for injury before moving

Median time from fall to post-fall check for injury increased to 10 minutes (8.5 mins in 2022).

Three-quarters (77%) of patients had a documented post-fall check. However, where a check was conducted, injury was not suspected in 31% (this should be 0%).

In recognition of the importance of an effective post-fall check, from next year KPI 2 will measure the proportion of patients with a post-fall check where injury was suspected. In 2023, this figure was 53%.

KPI 3: Safe lifting equipment used to move the patient from the floor

Use of flat lifting equipment remains low, only being used in 33% of cases.

KPI 4: Medical assessment within 30 minutes of the fall that caused the IFF

There was a reduction in this KPI to 65% from 74% in 2022. However, median time from fall to medical assessment was 25 minutes, an improvement of 5 minutes since 2022.

Pain relief after the fracture

There has been a significant improvement in prompt administration of analgesia with a quarter of the patients in the audit (26%) receiving pain relief within 30 minutes of the IFF compared to no patients in 2022. Overall, 79% of patients were administered analgesia after the fall that caused the IFF and the median time to administration was 1.5 hours after the fall.

Harm reported after the fracture

In 68% of cases, severe harm was attributed to the fall that caused the fracture (a further 1% were recorded as death), a notable drop from 75% in 2022. We recommend using the approach adopted by NHS England of attributing severe harm to all femoral fractures sustained in hospital. **The reason for this change is not clear but may reflect changes in responses to falls events as trusts in England began using a new Learning and Reporting System and the implementation of the** Patient Safety Incident Response Framework.

Delay to femoral fracture care

Delays to fracture care were reported in 21% of cases.

- Median time from fall to X-ray was 4 hours
- Median time from fall to transfer to orthopaedic care was 15 hours
- Median time from fall to transfer to acute site (where applicable) was 8 hours

These delays are significant as they do not align with the recommendations in NICE CG124 and compare poorly to the care provided for people who sustain a similar fracture outside of hospital care.

Post-fall reviews

Post-fall debriefs (hot debriefs) were undertaken for 40% of IFFs, and in 24%, it was done on the same shift as the fall occurred.

Swarm huddles (or after-action reviews) took place after 61% of IFFs and were held within 5 working days of the fall in 33% of patients.

We do not expect all IFFs to be reviewed using the above methods. Instead, trusts/HBs should consider their bespoke organisational approach to reviewing falls following the principles of the Patient Safety Incident Response Framework (PSIRF). We have provided resources to support this.

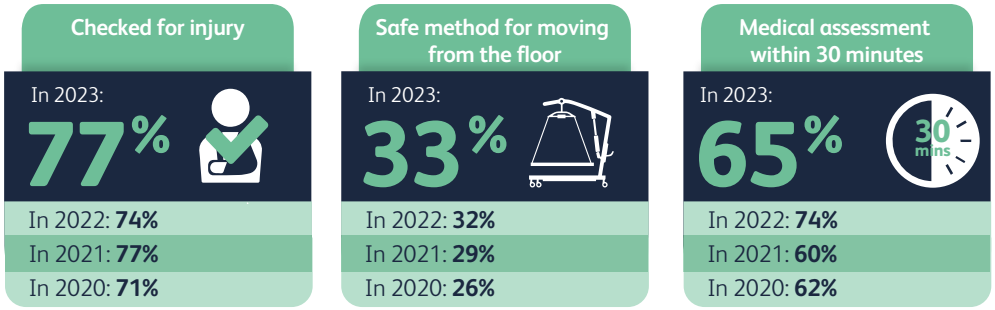


Fig 3. KPI 2, 3 and 4 performance

Recommendations

Recommendation 1

Trusts and health boards should review their policies and practice to ensure that older hospital inpatients are enabled to be as active as possible.

Organisations are encouraged to develop an ethos around safe activity that:

- uses language that encourages activity in care planning, and in communication between the MDT and with patients and their families/friends
- recognises that encouraging patients to be active may increase exposure to falls (see Fig 4), but restricting activity causes hospital-acquired deconditioning, which is another form of hospital-induced harm. Multifactorial assessment to optimise activity (MASA) is a way of identifying factors that might impair an individual's ability to move safely. Addressing this using tailored interventions gives the patient the best chance of moving around safely (see link)
- includes this approach in staff induction, education and training
- reviews fall incidents and during investigations, consideration is given to the potential for harm from deconditioning if activity had been restricted in order to avoid a fall. Trusts/HBs are encouraged adopt the principles of the Patient Safety Incident Response Framework (PSIRF)when investigating falls. We have produced resources to support trusts/HBs to develop their bespoke, organisation-led approaches to falls investigations
- prepares for a change to the mobility assessment and care plan audit question in 2025 (see next page).

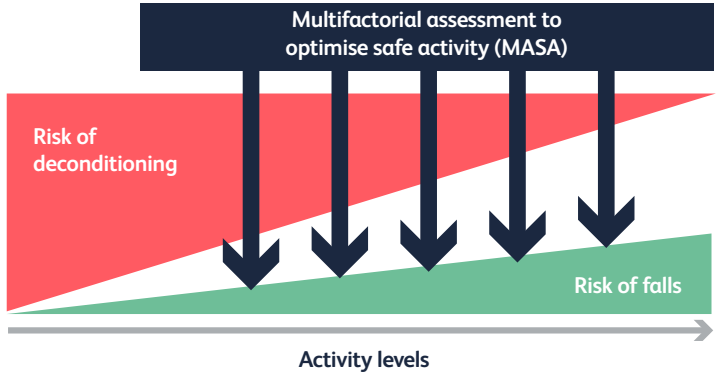
New mobility care plan question
In 2025, the mobility question in the dataset will change to ‘did the patient have a documented mobility plan supporting them to be as active as possible during the admission?’
To answer yes, the care plan must include an assessment that determines the walking aid and supervision required, actions noted to ensure that aids and call bells are in reach (where indicated) and what methods will be used to optimise activity levels during the admission.

High centre of gravity

Small base of support

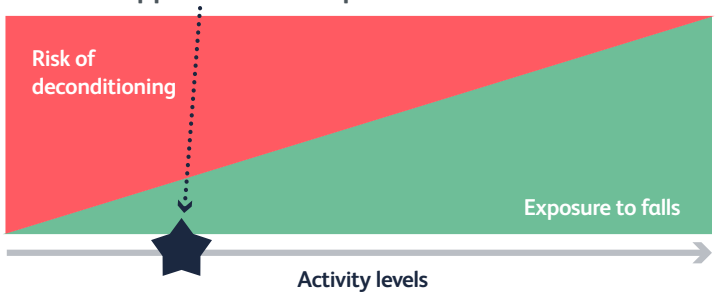
The physics of human standing and walking increases exposure to falling

Beneficial approach to falls prevention



Application of high-quality MASA addresses factors that increase falls – enabling safe activity and avoidance of hospital-acquired deconditioning

Harmful approach to falls prevention



There is a theoretical increase in exposure to falls as activity levels increase

***Examples:**

- **Active activity restriction:** administering sedative medication, using furniture to restrain movement (ie tilt in space chair or bed rails) or asking/encouraging a patient to sit or lie down
- **Passive activity restriction:** keeping a walking aid out of reach, not providing the correct equipment (ie chair too low) or failure to identify and manage conditions that affect mobility such as pain, hypoactive delirium or orthostatic hypotension

Fig 4. Approaches to falls prevention

Recommendation 2

NHS England and the Welsh Government should implement national drivers to ensure that all older people are screened for delirium upon hospital admission using the 4AT and reviewed for changes suggestive of a new onset of delirium for the duration of their admission.

- In 2023, nearly half of all inpatients (46%) had signs of delirium on the 4AT before the fall that caused the fracture. There are many potential reasons why delirium might increase the risk of falling in hospital inpatients. Behaviours such as restlessness increase exposure to falling and reduced activity levels seen in hypoactive delirium may lead to deconditioning affecting muscle strength and balance. Impaired attention is associated with impulsive behaviour and delirium may impact other cognitive functions that enable a patient to safely negotiate an unfamiliar environment. In addition, gait and balance impairments have been noted to accompany episodes of delirium.
- There is evidence that interventions addressing delirium may reduce inpatient falls. Additionally, awareness of delirium is required to develop care plans that consider the degree of support a patient needs to maintain safe mobility, and how to meet their basic psychological needs. Due to the fluctuating nature of delirium, ongoing monitoring is vital. New NEWS2 data collected in 2023, indicate that the question about new confusion is not as effective as the 4AT in identifying delirium. These findings give us confidence in making this more specific recommendation for delirium screening.
- It is possible that the reduction in completion of delirium assessments since NAIF started collecting data is capturing a regression following the withdrawal of the national dementia CQUIN.

Recommendation 3

Trusts and health boards should ensure that there are robust governance processes in place to understand when post-fall checks fail to correctly identify a fall related injury'.

- From 2025, KPI 2 will change to measure the proportion of cases where a post-fall check is performed, and injury is suspected. This should be 100%, as in this audit, all patients have experienced severe harm (femoral fracture). Trusts and health boards should review their audit cases to explore how improvement projects might address the quality of post-fall checks. Methods such as a thematic review could be used to look for patterns in the post-fall check processes that could be addressed with an improvement change idea.

See Supporting best and safe practice in post-fall management in inpatient settings for guidance on how to implement effective post-fall checks.

Recommendation 4

Trusts and health boards should have processes in place to hasten time to administration of analgesia after an injurious fall, to ensure that patients who sustain a femoral fracture in hospital are given analgesia within 30 minutes of falling.

- It has been very encouraging to see a step change improvement in access to prompt analgesia following the fall that caused the IFF. Our supplementary paper that explored differences in practice between acute, community and mental health settings suggests that analgesia administration is better in non-acute settings.

Recommendation 5

Trusts and health boards are encouraged to prepare for the audit expansion in January 2025.

- From January 2025, NAIF will be expanding to include head injuries, spinal injuries and all fractures that are the result of an inpatient fall. Up until now, eligible cases have been identified through the National Hip Fracture Database. With the expansion, trusts and health boards will need to identify NAIF eligible cases independently.

Trusts and health boards are encouraged to review the NAIF audit expansion resource and make their own plans for how they will identify eligible cases.

Resources to support improvement and acknowledgements are available on the RCP website.

National Audit of Inpatient Falls (NAIF)

Royal College of Physicians
11 St Andrews Place
Regent's Park
London NW1 4LE

Tel: +44 020 3075 1511
Email: falls@rcp.ac.uk

www.rcp.ac.uk

@rcp_fffap
#NAIF

Royal College of Physicians | National Audit of Inpatient Falls (NAIF)