# Appendix: Guiding and assessing surgery for hip fractures

For someone sustaining a hip fracture, the surgical aspects of care are a small but important feature. Shared decision making between clinicians and patients will help to ensure that each patient will receive the most appropriate surgery for them. This can have a lasting impact on clinical outcomes, as well as patient experience.

Over the past year, our understanding of several surgical aspects of hip fracture patient care has improved:

1. The National Institute for Health and Care Excellence (NICE) updated its guidance on the care of patients with a hip fracture in January 2023. This update has a similar structure to previous recommendations and much of the guidance is unchanged; however, several areas, specifically relating to surgery, have been altered.
2. The National Joint Registry (NJR) started to collect information on patients undergoing hemiarthroplasty (HA) surgery, aligning monitoring of the surgical care of hip fracture patients more closely with that of other patients undergoing arthroplasty procedures. This will improve our knowledge of surgical implants and clinical outcomes, and complement the information collected in the NHFD. None of the NHFD's work or focus on key performance indicators (KPIs) will be lost as a result of this change. The NJR and NHFD hope to work together to avoid duplication of data collection and will capture a more complete picture of patients' experience.

In this appendix to the 2023 annual report, we use two case studies to examine the implications of these changes.

**Case study 2** Mrs Y broke her right hip at church. She used to walk without sticks, but recently had leg pains due to problems with her arteries, and wear and tear in her back. She is 79 and had recently moved into a supported living environment. She was placed onto a designated fragility fracture operating list for consultant-led surgery the morning after her fall.

Her surgeon spent time explaining the two operations she might have, either a 'full' or a 'half' hip replacement, and considered her deteriorating function and reflected on the 2023 update of NICE guidelines. Following discussion, Mrs Y and her surgeon decided that the 'half' hip replacement was the more appropriate. Her surgeon performed this procedure using a specially designed implant known to have good results over time.

Mrs Y sustained an intracapsular hip fracture and her surgeon decided with her to perform a hemiarthroplasty (HA). Across England and Wales over 30,000 HAs are carried out every year, making it the most frequently performed operation for a hip fracture.

### Should Mrs Y have a hip replacement or a hemiarthroplasty performed?

Research published over the past year suggests that, for the majority of older patients with a displaced intracapsular hip fracture, a cemented hemiarthroplasty (HA) is seen as the operation of choice. Key to this is the subjective assessment of function and risk benefit prolonged out into the years following surgery. For a small number of patients, research has shown that there is a greater advantage to a total hip replacement (THR) after injury and operation, and that these benefits continue for a long time after discharge. For these patients, it is advised that THR should be offered and performed following a shared decision-making discussion with the patient.

This has been detailed in the guidance as:

> *Consider total hip replacement rather than hemiarthroplasty for people with a displaced intracapsular hip fracture who:*
>
> - *were able to walk independently out of doors with no more than the use of a stick **and***
> - *do not have a condition or comorbidity that makes the procedure unsuitable for them **and***
> - *are expected to be able to carry out activities of daily living independently beyond 2 years.*
>
> National Institute for Health and Care Excellence (NICE), 2023

The last criterion is a key difference from previous NICE guidance (2011, 2016), moving from an assessment of current mental and physical health to a focus on anticipated function after surgery and beyond to guide shared decision making.

Mrs Y and her surgeon discussed the risks and benefits as pertinent to her and a decision was made to perform a cemented HA.

### Will Mrs Y have the same prosthesis (type of hemiarthroplasty implant) as other patients with a similar injury?

Reducing variation in clinical practice will improve patient care. Recent guidance advocates that it is good practice for hospitals to use a single [type of] implant for managing individual injuries:

> *Hospitals should aim to use a single type of cemented femoral component for hemiarthroplasties as standard treatment for displaced intracapsular hip fracture management.*
>
> *If equivalent cemented femoral component designs are available, organisations should take into account overall costs, including training needs, and how familiar the team is with the component.*
>
> National Institute for Health and Care Excellence (NICE), 2023

The surgical teams in Mrs Y's hospital use the same cemented femoral implant for both elective and trauma cases, which reduces variation and learning curve effect.

Mrs Y underwent the same operation with the same implant used for all HA operations in the hospital, which will lead to an improved clinical outcome for Mrs Y.

### How should we measure the quality of care that Mrs Y receives?

Mrs Y's experience of hip fracture care will be captured in the NHFD. This will include not only the surgical episode (operation type) but all the other aspects of her treatment, such as her care and pain management in the emergency department, her orthogeriatric, nutritional and cognitive assessment, and her mental and physical performance immediately following surgery. The exclusively surgical (implant- and procedural-related issues) will be collected by the NJR.

> *Record long-term data on hemiarthroplasties, including patient-reported outcomes and adverse events, for submission to a national registry.*
>
> National Institute for Health and Care Excellence (NICE), 2023

## Before these changes occur, what do we know already and what is current practice?

We have previously demonstrated significant variation in the care of patients with fractures of the femur that get fixed. To understand the impact of migration of HA surgical elements to the NJR, we have performed a comprehensive analysis of recent practice. Unsurprisingly, while the cemented stem predominates (Figure 1), practice is far from consistent, and we await the impact of the NJR on this performance metric.

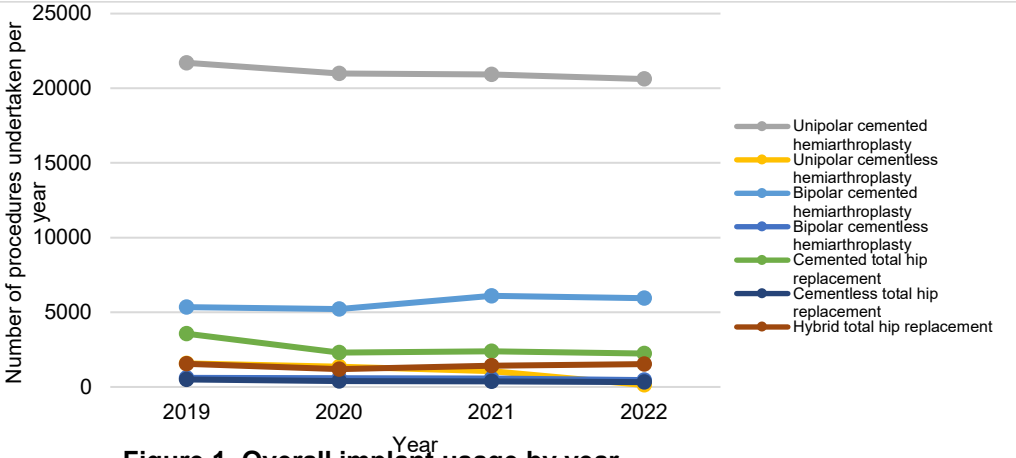
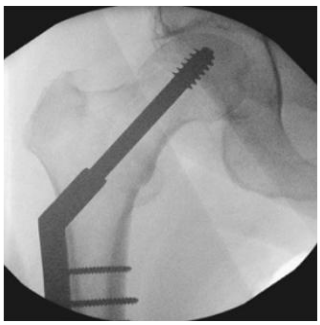



**Figure 1. Overall implant usage by year**

## What about people with fractures that do not need an arthroplasty?



**Case study 1** Mrs X fell and broke her hip while putting out her washing. She is 83 and lives alone at home, supported by her family. She was taken to her local hospital and after a wait to get into the emergency department had a comfortable transfer up to the orthopaedic ward. She was seen by a junior surgeon and a doctor specialising in looking after older patients.

The hospital had recently carried out a quality Improvement project as a result of which the morning session of their second trauma list had been designated for patients with lower limb fragility fractures. Mrs X was looked after by a consultant -led team and underwent a sliding hip screw fixation of her right trochanteric hip fracture the morning after her fall.

Mrs X sustained an extracapsular proximal femoral fracture following a fall. She sustained a fracture further away from the hip joint than Mrs Y, and this means that the aim of Mrs X's surgery was to hold the bones together and not to replace the head of the femur (with either an HA or a THR).

Holding the bones together allows the body to heal the fracture, and metalwork placed inside and on the surface of the bone keeps the injured bone edges together while they heal. There are two ways of doing this: a screw within the head of the femur is attached either to an 'intramedullary' nail (inside the thigh bone) or to an 'extramedullary' plate (on the outside). Mrs X received an extramedullary plate.

Surgical opinion and practice on these operations varies, but the NICE guidance is clear. In previous NICE guidance a technical, classification-based approach was taken, with fractures and their management based on subclassification. In the most recent guidance, however, A1 and A2 variants have been collapsed into simply 'trochanteric':

*Use extramedullary implants such as a sliding hip screw in preference to an intramedullary nail in people with trochanteric fractures above and including the lesser trochanter (except reverse oblique).*

National Institute for Health and Care Excellence (NICE), 2023