

Appendix 2: Treating patients with periprosthetic femoral fractures



Case study 3 Fifteen years after a successful hip replacement, Mrs Z tripped at home and broke the bone around the stem of the replacement. She and her family wanted to know more about what to expect from her treatment and asked a number of questions.

Until recently, we would have found it difficult to answer their questions with confidence. However, the NHFD has been collecting data on all types of femoral fracture for 3 years, so we now have more information to support our understanding.

To complement these data, we presented Mrs Z's case history and X-ray as the centrepiece of our 2021 facilities survey. We received responses from 93% (161/174) of the centres that contribute to the NHFD describing how Mrs Z would be treated.

The NHFD has now been collecting data on periprosthetic femoral fractures (PPFF) for 3 years. This has helped to improve our understanding of these injuries, how frequently they occur and what patients and their families can expect after these fractures. With nearly 100,000 hip and 100,000 knee replacements carried out every year in England and Wales, there is growing evidence that the number of people breaking the bones around their implants is going up. The number recorded is currently over 4,000 a year, and this is increasing as reporting to the NHFD becomes more reliable.

As we start to understand more about these injuries and how we can best care for patients who sustain them, we have started to see the introduction of [treatment guidelines from specialist societies](#), as well as the call for incentives to deliver good care (such as a Best Practice Tariff). While we do not know if/when this will happen or how it will be assessed, it makes sense for trusts to audit how their care of patients with PPFF performs against British Hip Society guidelines or hip fracture KPIs/BPT criteria in order to be best prepared.

Does Mrs Z need surgery?

The responses to Mrs Z's case history and X-ray showed that 47.5% of centres proposed fixation, 22.2% revision and 30.4% a combination of both revision and fixation. Across all PPFF types, eight out of 10 patients underwent surgery in 2022. Surgery may help patients to get up and walk as soon as possible, but some fractures do not need surgery and some patients are felt to be too poorly for surgery (supporting data can be seen [here](#)).

Will Mrs Z need to be transferred between hospitals for specialist care?

Most patients with PPFF were treated in the hospital at which they first presented, but 24.5% of units occasionally referred such patients. Twenty-one per cent of hospitals transferred all such patients to another hospital for surgery, perhaps for specialist care (such as kidney dialysis) or for specialist surgical expertise that isn't available in every hospital.

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

The NHFD currently reports [key performance indicators for PPFF](#) using the same KPIs that were developed for hip fracture, but further work is needed to clarify the specific priorities of patients with this more complex type of fracture.

Will Mrs Z face longer delays in surgery than patients with hip fractures?

Provision of prompt hip fracture surgery (KPI 2) averaged 56% in 2022, while [KPI 2 for PPF](#) averaged just 21%. Mrs Z is more likely to need a specialist surgeon and a theatre with more complicated equipment to get her back on her feet. Our [facilities survey](#) found surgeon (44.6%) and theatre (29.7%) availability to be the primary reasons for surgical delay beyond 36 hours.

How soon will Mrs Z be back on her feet?

Comparison of KPI 4 (prompt mobilisation after surgery) shows that, in 2022, [two-thirds](#) (66%) of patients with PPF got out of bed the day after surgery with the support of either a physiotherapist or a member of ward staff, compared with 80% of patients with hip fracture.

Will Mrs Z get back to her own home?

The results for KPI 6 (return to original residence) show that, in 2022, [just under half](#) of people who were living in their own home when they broke their femur went straight back to their own home from the trauma ward. Slightly more (six in 10) made it back to their own home after a short spell on a rehab ward that was part of the same hospital. This is a slightly lower proportion returning to their own home than patients with hip fractures (72%).

How can we improve care for people like Mrs Z in the future?

Before we can improve care, we need to better understand why people sustain these injuries, how care varies between hospitals and what happens to patients after they come into hospital. There are several large academic projects focusing on this subject and the NHFD team is contributing to many of them. You can find out more about them [here](#), and get involved as a patient, carer or healthcare worker.

Where can we find more information?

You can read a full discussion of the facilities survey where we asked about how hospitals deliver care to patients like Mrs Z [here](#). You can also find out more about [care in your local hospital](#), which includes data on how many non-hip femoral fractures were reported to the NHFD last year and how well patients were looked after according to the standards that we use for hip fracture surgery.