National Hip Fracture Database

The National Hip Fracture Database (NHFD) is a web-based, clinically-led national audit of hip fracture care in England, Wales and Northern Ireland. It seeks to improve the quality and cost-effectiveness of hip fracture care and to improve secondary prevention by documenting case-mix, process and outcomes. It provides hospitals with benchmarked feedback on care provided and compliance with six standards. The new Best Practice Tariff for hip fracture care, which offers additional reimbursement on a case-by-case basis for care meeting agreed standards, is monitored by the NHFD.

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Falls and fractures occur all too frequently in the older population; and hip fracture is the most serious common injury sustained, with around 76,000 cases occurring each year in the UK. As the population ages, there are concerns about rising numbers, with predictions of a doubling by 2050.

The human and economic costs of hip fracture are great. At a conservative estimate, 15,000 older people die in the UK each year following a hip fracture, though this is not always reflected in death certification. Loss of mobility, new dependency, and loss of home are common. NHS costs per year are around £1.4 billion, with comparable subsequent costs in social care to meet hip fracture-related dependency.

The National Hip Fracture Database

The National Hip Fracture Database (NHFD) is a clinically led, web-based audit covering England, Wales and Northern Ireland, and developed from 2004 as a collaboration between the British Orthopaedic Association (BOA) and the British Geriatrics Society (BGS). Its aim is to improve care, rehabilitation and secondary prevention for patients with hip fracture. A separate Scottish Hip Fracture Audit existed from 1993 to 2010.

The NHFD was launched in September 2007 along with the BOA/BGS Blue Book on the care of patients with fragility fracture. Together, they offer clinicians and managers providing hip fracture care the synergy of audit, clinical standards and national benchmarking to monitor and improve the care they provide.

The NHFD was recognised in 2009 as a national clinical audit, with central costs met by the Health Quality Improvement Partnership for an initial period of three years. Participating hospitals fund and organise data collection, and uploading locally, but participation is otherwise free. Continuous web-based feedback on caseload, case-mix, care and outcomes provides services with data that can prompt and evaluate clinical or service improvements aimed at both raising the quality and increasing the cost-effectiveness of care.

Since the 2007 launch, the NHFD has grown rapidly. 191 of the 193 eligible hospitals are now registered, with 90% regularly submitting data. There are now 100,000 cases on the database, and currently 12,000 additional records are added each quarter. The latter figure indicates that around 70% of all hip fractures occurring in England, Wales and Northern Ireland are being documented, making the NHFD the largest national hip fracture audit in the world.

The 2010 NHFD National Report

This report, launched on 2nd September 2010 with substantial media coverage, provides details on case-mix, care and outcomes of 36,556 cases of hip fracture from the 129 hospitals submitting, more than 100 cases over the year to 31...
At a national level, there is some evidence of increasing compliance with the Blue Book standards. In comparison with the findings of a less extensive previous report in 2009 (64 hospitals; 12,983 cases):

- 80% of patients now have surgery within 48 hours, up 5% from 2009
- 31% are assessed pre-operatively by a geriatrician, with 32% having other forms of medical assessment (total 63%, up 22%)
- 60% of patients now have falls assessments, with 3% awaiting appointment (total 63%, up 19%)
- 68% of patients are assessed for, and 57% discharged on, bone protection medication, with a further 7% awaiting a bone scan or bone clinic appointment; total 75% (up 15% from 2009).

While these figures are encouraging, individual participating hospitals have used the NHFD to achieve much more striking improvements locally, as two examples show:

- In Mayday University Hospital, Croydon, a trauma group sought to improve the hip fracture care pathway. Average pre-operative time fell from 58.8 hours to 28.9, and average acute stay from 32.6 days to 22
- The Royal Surrey Hospital brought in collaborative orthogeriatrician and surgical care, additional trauma lists, and daily orthogeriatrician ward rounds. Acute length of stay fell by six days and mortality by 3%. Implementation costs of £220,000 were more than offset by costed bed-day savings of £450,000.

A full version of the report can now be downloaded as a pdf from the NHFD’s website. As well as the kind of progress shown above, the report also demonstrates significant continuing concerns about the quality of hip fracture care: with many patients still facing unacceptable delays to surgery, missing out on pre-operative geriatrician assessment, and failing to benefit from access to bone protection and falls assessment interventions that might significantly reduce their risk of future fractures.

Best Practice Tariff

In England, hip fracture was one of the first four conditions to be selected for the Department of Health’s new case-based enhanced tariff for “best practice”. Since April 2010, the appropriate commissioning organisations pay the provider trusts around 5% in excess of the standard tariff for each patient whose care meets the agreed clinical standards shown in Box 2, which are monitored by the NHFD.

The new tariff, which aims to increase both the quality and cost-effectiveness of care, has attracted considerable interest and provided a major new stimulus for NHFD participation. Early findings from the first six months since the introduction of Best Practice Tariff show a very wide variation between hospitals in the percentage of cases submitted that meets all the standards. Geriatricians may be interested to learn that the standard with the highest failure rate is the fourth — senior orthogeriatric medical review within 72 hours.

Perhaps the most striking impact of the combination of the NHFD and the Blue Book has been the much closer involvement of orthogeriatricians in the acute care of older trauma patients and the increasing demand for consultants in the rapidly expanding subspecialty of orthogeriatrics.

**Box 1: The six “Blue Book” standards on hip fracture care**

- Prompt admission to orthopaedic care (transfer to orthopaedic ward within four hours of acute presentation)
- Surgery within 48 hours of acute presentation
- Nursing care aimed at minimising development of pressure ulcers
- Routine access to orthogeriatric medical care
- Assessment and treatment to promote bone health
- Falls assessment

**Box 2: Best Practice Tariff standards of high quality hip fracture care**

- Joint care between an orthopaedic surgeon and geriatrician
- Admitted according to a joint protocol agreed by surgeons, anaesthetists and geriatricians
- Surgery within 36 hours of acute presentation
- Senior orthogeriatric medical review within 72 hours
- Post-operative geriatrician-led multidisciplinary team input
- Fracture prevention assessments addressing falls and bone health
For reasons that most geriatricians will readily appreciate, definitive studies offering clear evidence that “orthogeriatrics works” are still awaited. However, the recognition that older trauma patients — particularly the frailest — benefit from collaborative care is uncontested. The broad national trend towards better care, together with the clear messages from the hospital-based case examples above, should hearten a still-young subspecialty that appears to be attracting some of the best and brightest of young geriatricians in recent years.

**NHFD — the future**

With the NHFD’s central funding secured until 2012, and its recent successful contribution to the Best Practice Tariff initiative for hip fracture care, there are grounds for optimism about the future of the audit, but no grounds for complacency. The NHFD must respond to admitted concerns about data completeness and data quality — at a time when expectations of national clinical audits are rising, and mandatory participation may be under consideration. Mechanisms to address these concerns are already in hand.

A closer focus on patient-related outcomes — rather than on process issues or provider priorities — is another current challenge; one that will be met by improved 30-day follow-up, covering mobility and place of residence as well as mortality. Also, given impending constraints on public sector funding, there will be an increasing emphasis on cost-effectiveness in NHS care. So the NHFD, by making greater use of patient-level Hospital Episode Statistics “super-spell” data, will in future document far better the overall NHS length of stay — the major determinant of cost in hip fracture care.

It is possible that predictions of future hip fracture numbers are too pessimistic. With a model Fracture Liaison Service and good falls prevention services, the overall incidence of hip fracture in Glasgow has gone down by 7-3% over a 10-year period. A large American study reports reductions of 20% in age-adjusted incidence of hip fracture in both women and men, which is perhaps in part related to a six-fold increase in the prescription of antiresorptive medication over the same period. The widespread implementation of fragility fracture secondary prevention measures of proven cost-effectiveness should therefore now be a high national priority.

But, whatever the numbers, the main messages that will drive progress forward are that “looking after hip fracture patients well is cheaper than looking after them badly.” In hip fracture care, cost and quality are not in conflict. So, with patients’ expectations rising and budgets increasingly tight, the NHFD may have as much to contribute over the next three years as it has over the last.

**Conflict of interest: none declared**

**References**