

# Improved care and fewer deaths since introduction of NHS hip fracture initiative

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Substantial improvements in the care and survival of older people with hip fracture in England have followed the introduction of a collaborative national initiative to tackle the issue, according to a new study published in the *Medical Care* journal.

Hip fracture is the most common serious injury of older people. In the UK there are around 70,000 cases per year (in people aged 60 years and older), while in the US there are approximately 250,000 cases (in people aged 65 years and older).

The UK National Hip Fracture Database (NHFD) is a clinician-led audit initiative launched in 2007 as a collaboration between the British Orthopaedic Association (BOA) and British Geriatrics Society (BGS).[1] The BOA/BGS published six national clinical standards for hip fracture care, including early surgery, and access to acute geriatric care. The NHFD uses data collection and feedback to support hospital clinical teams in monitoring their performance against these standards and improving their care.

To produce the first external evaluation of the NHFD initiative, researchers led by the London School of Hygiene & Tropical Medicine and The Royal College of Surgeons of England used routinely collected data on 471,590 older people (aged 60 and older) admitted with a hip fracture to NHS hospitals in England between 2003 and 2011.

Researchers compared data from 2003-2007 (before the introduction of

the NHFD) and 2007-2011 (after its introduction) to determine improvements in the use of early surgery (on the day of, or the day after admission) and mortality at 30 days from admission.

From 2007 to 2011, among the patients who had surgery, the rate of early surgery increased from 54.5% to 71.3%, whereas the rate had remained stable in the 2003 -2007 period. The proportion of patients who died within 30 days of being admitted to hospital with a fractured hip decreased from 10.9% to 8.5% from 2007-2011, compared to a small reduction from 11.5% to 10.9% from 2003 - 2007.

The annual relative reduction (30-day mortality, adjusted for age and sex) was 7.6% per year over the 2007 - 2011 period, compared with just 1.8% per year in the 2003 - 2007 period before the initiative was introduced.

The number of hospitals participating in the initiative increased from 11 in 2007 to 175 in 2011.

Lead author Dr Jenny Neuburger, Lecturer in Statistics at the London School of Hygiene & Tropical Medicine, said: "Our findings suggest that the launch of the National Hip Fracture Database in 2007 prompted substantial improvements in care and survival of older people with hip fracture in England. We estimate that by 2011, around 1,000 fewer people a year died within 30 days of hospital admission for hip fracture than would be expected had pre-2007 trends continued. [2]

"As well as a reduction in 30 day mortality, the results show a reduction in 90 and 365-day mortality. This suggests that better hip fracture care doesn't simply defer early mortality, but that improved longer-term survival is sustained.

"Hip fracture care is a substantial cost for the NHS each year. [3] Our

findings will be of particular interest to clinicians, commissioners and policy makers, especially given that the ageing population means the number of older people being admitted to hospital with hip fracture is likely to increase. Early surgery, dedicated medical care and rehabilitation following hip fracture can improve patient outcomes and decrease costs."

Co-author Colin Currie, formerly of the Geriatric Medical Unit at Edinburgh University, who was clinical lead for geriatric medicine on the NHFD from 2004-2013, said: "This study and its findings are important and very encouraging. Traditionally, audits have been self-reporting. But this analysis, using reliable before-and-after data, provides an external, objective assessment of the work of the NHFD since its launch in 2007.

"Improved survival at 30, 90 and 365 days reflects improved early care by clinical teams in which orthopaedic surgeons and geriatricians work together. This has saved lives and substantially reduced the medium term impact of a common, serious and much-feared injury affecting mainly [older people](#).

"This study is, quite simply, the best evidence yet that [hip fracture](#) audit really can make a difference."

The authors note some limitations to the study, including the quality and scope of the routinely collected data. They also highlight that other concurrent national policies could have contributed to the effects observed in the study.

**More information:** [1] Details of current UK National Hip Fracture Database (NHFD) project can be found at: [www.nhfd.co.uk/20/hipfractureR.nsf](http://www.nhfd.co.uk/20/hipfractureR.nsf)

[2] This 1,000 figure is an additional calculation not found in the paper. Based on approximately 50,000 new hip fractures in England each year, and an additional absolute reduction in mortality of 2 percentage points since 2007, over and above previous trends.

[3] A 2001 study suggested that annual medical costs for hip fracture care are nearly £1.7 billion in the UK including social care costs - Burge RT, Worley D, Johansen A, Bhattacharyya, Bose. The cost of osteoporotic fractures in the UK: projections for 2000-2020. J Med Econ 2001; 4; 51-62.

Provided by London School of Hygiene & Tropical Medicine

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