



Royal College
of Physicians

FFFAP

Falls and Fragility Fracture Audit Programme (FFFAP)

National Hip Fracture Database (NHFD) extended report 2014



In association with:

Commissioned by:





Royal College
of Physicians

FFFAP

Falls and Fragility Fracture Audit Programme (FFFAP)

National Hip Fracture Database
(NHFD) extended report 2014

In association with:



British
Orthopaedic
Association



Falls and
Fractures
Alliance



HQIP
Healthcare Quality
Improvement Partnership

Commissioned by:

National Hip Fracture Database annual report 2014

This report was prepared by the members of the National Hip Fracture Database (NHFD) workstream delivery team.

Chris Boulton, NHFD project manager
Viv Burgon, NHFD project coordinator
David Cromwell, Royal College of Surgeons
Antony Johansen, NHFD clinical lead, orthogeriatric medicine
Roz Stanley, FFFAP programme manager
Carmen Tsang, Royal College of Surgeons
Rob Wakeman, NHFD clinical lead, orthopaedic surgery
Andy Williams, NHFD project coordinator

Data analysis and chart production by Royal College of Surgeons of England, Clinical Effectiveness Unit.

NHFD data collection webtool and www.nhfd.co.uk are provided by Crown Informatics <http://crowninformatics.com/>

Falls and Fragility Fracture Audit Programme

The NHFD is commissioned by the Healthcare Quality Improvement Partnership (HQIP) and managed by the Royal College of Physicians (RCP) as part of the Falls and Fragility Fracture Audit Programme (FFFAP) alongside the Fracture Liaison Service Database (FLS-DB) and Falls Pathway workstream. FFFAP aims to improve the delivery of care for patients having falls or sustaining fractures through effective measurement against standards and feedback to providers.

Healthcare Quality Improvement Partnership

The Healthcare Quality Improvement Partnership (HQIP) is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing and National Voices. Its aim is to promote quality improvement, and in particular to increase the impact that clinical audit has on healthcare quality in England and Wales. HQIP hosts the contract to manage and develop the National Clinical Audit and Patient Outcomes Programme (NCAPOP). Their purpose is to engage clinicians across England and Wales in systematic evaluation of their clinical practice against standards and to support and encourage improvement in the quality of treatment and care. The programme comprises more than 30 clinical audits that cover care provided to people with a wide range of medical, surgical and mental health conditions.

The Royal College of Physicians

The Royal College of Physicians plays a leading role in the delivery of high-quality patient care by setting standards of medical practice and promoting clinical excellence. It provides physicians in over 30 medical specialties with education, training and support throughout their careers. As an independent charity representing 30,000 fellows and members worldwide, it advises and works with government, patients, allied healthcare professionals and the public to improve health and healthcare.

Citation for this report: Royal College of Physicians. *National Hip Fracture Database annual report 2014*. London: RCP, 2014.

Copyright

All rights reserved. Applications for the copyright owner's written permission to reproduce significant parts of this publication (including photocopying or storing it in any medium by electronic means and whether or not transiently or incidentally to some other use of this publication) should be addressed to the publisher. Brief extracts from this publication may be reproduced without the written permission of the copyright owner, provided that the source is fully acknowledged.

© Healthcare Quality Improvement Partnership 2014

Published September 2014

ISBN 978-1-86016-542-9
eISBN 978-1-86016-543-6

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

www.rcplondon.ac.uk
Registered Charity No 210508

Typeset by Cambrian Typesetters, Camberley, Surrey

Contents

Who is this report aimed at?	1
Summary report	2
Key findings	3
Key recommendations	14
Extended report	
1 Introduction	15
Hip fractures	15
National Hip Fracture Database	16
Standards of care	18
Challenges facing a national audit	19
2 Methodology	22
3 Audit findings	26
A&E to orthopaedic ward in 4 hours	26
Preoperative medical assessment	28
Type of anaesthetic	30
Time to surgery	32
Undisplaced intracapsular fractures	36
Displaced intracapsular fractures	38
Cementing of arthroplasties	40
Total hip replacements	42
Intertrochanteric fractures	44
Subtrochanteric fractures	46
Cases treated without surgery	48
Reoperation	50
Bone health assessment	52
Specialist falls assessment	54
Pressure ulcers	56
Discharge destination	58
Admitted from	60
Length of stay	62
Follow-up	64
4 Casemix-adjusted outcomes	65
Casemix	65
30-day mortality	65
Return to own home within 30 days	68
5 Best practice tariff	71

6 Regional tables	75
References	88
Appendices	
Appendix A – Facilities audit	89
Appendix B – Structure and governance	97
Appendix C – Outlier policy	99

Who is this report aimed at?

The work reported here is intended to meet the needs of a wide range of individuals and organisations, including:

- patients and carers
- healthcare professionals
- NHS managers
- commissioners
- policymakers
- patient organisations.

The report has been designed in four parts.

- 1 A short **summary report**, which seeks to present our key findings in a concise review of recent developments in hip fracture care in England, Wales and Northern Ireland.

This is particularly suited to NHS managers, hospital chief executives, commissioners and policymakers who are seeking to understand the priorities of their local service, and to see how this can be improved to best meet the needs of their patients.

An individualised version of this report – including details of month-on-month performance – will be provided to the clinical lead and chief executive in each hospital so that they can view their local performance alongside this summary report.

- 2 The more detailed **extended report** presents a step-by-step review of the patient's pathway through initial assessment, anaesthetic and operation, rehabilitation and discharge.

This includes an audit of care against standards defined by the National Institute for Health and Care Excellence (NICE), and a review of the outcomes achieved in each hospital. These outcomes are set against those for other units around the country, allowing healthcare professionals to review the care being given to patients within their hospital.

Regional tables summarising key performance indicators allow benchmarking of practice at each hospital against regional and national figures. These will also be of interest to patients, their carers and patient organisations.

- 3 A third report – **My hip fracture care** – is being prepared for publication later this year.

This will draw upon the annual report's findings to provide a non-technical explanation of the care offered to patients sustaining a hip fracture so that they, their families and carers can understand how care is organised, how this has changed over the years since the National Hip Fracture Database was set up, and how care varies around the country.

- 4 A fourth report – **NHFD Commissioners' Report** – is being prepared for publication later this year.

This will draw upon the annual report's data to provide a description of how care varies between clinical commissioning groups and Welsh local health boards as measured against a set of indicators included in the CCG Outcome Indicators and NHS Outcomes Framework.

Summary report

The National Hip Fracture Database (NHFD) is a clinically led, web-based quality improvement initiative commissioned by the Healthcare Quality Improvement Partnership (HQIP) and managed by the Royal College of Physicians (RCP).

All 182 eligible hospitals in England, Wales and Northern Ireland are now regularly submitting data to NHFD, the largest hip fracture database in the world, with:

- a third of a million cases recorded since its launch in 2007
- over 95% of all new hip fracture cases being documented
- 5,700 records being added every month.

This report describes casemix, care and outcomes for 64,838 people who were admitted with a hip fracture between 1 January 2013 and 31 December 2013, along with a casemix-adjusted analysis of 30-day mortality for the three calendar years 2011–13.

The NHFD was originally conceived as a way of auditing the care provided to patients against standards agreed by the British Orthopaedic Association (BOA) and the British Geriatrics Society (BGS).

As part of the Falls and Fragility Fracture Audit Programme (FFFAP) within the Clinical Effectiveness and Evaluation Unit at the RCP, the NHFD has now developed into a comprehensive quality improvement initiative and combines several elements:

- description of facilities and practice in different units around the country
- audit of practice against the NICE quality standard for hip fracture (QS16)
- performance evaluation to support Monitor's Best Practice Tariff (BPT)
- support for clinical governance in individual hospitals
- metrics to support patient safety monitoring
- identification of outlier hospitals in respect of patient outcome
- a framework to support local and national audit work
- an infrastructure for scientific and research work
- a resource of specialist information, expertise and networking.

These aspects of the work are each described in detail in the extended report, but key findings are summarised, reviewed and signposted in this summary report.

Key findings

1 Description of facilities and practice across the country

Audit of facilities in different hospitals has shown a year-on-year picture of investment in hip fracture care, with marked improvements in the availability of specialist nurses and senior orthogeriatricians across the country (Fig 1). However, 113 hospitals (62%) still report that they have no fracture liaison nurse, and eight hospitals (4.4%) have no orthogeriatric input.

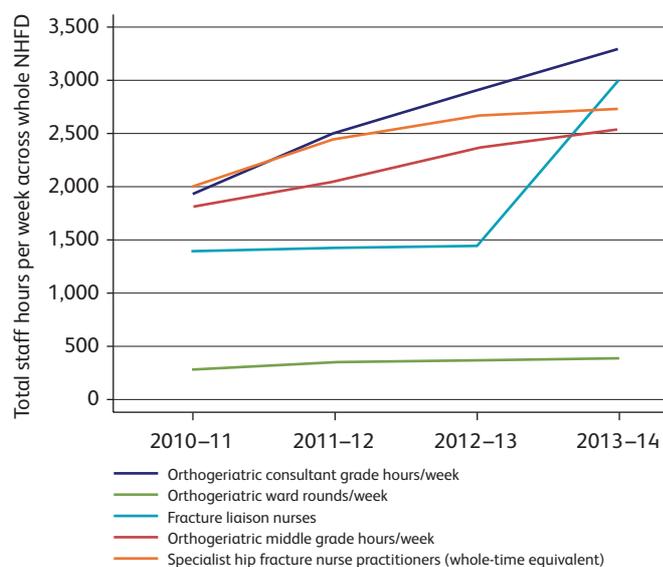


Fig 1 Facilities audit trends.

Despite the investment in hip fracture care in recent years, there remains huge variation between hospitals in key aspects of the patient experience, including how quickly patients are offered a bed on an appropriate orthopaedic or orthogeriatric ward (Fig 2).

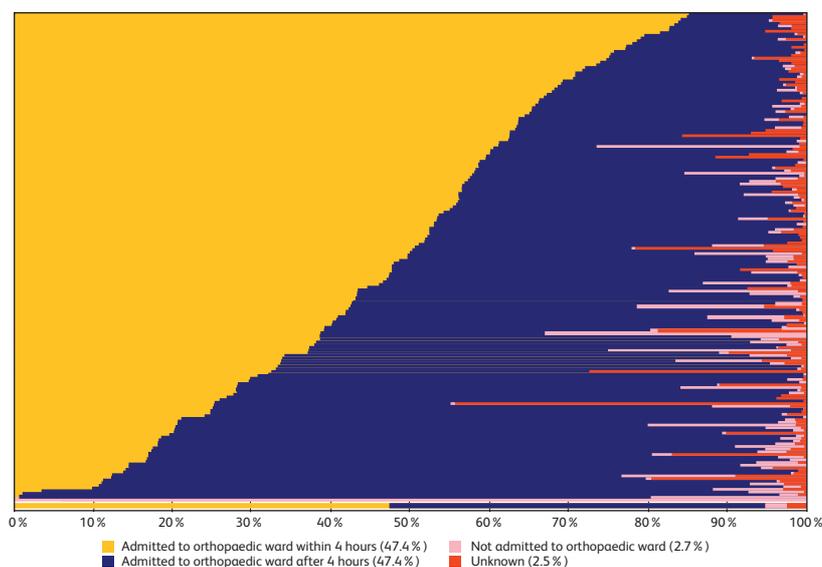


Fig 2 Admissions to orthopaedic ward.

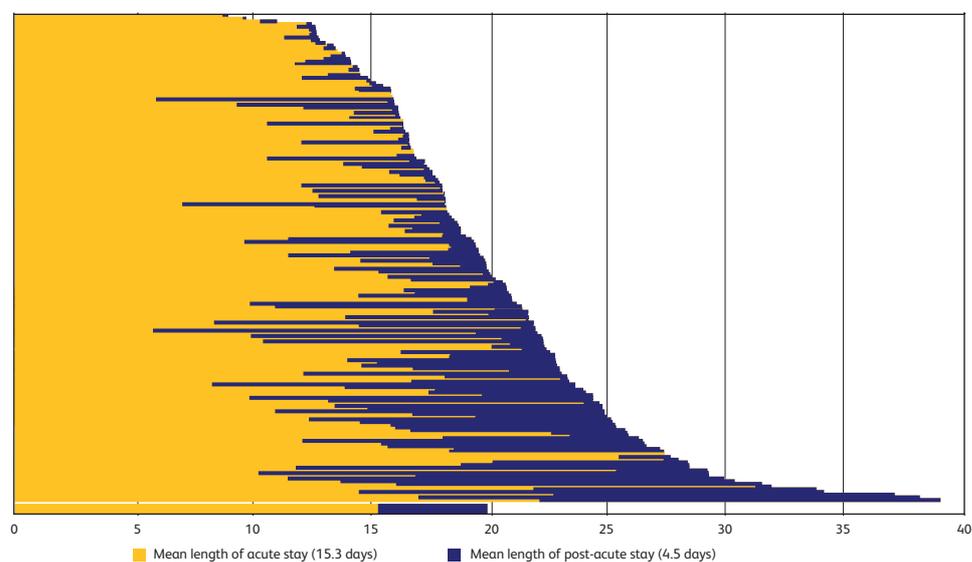


Fig 3 Length of stay.

Charts like this within the extended report provide detailed data on performance and outcome for individual hospitals.

Length of stay (LOS) is the main determinant of the initial economic impact of a hip fracture. Previous reports have documented progressive reductions in this, reflecting improvements in surgical care, rehabilitation, discharge planning and post-discharge care.

In 2013, the mean LOS in acute orthopaedic wards was 15.3 days, and overall LOS in the acute hospital was 19.8 days (Fig 3); both figures are essentially unchanged compared with those for 2012–13.

2 Audit of practice against the NICE quality standard for hip fracture (QS16)

NICE published its clinical guideline *The management of hip fracture in adults* (CG124)¹ in 2011 and its quality standard (QS16)² in 2012. The NHFD audits patient care against several of the QS16 standards.

Standard 3

People with hip fracture have their cognitive status assessed, measured and recorded from admission

The proportion of patients whose care meets this standard has improved markedly since it became a requirement for BPT in 2012.

The mean figure of 92.0% for 2013 represents a further improvement; in our last report, this figure was 87.8%.

Standard 5

People with hip fracture have surgery on the day of, or the day after, admission

The proportion of patients whose care meets this standard has improved progressively over the years since the first NHFD annual report.

The mean figure of 71.7% for 2013 represents a further improvement compared with the figure of 70.6% recorded for 2012–13 in our last annual report.

However, there remains unacceptable variation in performance around the country, with mean figures ranging from 13% to 91% (Fig 4).

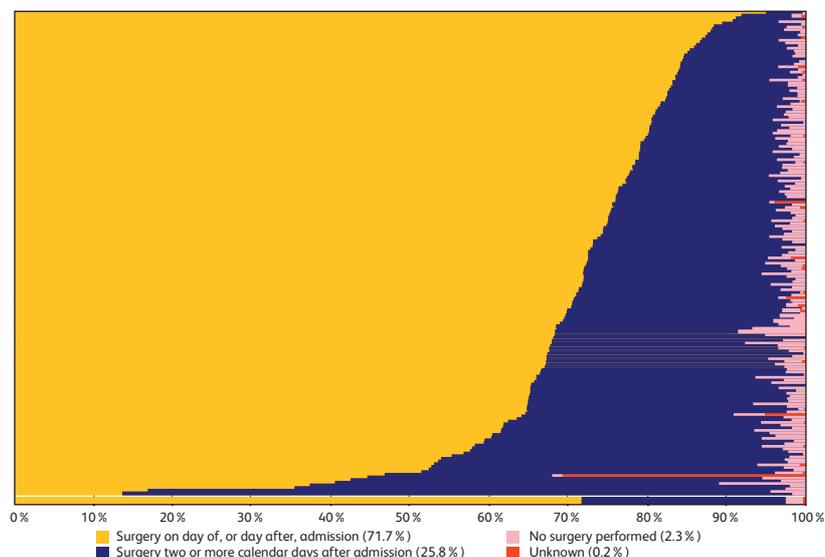


Fig 4 Surgery on day of, or day after, admission.

Standard 7

People with displaced intracapsular fracture receive cemented arthroplasty, with the offer of total hip replacement if clinically eligible

Cementing of arthroplasties has increased in line with the NICE recommendation, with a figure of 80.2% in 2013 compared with 77.2% in our last report.

We found that 19.1% of eligible patients (patients with displaced intracapsular fracture, who were ASA 1–2, with a normal mental test score, and able to walk outside using no more than a stick) received total hip replacement in 2013, a figure that is slightly lower than the 20.7% reported last year.

Standard 9

People with hip fracture are offered a physiotherapist assessment the day after surgery and mobilisation at least once a day unless contraindicated

The NHFD dataset is reviewed and updated each year. The dataset introduced in April 2014 (on which we will report next year) includes a new field, which records whether patients were mobilised out of bed on the day following surgery. This will allow us to profile how individual units' approaches to postoperative surgical care, transfusion, fluid management and physiotherapy affect their patients' ability to make a rapid recovery from injury and operation.

Standard 11

People with hip fracture are offered a multifactorial risk assessment to identify and address future falls risk, and are offered individualised intervention if appropriate

In 2013 we recorded 94.6% of patients as having received such assessment, an improvement from 93.4% in the last NHFD annual report.

Standard 12

People with hip fracture are offered a bone health assessment to identify future fracture risk and offered pharmacological intervention as needed before discharge

In 2013 we found that 79.4% of patients had been started on osteoporosis treatment, or referred for dual X-ray absorptiometry (DXA) scan or bone clinic assessment – a similar figure to the 79.5% reported last year.

A further 16.3% of patients were recorded as having been assessed but not treated – this figure is of concern, as it is higher than the 14.8% reported last year.

There was considerable variation between hospitals in both of these figures, and there is clearly a need for greater attention to bone protection therapies in some units if they wish to reduce the risk of patients being readmitted with recurrent hip or fragility fractures.

3 Performance monitoring to support BPT

The NHFD has successfully supported the first four years of ‘payment by results’ – the BPT initiative.

BPT rewards care that meets specified standards:

- surgery within 36 hours of admission
- shared care by surgeon and geriatrician
- admission using a care protocol agreed by geriatrician, surgeon and anaesthetist
- assessment by geriatrician within 72 hours of admission
- pre- and postoperative abbreviated mental test score (AMTS) assessment
- geriatrician-led multidisciplinary rehabilitation
- secondary prevention of falls
- bone health assessment.

Attainment of BPT has increased since it was introduced in 2010. In the last quarter of 2013, care for 64% of patients met all BPT standards – further improvement on the figure of 59% for the same period in 2012. In stark contrast, two English hospitals report that none of their patients received care that was eligible for BPT throughout 2013.

4 Support for clinical governance in individual hospitals

The NHFD website has always provided summary data for local teams to use: admission numbers, time to an orthopaedic ward, time to surgery, casemix, performance against NICE standards, and BPT attainment.

In 2013, the NHFD commissioned Crown Informatics as its web provider and this has enabled the development of a more interactive, user-friendly website (Fig 5). This is steadily being upgraded to provide graphical real-time information to support the monthly clinical governance meetings that are key to the hip fracture programme recommended in NICE CG124.

If individual hospitals keep data entry up to date, they will automatically be provided with run charts like those in Fig 5, which will help them to monitor key aspects of care such as time to theatre.

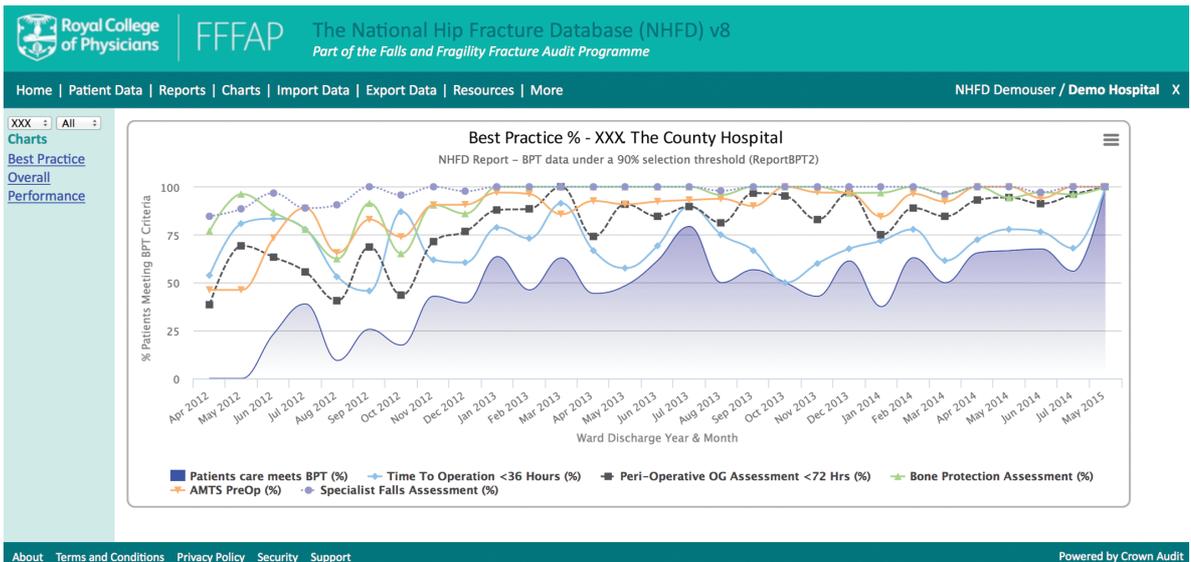
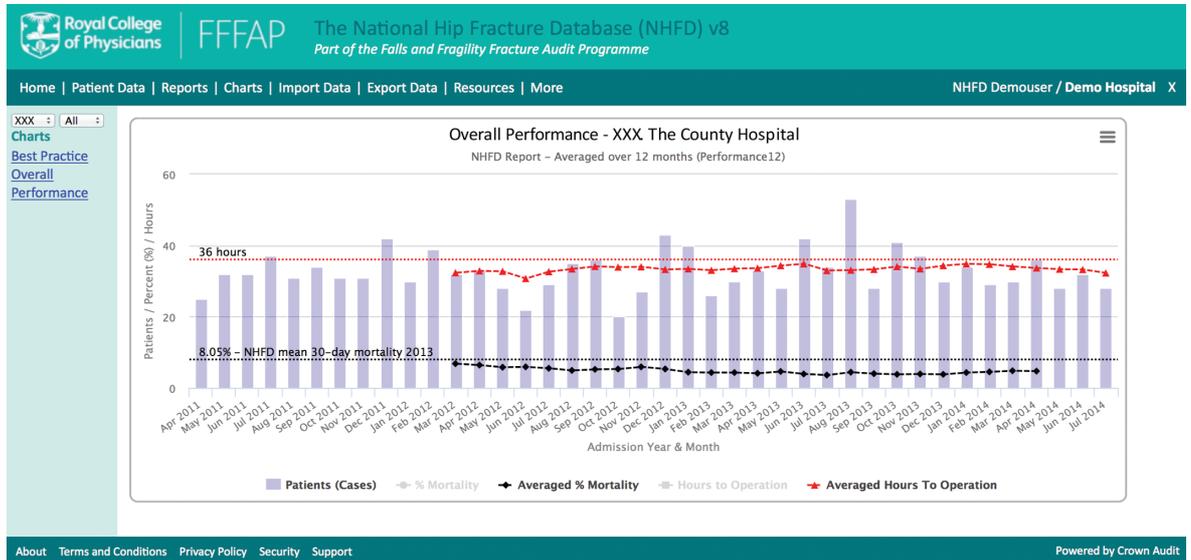


Fig 5 Screenshot of new online NHFD run chart of an individual hospital’s performance.

5 Patient safety

In their report on safety in the NHS in England, *A promise to learn – a commitment to act* (August 2013),³ the National Advisory Group on the Safety of Patients in England noted ‘There is no single measure of safety, but early warning signals can be valuable and should be maintained and heeded’.

The NHFD reports on a number of measures that relate not only to the quality of patient care, but also to the safe delivery of that care.

Inpatient falls

In 2013, 4.9% of hip fractures occurred while the patient was in NHS care. This amounts to approximately 3,000 hip fractures per year. Such injuries are particularly serious as the patient is often

already acutely unwell, perioperative care is more complex, and poor outcome and complications are more common.

Since April 2014, the NHFD dataset has improved the details of where hip fractures occur: the options are now 'on this hospital site', 'other hospital site of this trust' and 'other hospital trust'. This will complement local incident-reporting systems and support identification of hospital-acquired hip fractures. The measure is also proposed for domain 5 (patient safety) of the NHS outcomes framework for England.⁴

Pressure ulcers

Ulcers can develop when pressure on the skin impairs its blood supply. Pressure ulcers occur in immobile patients, such as those with hip fractures, but should be preventable with good care (NICE CG179).⁵ Treatment generally consists of prolonged periods of wound care, but may involve minor or major surgery.

Subjectivity in the grading of pressure ulcers and differences in the length of time that people with hip fractures spend in acute wards make direct comparison between hospitals difficult. However, there should be greater consistency of approach to this major concern.

The percentage of patients reported as developing an ulcer fell from 3.3% to 2.9% in this year's report. The new NHFD run charts will provide hospitals and hip fracture services with valuable insight into emerging trends in their own units.

Return to theatre

Hip fracture operations should be of a standard that permits immediate mobilisation.

Occasionally, complications (including infection, dislocation and displacement of fixation) may require reoperation within 30 days of admission. Reoperation is always a serious undertaking. Currently only 1.1% of patients are recorded as having a return to theatre; however, the 51.0% of cases recorded as 'unknown' precludes useful reporting of comparative figures.

Hospitals should record their 30-day follow-up data, so that changes in reoperation rates and the procedures recorded can be used in clinical governance meetings to improve local outcomes.

6 Identification of outlier hospitals in respect of patient outcome

Self-reported data from individual hospitals are useful for local clinical governance, but comparisons of performance and outcome between hospitals need third-party validation. Individual NHFD records are therefore linked to national data sources to allow a reliable picture of total LOS and mortality.

In this report, we have collated 30-day mortality data for the three calendar years 2011–13. This longer time period is designed to improve our sensitivity to poor performance in units that admit fewer numbers of patients. This means that a hospital may remain an outlier for a year or two, even after major improvements in practice and performance. Changes to complex multidisciplinary care cannot become embedded overnight. The new NHFD run charts will help such units to monitor the details of their progress.

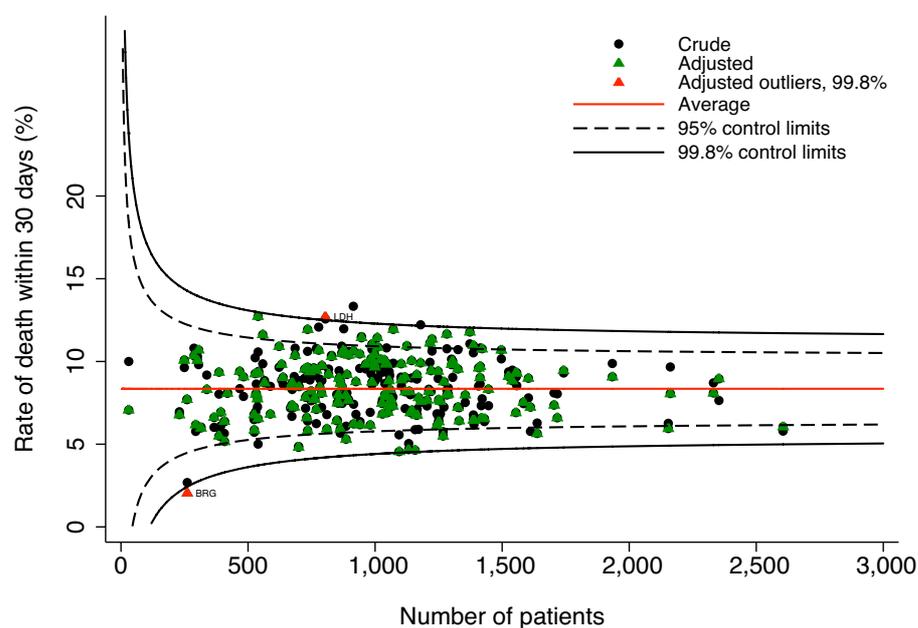


Fig 6 Casemix-adjusted 30-day mortality, 2011–13.

The Clinical Effectiveness Unit (CEU) at the Royal College of Surgeons of England (RCS) has developed models of casemix adjustment specific to hip fracture. These models have been used in analysing two key measures: death within 30 days of admission with hip fracture, and return to own home within 30 days.

These outcomes are reported in funnel plots that take account of a hospital's size.

Just three hospitals out of 182 (1.6%) triggered concern with significantly increased 30-day mortality – outside the funnel plot's three standard deviation (3 SD; 99.8%) limit (Fig 6). Two of these hospitals were subsequently excluded from this analysis after significant problems were identified with the quality of data that they had submitted.

The remaining outlier hospital has been contacted and offered support in reviewing its service to identify and address factors that might explain this finding.

7 A framework to support local and national audit work

Individual hospitals use their NHFD data as a framework on which to build more focused studies of local performance. Local audits of thromboprophylaxis, pain management, cognitive assessment and surgical technique have all been facilitated in this way.

On a regional basis, hospitals use the NHFD's standardised approach to recording of assessment, performance and outcome to support regional planning.

Nationally, in 2013 collaboration between the NHFD and the Association of Anaesthetists of Great Britain and Ireland (AAGBI) led to the **Anaesthetic Sprint Audit of Practice (ASAP)**⁶ published earlier this year.

Anaesthetic Sprint Audit of Practice

This sprint audit profiled hospitals' compliance with standards for perioperative care described in the AAGBI guideline *Management of proximal femoral fractures 2011*.⁷

The Anaesthetic Sprint Audit of Practice (ASAP) collected data on 16,498 patients who underwent anaesthesia and operation in 182 hospitals between 1 May 2013 and 31 July 2013. Additional anaesthetic data for 80% of these patients were collected using the NHFD's online system.

The audit identified striking inter-hospital variation in practice, suggesting that most units have yet to develop and implement standardised, evidence-based protocols for the assessment and management of this frail, high-risk group of patients.

- Over 90% of cases recorded both anaesthetist and surgeon as consultants or specialists and in only 0.4% of cases were both unsupervised trainees.
- Pain-relieving nerve blocks were administered to 56% of patients. This indicates an impressive adoption of this technique during recent years, particularly since its recommendation in NICE CG124.
- Some units administered spinal anaesthesia in over 80% of cases, while others used this approach in fewer than 10%.
- Variation was noted in use of intrathecal opioids, sedation, supplemental oxygen, and the drug dose used for spinal anaesthesia.

Follow-up of this cohort is in progress to evaluate the Nottingham Hip Fracture Score as an outcome predictor for hip fracture, and to establish how the intraoperative hypotension identified during ASAP affects individual patient outcome.

8 An infrastructure for scientific and research work

The NHFD provides a backbone upon which other work can be built. Ongoing academic work supported by the NHFD Scientific and Publications Committee includes follow-up of the ASAP patient cohort described above.

A study based on NHFD data showed that patients with hip fracture account for at least 1.5 million bed-days per year. This equates to the continuous occupation of 4,106 beds across the NHS at any one time – the equivalent of several district general hospitals just for this one condition.⁸

Another analysis of 65,535 patient records from the NHFD was used to determine differences in outcome according to the type of anaesthesia. Of these, 30,130 patients received general anaesthesia, 22,999 received spinal anaesthesia and the remaining 12,406 received a combination of the two. There was no significant difference in 5-day or 30-day mortality between patients who received general anaesthesia and those who received spinal anaesthesia, even after adjustment for age and physical status.⁹

In 2013, the NHFD Scientific and Publications Committee carried out a priority-setting exercise¹⁰ with NHFD lead clinicians to determine scientific priorities for using NHFD data. This exercise generated ten themes for further investigation:

- delay to surgery
- service modelling
- where should I have my hip fracture?
- recurrent hip fracture
- intracapsular hip fracture – a description of practice
- seasonal, day-of-the-week and diurnal patterns in presentation
- classification of different service models
- trends in incidence of hip fractures
- non-operative care
- where have all the English inpatients gone?

Researchers looking to collaborate with the NHFD in investigating these themes should contact the committee via NHFD@rcplondon.ac.uk.

9 A resource of specialist information, expertise and networking

A programme of regional meetings brings together people working in different specialties and hospitals to learn from each others' experiences.

Examples of how hospitals have used NHFD data locally to improve care of patients with hip fracture are presented at these regional meetings and summaries of some of these initiatives, like the one from Basildon below, are included throughout this report.

In 2007, a perioperative orthogeriatrician was employed by **Basildon and Thurrock University Hospital Trust** to provide shared care to patients with hip fracture. Weekly multidisciplinary meetings were instigated. Other initiatives included the introduction of fascia iliaca blocks in A&E and an increase in the use of spinal anaesthesia, rising from 15% last year to 35% this year. NHFD data have shown that, since the introduction of this joint care, 30-day mortality has fallen from around 15% in 2006 to 6.8% last year and 6.3% this year.

The NHFD website www.nhfd.co.uk hosts a wide range of resources, including assessment documentation developed by individual hospitals and innovative improvements to care. Additional resources include job descriptions and business cases for key staff members. Together, these will allow other units to adopt examples of good practice and innovation described in this and previous annual reports.

At **Kingston Hospital NHS Foundation Trust**, we used the NHFD online reports, in combination with the National Dementia CQUIN (Commissioning for Quality and Innovation), to drive improvement in quality of care for our patients with dementia and delirium, and their families and carers. We established the Forget-Me-Not dementia care quality scheme. This includes personalised, highly visible care preferences that alert staff to the needs of specific patients, 'carers' passports' to welcome carers as 'partners in care', and carer surveys to encourage feedback. Elements of the scheme have been quoted as examples of good practice in the Royal College of Nursing's *Triangle of care – carers included: a guide to best practice for dementia care*.¹¹ Further improvements this year include projects to improve awareness of delirium among theatre staff and a study of anaesthetic techniques and rates of postoperative delirium.

Key recommendations

Policymakers need to:

- consider a programme of audit centred on the NICE quality standard (QS16) to establish which units have developed the hip fracture programme that NICE identified as key to improving performance, cost-effectiveness and addressing the patient perspective
- in Northern Ireland and Wales, look at drivers to improve time to theatre and access to orthogeriatric care in order to achieve LOS figures equivalent to those achieved in England as a result of BPT.

Chief executives, commissioners and clinical leads need to:

- address weaknesses in completion of 30-day follow-up for their local service that leave local staff uncertain about real-time performance within their unit; rates of reoperation and of pressure ulcers should be of particular focus
- examine the provision of secondary prevention services – fracture liaison nurses and on-site DXA facilities
- in England, look at how BPT should develop to encourage still greater improvement among hospitals
- consider the appropriateness of paying BPT to units where many patients are apparently assessed for osteoporosis, but then not treated.

Clinical staff need to:

- consider the strengths and weaknesses of their own service identified in the inter-hospital comparison charts, regional tables and funnel plots of this report
- use the new web-based run charts to inform the monthly clinical governance meetings that will be central to their local hip fracture programme.

Extended report

1 Introduction

Hip fractures

What is a hip fracture?

Hip fracture is the common name used to describe a fracture or break of the upper part of the thigh bone where it meets the pelvis in the hip joint. This injury is sometimes referred to as a 'fractured neck of femur' or 'fracture of the proximal femur'.

The patient

Bone is normally strong and resilient to moderate trauma, such as a fall from standing height.

However, as we become older our bones become weaker owing to osteoporosis, which is common among people over the age of 80 years. A number of disease processes can hasten the effect of ageing and further weaken the bone structure.

Falls are increasingly likely as people get older. One in three people over 65 years old will fall each year. Slowing of reflexes can mean that old or frail people are unable to break their fall, and the hip often takes the brunt of the impact.

As a result, half of all fractures among older people affect the hip. The occurrence of a hip fracture may be the first warning of osteoporosis, of diseases leading to recurrent falls or of general frailty.

Many people recovering from a hip fracture therefore have coexisting medical, orthopaedic, psychological and social problems that can make operation and rehabilitation a real challenge.

The hip

The hip joint is the articulation of the head of the femur (the ball at the top of the thigh bone) with a socket in the pelvis. This joint is enclosed within a fibrous capsule, and the head of the femur receives much of its blood supply through blood vessels in this capsule.

If a hip fracture is 'intracapsular' (within the capsule), it can disrupt the blood supply to the head of the femur, leading to delayed healing of the fracture or to death of this part of the bone.

Fractures outside the capsule do not have this problem. These 'extracapsular' fractures can occur in different positions in the upper femur, 'intertrochanteric' and 'subtrochanteric' (Fig 7).

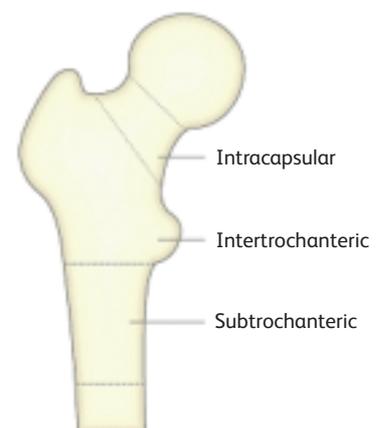


Fig 7 Anatomy of the upper femur.

The type of surgical treatment offered to a patient is dependent on the site of the fracture.

The NHFD collects data on people with both intracapsular and extracapsular types of fracture.

The operation

The immediate pain of a fracture can be eased by painkillers and by an injection of local anaesthetic around the nerves in front of the hip joint.

A very small proportion of patients with a hip fracture have an injury where the bone fragments are impacted or lodged together in a way that will heal without surgery. A few other patients are so medically unwell that anaesthetic and surgery are not advisable.

However, the vast majority of people need an operation if they are to move comfortably in or out of bed, to regain mobility and to return to their former level of independence.

The most common operation involves replacement of the head of the femur, with or without replacement of the hip socket in which it sits – a hemiarthroplasty (partial hip replacement) or a total hip replacement. This is usually performed for intracapsular hip fractures if the bones have separated, although some where there is only a hairline fracture can be repaired using screws.

Extracapsular hip fractures are repaired with a plate screwed to the upper thigh bone, through which a sliding screw is placed into the head of the femur. For more complex fractures, and those further down the thigh bone, a long nail passed down the inside of the thigh bone – an intramedullary nail – is used instead of the plate.

The operation can be performed with the patient asleep using a general anaesthetic (GA), or with their pain blocked by a spinal (SA) or epidural anaesthetic (CSE).

National Hip Fracture Database

The purpose of the NHFD is to drive improvement in the quality and cost-effectiveness of hip fracture care. It also aims to reduce the subsequent incidence of hip and other fractures by improved secondary prevention: the reduction of falls and the improvement of bone health.

In 2005, the success of collaboration between the BOA and the BGS in providing training for junior surgeons and geriatricians led these organisations to champion a change of approach to the care of older people with hip fracture in the UK.

At the same time, they proposed an independent, clinically led, web-based audit. This would monitor the quality and outcome of the care provided to individual patients and help individual trauma units to improve the organisation of their services.

The NHFD was launched in 2007; in 2009, it was recognised by the National Clinical Audit Advisory Group for central funding. The programme has now secured HQIP commissioning until 2015. Since 2012, the NHFD has been managed as part of FFFAP.

Falls and Fragility Fracture Audit Programme

FFFAP consists of three national clinical audits designed to improve the care that patients with fragility fractures and inpatient falls receive in hospital. FFFAP is commissioned by HQIP and managed by the RCP.

FFFAP aims to improve four key aspects of care in older people:

- preservation of bone health and the prevention of frailty and accidents
- the efficiency and outcome of care after a hip fracture
- early intervention to restore independence
- acute and primary care response after a first fracture – to prevent a second fracture.

FFFAP has two other workstreams, which complement the NHFD.

Fracture Liaison Service Database

The Fracture Liaison Service Database (FLS-DB) aims to evaluate patterns of assessment and treatment for osteoporosis and falls.

The aim of this feasibility study is to demonstrate that patient-level data captured in primary care settings can be combined with data from secondary care settings in a single database.

Data have been collected from both hospitals with an existing fracture liaison service (FLS) and hospitals that are interested in providing FLS-type services; these will be linked with primary care data.

Inpatient falls audit

The inpatient falls audit aims to measure compliance against national standards of best practice in reducing risk of falls within acute care.

The National Audit of Inpatient Falls is currently in development, undergoing feasibility evaluation.

The audit will focus on acute hospitals and consists of:

- a short organisational audit
- an audit of compliance against national standards of best practice in reducing falls in a sample of those patients at risk.

Standards of care

Patients presenting with hip fracture tend to be older than those in most other categories of acute hospital admission, and they are frequently frail with a combination of medical, psychological and social problems. As a result, they are a challenging group to involve in research trials, but the public health implications of this condition are such that a large number of trials have been published. This evidence has been used to develop guidelines for the management of hip fracture.

In 2005, a collaboration between the BOA and the BGS championed a change in attitudes to the care of older people with hip fracture. An expert panel reviewed the literature and developed a consensus statement, *The care of patients with fragility fracture*, which in 2007 was published as the BOA 'Blue Book'.¹²

This included six quality standards central to the organisation of care of patients with hip fracture. Health organisations were challenged to ensure that they provide:

- prompt admission to orthopaedic wards
- early surgical repair of the fracture
- protection against pressure ulcers
- routine access to acute orthogeriatric assessment and support
- assessment for bone protection therapy
- falls prevention.

These standards were used in developing the original dataset for the NHFD, and continue to influence the structure of NHFD analysis and reports, but these 'Blue Book' standards have largely been superseded by two new drivers for change that have been developed to follow their lead.

NICE CG124 and QS16

In 2011, NICE performed a more rigorous search, critical appraisal and economic analysis of the published literature for key areas of the care of hip fracture.

This led to their publication of clinical guideline 124 (CG124), *The management of hip fracture in adults*,¹ along with implementation tools and resources.

In 2012, NICE published a quality standard for hip fracture (NICE QS16).²

A number of these standards (3, 5, 7, 11 and 12) are already integral to the standards used in the NHFD programme of audit and will be directly addressed in this annual report. The NHFD team is currently developing a new dataset in order to extend coverage to the remaining elements of QS16.

Quality standard for hip fracture (NICE QS16)

- 1 *People with hip fracture are offered a formal hip fracture programme from admission.*
- 2 *The hip fracture programme team retains a comprehensive and continuing clinical and service governance lead for all stages of the pathway of care, including the policies and criteria for both intermediate care and early supported discharge.*
- 3 *People with hip fracture have their cognitive status assessed, measured and recorded from admission.*
- 4 *People with hip fracture receive prompt and effective pain management, in a manner that takes into account the hierarchy of pain management drugs, throughout their hospital stay.*
- 5 *People with hip fracture have surgery on the day of, or the day after, admission.*
- 6 *People with hip fracture have their surgery scheduled on a planned trauma list, with consultant or senior staff supervision.*
- 7 *People with displaced intracapsular fracture receive cemented arthroplasty, with the offer of total hip replacement if clinically eligible.*
- 8 *People with trochanteric fractures above and including the lesser trochanter (AO classification types A1 and A2) receive extramedullary implants such as a sliding hip screw in preference to an intramedullary (IM) nail.*
- 9 *People with hip fracture are offered a physiotherapist assessment the day after surgery and mobilisation at least once a day unless contraindicated.*
- 10 *People with hip fracture are offered early supported discharge (if they are eligible), led by the hip fracture programme team.*
- 11 *People with hip fracture are offered a multifactorial risk assessment to identify and address future falls risk, and are offered individualised intervention if appropriate.*
- 12 *People with hip fracture are offered a bone health assessment to identify future fracture risk and offered pharmacological intervention as needed before discharge from hospital.*

Challenges facing a national audit

Extent of coverage

The NHFD can only produce and publish reports on the data that are submitted, thus a national audit can only truly work if all hospitals treating hip fractures regularly submit a full dataset on every patient. Since 2011, all eligible hospitals in England, Wales and Northern Ireland have registered and submitted data to the NHFD. This year, all 182 participating hospitals have been included in the report.

Case ascertainment

Case ascertainment cannot be accurately measured until hip fracture rates have been validated at both hospital and national levels. The NHFD previously commissioned the CEU at the RCS to compare an extract of NHFD data with data obtained from Hospital Episode Statistics (HES) and Patient Episode Data for Wales (PEDW). Using individual patient diagnosis and operation codes, it was established that 95% of all hip fracture cases nationally were being submitted to the NHFD, although there was variation between provider sites. Using the latest HES and PEDW figures, it has been established that more than 95% of all hospitals in England and Wales submitted in excess of 80% of their cases.

Data completeness and quality

The NHFD dataset is reviewed annually and changes are made to reflect current standards and guidelines in hip fracture care. Fields allow data on casemix, process and outcomes to be collected for each patient and we ask that all fields are completed to allow a full and robust analysis of the patient pathway. Data completeness has improved this year, but the problem of incomplete data still persists, most notably in the reporting of 30-day and 120-day follow-up.

At each participating hospital, there is a nominated lead clinician who is responsible for verifying the quality of all data submitted.

Information governance

Secure database access for staff involved in the treatment of hip fracture is requested by the NHFD lead clinician for each hospital submitting data. Data are entered to a secure website with access via a username and password.

Data are collected and processed with specific approval of the secretary of state for health on the recommendation of the Health Research Authority (HRA) Confidentiality Advisory Group (CAG) under the Health Service (Control of Patient Information) Regulations 2002. This is more commonly referred to as section 251 approval, and references to 'section 251 support or approval' actually refer to approval given under the authority of the regulations.

Section 251 was established to enable the common law duty of confidentiality to be overridden to enable disclosure of confidential patient information for medical purposes, where it is not possible to use anonymised information and where seeking consent is not practical, with regard to the cost and technology available.

The process is different for Northern Ireland, with the data being provided from the Fracture Outcomes Research Database (FORD) system. As date of death is collected directly from trusts and not validated against an independent source, it has not been possible to include mortality statistics for Northern Ireland this year. The NHFD is exploring the validation of FORD data against government registry office data for subsequent NHFD reporting.

Personal confidential data items for this audit are processed by Crown Informatics under section 251 approval prior to anonymisation. For England and Wales, the demographic data are validated against data provided by the Health and Social Care Information Centre (HSCIC) and date of death is validated as part of this process. Once validated, the data are anonymised and securely transferred to the RCS CEU for analysis. Reported data and data files released under government transparency guidance¹³ are managed in line with UK statistics authority guidance on the handling of small numbers¹⁴ to prevent the identification of individuals. Data for English hospitals included in all provider level charts in this report can be found at www.data.gov.uk.

Previous NHFD reports

This report should be read in conjunction with previous NHFD annual reports available from www.nhfd.co.uk. Further online reporting for participant sites is available via the data entry portal, also at www.nhfd.co.uk. For a glossary, please see these previous reports.

2 Methodology

Data collection

Each hospital submits data on all patients aged 60 and over with hip fracture. These data are transferred electronically to the NHFD, either prospectively using a simple web-based form, or by bulk upload from their own databases.

Facilities audit

Each year, we undertake an organisational facilities audit using a questionnaire appended to the NHFD web tool, to define how services are organised and who is involved in providing care. This allows us to understand the pressures on individual participating units, to monitor how their service develops in response to changes in workload and patterns of investment, and to add a further richness of interpretation to clinical audit findings.

Reporting and ranking against standards of care at hospital level

Hospital performance and outcome indicators are calculated and ranked so that individual hospitals can see how their performance compares with those of other hospitals. Details of how each chart is ranked are given in the chart specification.

Data cohorts

The charts and tables are each based on one of four cohorts detailed below. Charts use the 2013 admission cohort unless otherwise specified.

One-year admission data cohort (2013)

It includes 64,838 cases that fulfil all of the following criteria:

- admitted between 1 January 2013 and 31 December 2013 inclusive
- aged between 60 and 110 years inclusive at admission
- from all of the 182 hospitals included in the 2013 NHFD report.

Three-year admission data cohort (2011–13)

This data slice is used for the 30-day mortality funnel chart.

It includes 178,534 cases that fulfil all of the following criteria:

- admitted between 1 January 2011 and 31 December 2013 inclusive
- aged between 60 and 110 years inclusive at admission
- from one of the 178 hospitals included in the 2013 NHFD report (excluding Northern Ireland).

One-year discharge data cohort (2013)

This data slice is used for length of acute and post-acute trust stays, discharge destination from trust, reoperation within 30 days, admitted from and discharged to own home, and BPT charts and tables.

It includes 58,853 cases that fulfil all of the following criteria:

- admitted between 1 January 2013 and 31 December 2013 inclusive
- discharged from trust between 1 January 2013 and 31 December 2013 inclusive (note that discharge trust date was missing for 0.3% of otherwise eligible cases. Cases with missing discharge trust date are not included in the discharge data slice)
- aged between 60 and 110 years inclusive at admission
- from one of the 164 hospitals in England included in the 2013 NHFD report.

Three-year discharge data cohort (2011–13)

This data slice is used for BPT by quarter of calendar year, 2011–13.

It includes 168,716 cases that fulfil all of the following criteria:

- admitted between 1 January 2011 and 31 December 2013 inclusive
- discharged from trust between 1 January 2011 and 31 December 2013 inclusive (note that discharge trust date was missing for 0.4% of otherwise eligible cases. Cases with missing discharge trust date are not included in the discharge data slice)
- aged between 60 and 110 years inclusive at admission
- from one of the hospitals in England included in the 2011, 2012 or 2013 NHFD report.

Numbers of cases

The axis of each chart details the number of cases per hospital included in the analysis.

Hospital (N) – Indicates that all cases are included and the number in brackets is the number of cases per hospital.

Hospital (n/N) – Indicates that a subset has been taken. ‘n’ is the number of cases in the subset and ‘N’ is the total number of cases in the hospital.

List of participating hospitals

Hospital	Code	Region
Addenbrooke's Hospital, Cambridge	ADD	East of England
Royal Albert Edward Infirmary, Wigan	AEI	North West
Airdale General Hospital	AIR	Yorks & the Humber
Alexandra Hospital, Redditch	RED	West Midlands
Altnagelvin Area Hospital	ALT	Northern Ireland
Arrowe Park Hospital, Wirral	WIR	North West
Barnet Hospital	BNT	London
Barnsley Hospital	BAR	Yorks & the Humber
Basingstoke and North Hampshire Hospital	NHH	South Central
Basildon and Thurrock University Hospital	BAS	East of England
Bassetlaw Hospital	BSL	Yorks & the Humber
Bedford Hospital	BED	East of England
Birmingham Heartlands Hospital	EBH	West Midlands
Bradford Royal Infirmary	BRD	Yorks & the Humber
Bristol Royal Infirmary	BRI	South West
Bronglais Hospital, Aberystwyth	BRG	Wales
Broomfield Hospital, Chelmsford	BFH	East of England
Chase Farm Hospital	CHS	London
Chelsea & Westminster Hospital	WES	London
Cheltenham General Hospital	CHG	South West
Chesterfield Royal Hospital	CHE	East Midlands
Colchester General Hospital	COL	East of England
Conquest Hospital, Hastings	CGH	South East
Countess of Chester Hospital	COC	North West
County Hospital, Hereford	HCH	West Midlands
Craigavon Hospital, Portadown	CRG	Northern Ireland
Croydon University Hospital	MAY	London
Cumberland Infirmary, Carlisle	CMI	North West
Darent Valley Hospital, Dartford	DVH	South East
Darlington Memorial Hospital	DAR	North East
Derbyshire Royal Infirmary, Derby	DER	East Midlands
Derriford Hospital, Plymouth	PLY	South West
Diana Princess of Wales Hospital, Grimsby	GGH	Yorks & the Humber
Doncaster Royal Infirmary	DID	Yorks & the Humber
Dorset County Hospital, Dorchester	WDH	South West
Ealing Hospital	EAL	London
East and North Herts Hospital	ENH	East of England
East Surrey Hospital, Redhill	ESU	South East
Eastbourne Hospital	DGE	South East
Frenchay Hospital, Bristol	FRY	South West
Frimley Park Hospital, Camberley	FRM	South East
Furness General Hospital, Barrow-in-Furness	FGH	North West
George Eliot Hospital, Nuneaton	NUN	West Midlands
Glan Clwyd Hospital, Bodolwyddan	CLW	Wales
Gloucestershire Royal Hospital, Gloucester	GLO	South West
Good Hope Hospital, Birmingham	GHS	West Midlands

Hospital	Code	Region
Grantham and District Hospital	GRA	East Midlands
Gwynedd Ysbyty, Bangor	GWY	Wales
Harrogate District Hospital	HAR	Yorks & the Humber
Hillingdon Hospital	HIL	London
Hinchingbrooke Hospital	HIN	East of England
Homerton Hospital, London	HOM	London
Hope Hospital, Salford	SLF	North West
Horton Hospital, Banbury	HOR	South Central
Huddersfield Royal Infirmary	HUD	Yorks & the Humber
Hull Royal Infirmary	HRI	Yorks & the Humber
Ipswich Hospital	IPS	East of England
James Cook University Hospital, Middlesbrough	SCM	North East
James Paget University Hospital, Great Yarmouth	JPH	East of England
John Radcliffe Hospital, Oxford	RAD	South Central
Kettering General Hospital	KGH	East Midlands
King's College Hospital, London	KCH	London
King's Mill Hospital, Sutton in Ashfield	KMH	East Midlands
Kingston Hospital	KTH	London
Leeds General Infirmary	LGI	Yorks & the Humber
Leicester Royal Infirmary	LER	East Midlands
Leighton Hospital, Crewe	LGH	North West
Lincoln County Hospital	LIN	East Midlands
Luton and Dunstable Hospital	LDH	East of England
Macclesfield General Hospital	MAC	North West
Maidstone and Tunbridge Wells Hospital	TUN	South East
Manchester Royal Infirmary	MRI	North West
Manor Hospital, Walsall	WMH	West Midlands
Medway Maritime Hospital	MDW	South East
Milton Keynes General Hospital	MKH	South Central
Morrison Hospital, Swansea	MOR	Wales
Musgrove Park Hospital, Taunton	MPH	South West
Nevill Hall Hospital, Abergavenny	NEV	Wales
New Cross Hospital, Wolverhampton	NCR	West Midlands
Newham General Hospital, London	NWG	London
Noble's Hospital, Isle of Man	NOB	North West
Norfolk and Norwich University Hospital	NOR	East of England
North Devon District Hospital, Barnstaple	NDD	South West
North Manchester General Hospital	NMG	North West
North Middlesex University Hospital	NMH	London
North Tyneside General Hospital, North Shields	NTY	North East
Northampton General Hospital	NTH	East Midlands
Northern General Hospital, Sheffield	NGS	Yorks & the Humber
Northwick Park Hospital, London	NPH	London
Peterborough City Hospital	PET	East of England
Pilgrim Hospital, Boston	PIL	East Midlands
Pinderfields General Hospital, Wakefield	PIN	Yorks & the Humber

Hospital	Code	Region
Poole General Hospital	PGH	South West
Prince Charles Hospital, Merthyr Tydfil	PCH	Wales
Princess of Wales Hospital, Bridgend	POW	Wales
Princess Royal Hospital, Telford	TLF	West Midlands
Princess Royal University Hospital, Bromley	BRO	London
Queen Alexandra Hospital, Portsmouth	QAP	South Central
Queen Elizabeth Hospital, Birmingham	QEB	West Midlands
Queen Elizabeth Hospital, Gateshead	QEG	North East
Queen Elizabeth Hospital, King's Lynn	QKL	East of England
Queen Elizabeth Hospital, Woolwich	GWH	London
Queen Elizabeth the Queen Mother Hospital, Margate	QEQ	South East
Queen's Hospital, Burton upon Trent	BRT	West Midlands
Queen's Hospital, Romford	OLD	London
Rotherham District General Hospital	ROT	Yorks & the Humber
Royal Berkshire Hospital, Reading	RBE	South Central
Royal Blackburn Hospital	BLA	North West
Royal Bolton Hospital	BOL	North West
Royal Devon & Exeter Hospital, Exeter	RDE	South West
Royal Free Hospital, London	RFH	London
Royal Glamorgan Hospital, Llantrisant	RGH	Wales
Royal Gwent Hospital, Newport	GWE	Wales
Royal Hampshire County Hospital, Winchester	RHC	South Central
Royal Lancaster Infirmary	RLI	North West
Royal Liverpool University Hospital	RLU	North West
Royal Oldham Hospital	OHM	North West
Royal Preston Hospital	RPH	North West
Royal Shrewsbury Hospital	RSS	West Midlands
Royal Surrey County Hospital, Guildford	RSU	South East
Royal Sussex County Hospital, Brighton	RSC	South East
Royal United Hospital, Bath	BAT	South West
Royal Victoria Hospital, Newcastle	RVN	North East
Royal Victoria Hospital, Belfast	RVB	Northern Ireland
Russells Hall Hospital, Dudley	RUS	West Midlands
Salisbury District Hospital	SAL	South West
Sandwell General Hospital	SAN	West Midlands
Scarborough General Hospital	SCA	Yorks & the Humber
Scunthorpe General Hospital	SCU	Yorks & the Humber
South Tyneside District Hospital, South Shields	STD	North East
Southampton General Hospital	SGH	South Central
Southend University Hospital	SEH	East of England
Southport District General Hospital	SOU	North West
St George's Hospital, London	GEO	London
St Helier Hospital, Carshalton	SHC	London
St Peter's Hospital, Chertsey	SPH	South East
St Richard's Hospital, Chichester	STR	South East

Hospital	Code	Region
St Thomas' Hospital, London	STH	London
St Mary's Hospital, Paddington	STM	London
St Mary's Hospital, Isle of Wight	IOW	South Central
Staffordshire General Hospital, Stafford	SDG	West Midlands
Stepping Hill Hospital, Stockport	SHH	North West
Stoke Mandeville Hospital, Aylesbury	SMV	South Central
Sunderland Royal Hospital	SUN	North East
Tameside General Hospital, Manchester	TGA	North West
The Great Western Hospital, Swindon	PMS	South West
The Princess Alexandra Hospital, Harlow	PAH	East of England
The Royal Cornwall Hospital, Trillick	RCH	South West
The Royal London Hospital	LON	London
Torbay District General Hospital	TOR	South West
Trafford General Hospital, Manchester	TRA	North West
Ulster Hospital, Belfast	NUH	Northern Ireland
University College Hospital London	UCL	London
University Hosp. of North Staffordshire, Stoke-on-Trent	STO	West Midlands
University Hospital Aintree	FAZ	North West
University Hospital Coventry	UHC	West Midlands
University Hospital Nottingham	UHN	East Midlands
University Hospital Of North Durham, Darlington	DRY	North East
University Hospital of North Tees, Stockton on Tees	NTG	North East
University Hospital of Wales, Cardiff	UHW	Wales
University Hospital, Lewisham	LEW	London
Victoria Hospital, Blackpool	VIC	North West
Wansbeck Hospital	ASH	North East
Warrington Hospital	WDG	North West
Warwick Hospital	WAR	West Midlands
Watford General Hospital	WAT	East of England
West Middlesex University Hospital, Isleworth	WMU	London
West Suffolk Hospital, Bury St Edmunds	WSH	East of England
West Wales General Hospital, Carmarthen	WWG	Wales
Weston General Hospital, Weston-Super-Mare	WGH	South West
Wexham Park Hospital, Slough	WEX	South Central
Whipps Cross University Hospital	WHC	London
Whiston Hospital, Prescot	WHI	North West
Whittington Hospital, London	WHT	London
William Harvey Hospital, Ashford	WHH	South East
Withybush Hospital, Haverford West	WYB	Wales
Worcestershire Royal Hospital, Worcester	WRC	West Midlands
Worthing & Southlands Hospital	WRG	South East
Wrexham Maelor Hospital	WRX	Wales
Wythenshawe Hospital, Manchester	WYT	North West
Yeovil District Hospital	YEO	South West
York Hospital	YDH	Yorks & the Humber

3 Audit findings

Chart 1 – A&E to orthopaedic ward in 4 hours

Standard:

From admission, offer patients a formal, acute, orthogeriatric or orthopaedic ward-based hip fracture programme.

Source:

NICE CG124 (2011)

Key findings:

The proportion of patients treated on an appropriate ward has risen from 93.4% in our last report to 94.8% this year.

However, only 47.4% of patients are transferred there within 4 hours of admission – a slight reduction compared with 48.9% last year.

Clinical commentary:

As part of a hip fracture programme, patients should be admitted directly to an appropriate ward at the earliest opportunity.

A&E care should take less than 4 hours to complete, and delays suggest either poor A&E organisation or the absence of bed capacity on appropriate wards.

Hospitals should see that appropriate 'fast-track' procedures are in place to minimise the time spent in the A&E, and should avoid placing patients with hip fracture in wards where they are 'outliers', removed from the multidisciplinary team that will optimise their care.

Chart specification

Data: 2013 calendar year.

Title: Chart 1 – A&E to orthopaedic ward in 4 hours.

Description: Based on Blue Book Standard 1. Hospitals ranked by the percentage of cases admitted to orthopaedic ward (OW) within 4 hours of admission.

Fields: Time of admission to A&E, time of admission to OW, ward type.

Detail: Unknown category includes cases where the time of admission to OW is unknown or outside 0–8,760 hours. In previous years, cases were assumed to have been admitted to an OW if the time to OW was plausible (ie within 0–8,760 hours), even if the ward type was unknown. This year, admission to OW status is classed as 'unknown' if ward type is unknown but time to OW is plausible (ie within 0–8,760 hours).

Exclusions: Not admitted from A&E, n=4,228.

In-hospital falls (date and time of admission to A&E after date and time of admission to OW), n=73.

Cases: 60,538.

Hospitals: 182.

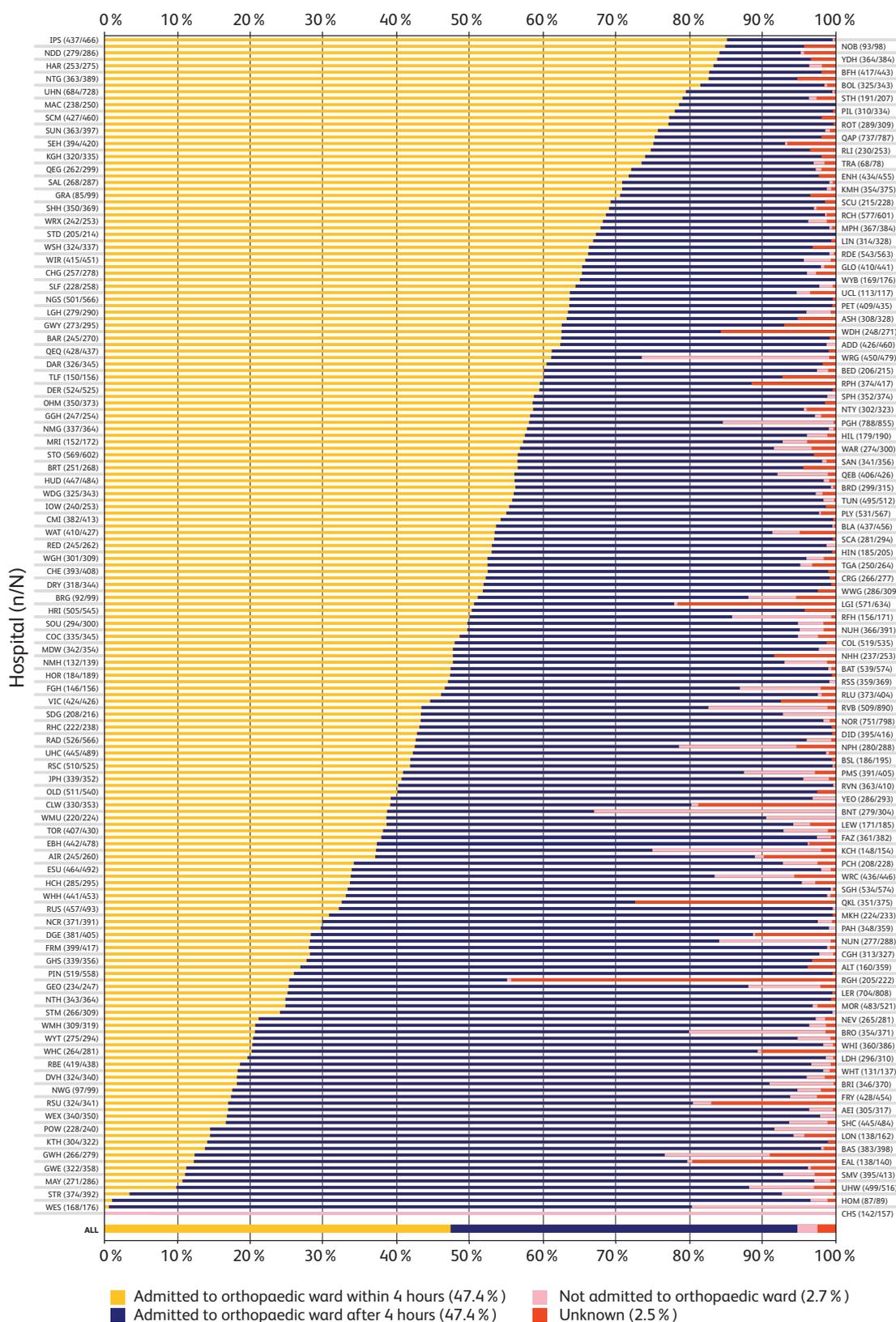


Chart 1 – A&E to orthopaedic ward in 4 hours

Chart 2 – Preoperative medical assessment

Standard:

All patients presenting with a fragility hip fracture are offered a formal hip fracture programme from admission that includes continued coordinated orthogeriatric and multidisciplinary review.

Source:

NICE CG124 (2011)

Key findings:

The percentage of patients reviewed by a geriatrician has improved from 47.1% last year to 50.5% in 2013.

In addition, 22% of all patients receive a preoperative assessment from other senior physicians or specialist nurses, but a further 27.3% still do not receive any preoperative assessment.

One unit (TLF) records that fewer than 5% of their patients received any form of preoperative assessment.

Clinical commentary:

A formal collaborative relationship between the orthopaedic and orthogeriatric teams is a fundamental part of the hip fracture programme that NICE recommends.

It is a concern that several units (including four in Wales) still have no access to acute orthogeriatric support. Other physicians may be asked to contribute to the management of new medical concerns or coexisting disease, but it is the orthogeriatrician's experience of supporting frail and older people through the perioperative period that allows them to make a real difference to the quality of care.

Chart specification:

Data: 2013 calendar year.

Title: Chart 2 – Preoperative medical assessment.

Description: Based on Blue Book Standard 4. Hospitals ranked by the percentage of cases that underwent any preoperative medical assessment.

Fields: Preoperative medical assessment.

As multiple responses were allowed, cases were allocated to the highest level of assessment received using the following hierarchy:

Routine by orthogeriatrician; all other reviews (including already under care of geriatrician/physician); no assessment; and unknown.

Cases: 64,838.

Hospitals: 182.

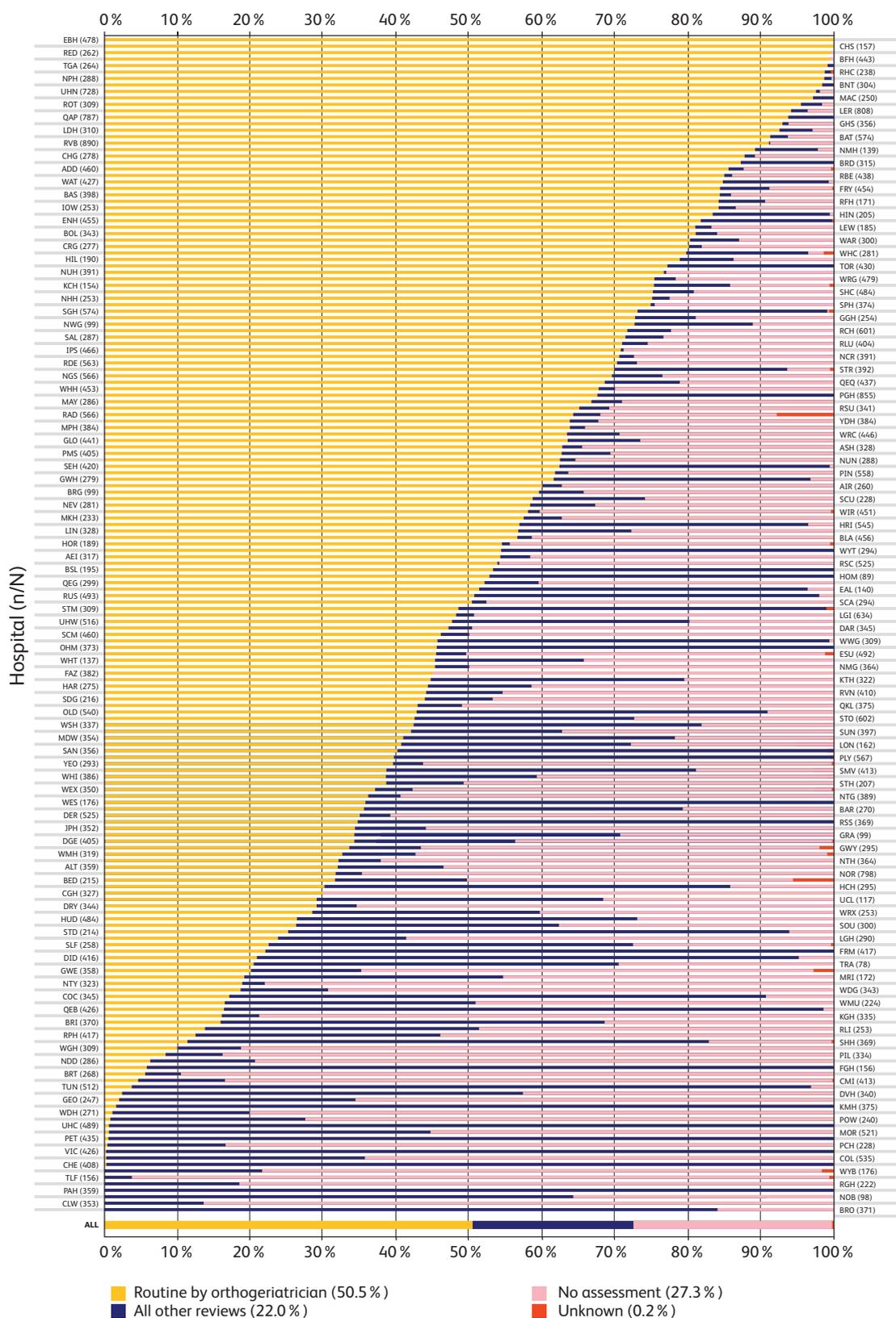


Chart 2 – Preoperative medical assessment

Chart 3 – Type of anaesthetic

Standard:

Offer patients a choice of spinal or general anaesthesia after discussing the risks and benefits.

Source:

NICE CG124 (2011)

Key findings:

There has been no change in the proportion of patients receiving spinal and general anaesthesia since last year's report.

Clinical commentary:

This issue is explored in considerable detail in the **Anaesthesia Sprint Audit of Practice (ASAP)**.⁶

It is difficult to assess the proportion of patients given a 'choice' of anaesthetic in the way that NICE recommends. It is improbable that significant patient choice exists in hospitals where the vast majority of patients have one type of anaesthetic.

Chart specification:

Data: 2013 calendar year.

Title: Chart 3 – Type of anaesthetic.

Description: Hospitals ranked by percentage of cases that received general anaesthesia either alone or in combination.

Fields: Anaesthesia type.

Cases: 60,538.

Hospitals: 182.

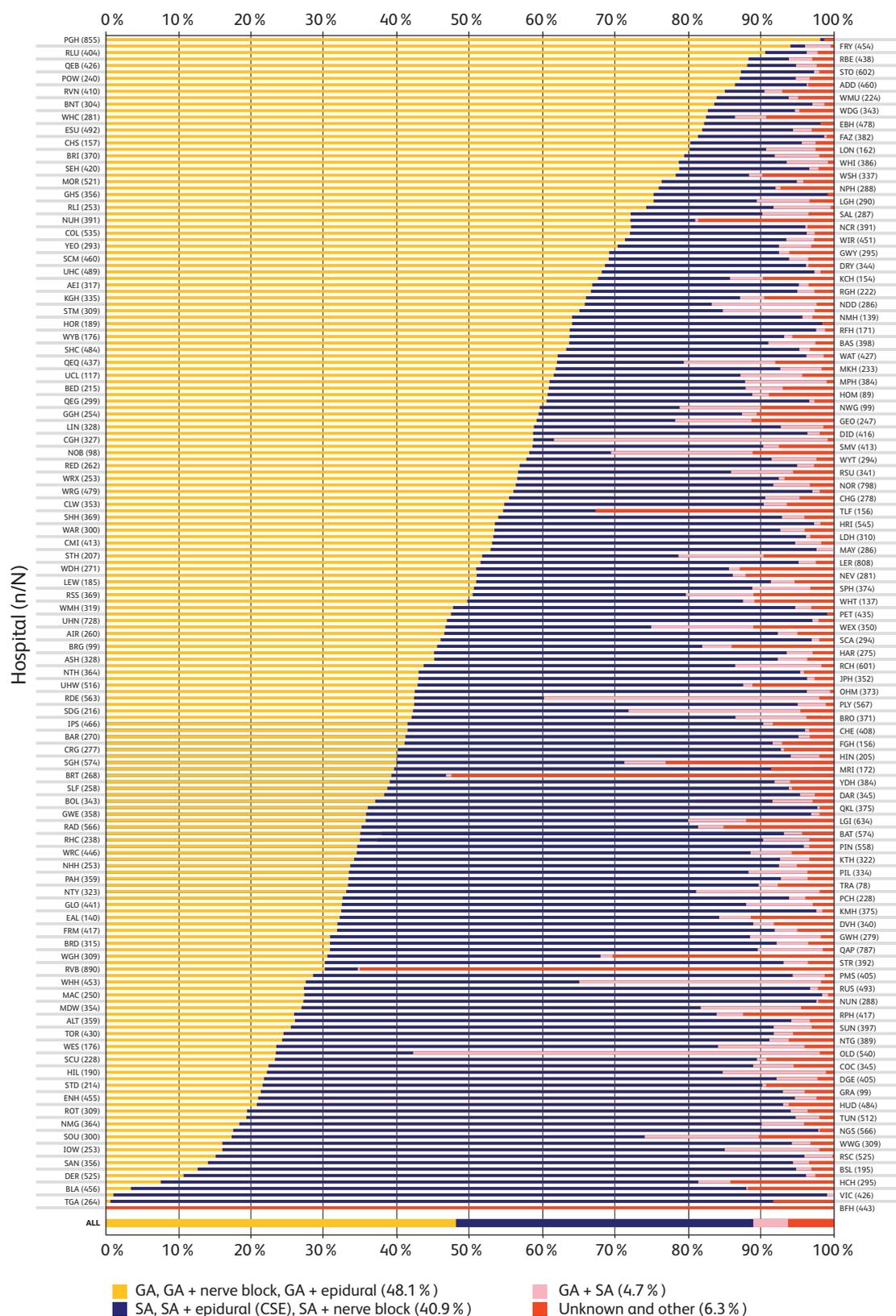


Chart 3 – Type of anaesthetic

Chart 4 – Time to surgery – day of/day after admission

Standard:

People with hip fracture have surgery on the day of, or the day after, admission.

Source:

NICE QS16 (2012)

Key findings:

The proportion of patients whose care meets this standard has improved progressively over the years since the first NHFD annual report.

The mean figure of 71.7% for 2013 represents a further improvement compared with the 70.6% recorded for 2012–13 in our last annual report.

However, there remains unacceptable variation in performance around the country, with mean figures ranging from 13% to 91%.

Clinical commentary:

The timing of surgery is an early marker of a patient's progress following a hip fracture. Some hospitals are achieving this standard for more than 90% of their patients, while eight hospitals (RVB, NUH, CRG, ALT, RSS, BRG, WMU, TLF) achieve it for fewer than half of their patients. It should be noted that four of these hospitals are situated in Northern Ireland, which operates a 'hub-and-spoke' model of centralised care.

It seems likely that these poorly performing hospitals lack a functional hip fracture programme in which the multidisciplinary team can rapidly optimise care and operate on the patient.

Theatre capacity must be adequate to allow prompt surgery, even when there are fluctuations in hip fracture numbers or other demands on theatre time.

Chart specification:

Data: 2013 calendar year.

Title: Chart 4 – Time to surgery – day of/day after admission.

Description: Hospitals ranked by the percentage of cases that underwent surgery on the day of, or day after, admission.

Fields used: Date of admission to A&E, date of surgery, operation type.

Calculation: Days to surgery is calculated as the difference between date of admission to A&E and date of surgery (times of admission and surgery are not taken into account).

Exclusions: Date of admission to A&E after date of surgery (in-hospital falls, n=21).

Detail: Cases with 'no operation' (operation type) but valid surgery date (n=26) are classed as 'no surgery performed'.

Cases with a record of surgery (operation type) but missing surgery date or where days to surgery were outside the range 0–365 days are classed as 'unknown'.

Cases: 64,817.

Hospitals: 182.

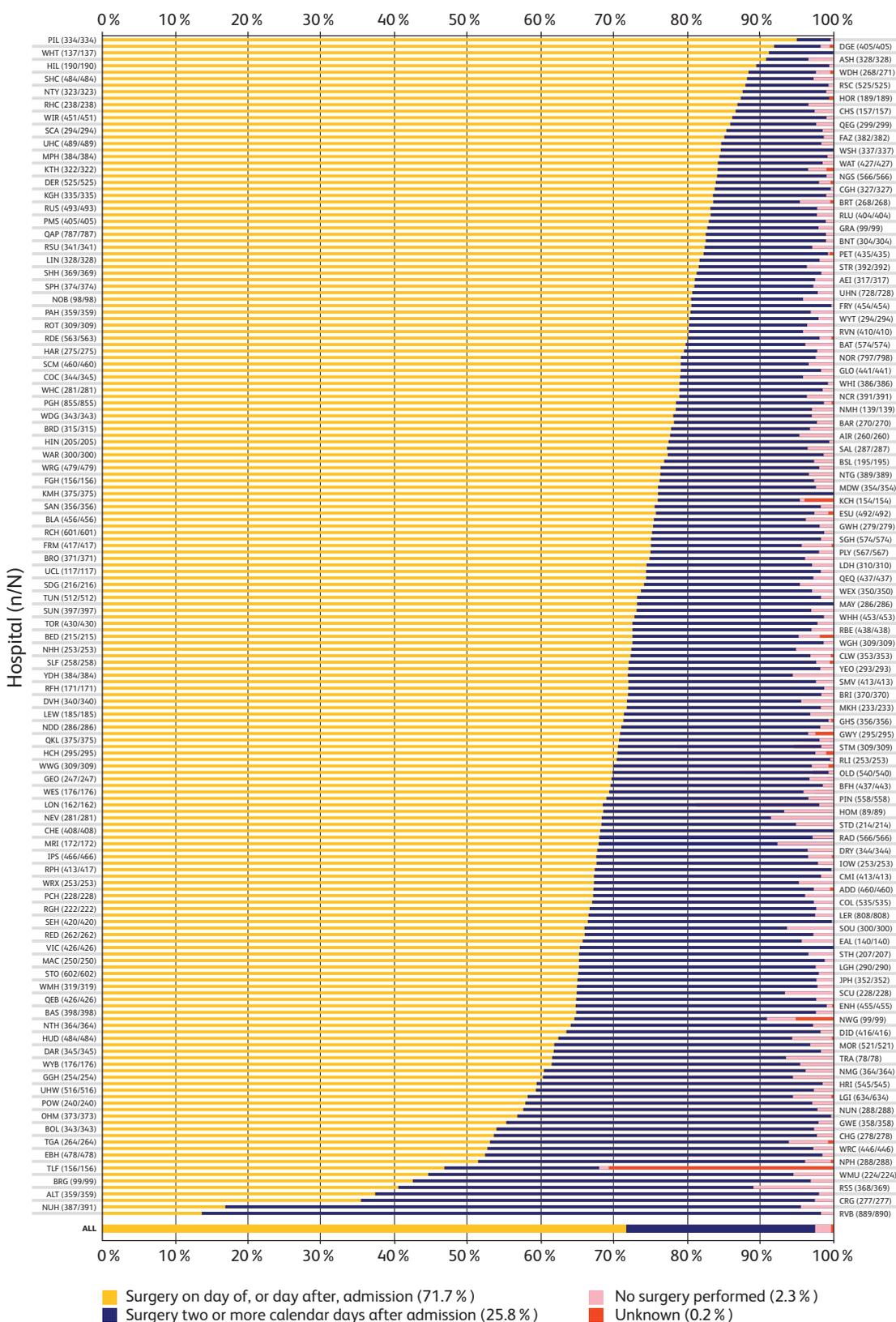


Chart 4 – Time to surgery – day of/day after admission

The 2013 NHFD annual report stimulated a multidisciplinary service redesign and improvements in the quality and safety of care in **Warrington**. We appointed a consultant orthogeriatrician, two middle-grade physicians and a trauma coordinator. The combined application of national guidelines and audit provided a catalyst for change, and NHFD reports have been instrumental in continuous monitoring of progress. The last half of the financial year saw a 46 % increase in compliance with BPT. Mean time to theatre has decreased from 36 to 24 hours. 100 % of patients now have a falls and bone health assessment prior to discharge. In recognition of these achievements, we have been shortlisted as finalists in the musculoskeletal category for the 2014 Patient Safety Awards.

In 2012, **Ealing Hospital NHS Trust** appointed a consultant orthogeriatrician who introduced a pro forma and integrated care pathway to improve patient outcomes and help in achieving BPT. Appointment of a trauma nurse coordinator has enhanced collaborative working in pre-theatre optimisation, use of nerve blocks and decreasing times to surgery. Daily orthogeriatrician input and weekly multidisciplinary team meetings assure early assessment of perioperative complications and rehabilitation goal setting. Average length of stay has fallen from 30.3 days to 23.2 days in the last year. Comparison of current practice with that in 2012 shows reduced average time to theatre from 60.4 hours to 28.9 hours, and pressure ulcer incidence is down from 5 % to 2 %.

Chart 5 – Undisplaced intracapsular fractures

Standard:

In undisplaced fracture types there is generally already inherent stability and little likelihood of damage to the blood supply. Fixation *in situ* is generally accepted.

Source:

NICE CG124 (2011)

Key findings:

The proportion of patients treated with an arthroplasty is 42.7%, which is similar to last year (43.9%).

Clinical commentary:

The management of undisplaced intracapsular fractures was not within the scope of NICE CG124, partly reflecting a widespread acceptance that internal fixation should be the normal treatment.

There remains concern as to why so many undisplaced fractures are treated with an arthroplasty.

One explanation could be that fractures treated with a hemiarthroplasty were in fact displaced fractures; in hospitals with high arthroplasty rates, the clinical leads should review the pre- and postoperative X-rays to ensure data quality.

Chart specification:

Data: 2013 calendar year.

Title: Chart 5 – Undisplaced intracapsular fractures.

Description: Hospitals ranked by percentage of eligible cases that received internal fixation.

Eligibility: Cases of undisplaced intracapsular fracture.

Exclusions: TLF was excluded from the chart due to poor data quality, operation status was unknown in 19.2% of cases at TLF (n=156). Non-undisplaced intracapsular fractures (n=58,463). Hospitals with <10 eligible cases (n=54 at 10 hospitals).

Fields used: Fracture type, operation.

'Internal fixation – cannulated screws' is equivalent to 'Internal fixation screws'.

'Internal fixation SHS' is equivalent to 'Internal fixation sliding hip screw'.

Cases: 6,165.

Hospitals: 171.

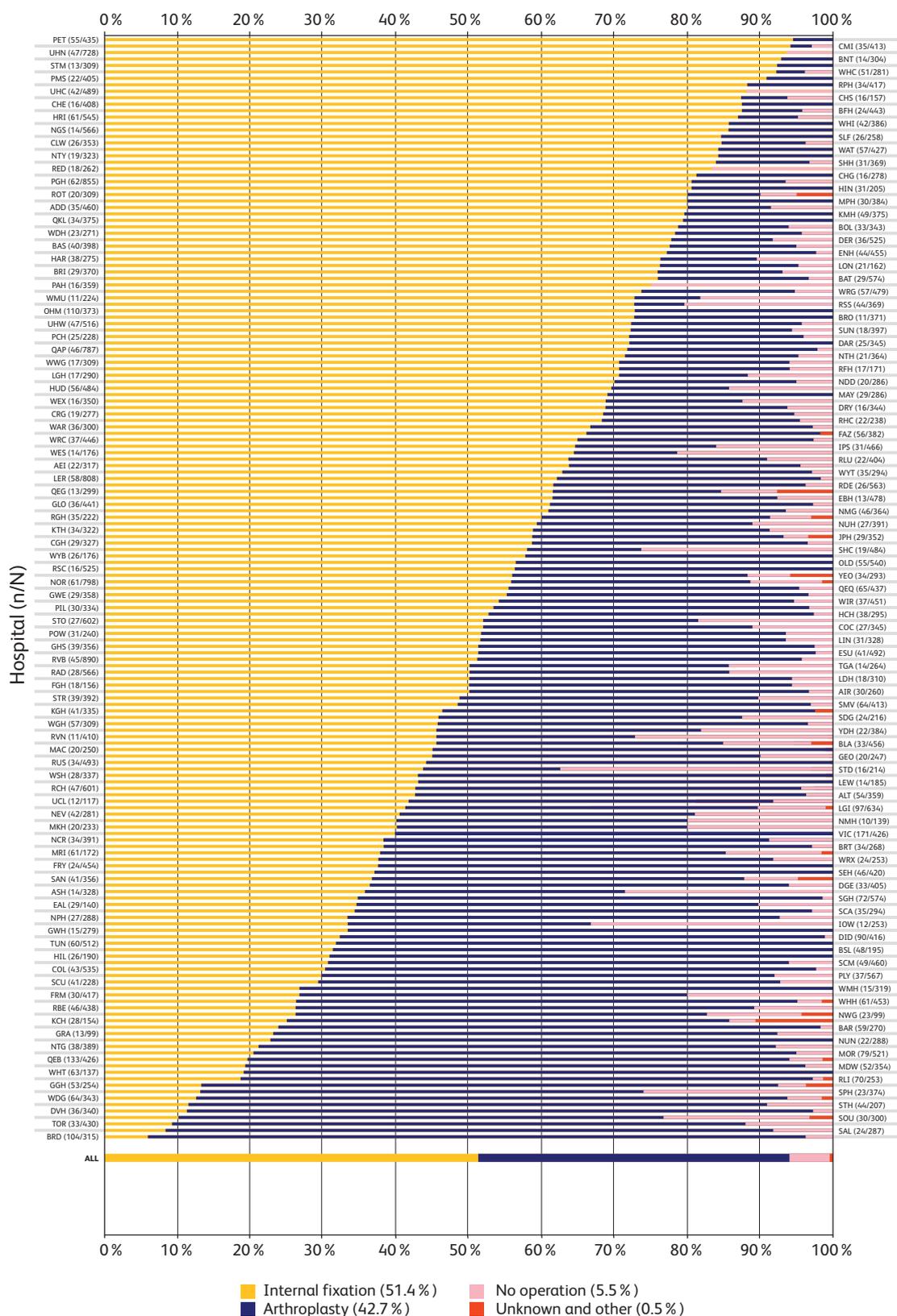


Chart 5 – Undisplaced intracapsular fractures

Chart 6 – Displaced intracapsular fractures

Standard:

People with displaced intracapsular fracture receive cemented arthroplasty, with the offer of total hip replacement if clinically eligible*.

*Eligible defined as patients with displaced intracapsular fracture, who were ASA 1–2, with a normal mental test score, and able to walk outside using no more than a stick.

Source:

NICE QS16 (2012)

Key findings:

There has been no change in the rate of arthroplasty compared with 2012–13 (90% in both years).

Clinical commentary:

Despite a general acceptance and implementation of NICE guidance, a small number of hospitals are continuing to report a significant number of internal fixations for displaced intracapsular hip fractures.

This may reflect miscoding of fracture type, or the adoption of more modern implants designed to reduce the risks of internal fixation. Hospitals that have a high internal fixation rate should ensure that their data are correct, that such patients are all followed up and that rates of reoperation are routinely reported to the NHFD so that they are available to inform local clinical governance.

Chart specification:

Data: 2013 calendar year.

Title: Chart 6 – Displaced intracapsular fractures.

Description: Hospitals ranked by the percentage of eligible cases that received arthroplasty.

Exclusions: TLF was excluded from the chart due to poor data quality, operation status was unknown in 19.2% of cases at TLF (n=156). Non-displaced intracapsular fractures (n=33,026).

Fields: Fracture type, operation.

Cases: 31,656.

Hospitals: 181.

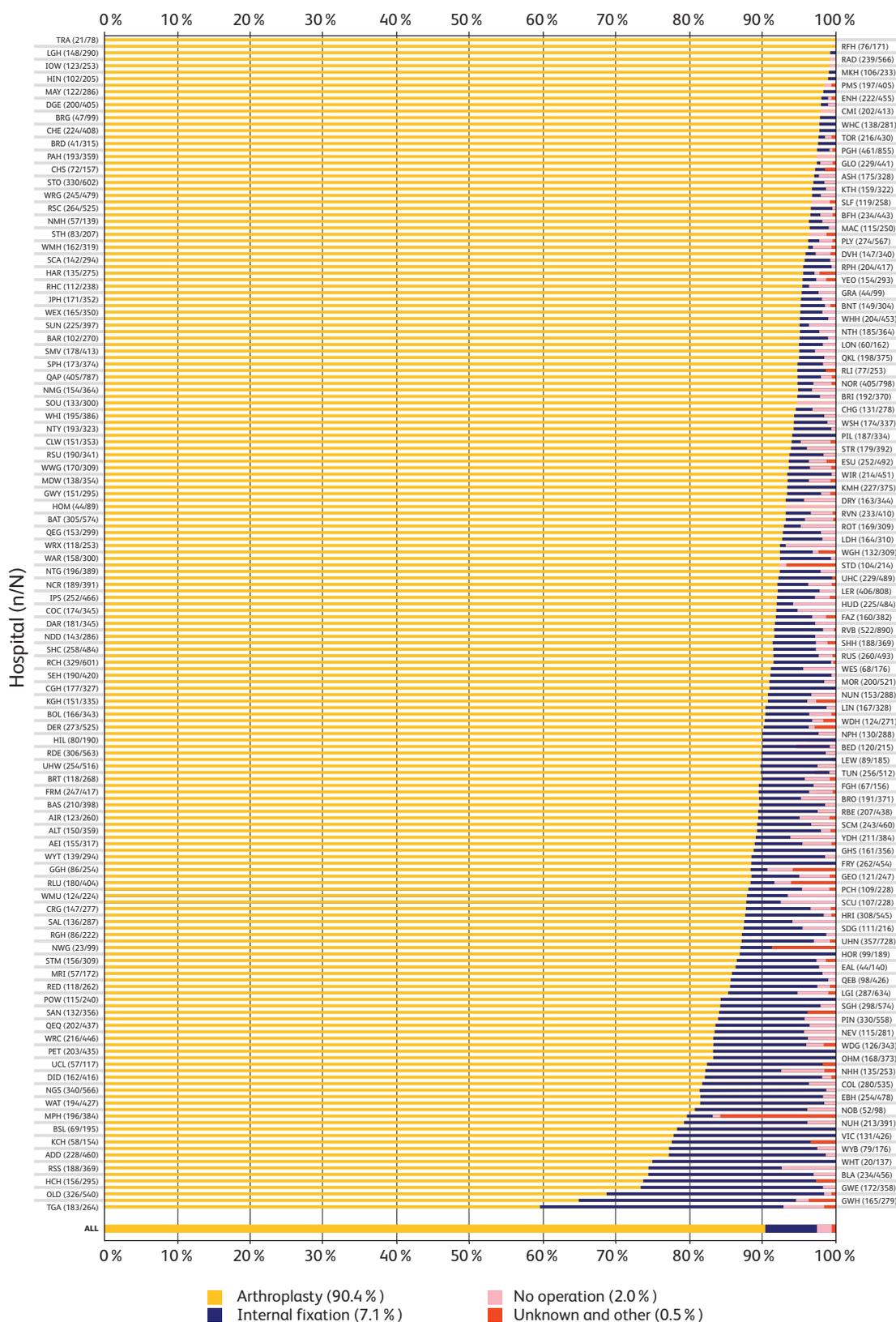


Chart 6 – Displaced intracapsular fractures

Chart 7 – Cementing of arthroplasties

Standard:

People with displaced intracapsular fracture receive cemented arthroplasty, with the offer of total hip replacement if clinically eligible.

Source:

NICE QS16 (2012)

Key findings:

Cementing of arthroplasties has increased in line with the NICE recommendation, with a figure of 80.2% in 2013, compared with 77.2% in our last report. Eighteen hospitals used cement in fewer than one-third of appropriate cases.

Clinical commentary:

Traditional types of uncemented hemiarthroplasty are associated with a poorer functional outcome and higher mortality rates. The use of cement reduces postoperative pain and aids recovery, but may be associated with serious cardiac events at the time of its insertion in a minority of patients (**see ASAP report**).⁶ The evidence supports the use of cement in the majority of patients, with due attention given to reducing the risks to a minimum.¹⁵ Hospitals with a low rate of cementing should seek to increase the use of modern cemented implants utilising clinical governance to ensure good practice.

Chart specification:

Data: 2013 calendar year.

Title: Chart 7 – Cementing of arthroplasties.

Description: Hospitals ranked by the percentage of eligible cases that had cemented arthroplasty.

Exclusions: TLF was excluded from the chart due to poor data quality, operation status was unknown in 19.2% of cases at TLF (n=156). Non-arthroplasty cases (n=33,038).

Fields: Fracture type, operation.

Cases: 31,644.

Hospitals: 181.

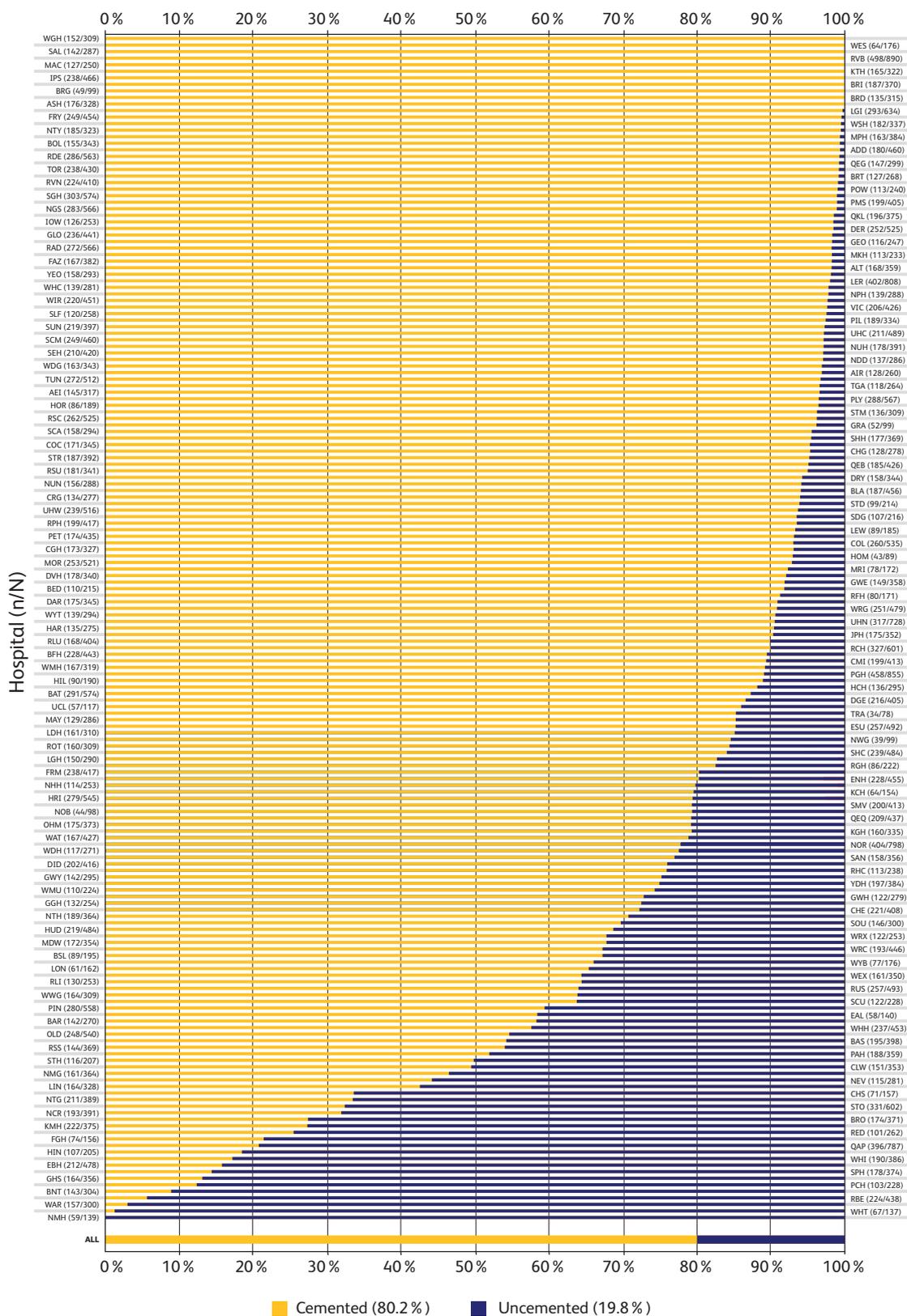


Chart 7 – Cementing of arthroplasties

Chart 8 – Total hip replacements

Standard:

People with displaced intracapsular fracture receive cemented arthroplasty, with the offer of total hip replacement if clinically eligible*.

*Eligible defined as patients with displaced intracapsular fracture, who were ASA 1–2, with a normal mental test score, and able to walk outside using no more than a stick.

Source:

NICE QS16 (2012)

Key findings:

There has been a slight decrease since last year's report in the percentage of eligible patients having total hip replacements, down from 20.7% to 19.1%.

Clinical commentary:

Historically, surgeons have avoided total hip replacement following hip fracture because of concern about possible complications, and resource implications. Cost-effectiveness work in the NICE guideline defined a group of patients in whom the potential benefits of this procedure outweigh the risks.

The percentage of eligible patients having total hip replacements has been rising each year from 10.7% in 2011 to 20.7% last year, and the current fall in that figure is a cause for concern.

A number of factors may be responsible for the change, including the cost of implants and the availability of specialist hip replacement surgeons. There may be a mismatch of resources, such that the hospital has difficulty in finding a surgeon with sufficient hip replacement experience who is available on the day of, or the day after, surgery. Hospitals should plan their trauma list staffing to reduce the possibility of patients receiving a less than satisfactory procedure.

Chart specification:

Data: 2013 calendar year.

Title: Chart 8 – Total hip replacements.

Description: Hospitals ranked by the percentage of eligible cases that received total hip replacement surgery.

Exclusions: TLF was excluded from the chart due to poor data quality, operation status was unknown in 19.2% of cases at TLF (n=156). Not displaced intracapsular fracture (n=33,026). Preop AMTS <7 or missing (n=11,900). ASA grade >3 or missing/unknown (n=2,626). Not able to walk outside with one aid/no aids (n=2,332). No operation (n=20). Missing operation type (n=4).

Fields: Operation, fracture type, walking ability outdoors, ASA grade, AMTS (preop).

Groups: Cases that received any total hip replacement surgery are classed as 'Total hip replacement'. Cases that received any other operation are classed as 'Other operation'.

Cases: 14,774.

Hospitals: 181.

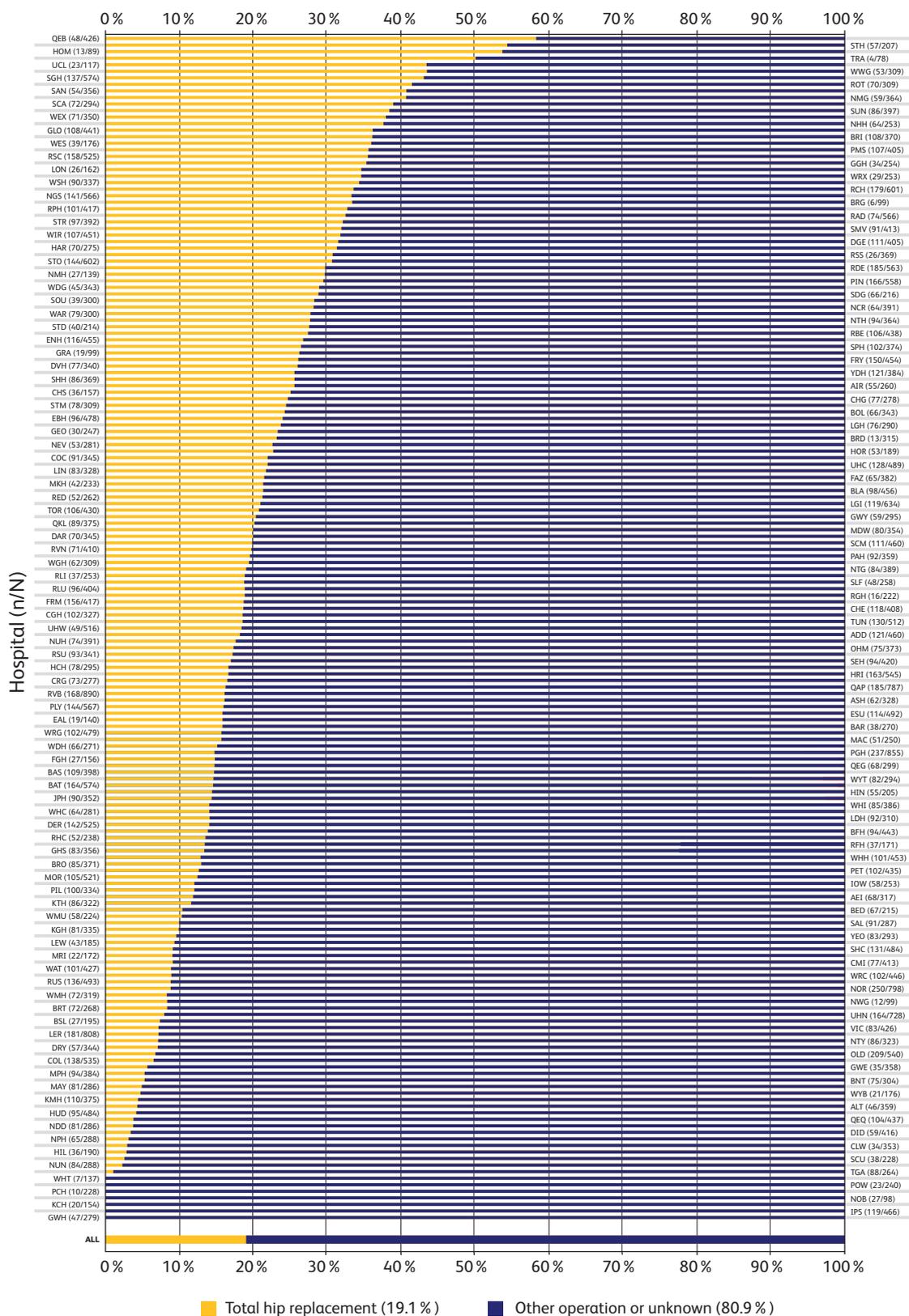


Chart 8 – Total hip replacements

Chart 9 – Intertrochanteric fractures

Standard:

People with trochanteric fractures above and including the lesser trochanter (AO classification types A1 and A2) receive extramedullary implants such as a sliding hip screw in preference to an intramedullary nail.

Source:

NICE QS16 (2012)

Key findings:

Overall, this aspect of management is unchanged since last year.

Clinical commentary:

The NHFD does not collect data on the various subtypes of fracture, so we cannot be certain as to whether NICE guidance is being followed. However, the national figures would suggest a broad adherence as demonstrated by this simplified ranking. Notably, a very small proportion of hospitals use sliding hip screws on only a minority of their patients. These hospitals and their commissioners should review their practice.

Chart specification:

Data: 2013 calendar year.

Title: Chart 9 – Intertrochanteric fractures.

Description: Hospitals ranked by the percentage of cases with intertrochanteric fractures that received internal fixation.

Fields: Fracture type, operation.

Exclusions: TLF was excluded from the chart due to poor data quality, operation status was unknown in 19.2% of cases at TLF (n=156). Not intertrochanteric fracture (n=42,260).

Cases: 22,422.

Hospitals: 181.

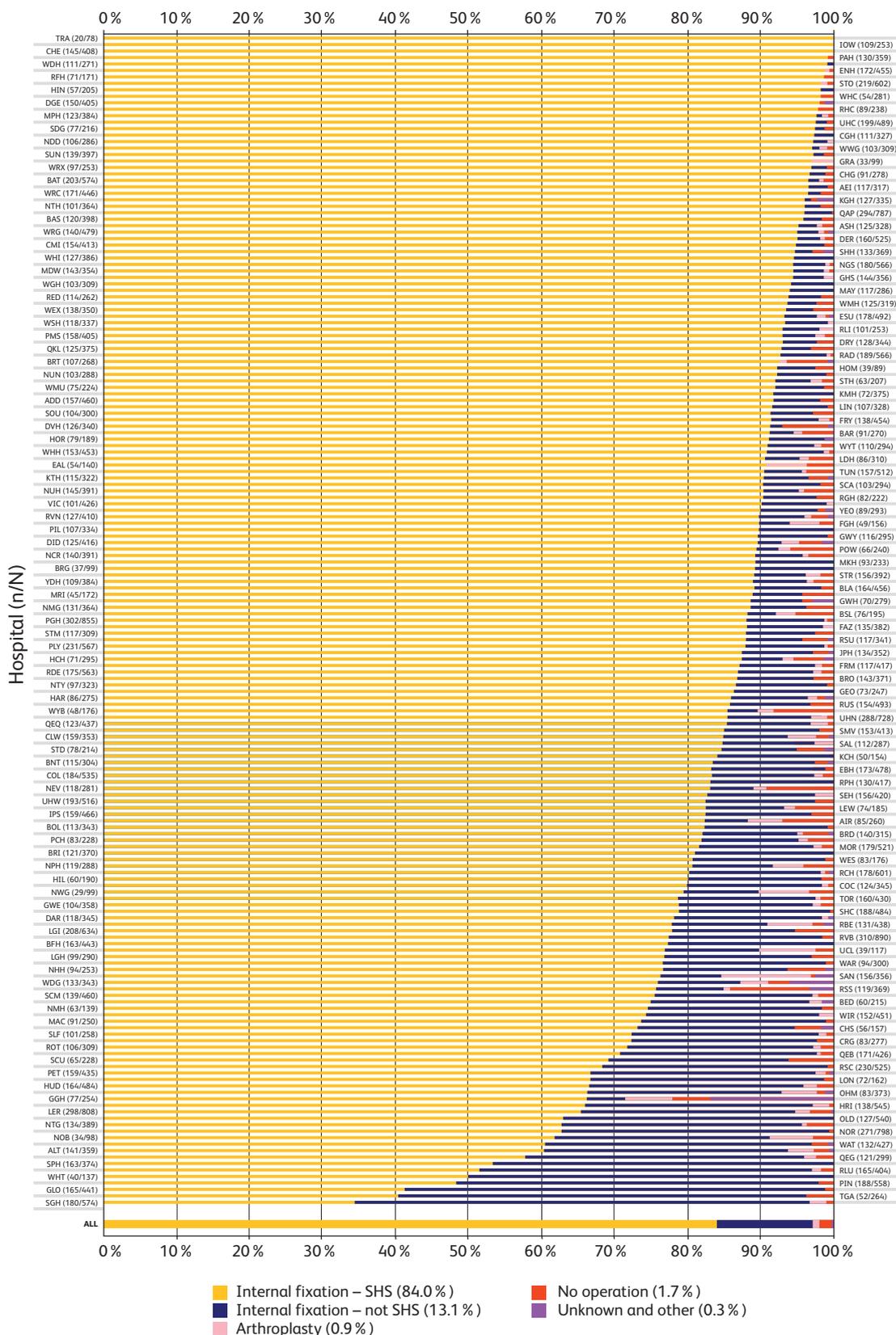


Chart 9 – Intertrochanteric fractures

Chart 10 – Subtrochanteric fractures

Standard:

Use an intramedullary nail to treat patients with a subtrochanteric fracture.

Source:

NICE CG124 (2011)

Key findings:

There has been little increase in the percentage of patients having intramedullary nails: 76.6% of patients had an intramedullary nail in 2013 compared with 74.1% in the last report.

Clinical commentary:

Subtrochanteric fractures are generally best treated with an intramedullary nail. This chart has been simplified so that hospitals can readily see how compliant they are with NICE guidance. Hospitals and local commissioners should review practice when <70% of patients with subtrochanteric fractures are treated with an intramedullary nail.

Chart specification:

Data: 2013 calendar year.

Title: Chart 10 – Subtrochanteric fractures.

Description: Hospitals ranked by the percentage of cases with subtrochanteric fractures that received internal fixation.

Fields: Fracture type, operation

Exclusions: TLF was excluded from the chart due to poor data quality, operation status was unknown in 19.2% of cases at TLF (n=156). Non-subtrochanteric fractures (n=61,000). Hospitals with fewer than 10 eligible cases (n=175 at 27 hospitals).

Cases: 3,507.

Hospitals: 154.

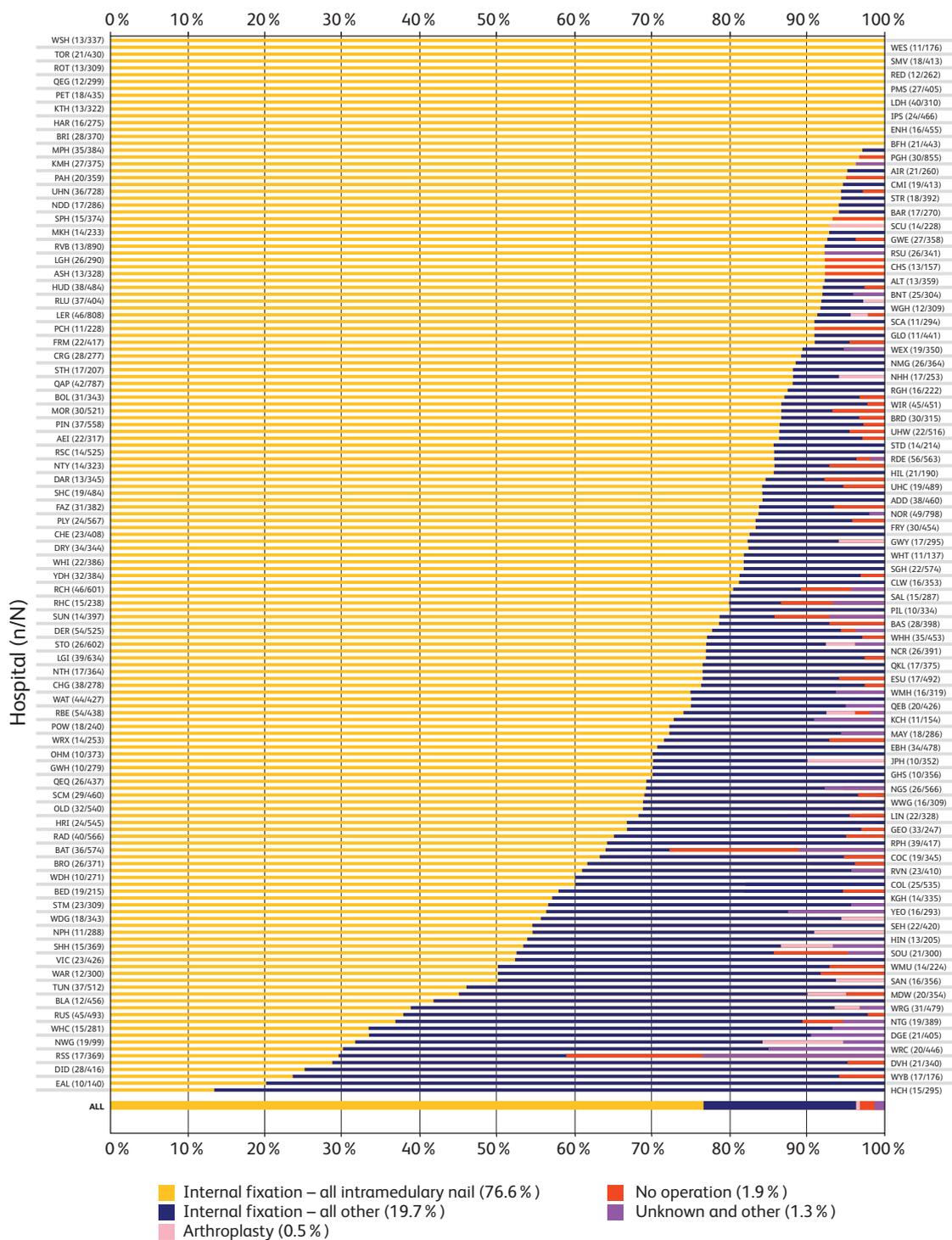


Chart 10 – Subtrochanteric fractures

Chart 11 – Cases treated without surgery

Standard:

People with hip fracture have surgery on the day of, or the day after, admission.

Source:

NICE QS16 (2012)

Key findings:

In total, 97.6% of patients had surgery, a marginal increase on last year.

Clinical commentary:

Operative treatment is associated with a reduced length of hospital stay and improved rehabilitation.

There is no recognised standard to indicate the percentage of patients who might be treated without surgery, but it is widely held that this form of treatment should be considered only for a small minority of patients who present too late to benefit from surgery, or who are considered to have a very reduced life expectancy. NICE CG124 emphasises the significant role of surgery to minimise pain – even in patients who are receiving palliative, end-of-life care.

It is of note that the fracture that is most likely to be treated non-operatively is the undisplaced intracapsular fracture (5.5%), which is the most likely to present late and least likely to result in long-term disability.

Fifteen hospitals had in excess of 5% non-operative cases, including one hospital (RSS) that treated more than 10% of cases non-operatively. Review of casemix in this hospital identified no significant differences in the type of patient that it was managing, and both providers and external bodies should consider whether patients in this unit are receiving acceptable care. All hospitals with >5% non-operative rate, and their commissioners, should investigate this finding.

Chart specification:

Data: 2013 calendar year.

Title: Chart 11 – Cases treated without surgery.

Description: Hospitals ranked by the percentage of cases that underwent surgery.

Exclusions: TLF was excluded from the chart due to poor data quality, operation status was unknown in 19.2% of cases at TLF (n=156).

Fields: Operation.

Cases: 64,682.

Hospitals: 181.

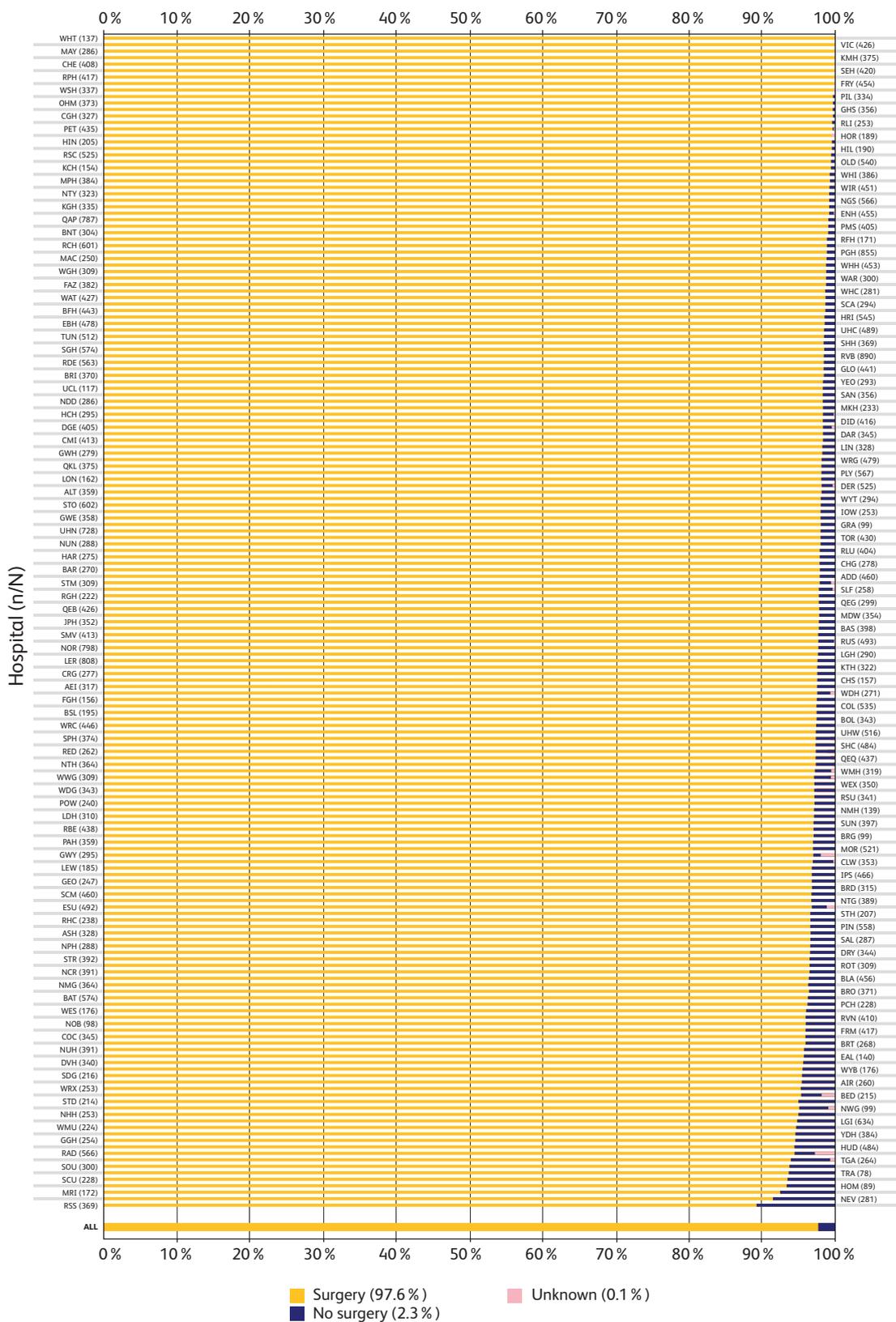


Chart 11 – Cases treated without surgery

Chart 12 – Reoperation

Key findings:

Reoperation performed within 30 days was recorded as ‘unknown’ for 51% of patients.

Clinical commentary:

This is clearly the gold standard test of the quality of the initial operation and perioperative care. However, follow-up data quality remains very disappointing.

It is of great concern that, in over half (51%) of the patients, there is no indication as to whether further surgery took place.

Although there is no specific standard against which we can measure reoperation rates, unplanned surgery is clearly of great significance as an indicator of surgical complications.

As this indicator should be of use to individual hospitals in measuring and addressing concerns regarding patient safety, completion of the data fields should be a priority.

Chart specification:

Data: 2013 calendar year.

Title: Chart 12 – Reoperations.

Description: Hospitals ranked by the percentage of eligible cases that underwent reoperation within 30 days of admission.

This chart uses the discharge data slice:

Admitted and discharged from trust between 1 January 2013 and 31 December 2013.

Exclusions: TLF was excluded from the chart due to poor data quality, operation status was unknown in 19.2% of cases at TLF (n=156). No operation (n=1,496). Missing discharge from trust date (n=388). Discharged after 2013 (n=3,812).

Fields: 30-day reoperation, operation.

Groups: Cases with any response indicating that reoperation had occurred are classed as ‘Reoperation within 30 days’. Cases with the response ‘None’ are classed as ‘No reoperation within 30 days’. Cases with no response or the response ‘Unknown’ are classed as ‘Unknown’.

Cases: 58,986.

Hospitals: 181.

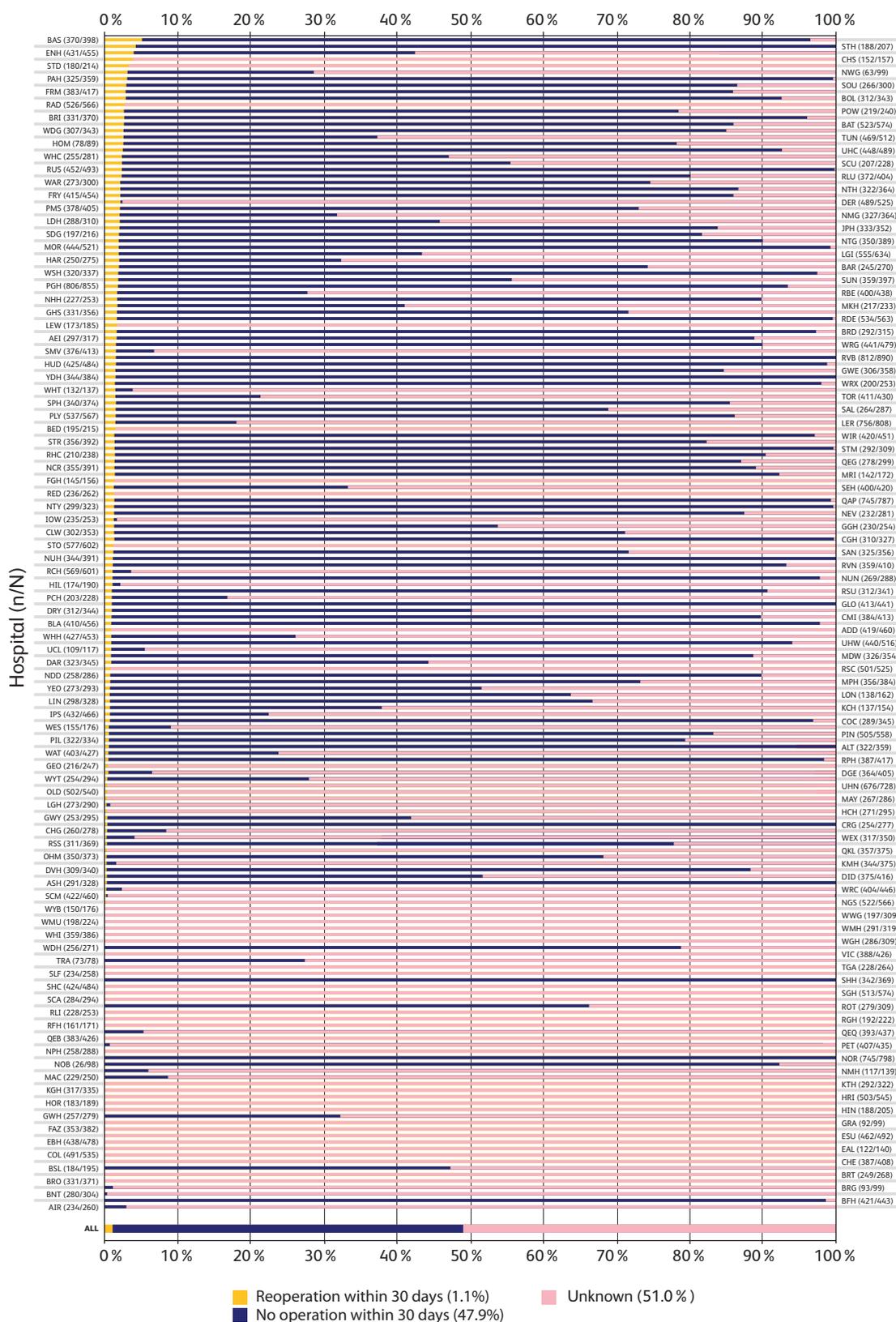


Chart 12 – Reoperations

Chart 13 – Bone health assessment

Standard:

People with hip fracture are offered a bone health assessment to identify future fracture risk and offered pharmacological intervention as needed before discharge from hospital.

Source:

NICE QS16 (2012)

Key findings:

In total, 96.2% of patients were recorded to already be taking an osteoporosis treatment, as having been assessed for treatment or as having been referred for further assessment.

This may look like an improvement on the figure of 94.6% in 2012–13, but it does not actually reflect an increase in the number of patients who are actively managed in respect of osteoporosis.

Clinical commentary:

All of this apparent increase reflects patients who were recorded as having been assessed, but then labelled as being inappropriate for secondary osteoporosis prevention – a figure that has risen from 14.3% last year to 16.7% in 2013.

We found substantial variation in this figure, with some units offering treatment to nearly all patients. In contrast, eight hospitals (BRD, GHS, MDW, MRI, NOB, PET, PGH, WRC) had recorded ‘no bone protection needed/appropriate’ for over half of their patients, with one of these hospitals (MDW) making such a decision in three-quarters of all cases.

There is clearly a need to consider the appropriateness of paying BPT in respect of patients where no secondary prevention is offered after assessment, and this will be an issue that needs to be considered in conjunction with NHS England.

Chart specification:

Data: 2013 calendar year.

Title: Chart 13 – Bone health assessment.

Description: Based on Blue Book Standard 5. Hospitals ranked by the percentage of eligible cases who continued (bone protection treatment) from pre-admission; started on this admission; awaits DXA scan; and awaits bone clinic assessment.

Exclusions: Died in hospital (discharge ward destination, n=4,168 and discharge trust destination n=1,317).

Fields: Antiresorptive therapy, discharge ward destination, discharge trust destination.

As multiple responses were allowed, cases were allocated to the highest level of assessment received using the following hierarchy:

Continued from pre-admission; started on this admission; awaits DXA scan; awaits bone clinic assessment; assessed – no bone protection medication needed/appropriate; no assessment or action taken; and unknown.

Cases: 59,353.

Hospitals: 182.

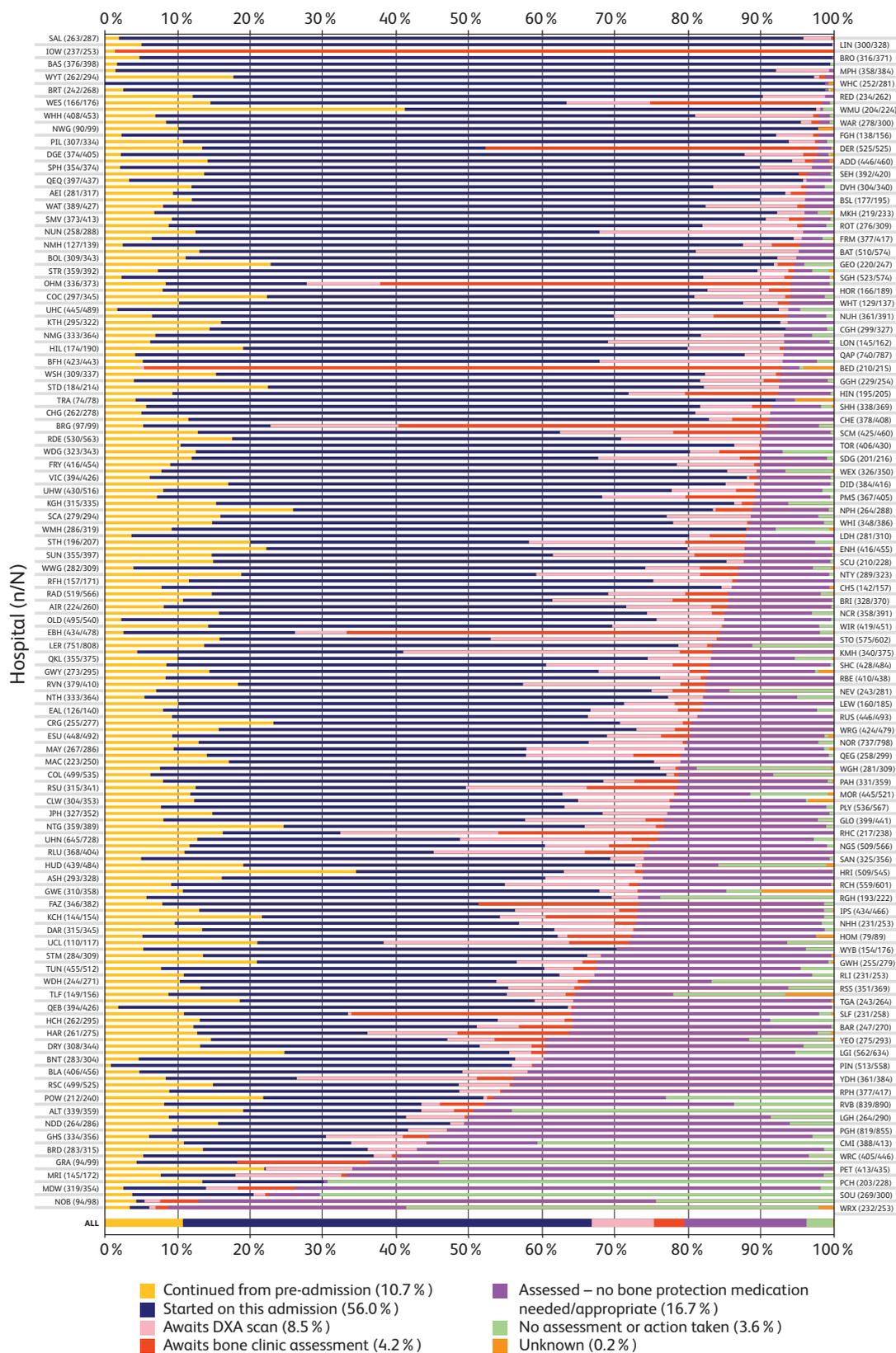


Chart 13 – Bone health assessment

Chart 14 – Specialist falls assessment

Standard:

People with hip fracture are offered a multifactorial risk assessment to identify and address future falls risk, and are offered individualised intervention if appropriate.

Source:

NICE QS16 (2012)

Key findings:

In 2013, 94.6% of patients were recorded as having received a falls assessment, up from 93.4% in our last annual report, and representing a continuation of the previous trend.

A number of hospitals failed to record falls assessment and intervention for any of their patients. These included two units (CLW and PCH) in Wales that do not have an orthogeriatrician.

Clinical commentary:

People who have had a hip fracture are clearly at high risk of future falls and it is gratifying that over 80% of hospitals report that they complete a structured falls assessment on over 90% of their patients.

It would be beyond the scope of the NHFD's highly focused dataset to evaluate the quality of such assessment, but it is clear that most units have now accepted that secondary falls prevention should be an integral part of hip fracture care.

Chart specification:

Data: 2013 calendar year.

Title: Chart 14 – Specialist falls assessment.

Description: Based on Blue Book Standard 6. Hospitals ranked by the percentage of eligible cases that received falls assessment or treatment (yes – performed on this admission; yes – awaits falls clinic assessment; and yes – further intervention not appropriate).

Exclusions: Died in hospital (indicated in discharge ward destination, n=4,168, or discharge trust destination, n=1,317).

Fields: Falls assessment, discharge ward destination, discharge trust destination.

Cases: 59,353.

Hospitals: 182.

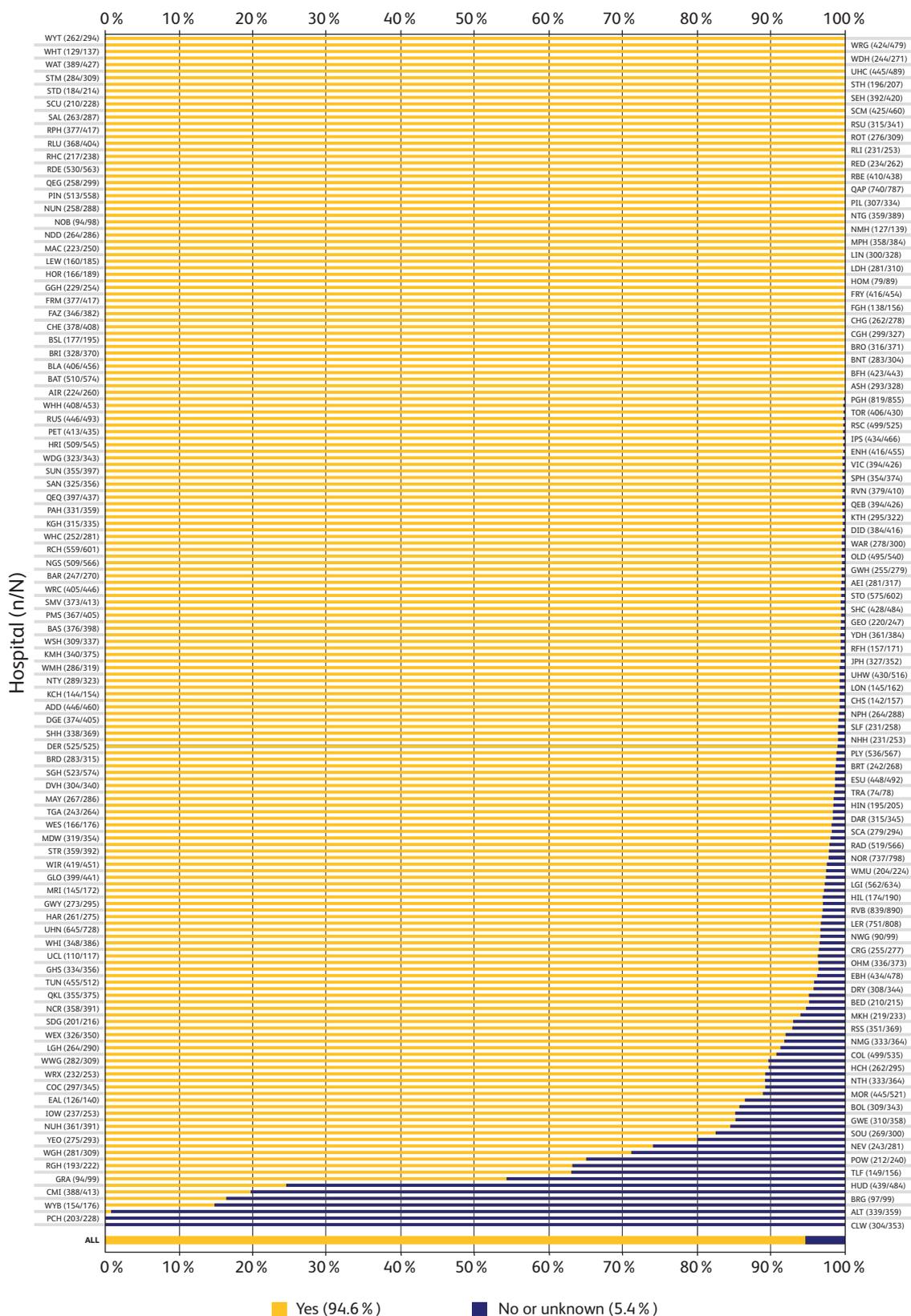


Chart 14 – Specialist falls assessment

Chart 15 – Pressure ulcers

Standard:

Carry out and document an assessment of pressure ulcer risk for adults.

Source:

NICE CG179 (2014)⁵

Key findings:

There has been a fall in both the percentage of patients developing a pressure ulcer and the percentage in which this was ‘unknown’. Compared with last year’s report, this year the proportion of patients in the ‘unknown’ category has fallen from 5.3% to 3.7%, with the percentage of patients recorded as developing an ulcer falling from 3.3% to 2.9%.

Nine hospitals report incidence of pressure ulcers in more than 10% of cases (MAY, QEB, RVN, NTG, NUN, GGH, RSC, QEG, HOM).

Clinical commentary:

The assessment and reduction of pressure ulcer risk is a key part of the patient admission process. In last year’s report, for 5.3% of patients the development of pressure ulcers was recorded as ‘unknown’. Not knowing whether your patients develop pressure ulcers is a serious indictment of clinical procedures.

Chart specification:

Data: 2013 calendar year.

Title: Chart 15 – Pressure ulcers.

Description: Based on Blue Book Standard 3. Hospitals ranked by the percentage of eligible cases with pressure ulcers.

Exclusions: Died in hospital (indicated in discharge ward destination, n=4,168, or discharge trust destination, n=1,317).

Fields: Pressure ulcers, discharge ward destination, discharge trust destination.

Cases: 59,353.

Hospitals: 182.

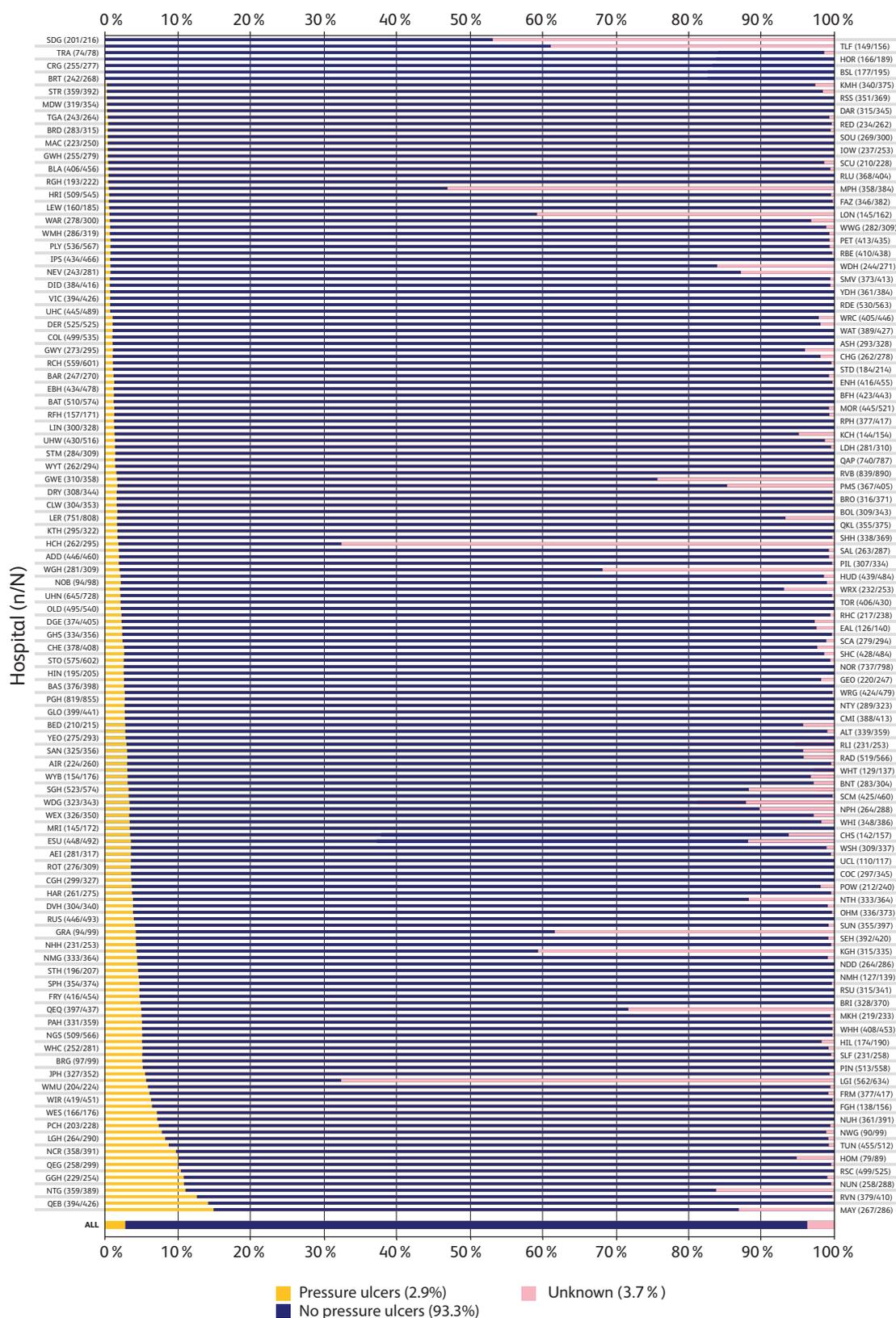


Chart 15 – Pressure ulcers

Chart 16 – Discharge destination from trust

Key findings:

There has been a slight improvement (from 46.4% to 48.0%) in the percentage of people being discharged to their own home compared with last year's report.

The percentage going to rehabilitation units has fallen from 19.6% to 18.9%.

Clinical commentary:

Ideally, hospitals will help patients to return to their usual place of residence, encouraging them to retain their independence whenever possible.

While rehabilitation may be in the best interest of a minority of patients, returning directly home should be the preferred pathway.

Chart specification:

Data: 2013 calendar year.

Title: Chart 16 – Discharge destination from trust.

Description: Hospitals ranked by the percentage of cases that were discharged to their own home or sheltered housing. This chart uses the discharge data slice:

Admitted and discharged from trust between 1 January 2013 and 31 December 2013.

Exclusions: Missing date of discharge from trust (n=422). Discharged after 2013 (n=3,867).

Fields: Discharge trust destination, discharge trust date.

Cases: 60,549.

Hospitals: 182.

At **Musgrove Park Hospital, Taunton**, monitoring of postoperative mobilisation showed that most delay in first mobilisation occurred at weekends, when no trauma physiotherapy service was available. As a result, we were able to make the case for investing in a 7-day physiotherapy service. Median time to first mobilisation has improved from 38 to 23 hours. This has been associated with an improved rate of discharge to own home, from 19% to 34%. We welcome the inclusion of 'mobilised on day of/day after surgery' as part of the new NHFD dataset.

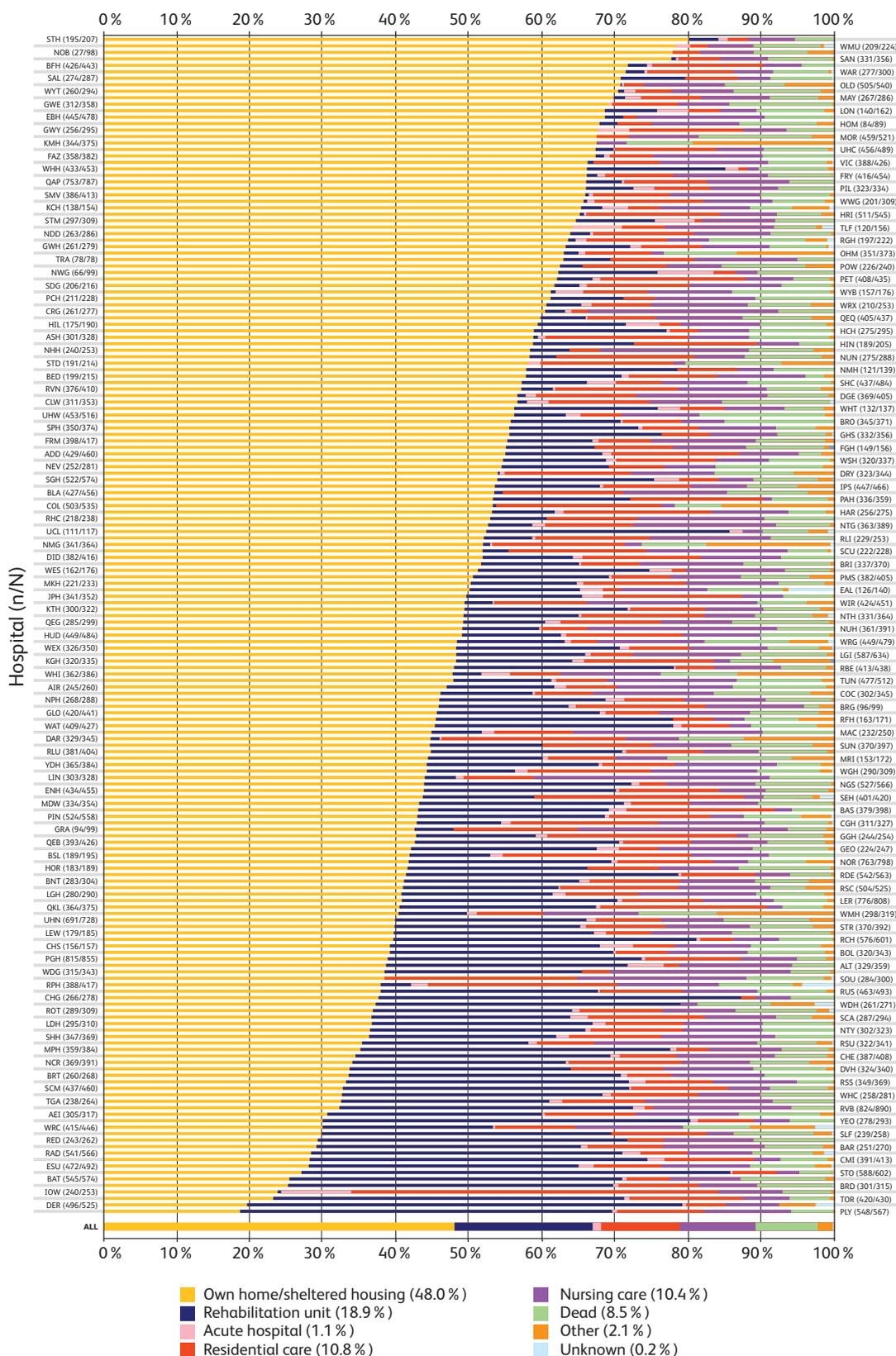


Chart 16 – Discharge destination from trust

Chart 17 – Admitted from

Key findings:

Original place of residence is largely unchanged from last year's report.

Clinical commentary:

This chart has been placed in proximity to the discharge destination chart to allow hospitals to make an easy comparison of their success in discharging people to their usual place of residence.

In 4.9% of cases, the patients sustained a hip fracture while in NHS care. This amounts to approximately 3,000 hip fractures a year.

Hospitals need to address all older patients' falls risk at their time of admission, and endeavour to mitigate these risks as far as possible.

While it is difficult to make useful comparisons between acute hospitals, the NHFD dataset has been modified to make it easier to record the location of an 'in-NHS' fall, which should permit the data to be used as an adjunct to local incident reporting.

Chart specification:

Data: 2013 calendar year.

Title: Chart 17 – Admitted from.

Description: Hospitals ranked by the percentage of cases admitted from their own home or sheltered housing.

Fields: Admitted from.

Cases: 64,838.

Hospitals: 182.

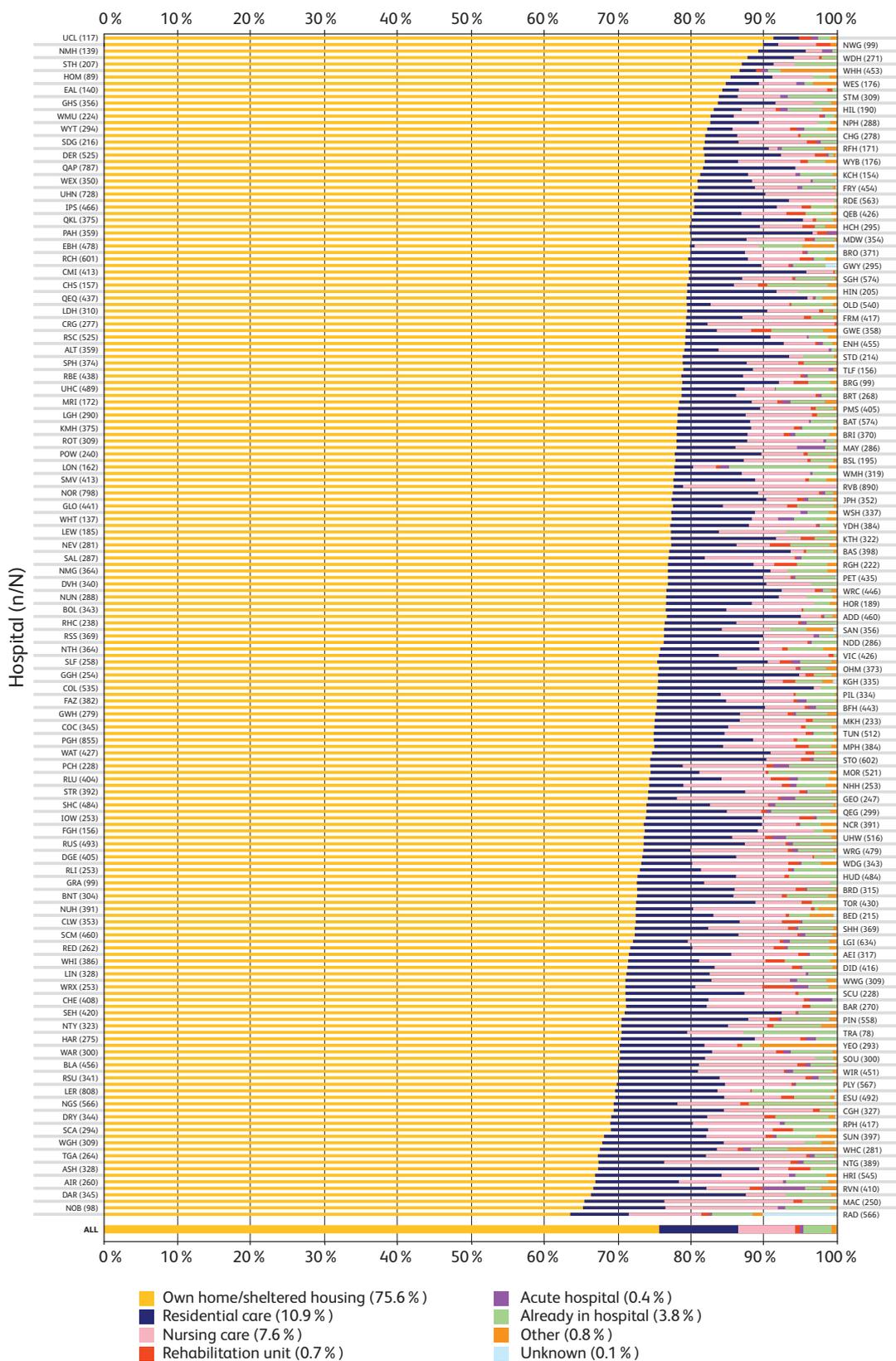


Chart 17 – Admitted from

Chart 18 – Length of stay

Key findings:

In 2013, the mean length of stay in acute orthopaedic wards was 15.3 days, which with 4.5 days of post-acute stay gives an overall LOS of 19.8 days. Both of these figures are not substantially different from those (15.7 days and 4.3 days, respectively) that made up the 20-day LOS figure for 2012–13.

Clinical commentary:

LOS is the main determinant of the economic impact of hip fracture. Previous reports have documented progressive improvement in the speed with which patients recover from hip fracture and return home.

In previous years we have commented on superspell – the total length of time that a patient stays in NHS care. These data are currently unavailable.

Chart specification:

Data: 2013 calendar year.

Title: Chart 18 – Length of stay.

Description: Hospitals ranked by total mean LOS (mean acute stay plus mean post-acute stay).

This chart uses the discharge data slice:

Admitted and discharged from trust between 1 January 2013 and 31 December 2013.

Exclusions:

Missing discharge from trust date (n=422).

Discharged after 2013 (n=3,867).

Cases missing date of discharge from ward (n=1,690).

Cases with LOS outside of the range 0–365 days (n=55).

CHS was excluded from the chart due to poor quality data, time of discharge from ward was missing for all cases (n=156).

Fields: Time of admission to A&E; time of admission to OW; time of discharge from ward; time of discharge from trust.

Calculation: Acute stay is calculated as the difference between time of admission to A&E and time of discharge from OW. Post-acute stay is calculated as the difference between time of discharge from ward and time of discharge from trust.

Cases: 58,804.

Hospitals: 181.

Newcastle upon Tyne Hospital has been submitting data to NHFD since 2009 and we use online reports to monitor and benchmark our practice at both regional and national levels. This has driven improvements in the service and care that we provide to patients admitted with hip fractures. Over the last two years, we have opened a dedicated hip fracture unit, introduced a nutritional policy for hip fracture patients, set up a nerve block service, increased orthogeriatric input to the acute and rehabilitation wards and improved multidisciplinary collaboration. In the last year, we have seen our total length of stay drop from 32.6 to 25.1 days.

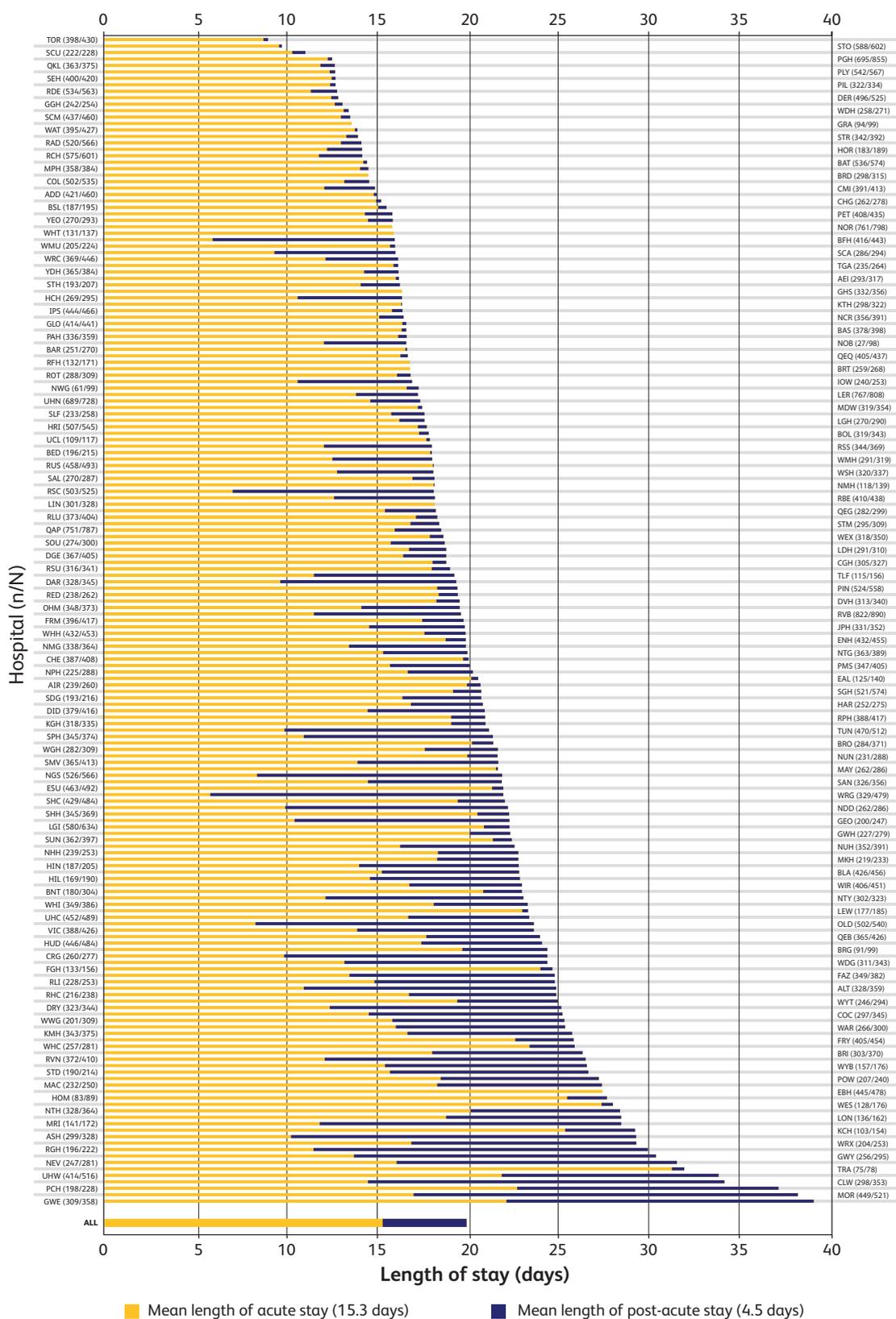


Chart 18 – Length of stay

Follow-up

Patient recovery continues after discharge from hospital and the only way that progress can be monitored is by undertaking patient follow-up at 30 days, 120 days and 365 days.

We have referred to the problem of incomplete data and find that, this year, 30-day follow-up was completed for fewer than 40% of all patients (inter-hospital variation of 0% to 100% of patients followed up).

The NHFD strongly encourages hospitals to participate in following their patients up, by either telephone or postal questionnaire, and we hope to report on patient-focused outcomes of return to previous lifestyle in future reports.

At **University Hospital Coventry and Warwickshire**, we have embedded the collection of patient-reported outcome measure (PROM) data within the NHFD process. With the University of Warwick, we spent four years identifying and testing suitable patient (or proxy)-reported outcome tools, to measure outcomes which patients themselves consider important. For the last year, we have collected outcome data for over 90 % of patients – including those with cognitive impairment. Supplementing existing NHFD data with PROM data means that we can relate 'process' to outcome, eg correlating how quickly a patient has surgery with their recovery at four months. Over the next year, several other hospitals will join us in collecting PROM data to assess and improve patient care within the framework of the NHFD.

4 Casemix-adjusted outcomes

Casemix

Outcome after a hip fracture depends on the overall health of the individual patient.

Regional variations in the age/sex distribution of the population, in levels of socio-economic deprivation and in patterns of public health are well recognised. Fair comparisons of outcome between hospitals should take such variation in casemix into account.

Most patients with hip fracture are elderly, but age is only one marker of frailty, and inter-hospital variation in anaesthetic grade, normal residence, walking ability, fracture type and mental test score have all been described in previous annual reports.

The NHFD uses casemix adjustment to help ensure that units dealing with an older or a frailer case load are judged fairly against others with younger or fitter patients.

We commissioned the CEU at the RCS to examine these and other fields within the NHFD dataset in order to develop the most robust possible model of casemix adjustment in respect of two key outcome measures: 30-day mortality and return home from home by 30 days after admission.

30-day mortality

Average mortality for the 2013 calendar year has fallen to 8.02%. This may seem only a small percentage improvement on the figure of 8.1% in our **2012 mortality supplement**.¹⁶ However, the large number of people who suffer hip fracture means that, in 2013, over 300 fewer people died within 30 days of hip fracture than in 2011–12.

This year, we planned our casemix-adjusted mortality analysis to include the three calendar years 2011–13, to address a concern that funnel plots based on just one year's data might be insufficiently sensitive to identify poor performance in smaller units.

The **methodology report** describes a number of alternative models for casemix adjustments, each using different combinations of fields from the NHFD dataset.

The RCS model CEU 12 was identified as the best-performing model and has seven variables, including deprivation and preoperative AMTS. However, this presented problems with differences between England and Wales or Northern Ireland in the derivation of deprivation scores. In addition, the higher rates of AMTS assessment achieved in England (owing to the BPT incentive) means that we have not included this field, in order to avoid introducing a systematic bias into the model.

As a result, we decided to base casemix adjustment on a six-variable model (CEU 17), which uses age, ASA grade, sex, source of admission, walking ability indoors and fracture type.

Table 1 Casemix

Casemix	Calendar year, %		
	2011	2012	2013
Sex			
Female	74.0	73.7	72.3
Male	26.0	26.3	27.7
Age (years)			
60–69	8.4	8.6	8.8
70–79	22.3	21.9	21.5
80–89	48.1	47.5	47.2
90	21.2	22.1	22.4
Admitted from			
Own home/sheltered housing	74.7	74.7	75.6
Not from own home	22.1	25.2	24.2
Unknown	3.2	0.2	0.1
ASA status			
No	9.8	7.5	5.1
Yes	90.2	92.5	94.9
ASA grade			
1	2.2	2.1	2.0
2	27.8	27.3	27.5
3	49.6	51.8	52.9
4	10.3	10.9	12.1
5	0.4	0.4	0.4
Unknown	9.8	7.5	5.1
Walking indoors ability			
Without aids	45.6	46.0	47.1
One aid	25.1	24.5	23.7
Two aids/frame	23.6	24.5	24.6
Wheelchair or bedbound	2.5	2.4	2.3
Unknown	3.2	2.7	2.2
Mobility			
Regularly mobile outdoors without aids (or assistance)	30.6	29.9	30.6
Mobile outdoors with only one aid	14.7	14.9	15.1
Mobile outdoors with two aids or frame	5.1	5.7	6.1
Indoor mobility only, never goes out unassisted	2.9	3.3	2.9
No functional mobility (wheelchair, assisted transfers or bedbound)	2.3	2.3	2.2
Unknown	44.3	43.9	43.1
Fracture type			
Intracapsular – displaced	46.7	47.2	48.9
Intracapsular – undisplaced	11.3	10.4	9.6
Intertrochanteric	34.3	35.1	34.6
Subtrochanteric	5.3	5.7	5.7
Other	2.0	1.2	0.9
Unknown	0.4	0.5	0.2

England and Wales

The mean 30-day mortality in 178 eligible hospitals was 8.35% (n=14,797/177,196).

The control limits in the funnel plot for 30-day mortality (Fig 8) are defined as two and three SD above and below this mean. These limits include a correction for over-dispersion derived using the random-effects method.¹⁷ Details of casemix and figures for crude and adjusted mortality for these hospitals are described in the methodology report.

After casemix adjustment, 11 hospitals (BRG, CHE, DEW, GWH, GWY, NTG, PGH, QAP, QEB, STO, VIC) recorded particularly good outcome figures, with 30-day mortality in these units falling below the lower two SD (95%) limit. (DEW Dewsbury Hospital no longer treats patients with hip fractures, the funnel plot below includes historic data submitted to NHFD in 2011)

After casemix adjustment, three hospitals were identified as outliers, with 30-day mortality above the three SD (99.8%) limit. However, for two of these hospitals (BRT and HOR) there were clear suggestions of a problem with data quality, particularly in respect of ASA grade. These two hospitals were therefore excluded and will be managed as 'alerts'.

One hospital (LDH) remained an outlier with 30-day mortality above the 99.8% limit, and was therefore managed as an 'alarm' under the NHFD outlier policy (Appendix C). However, analysis of single year data shows that while LDH was an outlier for 2012 its performance subsequently improved, and it was no longer an outlier for the 2013 calendar year.

A further 14 hospitals were managed as 'alerts', being outliers between the upper 95% and 99.8% limits. All outlier hospitals were signposted to multidisciplinary site review via the British Orthopaedic Association.

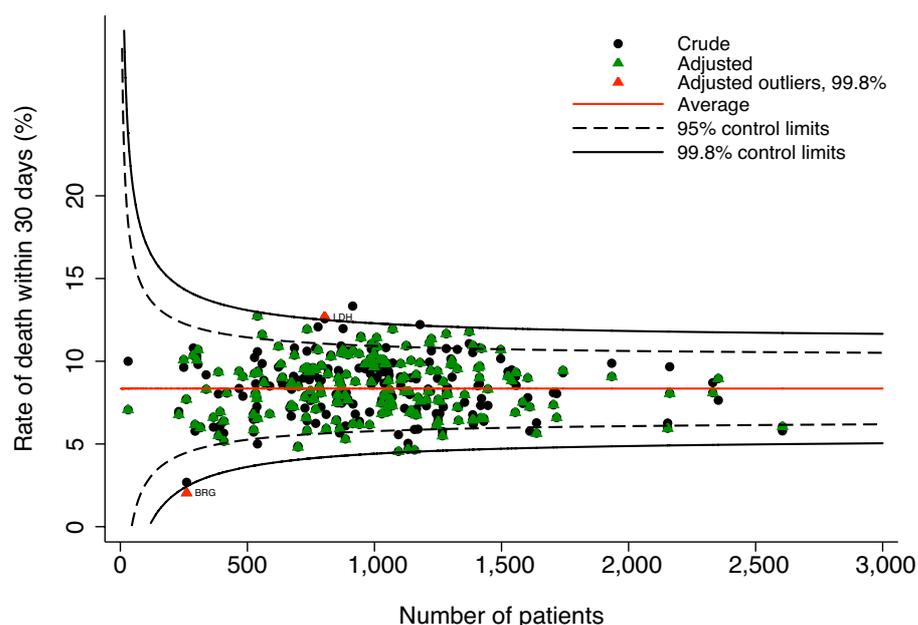


Fig 8 Casemix-adjusted 30-day mortality, 2011–13.

Northern Ireland

The potential impact of outlier status for local patients, clinical staff and NHS managers meant that we could include units in our casemix-adjusted funnel plots only when we could independently validate mortality at 30 days. In the absence of Office for National Statistics (ONS) data for Northern Ireland, this was not possible for the four participating hospitals (ALT, CRG, RVB, NUH).

We are exploring alternatives for validation of these figures against third-party data so that we can include these hospitals in our mortality analysis in the future. However, local 30-day follow-up is well established and reliable in Northern Ireland and from these data we can derive crude mortality between 4% and 5.5% for all four hospitals. Therefore, none of these units would have been an outlier after casemix adjustment.

In 2012, **Calderdale and Huddersfield NHS Foundation Trust** was an outlier with an adjusted 30-day mortality of 13.1%. An internal review of services resulted in the appointment of an orthogeriatrician and a dedicated fractured neck of femur ward. In 2013, the BOA gave our service a very positive review, noting excellent staff morale and high clinical standards, especially in respect of our delirium work. However, none of our patients achieved BPT, and the BOA felt that our hip fracture programme lacked leadership. Our fractured neck of femur interest group, led by an enthusiastic specialty consultant, has introduced innovations such as nerve blocks in A&E and 'pre-load' carbohydrate drinks before surgery. In 2013–14, our crude 30-day mortality had reduced to 7.7%.

Return to own home within 30 days

Cases were eligible for the 'return home from home' analysis if they were admitted from their own home during the 2013 calendar year.

Previous reports have reported 'return home from home' using the follow-up field of 'residential status at 30 days' from the NHFD dataset. However, the quality of such data is inconsistent. The precise timing of the follow-up contact may be significantly before or after 30 days, and some hospitals report only on patients who are still in hospital at 30 days.

In this report we have adopted a different approach to definition of 'return home from home' – combining 'discharge date' and 'discharge destination' to identify when a patient was discharged to their own home within 30 days of admission.

This avoids the difficulties regarding reporting of 'residential status at 30 days'. As a result, a larger number of patients and hospitals can be included in the analysis.

The original 'residential status' measure identified 11,620 patients as being at home or in sheltered housing 30 days after admission. The new measure identified 23,639 patients as having been discharged home within 30 days of admission.

Queen Alexandra Hospital, Portsmouth is a positive outlier in terms of 30-day return home – 63 % last year, compared with the national average of 46.2 %. To support our focus on rehabilitation from the day after surgery, we proposed enhancing the therapy input with additional physiotherapy and occupational therapy staff. We used NHFD records to compare performance before and after these changes. Acute length of stay fell from 16.6 days to 13.7 days, more patients returned to their previous residence (76.8 % versus 68.9 %), discharge to specialist rehabilitation fell from 13.7 % to 9 %, and need for care home placement was reduced by 43 %.

5 Best practice tariff

The Department of Health (England) introduced BPT in 2010 as part of their ‘payment by results’ strategy. Care is measured against a number of criteria and, if all are achieved, then an additional tariff is paid to the provider hospital. BPT for hip fracture care was one of the first payments by results to be paid on an individual patient basis (currently £1,335 per patient), rather than based on achieving a target level and receiving an all-or-nothing payment. It was hoped that this would safeguard patients requiring a period of optimisation prior to surgery.

Table 2 demonstrates the success of the BPT initiative over the last three calendar years – showing improvement from 37% of patients achieving the uplift in tariff at the beginning of 2011 to 64% in the last quarter of 2013.

Many hospitals have invested in services to improve patient care and have been rewarded with additional income from the tariff uplift. However, a small percentage of hospitals continue to fail in achieving uplift on any of their patients and this gives cause for concern.

Table 2 Best Practice Tariff by quarter of calendar year, 2011–2013.

	Number of eligible hospitals	Number of hospitals achieving BPT (%)	Number of cases submitted	Number of cases achieving BPT (%)
2011				
Qtr 1	167	119 (71)	12,680	4,671 (37)
Qtr 2	170	131 (77)	13,578	5,508 (41)
Qtr 3	166	135 (81)	13,212	6,169 (47)
Qtr 4	166	140 (84)	14,145	7,207 (51)
2012				
Qtr 1	168	147 (88)	14,315	7,837 (55)
Qtr 2	166	148 (89)	13,971	6,815 (49)
Qtr 3	166	150 (90)	13,744	7,167 (52)
Qtr 4	166	155 (93)	14,218	8,413 (59)
2013				
Qtr 1	166	156 (94)	14,662	8,748 (60)
Qtr 2	166	160 (96)	15,076	8,929 (59)
Qtr 3	166	160 (96)	14,259	8,377 (59)
Qtr 4	164	160 (98)	14,856	9,529 (64)

Chart 19 – Best practice tariff achievement

Standard:

Best practice tariff eligibility is based on an individual's care meeting a series of standards. There is no target rate for an individual hospital.

Source:

NHS England/Monitor, Payment by results guidance, best practice tariff¹⁸

Key findings:

The percentage of patients whose care meets all nine criteria has risen from 60.5% to 64%. In most cases, failure is by a single criterion.

Clinical commentary:

BPT gives a broad but not comprehensive overview of the care that a patient receives. The improvement in the percentage of patients eligible for the tariff uplift is encouraging, as is the fall in the number of unfulfilled criteria. While the standard can be achieved in over 90% of patients, 30 hospitals provide this level of care to fewer than half of their patients. This includes two hospitals, RSS and TLF (both part of the Shrewsbury and Telford Hospital Trust), with no patients meeting the criteria since BPT began in 2010.

Commissioners should work with providers to increase access to orthogeriatricians, as their role is critical to the provision of BPT-compliant care.

Chart specification:

Data: 2013 calendar year.

Title: Chart 19 – Best practice tariff achievement

Description: Hospitals ranked by the percentage of cases who meet all of the eligibility requirements for BPT uplift:

- Time to surgery is in the range greater than 0 hours and less than or equal to 36 hours.
- Orthopaedic GMC number and geriatrician GMC number are not missing.
- Admitted Using Jointly Agreed Assessment Protocol is equal to 'Yes'.
- Time to geriatrician assessment is between 0 and 72 hours, Geriatrician Grade is equal to 'Consultant', 'ST3' or 'SAS'.
- MDT Assessment is equal to 'Yes'.
- Bone Therapy Medication response indicates patient received any form of assessment/action.
- Falls Assessment response indicates patient received any form of assessment/action.
- Valid preoperative AMT score.
- Valid postoperative AMT score.

This chart is based on the discharge data slice. Only English hospitals are included.

Fields: NHS number, time of admission to A&E, time of admission to orthopaedic ward, date of surgery, orthopaedic surgeon GMC number, geriatrician GMC number, admitted using jointly agreed assessment protocol, geriatrician assessment time, geriatrician grade, multidisciplinary team assessment, bone therapy medication, falls assessment, AMTS 1 and AMTS 2.

Calculations: Time to surgery is calculated as the difference in the time of admission to A&E to time of surgery.

Time to geriatrician assessment is calculated as the difference in the time of admission to A&E to time of geriatrician assessment. Denominator values show the number of cases discharged from the hospital trust in 2013.

Cases: 58,853.

Hospitals: 164.

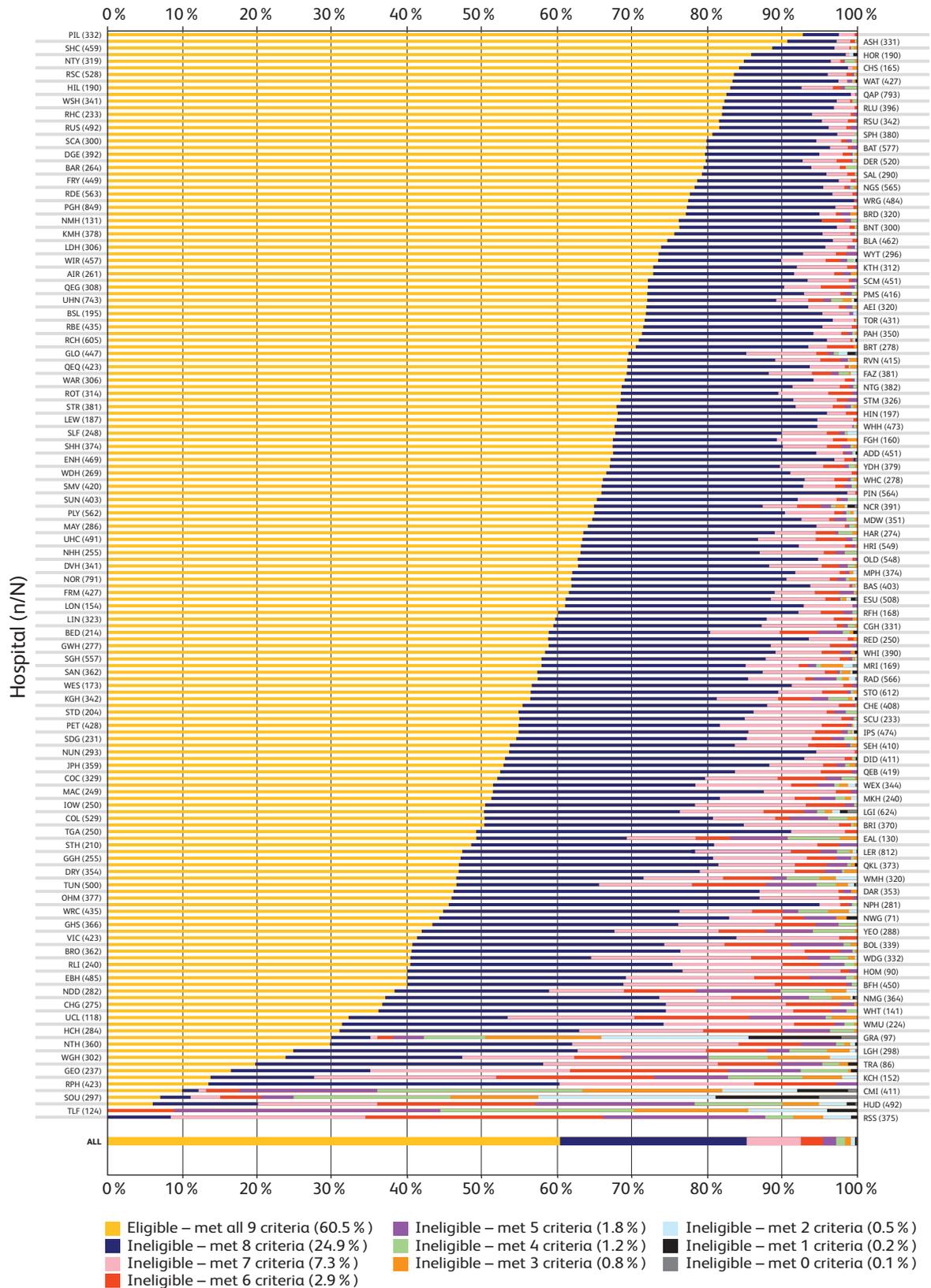


Chart 19 – Best practice tariff achievement

At **St Peter's Hospital, Chertsey**, we have used NHFD reports to monitor, benchmark and improve our practice. In 2009–10, only 39.6 % of our patients were operated on within 36 hours, 28 % achieved BPT and crude 30-day mortality was 7.8 %. We have made improvements to our patient pathway, including fast-tracking to the ward and improving clerking documentation to include important patient assessments. We have improved access to theatre, with prioritisation of surgical need, a senior surgeon in theatre, daily weekday orthogeriatrician rounds and 7-day physiotherapy working. Monthly clinical governance meetings include root cause analyses of mortality and theatre delay. As a result, our crude 30-day mortality is now <5 % and BPT attainment is over 80 %.

At **Milton Keynes Hospital**, we have appointed an orthopaedic surgeon to lead on hip fracture, and a geriatrician and a fragility fracture advanced nurse practitioner to form the core of a dedicated multidisciplinary steering group for the hip fracture patient pathway. Regular meetings use 'live' online NHFD reports to monitor and benchmark our practice in real time. This showed that patients admitted over the weekend had a protracted time to surgery so we introduced an additional weekend trauma list. Our BPT attainment was nil in 2012, but is now over 50 %, and length of stay has fallen by 4 days.

6 Regional tables

For ease of reference, NHFHD regionalises provider hospitals (based on previous strategic health authorities).

The following summary tables reflect the performance of individual hospitals within each region over various key measures of hip fracture care.

Colour coding allows readers to ascertain quickly whether their local hospital is performing better (green) or worse (red) than the national average (amber), and closer analysis allows provider units to benchmark their practice against regional and national performance.

Notes on calculations:

- 1 Senior geriatric review within 72 hours of admission (%)
Derived from 'Date and time assessed by geriatrician' and 'Geriatrician grade' fields.
Numerator: date and time within 72 hours of 'admission to A&E' or 'seen by trauma team' if already in hospital. Geriatrician 'consultant', 'SAS' or 'ST3+' grade.
- 2 Abbreviated mental test performed (%)
Numerator: Valid AMTS 1 or AMTS 2. (NB Unlike this measure, BPT is derived from valid records of both AMTS 1 and AMTS 2.)
Exclusions: Record of 'not done', 'patient refused' or missing AMTS 1 or AMTS 2.
- 3 Specialist falls assessment performed (%)
Numerator: Yes – performed on this admission; yes – awaits; or yes – no further action.
- 4 Bone health medication assessment performed (%)
Numerator: continued from pre-admission; started on this admission; awaits DXA scan; awaits bone clinic assessment; or assessed – no bone protection medication needed/appropriate.
- 5 Best practice tariff attainment (%)
Cases that met all 9 criteria. Calculations for England only. Excludes Nobles Hospital, Isle of Man.
- 6 Crude and casemix-adjusted mortality – National average for England and Wales only. Northern Ireland not included as data unavailable. Crude mortality rates in Northern Ireland are provided locally by each hospital and are not validated against third party sources.
- 7 Crude and casemix-adjusted mortality/return home from home within 30 days – Regional rates not calculated.
- 8 Mean length of total Trust stay (acute + post-acute) (days).
Only if between 0 and 365 days – same as for the ranked chart.
- 9 30 day follow up completion rate (%)
Includes admissions between 1st December 2012 and 30th November 2013.
Corrects discharge destination data for DER and SEH, same as for chart 16 – Discharge destination.
Exclusions: Discharge from trust destination "dead", residential status "dead" and difference between date of admission and date of discharge from trust is less than 30 days. Residential status "dead" and died within 30 days of admission.

East Midlands

	Hospital code	Number of cases submitted	Admitted to orthopaedic ward within 4 hours (%)	Surgery on the day or day after admission (%)	Senior geriatric review within 72 hours of admission (%)	Abbreviated mental test performed (%)	Specialist falls assessment performed (%)	Bone health medication assessment performed (%)	Patients developing pressure ulcers (%)	Best practice tariff attainment (%)	Mortality 2011 to 2013 - crude (%)	Mortality 2011 to 2013 - casemix adjusted (%)	Return home from home within 30 days - crude (%)	Return home from home within 30 days - casemix adj. (%)	Mean length of total trust stay [acute + post-acute] (days)	30 day follow-up completion rate (%)
	CHE	408	52.4	68.1	88.5	97.1	100.0	100.0	2.6	55.8	5.0	4.7	41.4	41.8	20.0	0.0
	DER	525	59.5	84.0	92.4	98.5	99.0	99.6	1.0	79.2	6.2	6.5	22.6	22.2	12.8	0.0
	GRA	99	70.6	82.8	47.5	80.8	54.3	45.7	4.3	30.9	5.8	6.2	56.9	59.3	13.6	0.0
	KGH	335	74.1	83.6	74.6	97.0	99.7	93.7	4.4	56.6	6.9	6.2	45.1	44.7	21.0	0.0
	KMH	375	70.9	76.0	95.2	98.9	99.4	100.0	0.3	75.9	9.4	10.1	42.3	42.3	25.7	5.0
	LER	808	25.1	66.6	92.2	97.9	96.8	88.8	1.7	47.4	8.7	8.1	44.5	45.5	17.3	16.0
	LIN	328	66.9	81.7	78.0	98.2	100.0	100.0	1.3	58.7	8.9	9.9	56.4	52.9	18.1	67.4
	NTH	364	24.8	64.0	66.5	97.5	89.2	94.9	3.9	30.5	8.1	7.7	50.0	49.7	28.4	90.9
	PIL	334	78.1	94.9	96.1	99.7	100.0	99.0	2.0	92.6	8.8	9.7	76.2	75.9	12.7	78.4
	UHN	728	79.5	80.8	93.7	99.0	96.7	97.2	2.2	71.8	9.7	8.1	43.7	48.2	17.3	0.0
	EAST MIDLANDS	4,304	57.7	76.9	87.0	97.8	96.7	95.1	2.1	62.0	N/A	N/A	N/A	N/A	18.5	22.9
	ENGLAND	58,972	48.3	73.8	86.8	96.9	96.8	97.3	3.0	60.6	N/A	N/A	N/A	N/A	19.0	38.9
	OVERALL	64,838	47.4	71.7	81.6	93.7	94.6	96.1	2.9	60.6	8.4		52.6		19.8	39.7

East of England

Hospital code	Number of cases submitted	Admitted to orthopaedic ward within 4 hours (%)	Surgery on the day of or day after admission (%)	Senior geriatric review within 72 hours of admission (%)	Abbreviated mental test performed (%)	Specialist falls assessment performed (%)	Bone health medication assessment performed (%)	Patients developing pressure ulcers (%)	Best practice tariff attainment (%)	Mortality 2011 to 2013 - crude (%)	Mortality 2011 to 2013 - casemix adjusted (%)	Return home from home within 30 days - crude (%)	Return home from home within 30 days - casemix adj. (%)	Mean length of total stay [acute + post-acute] (days)	30 day follow-up completion rate (%)
Aldenbrooke's Hospital, Cambridge	460	62.4	67.2	96.7	99.1	99.3	99.3	2.0	66.4	6.8	7.6	62.3	62.3	15.0	0.0
Basildon and Thurrock University Hospital	398	13.8	64.8	94.7	99.5	99.5	99.5	2.7	61.2	7.1	6.8	56.0	57.6	16.6	82.4
Bedford Hospital	215	60.2	72.6	75.8	95.8	95.2	95.2	2.9	61.3	7.0	8.0	67.3	63.1	18.0	0.5
Broomfield Hospital, Chelmsford	443	82.7	69.6	92.3	74.3	100.0	97.6	1.2	39.7	7.2	7.2	83.5	83.2	15.7	0.0
Colchester General Hospital	535	48.0	67.1	70.7	98.9	90.8	91.6	1.0	49.3	9.5	8.8	60.6	61.8	14.6	0.0
East & North Herts Hospital	455	71.7	64.8	96.7	99.3	99.8	99.5	1.2	65.4	11.1	11.8	51.7	50.7	19.8	45.4
Hinchingbrooke Hospital	205	53.0	77.6	93.2	100.0	98.5	99.5	2.6	69.8	5.7	5.9	61.3	61.0	22.8	0.0
Ipswich Hospital	466	85.1	67.6	95.3	97.9	99.8	98.6	0.7	55.5	7.2	6.4	62.1	62.6	16.4	17.4
James Paget University Hospital, Great Yarmouth	352	40.7	65.1	91.8	99.1	99.4	99.4	5.5	53.7	8.7	8.0	57.5	58.9	19.8	81.5
Luton and Dunstable Hospital	310	19.6	74.5	98.4	98.7	100.0	100.0	1.4	72.5	12.6	12.7	46.3	48.0	18.7	44.4
Norfolk and Norwich University Hospital	798	43.3	79.2	86.6	99.7	97.8	97.8	2.6	61.2	7.6	9.0	48.0	46.5	15.8	0.0
The Princess Alexandra Hospital, Harlow	359	29.6	80.5	91.9	99.4	99.7	99.1	5.1	72.0	9.0	10.9	63.1	61.1	16.6	94.7
Peterborough City Hospital	435	63.6	82.3	78.2	93.8	99.8	99.8	0.7	55.4	7.2	8.8	70.1	66.6	15.8	0.5
Queen Elizabeth Hospital, King's Lynn	375	32.5	70.7	77.9	97.3	95.2	94.6	1.7	47.5	7.9	7.3	48.0	49.7	12.5	0.3
Southend University Hospital	420	75.1	66.4	89.5	93.6	100.0	99.5	4.3	53.4	8.2	9.5	63.4	60.4	12.7	45.4
Watford General Hospital	427	53.4	84.3	99.3	99.8	100.0	100.0	1.0	84.1	10.8	11.7	44.5	43.3	13.9	20.3
West Suffolk Hospital, Bury St. Edmunds	337	66.4	84.6	99.4	99.7	99.4	100.0	3.6	81.9	7.4	6.2	73.9	75.3	18.1	66.8
EAST OF ENGLAND	6990	53.5	72.8	89.6	96.8	98.4	98.2	2.3	60.9	N/A	N/A	N/A	N/A	16.3	26.7
ENGLAND	58972	48.3	73.8	86.8	96.9	96.8	97.3	3.0	60.6	N/A	N/A	N/A	N/A	19.0	38.9
OVERALL	64838	47.4	71.7	81.6	93.7	94.6	96.1	2.9	60.6	8.4	52.6	52.6	52.6	19.8	39.7

London

Hospital code	Number of cases submitted	Admitted to orthopaedic ward within 4 hours (%)	Surgery on the day of or day after admission (%)	Senior geriatric review within 72 hours of admission (%)	Abbreviated mental test performed (%)	Specialist falls assessment performed (%)	Bone health medication assessment performed (%)	Patients developing pressure ulcers (%)	Best practice tariff attainment (%)	Mortality 2011 to 2013 - crude (%)	Mortality 2011 to 2013 - casemix adjusted (%)	Return home from home within 30 days - crude (%)	Return home from home within 30 days - casemix adj. (%)	Mean length of total trust stay [acute + post-acute] (days)	30 day follow-up completion rate (%)
Barnet Hospital	304	38.7	82.6	95.7	98.0	100.0	100.0	3.2	76.3	8.1	9.2	43.4	42.6	22.9	0.7
Princess Royal University Hospital, Bromley	371	20.6	74.9	70.4	98.9	100.0	100.0	1.6	40.0	9.8	10.4	50.3	52.6	21.4	0.0
Chase Farm Hospital	157	0.0	86.6	99.4	100.0	99.3	99.3	3.5	84.6	9.9	11.6	46.4	46.5	No data	2.6
Ealing Hospital	140	12.3	65.7	87.1	90.7	86.5	97.6	2.4	50.8	7.0	6.8	52.5	51.6	20.5	0.0
St George's Hospital, London	247	25.2	69.6	32.0	81.0	99.5	95.9	2.7	17.0	8.5	6.8	42.6	46.0	22.2	0.0
Queen Elizabeth Hospital, Woolwich	279	12.4	75.3	86.4	94.3	99.6	99.2	0.4	59.0	6.1	5.3	76.7	82.9	22.3	68.2
Hillingdon Hospital	190	57.5	89.5	95.8	98.9	97.1	100.0	5.2	81.1	8.8	8.7	60.1	59.4	22.9	36.1
Homerton Hospital, London	89	1.1	68.5	92.1	93.3	100.0	97.5	10.1	38.1	9.6	10.1	67.1	69.9	27.6	74.1
King's College Hospital, London	154	37.2	76.0	78.6	61.7	99.3	98.6	1.4	14.5	6.0	6.6	60.0	58.8	29.2	35.2
Kingston Hospital	322	14.1	84.2	95.0	99.1	99.7	100.0	1.7	72.7	6.8	8.8	53.8	52.2	16.3	0.4
University Hospital, Lewisham	185	38.6	71.4	96.2	100.0	100.0	100.0	0.6	68.2	10.6	12.7	38.5	38.4	23.3	0.0
The Royal London Hospital	162	14.5	68.5	97.5	98.1	99.3	99.3	0.7	60.0	6.4	5.2	58.7	56.2	28.4	66.7
Croydon University Hospital, London	286	10.7	73.1	93.4	100.0	98.5	98.5	15.0	64.4	7.2	8.1	70.4	68.4	21.6	0.0
North Middlesex University Hospital	139	47.7	78.4	96.4	99.3	100.0	100.0	4.7	76.0	8.0	9.4	57.3	54.5	18.1	7.6
Northwick Park Hospital, London	288	42.5	51.4	94.8	99.0	99.2	99.2	3.4	47.4	7.6	8.2	46.6	47.9	20.2	0.0
Newham General Hospital, London	99	17.5	64.6	87.9	96.0	96.7	97.8	7.8	47.0	9.8	10.7	46.1	45.5	17.2	25.0
Queen's Hospital, Romford	540	40.1	69.8	90.0	99.8	99.6	99.6	2.2	63.6	7.8	9.0	66.7	68.4	23.6	54.0
Royal Free Hospital, London	171	50.0	71.9	97.1	97.7	99.4	100.0	1.3	58.3	8.6	8.1	47.1	48.2	16.8	0.7
St Helier Hospital, Carshalton	484	16.6	88.2	98.1	100.0	99.5	99.5	2.6	87.4	10.1	9.8	59.5	61.5	22.0	0.0
St Thomas' Hospital, London	207	79.1	65.2	88.4	93.2	100.0	97.4	4.6	44.6	5.0	6.6	86.1	74.0	16.2	0.0
St. Mary's Hospital, Paddington	309	24.1	70.6	91.3	97.4	100.0	99.6	1.4	66.3	7.5	8.5	64.5	63.4	18.4	0.0
University College Hospital	117	63.7	74.4	64.1	81.2	96.4	93.6	3.6	33.3	6.0	6.0	54.6	51.2	17.8	5.0
Chelsea and Westminster Hospital	176	0.6	69.3	91.5	100.0	98.2	99.4	7.2	56.2	5.7	6.4	41.6	39.9	27.9	5.1
Whipps Cross University Hospital	281	20.1	79.0	96.1	99.6	99.6	99.2	5.2	67.1	8.8	8.7	41.1	43.5	25.8	47.7
Whittington Hospital, London	137	18.3	91.2	81.0	90.5	100.0	100.0	3.1	37.1	6.1	7.0	60.4	62.5	15.9	1.5
West Middlesex University Hospital, Isleworth	224	38.6	44.6	67.0	96.4	97.5	98.5	5.9	30.6	9.6	10.9	83.8	85.4	15.9	0.0
LONDON	6,058	28.4	73.7	87.4	96.1	99.0	99.1	3.6	58.5	N/A	N/A	N/A	N/A	21.3	16.4
ENGLAND	58,972	48.3	73.8	86.8	96.9	96.8	97.3	3.0	60.6	N/A	N/A	N/A	N/A	19.0	38.9
OVERALL	64,838	47.4	71.7	81.6	93.7	94.6	96.1	2.9	60.6	8.4		52.6		19.8	39.7

North East

	Hospital code	Number of cases submitted	Admitted to orthopaedic ward within 4 hours (%)	Surgery on the day of or day after admission (%)	Senior geriatric review within 72 hours of admission (%)	Abbreviated mental test performed (%)	Specialist falls assessment performed (%)	Bone health medication assessment (%)	Patients developing pressure ulcers (%)	Best practice tariff attainment (%)	Mortality 2011 to 2013 - crude (%)	Mortality 2011 to 2013 - casemix adjusted (%)	Return home from home within 30 days - crude (%)	Return home from home within 30 days - casemix adj. (%)	Mean length of total trust stay [acute + post-acute] (days)	30 day follow-up completion rate (%)
Wansbeck Hospital	ASH	328	63.3	90.9	99.1	100.0	100.0	100.0	1.0	90.0	8.6	8.8	54.3	53.6	29.1	84.8
Darlington Memorial Hospital	DAR	345	60.4	61.7	85.5	99.4	98.4	98.7	0.3	46.8	9.3	7.5	51.1	52.1	19.3	36.1
University Hospital Of North Durham, Darlington	DRY	344	51.9	67.7	73.8	98.8	95.8	95.8	1.6	48.9	8.2	7.3	47.1	50.1	25.1	46.4
University Hospital of North Tees, Stockton on Tees	NTG	389	82.6	76.3	88.9	99.2	100.0	98.9	11.1	68.6	5.6	4.6	70.2	69.6	20.0	56.3
North Tyneside General Hospital, North Shields	NTY	323	58.6	87.6	96.6	100.0	99.3	99.3	2.8	85.4	9.5	9.9	53.1	50.0	23.1	77.9
Queen Elizabeth Hospital, Gateshead	QEG	299	72.1	86.0	92.0	99.0	100.0	99.2	10.1	71.2	12.0	10.7	64.3	64.3	18.2	97.1
Royal Victoria Hospital, Newcastle	RVN	410	40.2	80.2	93.4	98.0	99.7	100.0	12.7	69.7	6.8	6.1	59.5	62.7	26.4	92.1
James Cook University Hospital, Middlesbrough	SCM	460	77.3	79.1	93.7	99.3	100.0	99.5	3.3	72.3	6.8	6.5	35.4	34.9	13.5	10.9
South Tyneside District Hospital, South Shields	STD	214	67.3	68.2	90.2	100.0	100.0	100.0	1.1	55.5	8.6	9.0	45.6	45.8	26.5	0.0
Sunderland Royal Hospital	SUN	397	75.8	73.0	88.7	99.5	99.7	99.7	4.2	64.9	12.2	9.9	52.8	54.0	22.4	59.3
NORTH EAST		3,509	65.2	77.2	90.2	99.3	99.3	99.1	5.1	67.7	N/A	N/A	N/A	N/A	21.9	56.9
ENGLAND		58,972	48.3	73.8	86.8	96.9	96.8	97.3	3.0	60.6	N/A	N/A	N/A	N/A	19.0	38.9
OVERALL		64,838	47.4	71.7	81.6	93.7	94.6	96.1	2.9	60.6	8.4		52.6		19.8	39.7

North West

Hospital code	Number of cases submitted	Admitted to orthopaedic ward within 4 hours (%)	Surgery on the day of or day after admission (%)	Senior geriatric review within 72 hours of admission (%)	Abbreviated mental test performed (%)	Specialist falls assessment performed (%)	Bone health medication assessment performed (%)	Patients developing pressure ulcers (%)	Best practice tariff attainment (%)	Mortality 2011 to 2013 - crude (%)	Mortality 2011 to 2013 - casemix adjusted (%)	Return home from home within 30 days - crude (%)	Return home from home within 30 days - casemix adj. (%)	Mean length of total trust stay [acute + post-acute] (days)\	30 day follow-up completion rate (%)
Royal Albert Edward Infirmary, Wigan	317	17.0	81.1	95.9	100.0	99.6	100.0	3.6	72.8	11.5	11.4	53.3	53.9	16.2	96.9
Royal Blackburn Hospital	456	53.5	75.4	97.1	99.6	100.0	100.0	0.5	73.8	10.7	9.6	53.1	54.1	22.8	98.3
Royal Bolton Hospital	343	81.5	53.9	77.8	98.5	85.8	100.0	1.6	40.9	10.8	9.9	47.1	50.3	17.8	77.0
Cumberland Infirmary, Carlisle	413	54.2	67.3	14.0	89.1	19.8	59.3	2.8	10.0	7.1	6.8	49.2	48.7	14.8	89.7
Countess of Chester Hospital	345	48.7	79.1	76.5	98.8	89.2	98.7	3.7	52.6	9.2	10.2	52.5	49.4	25.2	93.8
University Hospital Aintree	382	38.0	85.1	91.4	96.1	100.0	98.6	0.6	69.3	8.9	9.1	52.1	51.3	24.7	0.0
Furness General Hospital, Barrow-in-Furness	156	46.6	76.3	91.7	98.1	100.0	100.0	6.5	66.4	6.0	5.5	49.6	51.1	24.6	1.4
Leighton Hospital, Crewe	290	63.4	65.2	50.3	96.9	91.3	91.3	8.3	24.3	8.0	6.4	48.0	48.9	17.6	0.8
Macclesfield General Hospital	250	78.6	65.2	93.2	96.8	100.0	100.0	0.4	51.3	7.9	6.6	43.9	42.6	27.3	8.8
Manchester Royal Infirmary	172	57.2	68.0	72.7	94.2	97.2	98.6	3.4	54.2	7.9	9.1	37.8	36.6	28.4	100.0
North Manchester General Hospital	364	57.9	60.4	81.3	98.9	91.9	97.0	4.5	39.0	10.8	9.5	50.7	52.3	19.9	27.6
Noble's Hospital, Isle of Man	98	84.9	80.6	1.0	99.0	100.0	75.5	2.1	No data	7.7	7.7	50.0	45.5	16.6	85.0
Royal Oldham Hospital	373	58.6	56.8	95.4	98.1	96.4	99.4	3.9	47.3	9.6	10.5	57.8	55.6	19.5	19.4
Royal Lancaster Infirmary	253	74.8	70.4	71.9	93.3	100.0	97.0	3.0	39.3	9.6	7.7	48.6	49.1	24.7	0.0
Royal Liverpool University Hospital	404	46.1	83.2	99.0	100.0	100.0	100.0	0.5	82.4	7.1	8.2	58.3	55.9	18.3	32.2
Royal Preston Hospital	417	59.6	67.3	26.1	94.2	100.0	100.0	1.3	14.7	7.3	7.7	52.1	49.4	20.9	56.4
Stepping Hill Hospital, Stockport	369	69.1	81.3	85.9	97.8	99.1	98.2	1.8	68.3	7.7	6.9	41.9	42.8	22.1	0.0
Hope Hospital, Salford	258	64.5	72.1	95.0	97.7	99.1	97.8	5.2	69.0	10.8	10.4	33.3	34.4	17.6	0.0
Southport District General Hospital	300	49.7	66.0	11.7	57.3	82.5	29.4	0.4	7.4	6.5	7.5	50.2	51.5	18.7	88.0
Tameside General Hospital, Manchester	264	52.4	53.0	89.8	100.0	98.4	99.6	0.4	47.9	10.6	12.0	38.2	35.4	16.1	0.0
Trafford General Hospital, Manchester	78	73.5	61.5	60.3	94.9	98.6	94.6	0.0	20.5	10.3	10.1	58.2	57.5	31.9	22.1
Victoria Hospital, Blackpool	426	44.6	65.3	66.2	100.0	99.7	99.5	0.8	41.2	5.8	5.5	55.3	54.2	23.6	0.0
Warrington Hospital	343	56.0	78.1	75.5	81.3	99.7	92.9	3.4	41.6	6.4	6.2	46.2	47.6	24.3	85.8
Whiston Hospital, Prescot	386	20.3	79.0	90.9	98.7	96.6	98.6	3.4	59.7	10.9	11.0	43.5	43.0	23.3	0.0
Arrowe Park Hospital, Wirral	451	65.8	86.3	94.5	99.3	97.6	97.9	6.4	72.9	9.0	9.4	53.2	52.1	22.9	32.9
Wythenshawe Hospital, Manchester	294	20.4	80.3	90.1	100.0	100.0	100.0	1.5	75.8	7.5	8.0	63.2	60.8	24.9	25.0
NORTH WEST	8,202	53.4	72.0	74.9	95.5	92.8	93.6	2.7	50.5	N/A	N/A	N/A	N/A	21.3	40.4
ENGLAND	58,972	48.3	73.8	86.8	96.9	96.8	97.3	3.0	60.6	N/A	N/A	N/A	N/A	19.0	38.9
OVERALL	64,838	47.4	71.7	81.6	93.7	94.6	96.1	2.9	60.6	8.4	8.4	52.6	52.6	19.8	39.7

Northern Ireland

Hospital code	Number of cases submitted	Admitted to orthopaedic ward within 4 hours (%)	Surgery on the day of or day after admission (%)	Senior geriatric review within 72 hours of admission (%)	Abbreviated mental test performed (%)	Specialist falls assessment performed (%)	Bone health medication assessment performed (%)	Patients developing pressure ulcers (%)	Mortality 2013 – crude (%) Locally supplied by provider hospitals	Return home from home within 30 days – crude (%)	Return home from home within 30 days – case mix adj. (%)	Mean length of total Trust stay [acute + post-acute] (days)	30 day follow-up completion rate (%)
Altnagelvin Area Hospital	359	26.9	37.3	17.3	42.3	0.9	53.1	2.9	4.0	44.7	41.7	24.8	100.0
Craigavon Hospital, Portadown	277	52.3	35.4	32.9	91.7	96.5	100.0	0.0	4.6	58.2	56.3	24.3	100.0
Ulster Hospital, Belfast	391	49.7	16.8	34.8	77.7	84.5	98.9	7.2	5.5	50.0	47.8	22.4	100.0
Royal Victoria Hospital, Belfast	890	43.4	13.6	27.3	62.8	97.0	85.6	1.5	4.5	57.7	55.7	19.5	100.0
NORTHERN IRELAND	1,917	45.0	21.9	27.8	66.2	76.3	84.2	2.7	N/A	N/A	N/A	21.8	100.0
OVERALL	64,838	47.4	71.7	81.6	93.7	94.6	96.1	2.9		52.6	52.6	19.8	39.7

South Central

Hospital code	Number of cases submitted	Admitted to orthopaedic ward within 4 hours (%)	Surgery on the day of or day after admission (%)	Senior geriatric review within 72 hours of admission (%)	Abreviated mental test performed (%)	Specialist falls assessment performed (%)	Bone health medication assessment performed (%)	Patients developing pressure ulcers (%)	Best practice tariff attainment (%)	Mortality 2011 to 2013 - crude (%)	Mortality 2011 to 2013 - casemix adjusted (%)	Return home from home within 30 days - crude (%)	Return home from home within 30 days - casemix adj. (%)	Mean length of total trust stay [acute + post-acute] (days)	30 day follow-up completion rate (%)
Horton Hospital, Banbury	189	47.3	87.3	98.4	99.5	100.0	100.0	0.0	85.8	11.1	No data	42.8	48.0	14.1	0.0
St Mary's Hospital, Isle of Wight	253	55.4	67.6	81.4	99.6	85.2	100.0	0.4	50.8	9.0	9.5	28.3	29.0	16.9	1.3
Milton Keynes General Hospital	233	30.8	71.7	82.4	99.1	94.1	97.7	5.0	51.1	8.1	8.1	55.4	56.4	22.8	50.7
Basingstoke & N. Hants Hospital	253	47.7	72.3	96.4	99.2	99.1	98.3	4.3	62.9	8.8	8.5	61.2	61.5	22.7	85.5
Queen Alexandra Hospital, Portsmouth	787	75.3	82.6	99.9	100.0	100.0	100.0	1.4	82.5	6.3	6.0	72.2	76.2	18.5	99.3
John Radcliffe Hospital, Oxford	566	42.6	68.0	88.9	97.5	97.9	98.1	3.1	57.7	9.1	6.9	32.5	36.1	14.1	0.0
Royal Berkshire Hospital, Reading	438	18.6	72.6	97.3	99.5	100.0	100.0	0.7	71.7	7.5	8.0	52.5	52.6	18.1	70.9
Royal Hampshire County Hospital, Winchester	238	43.2	87.0	95.0	100.0	100.0	100.0	2.3	83.0	8.3	8.7	57.1	58.9	24.8	97.2
Southampton General Hospital	574	33.3	75.1	92.9	97.2	98.7	99.4	3.3	55.9	8.1	7.4	47.0	46.0	20.7	0.0
Stoke Mandeville Hospital, Aylesbury	413	11.1	71.9	95.6	99.5	99.5	99.5	0.8	66.8	7.5	7.6	69.2	67.1	21.6	61.1
Wexham Park Hospital, Slough	350	16.8	73.7	82.6	93.7	92.0	93.3	3.4	50.3	9.2	8.3	48.8	50.4	18.6	3.6
SOUTH CENTRAL	4,294	40.3	75.3	92.8	98.6	97.6	98.8	2.2	66.9	N/A	N/A	N/A	N/A	19.0	45.9
ENGLAND	58,972	48.3	73.8	86.8	96.9	96.8	97.3	3.0	60.6	N/A	N/A	N/A	N/A	19.0	38.9
OVERALL	64,838	47.4	71.7	81.6	93.7	94.6	96.1	2.9	60.6	8.4		52.6		19.8	39.7

South East

Hospital code	Number of cases submitted	Admitted to orthopaedic ward within 4 hours (%)	Surgery on the day or day after admission (%)	Senior geriatric review within 72 hours of admission (%)	Abbreviated mental test performed (%)	Specialist falls assessment performed (%)	Bone health medication assessment performed (%)	Patients developing pressure ulcers (%)	Best practice tariff attainment (%)	Mortality 2011 to 2013 - crude (%)	Mortality 2011 to 2013 - casemix adjusted (%)	Return home from home within 30 days - crude (%)	Return home from home within 30 days - casemix adj. (%)	Mean length of total trust stay [acute + post-acute] (days)	30 day follow-up completion rate (%)
Conquest Hospital, Hastings	327	28.1	83.8	72.5	99.7	100.0	99.0	3.7	61.4	10.6	10.4	53.3	51.4	18.7	1.0
Eastbourne Hospital	405	28.3	91.9	89.4	99.8	99.2	99.2	2.4	81.8	6.9	7.1	64.0	65.8	18.7	3.4
Darent Valley Hospital, Dartford	340	18.2	71.8	91.8	97.6	98.7	98.7	3.9	63.6	10.7	11.1	42.5	44.7	19.5	92.9
East Surrey Hospital, Redhill	492	33.8	75.6	84.8	97.8	98.7	98.7	3.6	60.4	8.5	9.6	33.2	31.9	21.9	0.4
Frimley Park Hospital, Camberley	417	28.1	75.1	88.7	94.7	100.0	98.4	6.1	63.6	9.9	12.0	60.4	57.6	19.7	84.7
Medway Maritime Hospital	354	47.7	76.0	83.3	100.0	98.1	98.1	0.3	63.8	9.7	11.5	56.2	54.9	17.4	94.7
Queen Elizabeth the Queen Mother Hospital, Margate	437	61.2	74.4	94.3	99.8	99.7	99.7	5.0	68.9	8.4	8.0	59.1	63.3	16.6	0.0
Royal Sussex County Hospital, Brighton	525	41.8	88.0	97.3	99.8	99.8	99.8	10.4	83.5	6.4	6.6	41.8	41.8	18.1	0.0
Royal Surrey County Hospital, Guildford	341	17.0	82.4	97.4	99.7	100.0	100.0	4.8	81.1	7.7	6.8	51.0	52.0	19.0	85.8
St Peter's Hospital, Chertsey	374	58.8	81.0	99.5	100.0	99.7	99.7	4.8	80.0	5.9	7.8	56.9	52.5	21.3	90.5
St Richard's Hospital, Chichester	392	3.5	81.6	94.9	98.7	97.8	96.9	0.3	68.4	9.1	9.9	59.5	62.6	13.9	87.1
Maidstone & Tunbridge Wells	512	55.8	73.2	72.9	90.6	95.8	95.4	8.8	48.4	8.2	8.2	53.1	52.6	21.1	3.8
William Harvey Hospital, Ashford	453	33.1	72.8	97.6	99.6	99.8	99.5	5.1	67.2	10.0	11.1	58.3	60.8	19.8	34.3
Worthing & Southlands Hospital	479	61.1	76.4	97.9	100.0	100.0	100.0	2.8	76.8	10.8	9.7	52.3	55.0	21.9	78.5
SOUTH EAST	5848	38.1	78.8	90.2	98.3	99.1	98.8	4.7	69.1	N/A	N/A	N/A	N/A	19.2	43.5
ENGLAND	58972	48.3	73.8	86.8	96.9	96.8	97.3	3.0	60.6	N/A	N/A	N/A	N/A	19.0	38.9
OVERALL	64838	47.4	71.7	81.6	93.7	94.6	96.1	2.9	60.6	8.4		52.6		19.8	39.7

South West

Hospital code	Number of cases submitted	Admitted to orthopaedic ward within 4 hours (%)	Surgery on the day of or day after admission (%)	Senior geriatric review within 72 hours of admission (%)	Abbreviated mental test performed (%)	Specialist falls assessment performed (%)	Bone health medication assessment performed (%)	Patients developing pressure ulcers (%)	Best practice tariff attainment (%)	Mortality 2011 to 2013 - crude (%)	Mortality 2011 to 2013 - casemix adjusted (%)	Return home from home within 30 days - crude (%)	Return home from home within 30 days - casemix adj. (%)	Mean length of total stay [acute + post-acute] (days)	30 day follow-up completion rate (%)
Royal United Hospital, Bath	574	47.5	79.8	99.7	99.3	100.0	100.0	1.2	80.0	9.4	9.1	52.8	53.2	14.4	91.1
Bristol Royal Infirmary	370	18.2	71.9	71.4	100.0	100.0	99.7	4.9	52.2	9.4	10.1	57.4	56.0	26.3	97.9
Cheltenham General Hospital	278	65.4	53.6	93.9	99.6	100.0	100.0	1.1	35.7	8.0	8.0	55.7	57.4	15.2	37.5
Frenchay Hospital, Bristol	454	17.3	80.6	97.1	99.6	100.0	99.8	4.8	77.9	9.0	10.0	62.4	62.1	25.8	91.4
Gloucestershire Royal Hospital, Gloucester	441	65.4	79.1	89.1	96.8	97.5	97.7	2.8	69.8	10.6	11.4	62.0	62.6	16.6	32.5
Musgrove Park Hospital, Taunton	384	67.8	84.4	93.0	98.4	100.0	100.0	0.6	62.1	8.9	9.2	61.1	61.2	14.5	68.8
North Devon District Hospital, Barnstaple	286	84.2	71.0	58.7	88.5	100.0	93.9	4.5	41.1	8.9	9.4	56.0	56.5	22.2	92.5
Poole General Hospital	855	58.2	78.5	99.5	99.6	99.9	99.9	2.8	77.2	5.8	6.1	54.6	54.5	12.4	95.6
Derriford Hospital, Plymouth	567	55.0	75.0	90.1	98.8	98.9	98.9	0.7	64.8	7.4	7.5	36.3	35.2	12.6	85.9
The Great Western Hospital, Swindon	405	40.9	83.0	94.1	98.0	99.5	99.5	1.6	72.8	9.0	10.1	57.4	55.0	20.1	75.8
The Royal Cornwall Hospital, Triliske	601	68.6	75.2	95.8	99.2	99.6	99.6	1.1	71.4	9.3	9.5	41.5	41.3	14.2	3.2
Royal Devon & Exeter Hospital, Exeter	563	66.3	80.1	97.2	99.8	100.0	99.8	0.8	77.1	5.8	7.2	57.4	55.5	12.8	98.0
Salisbury District Hospital	287	70.9	77.4	96.2	99.7	100.0	100.0	1.9	78.1	8.8	9.8	77.8	79.7	18.1	65.4
Torbay District General Hospital	430	38.1	72.6	99.3	99.3	99.8	99.8	2.2	71.2	8.3	8.0	35.6	36.0	9.0	19.8
Dorset County Hospital, Dorchester	271	62.5	88.4	90.0	100.0	100.0	83.2	0.8	67.8	8.9	8.5	35.3	38.7	13.4	0.0
Weston General Hospital, Weston-Super-Mare	309	52.5	72.5	49.8	95.8	71.2	81.1	2.1	23.8	6.8	5.9	45.2	46.3	21.6	0.0
Yeovil District Hospital	293	39.2	72.0	60.8	96.9	80.0	88.4	2.9	41.0	7.3	7.8	38.8	38.6	15.8	7.5
SOUTH WEST	7,368	53.8	76.8	89.6	98.5	97.7	97.6	2.1	66.1	N/A	N/A	N/A	N/A	16.0	61.9
ENGLAND	58,972	48.3	73.8	86.8	96.9	96.8	97.3	3.0	60.6	N/A	N/A	N/A	N/A	19.0	38.9
OVERALL	64,838	47.4	71.7	81.6	93.7	94.6	96.1	2.9	60.6	8.4		52.6		19.8	39.7

Wales

Hospital code	Number of cases submitted	Admitted to orthopaedic ward within 4 hours (%)	Surgery on the day of or day after admission (%)	Senior geriatric review within 72 hours of admission (%)	Abbreviated mental test performed (%)	Specialist falls assessment performed (%)	Bone health medication assessment performed (%)	Patients developing pressure ulcers (%)	Mortality 2011 to 2013 - crude (%)	Mortality 2011 to 2013 - casemix adjusted (%)	Return home from home within 30 days - crude (%)	Return home from home within 30 days - casemix adj. (%)	Mean length of total Trust stay [acute + post-acute] (days)	30 day follow-up completion rate (%)
Bronglais Hospital, Aberystwyth	99	51.1	42.4	73.7	45.5	16.5	97.9	5.2	2.7	2.0	47.4	49.8	24.3	9.7
Glan Clwyd Hospital, Rhyl	353	39.1	72.2	0.3	39.4	0.0	96.1	1.6	9.4	8.8	43.4	44.4	34.1	75.5
Royal Gwent Hospital, Newport	358	11.2	55.3	15.9	52.5	85.2	85.2	1.6	7.2	8.5	50.0	49.5	39.0	94.1
Gwynedd Ysbyty, Bangor	295	62.6	70.8	65.4	72.2	97.1	97.4	1.1	4.9	4.8	51.9	49.4	30.3	4.9
Morrison Hospital, Swansea	521	24.8	61.8	52.6	90.6	89.0	88.5	1.3	7.3	8.3	40.5	38.8	38.1	79.7
Nevill Hall Hospital, Abergavenny	281	21.1	68.3	68.3	76.5	74.1	85.6	0.8	9.5	9.2	43.3	43.5	31.5	96.6
Prince Charles Hospital, Merthyr Tydfil	228	34.1	67.1	1.8	21.9	0.0	30.5	7.4	9.2	8.3	48.8	50.5	37.0	15.1
Princess Of Wales Hospital, Bridgend	240	14.5	57.9	1.7	40.0	65.1	76.9	3.8	9.4	9.3	64.2	63.7	27.2	51.7
Royal Glamorgan Hospital, Llantrisant	222	25.4	66.7	12.6	32.9	63.2	76.2	0.5	8.9	9.8	50.3	48.1	29.9	0.0
University Hospital of Wales, Cardiff	516	9.8	59.3	10.3	41.9	99.3	98.4	1.4	10.2	10.7	48.4	49.4	33.7	84.5
Maelor Hospital, Wrexham	253	68.2	67.2	38.3	70.0	89.2	41.4	2.2	6.4	5.8	45.6	47.4	29.2	0.4
West Wales General Hospital, Carmarthen	309	51.7	69.9	71.2	90.0	89.7	97.2	0.7	7.7	7.7	42.3	43.4	25.3	0.0
Withybush Hospital, Haverford West	176	65.1	61.4	1.1	42.6	14.9	96.1	3.2	8.4	9.4	47.9	45.9	26.5	0.0
WALES	3,851	33.0	63.8	31.1	58.1	67.8	83.8	2.0	N/A	N/A	N/A	N/A	32.6	49.2
OVERALL	64,838	47.4	71.7	81.6	93.7	94.6	96.1	2.9	8.4	8.4	52.6	N/A	19.8	39.7

West Midlands

Hospital code	Number of cases submitted	Admitted to orthopaedic ward within 4 hours (%)	Surgery on the day or day after admission (%)	Senior geriatric review within 72 hours of admission (%)	Abbreviated mental test performed (%)	Specialist falls assessment performed (%)	Bone health medication assessment performed (%)	Patients developing pressure ulcers (%)	Best practice tariff attainment (%)	Mortality 2011 to 2013 - crude (%)	Mortality 2011 to 2013 - casemix adjusted (%)	Return home from home within 30 days - crude (%)	Return home from home within 30 days - casemix adj. (%)	Mean length of total trust stay [acute + post-acute] (days)	30 day follow-up completion rate (%)
Queens Hospital, Burton upon Trent	268	56.6	83.6	83.6	100.0	98.8	99.2	0.0	70.4	9.2	No data	34.6	30.4	16.8	0.0
Birmingham Heartlands	478	37.3	52.3	94.4	91.2	96.3	97.9	1.2	39.1	7.3	6.6	53.7	61.0	27.4	2.4
Good Hope Hospital, Birmingham	356	27.7	71.3	79.5	94.7	96.4	97.0	2.4	44.6	8.5	8.9	59.7	61.5	16.3	65.6
County Hospital, Hereford	295	33.7	70.5	62.4	94.9	89.7	91.2	1.9	31.3	10.4	10.3	60.6	58.1	16.3	0.0
New Cross Hospital, Wolverhampton	391	29.9	79.0	91.6	96.2	94.7	96.9	9.8	65.3	8.0	6.9	43.8	45.9	16.4	91.8
George Eliot Hospital, Nuneaton	288	28.2	57.6	93.1	98.6	100.0	100.0	10.9	53.8	9.2	9.6	67.9	67.7	21.6	42.0
Queen Elizabeth Hospital, Birmingham	426	56.2	64.8	92.0	97.7	99.7	99.7	14.2	52.9	5.9	4.6	35.1	36.3	23.9	0.0
Alexandra Hospital, Redditch	262	53.1	66.0	90.1	99.6	100.0	100.0	0.4	57.6	7.2	7.8	35.1	34.7	19.4	0.9
Royal Shrewsbury Hospital	369	47.1	40.5	59.9	36.9	92.9	93.7	0.3	0.0	7.5	7.9	46.1	44.8	17.9	33.7
Russells Hall Hospital, Dudley	493	32.2	83.2	96.1	100.0	99.8	99.8	4.0	81.2	7.7	10.8	45.7	43.1	18.1	5.3
Sandwell General Hospital	356	56.6	75.6	86.2	95.5	99.7	99.4	3.1	57.4	8.6	9.8	67.3	69.9	21.9	73.0
Staffordshire General Hospital, Stafford	216	43.3	74.1	76.4	98.1	93.0	99.0	0.0	51.9	6.7	7.4	67.8	65.2	20.7	86.4
University Hospital of North Staffordshire, Stoke-on-Trent	602	56.6	65.1	93.2	95.3	99.5	99.8	2.6	57.1	6.3	5.7	30.1	30.1	9.7	0.2
Princess Royal Hospital, Telford	156	60.0	46.8	0.0	94.9	63.1	77.9	0.0	0.0	6.5	6.8	48.0	51.3	19.2	0.0
University Hospital Coventry	489	42.2	84.7	74.6	100.0	100.0	95.3	0.9	62.7	8.6	9.0	63.6	63.5	23.4	91.6
Warwick Hospital	300	56.9	77.3	94.3	99.3	99.6	99.3	0.7	68.2	5.7	5.9	65.4	63.8	25.3	91.7
Manor Hospital, Walsall	319	20.7	64.9	66.1	88.7	99.3	92.0	0.7	47.0	9.4	9.0	40.7	41.3	18.0	0.0
Worcestershire Royal Hospital, Worcester	446	33.7	52.7	84.5	93.9	99.5	96.5	1.0	47.0	6.6	6.4	31.9	31.5	16.1	4.3
WEST MIDLANDS	6,510	42.3	67.6	82.3	92.9	97.0	97.0	3.2	51.6	N/A	N/A	N/A	N/A	19.1	31.8
ENGLAND	58,972	48.3	73.8	86.8	96.9	96.8	97.3	3.0	60.6	N/A	N/A	N/A	N/A	19.0	38.9
OVERALL	64,838	47.4	71.7	81.6	93.7	94.6	96.1	2.9	60.6	8.4		52.6		19.8	39.7

Yorks & the Humber

Hospital code	Number of cases submitted	Admitted to orthopaedic ward within 4 hours (%)	Surgery on the day or day after admission (%)	Senior geriatric review within 72 hours of admission (%)	Abbreviated mental test performed (%)	Specialist falls assessment performed (%)	Bone health medication assessment performed (%)	Patients developing pressure ulcers (%)	Best practice tariff attainment (%)	Mortality 2011 to 2013 - crude (%)	Mortality 2011 to 2013 - casemix adjusted (%)	Return home from home within 30 days - crude (%)	Return home from home within 30 days - casemix adj. (%)	Mean length of total stay (acute + post-acute) (days)	30 day follow-up completion rate (%)
Airdale General Hospital	260	37.1	77.7	92.3	99.2	100.0	99.6	3.1	72.2	9.7	9.6	55.2	54.3	20.7	0.0
Barnsley Hospital	270	62.4	78.1	93.3	100.0	99.6	99.6	1.2	80.1	9.2	7.7	35.9	35.3	16.6	0.0
Bradford Royal Infirmary	315	56.2	77.8	97.5	100.0	98.9	98.6	0.4	77.1	13.3	10.7	47.2	48.6	14.5	95.9
Bassettlaw Hospital	195	41.9	76.9	91.8	99.5	100.0	100.0	0.0	72.5	10.2	9.3	55.3	59.4	15.6	83.9
Doncaster Royal Infirmary	416	42.8	63.5	81.5	99.8	99.7	99.5	0.8	53.7	8.3	8.2	57.9	57.6	20.9	88.7
Diana Princess of Wales Hospital, Grimsby	254	58.3	60.2	84.6	90.2	100.0	99.1	10.9	47.1	12.1	10.7	60.4	64.3	13.1	56.0
Harrrogate District Hospital	275	83.4	79.6	81.8	98.9	96.9	97.7	3.8	64.1	6.2	7.1	57.7	53.9	20.8	26.1
Hull Royal Infirmary	545	50.3	59.4	93.4	99.3	99.8	99.8	0.6	63.4	8.5	9.3	77.3	72.4	17.7	0.0
Huddersfield Royal Infirmary	484	56.2	62.4	65.9	93.4	24.6	84.1	2.1	6.7	10.5	11.0	48.6	47.8	24.0	54.2
Leeds General Infirmary	634	50.6	58.2	87.9	94.5	97.3	94.7	5.7	51.4	9.9	9.1	52.6	55.6	22.3	46.2
Northern General Hospital, Sheffield	566	63.7	84.1	94.2	100.0	99.6	99.0	5.1	79.1	8.0	6.6	48.5	49.6	21.8	0.0
Pinderfields General Hospital, Wakefield	558	26.0	69.0	97.3	100.0	100.0	100.0	5.3	67.4	9.1	9.3	56.7	54.4	19.4	87.8
Rotherham District General Hospital	309	77.2	80.3	92.6	96.8	100.0	98.9	3.6	69.6	10.9	10.5	47.7	49.7	16.8	40.4
Scarborough General Hospital	294	53.4	85.4	92.9	99.7	98.2	97.8	2.5	80.1	7.8	7.5	41.9	40.7	16.0	0.0
Scunthorpe General Hospital	228	69.3	64.9	90.8	96.9	100.0	99.5	0.5	55.0	9.1	7.3	71.6	74.0	11.0	50.7
York Hospital	384	83.8	71.9	94.0	99.2	99.4	100.0	0.8	66.6	6.4	7.7	68.7	64.2	16.1	97.2
YORKS & THE HUMBER	5,987	55.5	70.5	89.3	97.9	93.2	97.6	3.1	61.3	N/A	N/A	N/A	N/A	18.7	44.9
ENGLAND	58,972	48.3	73.8	86.8	96.9	96.8	97.3	3.0	60.6	N/A	N/A	N/A	N/A	19.0	38.9
OVERALL	64,838	47.4	71.7	81.6	93.7	94.6	96.1	2.9	60.6	8.4	8.4	52.6	52.6	19.8	39.7

References

- 1 National Institute for Health and Care Excellence (NICE), 2011. The management of hip fracture in adults – clinical guideline CG124. www.nice.org.uk/guidance/CG124 [Accessed 9 July 2014]
- 2 National Institute for Health and Care Excellence (NICE), 2012. Quality standard for hip fracture (QS16). www.nice.org.uk/guidance/QS16 [Accessed 9 July 2014]
- 3 National Advisory Group on the Safety of Patients in England, 2013. A promise to learn – a commitment to act. www.gov.uk/government/uploads/system/uploads/attachment_data/file/226703/Berwick_Report.pdf [Accessed 9 July 2014]
- 4 NHS England, 2012. NHS outcomes framework and CCG outcomes indicators. www.england.nhs.uk/wp-content/uploads/2012/12/oi-data-table.pdf [Accessed 9 July 2014]
- 5 National Institute for Health and Care Excellence (NICE), 2014. Pressure ulcers: prevention and management of pressure ulcers – clinical guideline CG179. www.nice.org.uk/guidance/CG179 [Accessed 9 July 2014]
- 6 National Hip Fracture Database, 2014. Anaesthesia sprint audit of practice. www.nhfd.co.uk [Accessed 17 July 2014]
- 7 Association of Anaesthetists of Great Britain and Ireland. Management of proximal femoral fractures 2011. *Anaesthesia* 2012;67:85–98.
- 8 Johansen A, Neuberger J, Boulton C, *et al.* Using the National Hip Fracture Database (NHFD) to profile the impact of hip fracture on the NHS. British Geriatrics Society spring conference, Manchester, UK, 23–25 April 2014. Podium presentation. Abstract available at www.bgs.org.uk/pdf/cms/admin_archive/2014_spring_abstracts.pdf [Accessed 17 July 2014]
- 9 White SM, Moppett IK, Griffiths R. Outcome by mode of anaesthesia for hip fracture surgery. An observational audit of 65,535 patients in a national dataset. *Anaesthesia* 2014;69:224–30. doi:10.1111/anae.12542
- 10 Boulton, C, Johansen A, Wakeman R, *et al.* Hip fracture research priority-setting exercise: realising the potential of NHFD as a data source. Fragility Fracture Network congress, Madrid, Spain, 4–6 September 2014. Podium presentation.
- 11 Royal College of Nursing, 2013. The triangle of care. www.rcn.org.uk/_data/assets/pdf_file/0009/549063/Triangle_of_Care_-_Carers_Included_Sept_2013.pdf [Accessed 17 July 2014]
- 12 British Orthopaedic Association (BOA) and British Geriatrics Society (BGS), 2007. The care of patients with fragility fracture. www.nhfd.co.uk [Accessed 9 July 2014]
- 13 GOV.UK, 2013. Improving the transparency and accountability of government and its services. <https://www.gov.uk/government/policies/improving-the-transparency-and-accountability-of-government-and-its-services> [Accessed 16 July 2014]
- 14 UK Statistics Authority, 2009. Addendum to the standard terms and conditions for the use and re-use of public sector information – small numbers special terms and conditions, which reference the confidentiality principle of the Code of Practice for Official Statistics. www.statisticsauthority.gov.uk/assessment/code-of-practice [Accessed 9 July 2014]
- 15 National Patient Safety Agency, 2009. Rapid response report – mitigating surgical risk in patients undergoing hip arthroplasty for fractures of the proximal femur. www.nrls.npsa.nhs.uk/alerts/?entryid45=59867 [Accessed 9 July 2014]
- 16 National Hip Fracture Database, 2012. Supplementary report. www.nhfd.co.uk [Accessed 17 July 2014]
- 17 Spiegelhalter, DJ. Handling over-dispersion of performance indicators. *Qual Saf Health Care* 2005;14:347–51.
- 18 NHS England, 2013. Payment by results guidance. www.gov.uk/government/uploads/system/uploads/attachment_data/file/214902/PbR-Guidance-2013-14.pdf [Accessed 9 July 2014]

Appendices

Appendix A – Facilities audit

Hospital code	No. of hip fractures treated/annum	Trauma service description ^a	Hours of designated trauma/week	No. of WTE orthopaedic consultants	No. of WTE ^b orthopaedic middle grades	Orthopaedic consultant hours/week	Orthopaedic middle grade hours/week	Orthopaedic ward rounds/week	No. of WTE fragility fracture nurses	No. of WTE fracture liaison nurses	Specific clerking proforma	Falls clinic ^c	DXA on-site facility	Data collected by	Data entered by ^d	Enhanced recovery programme	Early supported discharge service	Access to rehabilitation beds
ADD	480	Both	120	22	11	75	0	5	1	1	Yes	Con	Axial	Doctors	Nurses	No	Yes	Yes
AEI	330	Both	52	12	8	20	0	5	0	0	Yes	Con	Axial	Nurses	Nurses	No	No	Yes
AIR	290	DGH	20	7	6	9	0	3	1	0	Yes	Con	Axial	Nurses	Admin	No	Yes	Yes
ALT	378	DGH	45.5	10	2	37.5	0	5	1	1	Yes	None	Axial	Nurses	Nurses	Yes	Yes	Yes
ASH	340	DGH	44	10	8	8	40	2	1	0	No	Con	None	Nurses	Nurses	Yes	No	No
BAR	250	DGH	31.5	8	9	20	16	5	2.9	0	Yes	Con	Axial	Nurses	Audit	No	Yes	Yes
BAS	400	DGH	44	12	13	25	24	5	1	1.4	No	Con	Axial	Nurses	Nurses	No	No	No
BAT	520	DGH	73	15	16	26	32	5	1	0	Yes	Con	None	Nurses	Admin	No	Yes	Yes
BED	200	DGH	20	7	8	24	30	7	0	0	Yes	Nurse	Axial	HCA's	HCA's	No	No	Yes
BFH	468	DGH	46.5	12	10	10	0	2	1.8	2	Yes	Con	Axial	Nurses	Nurses	No	No	No
BLA	450	DGH	76	16	15	20	4	5	0	2	Yes	Con	Axial	Nurses	Nurses	No	Yes	Yes
BNT	450	DGH	55.5	15	16	24	40	5	0	2	No	Con	Axial	Nurses	Nurses	No	Yes	No
BOL	390	DGH	52	12	6	40	12	5	0	0	Yes	Con	None	Nurses	Nurses	Yes	No	Yes
BRD	330	DGH	60	15	9	15	0	5	0	0	Yes	Con	Axial	Admin	Admin	No	Yes	Yes
BRG	101	DGH	15	3	4	33	0	5	1	1	Yes	Con	Axial	Nurses	Nurses	No	No	Yes
BRI	380	Both	46	14	15	32	0	5.5	1	0.74	Yes	Con	Axial	Nurses	Nurses	Yes	No	Yes
BRO	380	DGH	56	7	13	8	5	5	1	0	Yes	Con	Axial	Nurses	Nurses	No	Yes	Yes
BRT	257	DGH	44	9	8	15	15	5	0	0	Yes	Con	Peri	Audit	Audit	No	No	No
BSL	150	DGH	28	6	6	5	0	5	1	0	Yes	Con	Axial	Nurses	Admin	Yes	Yes	Yes

Hospital code	No. of hip fractures treated/annum	Trauma service description ^a	Hours of designated trauma/week	No. of WTE ^b orthopaedic consultants	No. of WTE orthopaedic middle grades	Orthopaedic consultant hours/week	Orthopaedic middle grade hours/week	Orthopaedic ward rounds/week	No. of WTE fragility fracture nurses	No. of WTE fracture liaison nurses	Specific clerking proforma	Falls clinic ^c	DXA on-site facility	Data collected by	Data entered by ^d	Enhanced recovery programme	Early supported discharge service	Access to rehabilitation beds
CGH	278	DGH	28	8	7	8	0	4	0	0	Yes	Con	None	Admin	Admin	Yes	No	Yes
CHE	410	DGH	38.5	9	7.3	16	0	4	0.6	0	Yes	Con	Axial	Admin	Admin	No	No	No
CHG	260	DGH	28	11	11	8	30	5	2	1.1	No	Con	Axial	Nurses	Nurses	No	No	Yes
CHS	219	DGH	17.5	7.5	9	12	32	2	0	0	*	Con	None	Nurses	Nurses	*	*	*
CLW	365	DGH	56	9	9	0	0	0	0.3	0	Yes	None	Peri	Nurses	Nurses	No	No	No
CMI	450	DGH	52.5	10	10	15	15	1	1	0	No	Nurse	None	Nurses	Nurses	No	No	Yes
COC	351	DGH	41	8	8	7	3	5	2	1	Yes	Con	Peri	Nurses	Nurses	No	No	No
COL	550	DGH	56	12	10	8	2	5	0	0	Yes	Con	Axial	Nurses	Nurses	Yes	No	Yes
CRG	250	DGH	45	6	6	20	30	5	0	0.8	Yes	Con	None	Nurses	Admin	Yes	Yes	Yes
DAR	370	DGH	34.5	9	9	6	0	5	1.8	2.5	Yes	None	Axial	Nurses	Audit	No	No	No
DER	585	DGH	84	20	20	12	0	5	0	1	Yes	Con	Axial	Nurses	Admin	No	No	No
DGE	425	DGH	35	7	8	20	0	5	1	0	Yes	Con	None	Nurses	Nurses	Yes	Yes	Yes
DID	350	DGH	56	12	15	16	8	5	6	0	Yes	Con	Axial	Nurses	Admin	Yes	No	Yes
DRY	352	DGH	45	9	9	6	0	3	1	0	Yes	Con	Axial	Nurses	Admin	No	No	No
DVH	363	DGH	28	7	11	40	40	5	1	0	Yes	Con	Peri	Nurses	Audit	Yes	No	Yes
EAL	160	DGH	20	4.5	6	12	2	2	1	1	Yes	Con	None	Nurses	Nurses	Yes	Yes	Yes
EBH	480	DGH	49	11	12	28	12	6	0	0	Yes	Con	None	Admin	Admin	No	Yes	No
ENH	480	DGH	60	10	3	12	40	5	1	0	Yes	Con	Axial	Nurses	Nurses	No	No	Yes
ESU	540	DGH	55	9	9	34	40	5	0.6	0.9	Yes	Con	Axial	Nurses	Nurses	No	Yes	No
FAZ	400	DGH	56	13	7	15	0	5	0	0	Yes	Con	Axial	Doctors	Admin	Yes	Yes	Yes
FGH	127	DGH	*	6	7	8	0	3	0	0	Yes	Con	None	Admin	Admin	Yes	Yes	No
FRM	330	DGH	64	19.2	18	40	40	5	0	0	Yes	Con	Axial	Nurses	Nurses	Yes	No	Yes
FRY	450	Tertiary	60	14	12	38	0	7.5	1.4	1	Yes	Con	Axial	Nurses	Nurses	Yes	Yes	No
GEO	265	Both	100	16	26	20	25	7	0	37.5	Yes	Con	Axial	Nurses	Nurses	Yes	Yes	Yes

Hospital code	No. of hip fractures treated/annum	Trauma service description ^a	Hours of designated trauma/week	No. of WTE ^b orthopaedic consultants	No. of WTE orthopaedic middle grades	Orthopaedic consultant hours/week	Orthopaedic middle grade hours/week	Orthopaedic ward rounds/week	No. of WTE fragility fracture nurses	No. of WTE fracture liaison nurses	Specific clerking proforma	Falls clinic ^c	DXA on-site facility	Data collected by	Data entered by ^d	Enhanced recovery programme	Early supported discharge service	Access to rehabilitation beds
GGH	269	DGH	24	6	7	9	9	3	1	1	Yes	Con	Axial	Nurses	Admin	No	No	No
GHS	370	DGH	20	8	8	15	3	5	0	0	Yes	Con	Axial	Admin	Admin	No	Yes	No
GLO	440	DGH	67.3	12	9	18	8	5	0	1	Yes	Con	Axial	Admin	Admin	No	No	Yes
GRA	130	DGH	28	5	5	17	*	5	*	1	Yes	Con	None	Doctors	Admin	No	No	Yes
GWE	368	DGH	46	16	15	6	0	2	4	0.5	Yes	Con	Axial	Nurses	Nurses	No	No	No
GWH	286	DGH	48	9	6	13	0	5	0	2	Yes	Con	Axial	Nurses	Nurses	No	Yes	Yes
GWY	260	DGH	52.5	10	11	8	0	2	1	1	Yes	Con	Axial	Doctors	Audit	No	Yes	Yes
HAR	277	DGH	20	10	10	20	0	4	0.8	0	Yes	Con	Axial	Nurses	Nurses	Yes	No	Yes
HCH	360	DGH	24	10	9	6	6	5	0.5	0	Yes	Con	Axial	Nurses	HcAs	No	No	No
HIL	230	DGH	56	6	9	20	14	3	0	0	Yes	None	None	Doctors	Audit	No	No	No
HIN	200	DGH	40	6	5	20	0	5	0	1	Yes	Con	Axial	Doctors	Nurses	No	No	Yes
HOM	86	DGH	0	6	6	12	0	3	0	0	Yes	Nurse	Axial	Nurses	Nurses	No	Yes	Yes
HOR	175	DGH	0	5	6	25	0	4	0	0.2	No	Nurse	None	Admin	Doctors	No	Yes	Yes
HRI	550	DGH	90	27	15	16	0	5	1	4	Yes	Con	Axial	Audit	Audit	No	No	Yes
HUD	510	DGH	49	18	13	8	6	2	0	0	Yes	Con	Peri	Nurses	Admin	No	No	Yes
IOW	260	DGH	17.5	6	4	0	0	0	1	1	Yes	Con	Axial	Nurses	Nurses	No	Yes	Yes
IPS	438	DGH	35	14	9	20	0	2	1	1	Yes	Con	Axial	Nurses	Nurses	No	No	Yes
JPH	380	DGH	22.5	6	6	9	0	3	0	0	Yes	None	Axial	Nurses	Nurses	Yes	Yes	No
KCH	160	Both	36	16	20	8	30	5	1	1	Yes	Con	Peri	Doctors	Nurses	Yes	Yes	Yes
KGH	350	DGH	44	8	11	24	12	5	5	0	Yes	Con	Peri	Nurses	Nurses	No	Yes	Yes
KMH	370	DGH	44	13	12	20	20	6	0	0	Yes	Con	Axial	Admin	Admin	No	No	No
KTH	350	DGH	48	11	8	40	0	5	0	0	Yes	Con	Axial	Nurses	Nurses	No	No	Yes
LDH	320	DGH	49.5	11	14	40	40	5	0	0	No	Con	Axial	Admin	Admin	Yes	Yes	Yes
LER	800	Both	96	20	10	32	0	5	0	0.5	Yes	Con	Axial	Nurses	Audit	No	Yes	No

Hospital code	No. of hip fractures treated/annum	Trauma service description ^a	Hours of designated trauma/week	No. of WTE ^b orthopaedic consultants	No. of WTE orthopaedic middle grades	Orthopaedic consultant hours/week	Orthopaedic middle grade hours/week	Orthopaedic ward rounds/week	No. of WTE fragility fracture nurses	No. of WTE fracture liaison nurses	Specific clerking proforma	Falls clinic ^c	DXA on-site facility	Data collected by	Data entered by ^d	Enhanced recovery programme	Early supported discharge service	Access to rehabilitation beds
LEW	180	DGH	24	8	8	10	10	7	0	0.5	Yes	Con	Axial	Doctors	Audit	Yes	Yes	Yes
LGH	280	DGH	32	8.5	8	7	0	3	0	0	Yes	None	Axial	Nurses	Nurses	No	No	Yes
LGI	680	Both	136	16	27	32	40	8	1	0	Yes	Con	Axial	Nurses	Audit	No	No	No
LIN	350	DGH	59.5	12	10	13	0	3	0	0	No	Con	Axial	Nurses	Admin	No	Yes	Yes
LON	162	Both	66	16	20	19	0	4	0	0	Yes	Con	Axial	Nurses	Nurses	No	No	No
MAC	236	DGH	32	7	7	8	12	5	0	0	Yes	None	Axial	Audit	Audit	Yes	Yes	Yes
MAY	300	DGH	40	8	9	20	10	4	0	0	Yes	Con	Axial	Doctors	Doctors	No	Yes	Yes
MDW	375	DGH	60	12	11	20	42.5	5	0	4	Yes	Con	Axial	Nurses	Admin	Yes	Yes	Yes
MKH	250	DGH	44	7	10	15.5	0	5	1	0	Yes	Con	Peri	Nurses	Nurses	No	No	Yes
MOR	450	Both	70	20	13	15	18.8	4	8	0	Yes	Con	Axial	Nurses	Audit	No	Yes	Yes
MPH	380	DGH	52	8.3	1	14	6	2	0	0	Yes	Con	Axial	Nurses	Nurses	Yes	No	No
MRI	250	DGH	66	16	17	18	4	4	2.8	0	Yes	Con	Axial	Nurses	Nurses	Yes	Yes	Yes
NCR	375	DGH	56	15	10	0	11	1	1.3	0.8	Yes	Con	Axial	Nurses	Nurses	No	Yes	No
NDD	275	DGH	22.5	7	7	16	8	5	0	0	No	None	Axial	Nurses	Nurses	No	No	No
NEV	278	DGH	24.5	9	9	7.5	30	2	0	0	Yes	Con	Peri	Nurses	Nurses	No	No	No
NGS	620	Both	66.5	25	12	72	40	10	0	0	Yes	Con	Axial	Nurses	Admin	No	Yes	Yes
NHH	230	DGH	32	10	10	8	24	4	0	0	Yes	Con	Peri	Nurses	Nurses	No	No	No
NMG	408	DGH	49	12	11	40	0	2	1	1	Yes	None	Axial	Nurses	Nurses	No	Yes	No
NMH	250	DGH	35	6	6	15	20	5	0	0	No	Con	None	Doctors	Doctors	Yes	Yes	Yes
NOB	101	DGH	14	4	*	0	0	0	0	0	No	Nurse	Axial	Nurses	Audit	No	No	No
NOR	800	DGH	84	16	9	30	20	2	0.6	0	No	Con	Axial	Admin	Admin	Yes	No	Yes
NPH	313	DGH	78	8	12	20	4	2	0	0	Yes	Con	Axial	Admin	Admin	Yes	Yes	*
NTG	402	DGH	54.5	15	14	26	28	5	0	0.6	Yes	Con	Axial	Nurses	Admin	No	Yes	Yes
NTH	364	DGH	53	11	10	20	0	5	0	0	Yes	Con	Axial	Nurses	Nurses	No	No	No

Hospital code	No. of hip fractures treated/annum	Trauma service description ^a	Hours of designated trauma/week	No. of WTE ^b orthopaedic consultants	No. of WTE orthopaedic middle grades	Orthogeriatric consultant hours/week	Orthogeriatric middle grade hours/week	Orthogeriatric ward rounds/week	No. of WTE fragility fracture nurses	No. of WTE fracture liaison nurses	Specific clerking proforma	Falls clinic ^c	DXA on-site facility	Data collected by	Data entered by ^d	Enhanced recovery programme	Early supported discharge service	Access to rehabilitation beds
NTY	340	DGH	40	9	10	4	32	1	1	0	No	Con	Axial	Nurses	Nurses	Yes	No	Yes
NUH	380	DGH	56	4	5	2	84	5	0.5	1	Yes	Nurse	Axial	Audit	Audit	No	Yes	Yes
NUN	300	DGH	28	6	7	10	40	5	0	0	Yes	Con	Axial	Audit	Audit	Yes	Yes	Yes
NWG	120	DGH	24	6	9	6	0	2	0	0	No	Con	None	Doctors	Admin	No	Yes	No
OHM	435	DGH	52.5	10	9	40	40	5	2	0	Yes	Con	Axial	Nurses	Admin	Yes	Yes	No
OLD	550	DGH	22	14	28	8	56	7	0	0.8	Yes	Con	Axial	Doctors	HCAs	No	Yes	No
PAH	370	DGH	32	12	10	25	32	5	0	0	Yes	None	None	Nurses	Nurses	Yes	No	Yes
PCH	220	DGH	17.5	7	7	0	0	0	0	0	Yes	None	Peri	Audit	Audit	No	No	No
PET	460	DGH	40	16	5	0	0	0	0	1	Yes	Con	Axial	Nurses	Nurses	Yes	Yes	Yes
PGH	886	DGH	140.5	10	8	64.5	16	22	0	1.6	Yes	None	None	Nurses	Admin	Yes	Yes	Yes
PIL	345	DGH	37.5	7	9	15	0	5	0	0	Yes	Con	Axial	Nurses	Admin	No	No	Yes
PIN	600	DGH	96	16	12	32	4	5	0	0	Yes	None	Axial	HCAs	HCAs	No	Yes	Yes
PLY	481	Tertiary	91.5	21	14	20	34	5	0	0	Yes	Con	Axial	Nurses	Nurses	No	No	Yes
PMS	375	DGH	87.5	12.8	17.6	28	72	5	0	0	Yes	Con	Axial	Doctors	Audit	No	No	Yes
POW	275	DGH	6	9	8	0	0	0	1	3	Yes	Nurse	Axial	Audit	Audit	Yes	Yes	Yes
QAP	736	DGH	84	21.67	22.1	30.5	39.5	5	1.8	0	Yes	Con	Axial	Nurses	Audit	No	No	Yes
QEB	427	DGH	28	12	16	16	5	5	4	1	Yes	Con	Axial	Nurses	Audit	Yes	Yes	Yes
QEG	320	DGH	48	8	10	9	24	5	0	0.6	Yes	Con	Axial	Doctors	Nurses	No	Yes	No
QEQ	456	DGH	37	9.5	27.2	30	40	5	0	1	Yes	Con	None	Doctors	Audit	Yes	Yes	Yes
QKL	420	DGH	30	8	7	4	0	2	0	0	Yes	Con	None	Nurses	Nurses	No	No	Yes
RAD	534	Both	119	9.51	10	36	32	5	0	4.3	Yes	Con	Axial	Audit	Audit	No	Yes	Yes
RBE	449	DGH	56	8	13	30	40	5	1.5	0	Yes	Con	None	Doctors	Admin	Yes	Yes	No
RCH	577	DGH	108	17	13	20	10	5	0	0	Yes	Con	Axial	Nurses	Nurses	Yes	No	No
RDE	581	DGH	56	12	7	22	15	5	0	0	Yes	None	Axial	Nurses	Nurses	No	Yes	Yes

Hospital code	No. of hip fractures treated/annum	Trauma service description ^a	Hours of designated trauma/week	No. of WTE ^b orthopaedic consultants	No. of WTE orthopaedic middle grades	Orthogeriatric consultant hours/week	Orthogeriatric middle grade hours/week	Orthogeriatric ward rounds/week	No. of WTE fragility fracture nurses	No. of WTE fracture liaison nurses	Specific clerking proforma	Falls clinic ^c	DXA on-site facility	Data collected by	Data entered by ^d	Enhanced recovery programme	Early supported discharge service	Access to rehabilitation beds
RED	250	DGH	20	10	8	10	0	5	1	0	Yes	Con	None	Nurses	Nurses	No	No	No
RFH	170	DGH	24	6	7	20	10	5	0.5	0	Yes	Con	Axial	Nurses	Doctors	No	Yes	No
RGH	250	DGH	16.5	6.5	5	3	0	1.5	0	0	Yes	None	Axial	Nurses	Nurses	No	No	No
RHC	275	DGH	20	9.5	8.8	28	0	6	1	0	Yes	Con	None	Nurses	Nurses	Yes	Yes	Yes
RLI	264	DGH	38	9.4	12	9	0	4	0	0	Yes	Con	Axial	Nurses	Audit	Yes	No	No
RLU	360	Both	106	25	12	29	4	6	1	0	Yes	Con	Axial	Nurses	Nurses	Yes	No	Yes
ROT	300	DGH	36	12.2	9.5	8	0	1	0	0	Yes	Con	None	Nurses	Admin	No	No	Yes
RPH	430	Both	66	12	11	49	0	7	1	0	Yes	Con	None	Nurses	Nurses	No	No	No
RSC	530	Tertiary	130	27	15	28	0	7	0	2	Yes	Nurse	Axial	Audit	Audit	Yes	Yes	Yes
RSS	400	DGH	50	5	5	10	37.5	5	*	37.5	Yes	Con	None	Nurses	Nurses	No	No	Yes
RSU	330	DGH	24	15	10	24	40	5	1	1	Yes	Con	None	Nurses	Nurses	No	No	Yes
RUS	512	DGH	56	11	10	16	80	3	3.8	0	Yes	Con	Axial	Nurses	Nurses	Yes	No	Yes
RVB	947	Both	148	16	14	26	76	7	0	1	No	Con	None	Audit	Admin	No	Yes	Yes
RVN	450	Both	70	7.5	8	12	10	5	1.16	1.4	Yes	Con	Axial	Nurses	Admin	No	Yes	Yes
SAL	278	DGH	30	10	8	20	44	6	1	0	Yes	Con	Peri	Nurses	Admin	No	No	Yes
SAN	380	DGH	72	11.5	15	22	0	5	1.5	0	No	Con	Axial	Nurses	Audit	Yes	No	Yes
SCA	308	DGH	21	6	6	15	0	5	0	0	Yes	Con	Axial	Admin	Admin	Yes	Yes	Yes
SCM	512	Both	65	22	16	37.5	0	5	1	2	Yes	None	Axial	Admin	Admin	Yes	Yes	Yes
SCU	212	DGH	32	6	8	3.5	0	5	0	0	Yes	Con	Axial	Nurses	Admin	No	No	Yes
SDG	240	DGH	29	10	7	0	8	5	2	1	Yes	None	Peri	Nurses	Nurses	No	No	No
SEH	400	DGH	32	15.3	11	75	37.5	5	1	0.2	Yes	Con	Axial	Nurses	Admin	No	No	Yes
SGH	674	Both	115	20	20	26	80	5	0	0	Yes	Con	Axial	Admin	Admin	No	Yes	Yes
SHC	400	DGH	62.5	16	12	26	26	5	0.8	0	Yes	None	None	Nurses	Audit	No	Yes	Yes
SHH	379	DGH	59.5	18	11	18	0	6	0	0	Yes	Con	Axial	Nurses	Audit	No	Yes	Yes

Hospital code	No. of hip fractures treated/annum	Trauma service description ^a	Hours of designated trauma/week	No. of WTE ^b orthopaedic consultants	No. of WTE orthopaedic middle grades	Orthopaedic consultant hours/week	Orthopaedic middle grade hours/week	Orthopaedic ward rounds/week	No. of WTE fragility fracture nurses	No. of WTE fracture liaison nurses	Specific clerking proforma	Falls clinic ^c	DXA on-site facility	Data collected by	Data entered by ^d	Enhanced recovery programme	Early supported discharge service	Access to rehabilitation beds
SIF	280	Both	63	12.4	11	40	0	5	0.5	0.5	Yes	Con	Axial	Doctors	Doctors	Yes	Yes	Yes
SMV	400	DGH	56	13	13.5	20	8	3	0	1	Yes	Con	None	Nurses	Nurses	No	Yes	Yes
SOU	312	DGH	45	8	8	10	6	5	1	0	Yes	Con	Axial	Nurses	Nurses	Yes	Yes	Yes
SPH	392	Both	45	14	14	17	2	4	1	1	Yes	Con	Axial	Nurses	Nurses	Yes	Yes	Yes
STD	220	DGH	17.5	5	6	3	10	5	1	0	No	Con	Axial	Nurses	Nurses	Yes	No	No
STH	210	Tertiary	44	8	8	14	8	5	1	1	Yes	Con	Axial	Doctors	Admin	No	Yes	Yes
STM	320	Both	84	14	18	28	28	5	0	0	No	Nurse	Axial	Audit	Audit	Yes	Yes	Yes
STO	620	Both	68	19	18	15	0	3	2	1	Yes	Nurse	Axial	Nurses	Nurses	No	Yes	Yes
STR	375	DGH	40	12	8	10	1	5	0	0	Yes	Con	Axial	Nurses	Admin	No	No	No
SUN	410	DGH	52.5	14	8	8	0	5	1.9	2	No	Con	Axial	Nurses	Nurses	No	No	No
TGA	350	DGH	53	8	6	2	3	5	0	0	Yes	Con	Axial	Nurses	Nurses	Yes	Yes	Yes
TLF	230	DGH	17.5	10	7	0	0	0	1	0	Yes	Nurse	Peri	Doctors	Nurses	No	No	No
TOR	450	DGH	53.5	12	7.5	20	40	3	2	2	No	Con	Axial	Doctors	Nurses	No	No	Yes
TRA	110	DGH	20	6	5	8	0	2	1	0	*	Con	None	Nurses	Nurses	*	*	*
TUN	520	Both	70	16	13	32.5	0	5	0	0	Yes	Con	Axial	Audit	Audit	Yes	Yes	No
UCL	142	Both	28	11.5	11	8	2	2	1	0	Yes	None	Axial	Nurses	Nurses	No	Yes	Yes
UHC	522	Both	108	26	15	15	0	5	4	0	Yes	None	Axial	Nurses	Admin	No	No	Yes
UHN	800	Both	166	12	16	25	25	5	1.2	1.2	Yes	Con	Axial	Audit	Audit	No	No	Yes
UHW	500	Both	92	14	15	34	26	10	3	0	Yes	None	Axial	Nurses	Nurses	No	Yes	No
VIC	450	DGH	55.5	8	9	14	0	2	2	2	Yes	Nurse	Peri	Nurses	Admin	Yes	Yes	Yes
WAR	365	DGH	30	9.15	9	16	40	3	6.3	0	Yes	Con	Axial	Nurses	Nurses	No	Yes	No
WAT	450	DGH	60	10	18	24	40	5	1	0.5	Yes	Con	None	Nurses	Admin	No	No	No
WDG	350	DGH	48	12	8	37.5	0	5	0	0	Yes	None	Peri	Nurses	Nurses	No	No	Yes
WDH	270	DGH	20.3	8	9	8	8	2	1	1	Yes	Con	Axial	Nurses	Admin	Yes	Yes	Yes

Hospital code	No. of hip fractures treated/annum	Trauma service description ^a	Hours of designated trauma/week	No. of WTE ^b orthopaedic consultants	No. of WTE orthopaedic middle grades	Orthogeriatric consultant hours/week	Orthogeriatric middle grade hours/week	Orthogeriatric ward rounds/week	No. of WTE fragility fracture nurses	No. of WTE fracture liaison nurses	Specific clerking proforma	Falls clinic ^c	DXA on-site facility	Data collected by	Data entered by ^d	Enhanced recovery programme	Early supported discharge service	Access to rehabilitation beds
WES	180	Both	26	12	7	7	3	3	1	0	Yes	Con	Axial	Nurses	Nurses	No	Yes	Yes
WEX	365	DGH	33	11	12	4	37.5	5	0	0	Yes	Con	None	Nurses	Admin	Yes	No	No
WGH	350	DGH	24	7	9	5	0	0	0.4	0.4	Yes	None	Axial	Audit	Audit	No	No	No
WHC	320	DGH	40	9	9	17	0	2	1	0	Yes	Con	None	Nurses	Nurses	No	No	Yes
WHH	441	DGH	45	10	12	10	40	4	4	2	Yes	Con	None	Audit	Audit	Yes	Yes	Yes
WHI	385	DGH	56	11	11	8	8	3	0	0	Yes	Con	Axial	Nurses	Audit	No	No	Yes
WHT	150	DGH	20	8	8	15	0	5	0	0	Yes	Con	Axial	Doctors	Nurses	Yes	Yes	Yes
WIR	450	DGH	81	16	9	20	40	7	1	0	Yes	None	Axial	Audit	Audit	Yes	No	Yes
WMH	360	DGH	22	9	10	12	0	5	0	0	Yes	Nurse	None	Nurses	Nurses	No	No	Yes
WMU	200	DGH	30	5	9	6	4	3	1	0	Yes	Con	Peri	Nurses	Nurses	Yes	Yes	No
WRC	420	DGH	10	8	8	5	3	4	0	1	Yes	Con	Axial	Nurses	Nurses	No	No	No
WRG	518	DGH	43.5	8	16	16	4	7	0	0	Yes	Con	None	Admin	Admin	No	No	Yes
WRX	235	DGH	27	10	6	10	12	2	0	1	Yes	Con	None	Nurses	Nurses	Yes	Yes	No
WSH	300	DGH	20	10	10	20	10	3	2	0	Yes	Con	None	Doctors	Audit	Yes	No	Yes
WWG	350	DGH	17.5	10	9	4	5	1	1	0	Yes	None	None	Nurses	Audit	Yes	No	No
WYB	200	DGH	12	5	5	0	0	0	0	0.8	Yes	None	None	Admin	Audit	No	No	Yes
WYT	300	Both	48	12	11	25	6	5	0	0	Yes	Con	Axial	Nurses	Nurses	No	Yes	No
YDH	360	DGH	36	11	10	18	0	4	1	0	Yes	Con	None	Doctors	Audit	No	No	No
YEO	320	DGH	36	8	9	8	40	2	0	0.5	Yes	None	Axial	Nurses	Nurses	No	No	No

* No data submitted.
a Both, DGH that provides specialist medical services to a number of surrounding DGHs; DGH, primary general hospital within a geographical area; tertiary hospital, speciality hospital providing advanced medical treatments, eg a major trauma centre.
b WTE, whole-time equivalent.
c Con, consultant.
d HCA, healthcare assistant.

Appendix B – Structure and governance

FFFAP Board

Rhona Buckingham, Clinical Effectiveness and Evaluation Unit (CEEU) operations director, RCP
Tim Chesser, British Orthopaedic Association
Antony Johansen, NHFD clinical lead, orthogeriatric medicine
Dave Marsh, clinical lead, Fracture Liaison Service Database
Finbarr Martin, FFFAP programme chair and clinical lead
Roz Stanley, FFFAP programme manager
Kevin Stewart, CEEU clinical director, RCP
Jonathan Trembl, clinical lead, Falls Pathway workstream
Rob Wakeman, NHFD clinical lead, orthopaedic surgery
Helen Wilson, British Geriatrics Society

NHFD Workstream Delivery Team

Chris Boulton, NHFD project manager
Tim Bunning, Crown Informatics
Viv Burgon, NHFD project coordinator
David Cromwell, Royal College of Surgeons
Antony Johansen, NHFD clinical lead, orthogeriatric medicine
Roz Stanley, FFFAP programme manager
Carmen Tsang, Royal College of Surgeons
Rob Wakeman, NHFD clinical lead, orthopaedic surgery
Andy Williams, NHFD project coordinator

NHFD Advisory Group

Chris Boulton, NHFD project manager
Tim Bunning, Crown Informatics
Viv Burgon, NHFD project coordinator
Tim Chesser, British Orthopaedic Association
Gary Cook, consultant in public health medicine, Stockport
Matt Costa, associate clinical professor, University Hospitals Coventry and Warwick
David Cromwell, Royal College of Surgeons
James Elliott, consultant orthopaedic surgeon, Royal Victoria Hospital, Belfast
Mike Ellis, clinical nurse specialist, tissue viability, Royal Devon and Exeter NHS Trust
Richard Griffiths, consultant anaesthetist, Peterborough Hospital
Karen Hertz, advanced nurse practitioner, University Hospital of North Staffordshire
Antony Johansen, NHFD clinical lead, orthogeriatric medicine
Jenny Neuburger, Royal College of Surgeons
Neil Pendleton, senior lecturer in geriatric medicine, University of Manchester
Nivi Singh, consultant orthogeriatrician, St Helier Hospital
Roz Stanley, FFFAP programme manager
Cameron Swift, King's College London
Ruth Ten Hove, Chartered Society of Physiotherapists

Philippa Thorpe, consultant orthopaedic surgeon, Arrowe Park Hospital
Anne Thurston, National Osteoporosis Society
Carmen Tsang, Royal College of Surgeons
Rob Wakeman, NHFD clinical lead, orthopaedic surgery
Andy Williams, NHFD project coordinator
Helen Wilson, British Geriatrics Society

NHFD Data Subgroup

Chris Boulton, NHFD project manager
Viv Burgon, NHFD project coordinator
Tim Bunning, Crown Informatics
Gary Cook, consultant in public health medicine, Stockport
David Cromwell, Royal College of Surgeons
James Elliott, consultant orthopaedic surgeon, Royal Victoria Hospital, Belfast
Antony Johansen, NHFD clinical lead, orthogeriatric medicine
Carmen Tsang, Royal College of Surgeons
Rob Wakeman, NHFD clinical lead, orthopaedic surgery
Andy Williams, NHFD project coordinator

NHFD Scientific and Publications Committee

Chris Boulton, NHFD project manager
Viv Burgon, NHFD project coordinator
Matt Costa, associate clinical professor, University Hospitals Coventry and Warwick
James Elliott, consultant orthopaedic surgeon, Royal Victoria Hospital, Belfast
Karen Harding, consultant orthogeriatrician, Frenchay Hospital
Antony Johansen, NHFD clinical lead, orthogeriatric medicine
Janet Lippett, consultant in elderly care, Royal Berkshire NHS Foundation Trust
Jenny Neuburger, Royal College of Surgeons
Michael Pearson, professor of clinical evaluation, University of Liverpool
Neil Pendleton, senior lecturer in geriatric medicine, University of Manchester
Roz Stanley, FFFAP programme manager
Carmen Tsang, Royal College of Surgeons
Rob Wakeman, NHFD clinical lead, orthopaedic surgery
Andy Williams, NHFD project coordinator

Appendix C – Outlier policy for NHFD annual report 2014

Purpose

This appendix details the identification and management of significantly outlying organisations in the NHFD 30-day casemix-adjusted mortality funnel for 3 years of data, published in the NHFD annual report 2014.

Definitions

BGS	British Geriatrics Society
BOA	British Orthopaedic Association
CCG	Clinical commissioning group
CEEU	Clinical Effectiveness and Evaluation Unit, Royal College of Physicians (RCP)
CEO	Chief Executive Officer
CQC	Care Quality Commission
DLES	Data Linkage and Extract Service, Health and Social Care Information Centre
FFFAP	Falls and Fragility Fracture Audit Programme, RCP
HQIP	Healthcare Quality Improvement Partnership
NHFD	National Hip Fracture Database
WDT	Workstream Delivery Team

Policy

Stage	Action	Party responsible	Schedule
	NHFD lead clinicians and CEO contacted (via email) to advise of report data slice, and importance of adequate data checking	NHFD WDT	January 2014
0	Report data slice (1 January 2011 to 31 December 2013) extracted from database	IT provider	April 2014
1	Matched against DLES sources for return of date of death Data returned from DLES and validated by IT provider	IT provider	April 2014
2	Linked data transferred to data analyst via secure transfer mechanism	IT provider	April 2014
3	Organisations with low case ascertainment and/or poor mortality linkage removed from analysis <ul style="list-style-type: none"> Organisations informed – letter to CEO, medical director and lead clinician Advised on data quality/checking in advance of next report period Information recorded – exclusion will need to be mentioned in national report FFFAP, CEEU, HQIP, BGS and BOA to be informed 	Data analyst NHFD clinical leads	May 2014

Stage	Action	Party responsible	Schedule
4	Provisional funnel plot (both 1 and 3 years) provided to NHFD WDT <ul style="list-style-type: none"> • Outliers (both high and low mortality) identified • Table of casemix factors for outliers provided, alongside national descriptor figures (mean/range) – as a credibility check on data quality • Careful scrutiny of data handling, matching and analyses performed to determine in which hospitals there is a case to answer Where outlier status can be clearly associated with poor data quality <ul style="list-style-type: none"> • Organisations informed – letter to CEO, medical director and lead clinician • Advised on data quality/checking in advance of next report period • Information recorded – exclusion will need to be mentioned in national report • FFFAP and CEEU clinical director to be informed 	Data analyst NHFD WDT	May 2014
5	Updating of all trust contact details for outlying hospitals (both high and low outliers) – CEO, lead clinician, medical director, clinical governance lead	NHFD admin support	May 2014
6	Analyst advised of any exclusions from mortality analysis as a result of the review (step 4) above	NHFD WDT	May 2014
7	Final funnel plots (1 and 3 years) provided to NHFD	Data analyst	May 2014
8	Contact provider lead clinician by telephone or email, prior to written confirmation of potential outlier status, copied to: <ul style="list-style-type: none"> • provider clinical governance lead • medical director Letter to CEO advising that they inform relevant bodies including CQC, CCG(s) and professional societies/associations	NHFD clinical leads	June 2014
9	Weekly update of hospital contacts maintained by NHFD project manager and circulated to: <ul style="list-style-type: none"> • NHFD lead clinicians • FFFAP chair and programme manager • CEEU clinical director 	NHFD project manager	June–July 2014
10	Acknowledgement of receipt received by NHFD Follow-up letters if no acknowledgement received in 5 working days	Provider CEO	June 2014
11	Provider appeals outlier status and provides evidence to support this Provider failure <ul style="list-style-type: none"> • Provider accepts/claims that there has been a failing in local coding and data checking • If this appears true, we remove them from funnel plot and indicate in report exclusion on the basis of data quality • If no evidence to support a claim of coding failure – leave in funnel/report 	NHFD clinical leads	June 2014

Stage	Action	Party responsible	Schedule
	NHFD error <ul style="list-style-type: none"> • Site highlights an error in NHFD analysis • Corrections applied, and reconsideration of outlier status is made 		
12	Provider fails to respond to letter within 14 working days <ul style="list-style-type: none"> • Letter resent • NHFD clinical lead phones provider CEO and asks for acknowledgement with action plan 	NHFD clinical leads	June 2014
13	Provider fails to respond to NHFD telephone call within 7 working days <ul style="list-style-type: none"> • Final letter to CEO • Copied to CEEU clinical director 	NHFD clinical leads	July 2014
14	Outlier status (ie a case to answer) accepted by provider organisation <i>or</i> Possible outlier is identified by NHFD but the provider organisation persistently fails to respond HQIP informed of: <ul style="list-style-type: none"> • the name of the outlier • the reporting period in question • the measure and clinical context for which they are possible or confirmed outliers • relevant communications/actions to date • the anticipated publication date 	NHFD	July 2014
15	Final draft of NHFD report is submitted to HQIP	NHFD	July 2014
16	Embargoed report made available to outlying trusts, and to BOA and BGS	NHFD	August 2014
17	Public disclosure (release of annual report)	NHFD	September 2014
18	Review of the progress/results of investigations undertaken by outlier provider Follow-up protocol Until adequate update on findings/remedial measures received from provider CEO <ul style="list-style-type: none"> • Further reminder letter sent at 2 weeks • Telephone call to provider lead clinician at 4 weeks • Notification of FFFAP and CEEU leads if no response before end of February 2015 • Notification of HQIP if no response before end of March 2015 (see below) 	NHFD clinical leads	January 2015
19	All outlier issues finally closed: <ul style="list-style-type: none"> • either closed as adequate responses • or escalated to HQIP as inadequate responses 	FFFAP Board	March 2015

Falls and Fragility Fracture Audit Programme (FFFAP)

A suite of linked national clinical audits, driving improvements in care; managed by the Royal College of Physicians

- > **Falls Pathway Workstream**
- > **Fracture Liaison Service Database (FLS-DB)**
- > **National Hip Fracture Database (NHFD)**



Royal College
of Physicians

FFFAP