Delivering Quality and Value

Focus on: Fractured Neck of Femur
Introduction

This document aims to help local health communities and organisations improve the quality and value of care for fractured neck of femur patients. It is one of a series of documents produced by the Delivering Quality and Value team at the NHS Institute for Innovation and Improvement as part of the high volume Healthcare Resource Groups (HRG) programme.

The series of HRGs chosen were:
- acute admissions in adult mental health
- acute stroke
- preparing for end stage renal disease
- Caesarean section
- fractured neck of femur
- cholecystectomy
- short stay emergency care
- frail older patients
- primary hip and knee replacement
- heart failure
- psychiatric intensive care units
- cataracts
- cancer
- diabetes
- Radiology
- Musculoskeletal interface services
- emergency and urgent care for children and young people

The document covers:
- the Delivering Quality and Value team’s approach
- the key characteristics of organisations providing high quality care and value for money
- measures for improvement
- further information.
The approach

A literature review was undertaken of the recognised evidence in delivering optimised care for fractured neck of femur patients. The ‘Further information’ section gives further detail of the documentary evidence.

A thorough data analysis was undertaken using nationally available data from Hospital Episode Statistics (HES) as an indicator to rank and identify organisations using average length of stay spell (spell refers to the length of time a patient stays in an acute hospital setting).

The initial statistics were then adjusted for age and deprivation levels, mortality rate and readmission rates.

After we reviewed the data analysis, it became evident that as the numbers were based on finished consultant episodes (FCEs), they did not reflect the true state of performance in some cases. This was particularly true of fractured neck of femur patients, who are moved around through acute and rehabilitation services, thus generating a series of FCEs or ‘spells’. A further analysis was done to take account of the entire patient journey or ‘superspell’ prior to making a decision about which local health and social care communities to approach.

Verifying the selection of organisations

Having identified the local health and social care communities, we then approached the organisations to allow us to visit them and observe how they manage this group of patients. The ‘Acknowledgements’ section lists the organisations we visited. The information contained within this pathway was only possible because health and social care communities allowed us to see their practice.

We then undertook site visits, ensuring that at least 50% of our time was spent observing, watching, listening and looking at the flow and processes of care. We also explored the use of information to aid clinical and non-clinical decision making. The remaining time was spent conducting a series of semi-structured interviews with key members of staff across the pathway of care (including a range of clinical staff, porters, ambulance staff, pharmacy staff, social care staff, primary care staff, community services staff and commissioners), and with patients. In total we interviewed at least 200 staff and patients and observed at least 120 different areas (clinical and non-clinical) for this pathway.

The knowledge we gained from these visits and the co-production events1 was then consolidated, and the optimised pathway of care illustrated later in the document was identified.

We worked in partnership with the NHS throughout this project to validate the pathway and the knowledge gained from the site visits, and to identify measures for improvement that would be helpful indicators for evaluating the impact of change.

The key characteristics for delivering optimal care in the NHS have been tested with the organisations we worked with and others, to ensure that the change in practice is understood and is relevant and appropriate, and that measuring the improvement is possible within a short time frame. The field test organisations described in this document developed the characteristics further and learned about how they might be implemented. The testing process is one of learning and development, often carried out quickly and with a small group of patients. Some example case studies and field tests are given in this document.

‘The Rapid Improvement Programme’ undertaken in ten hospitals has further added to our knowledge of this pathway. Case studies from the Rapid Improvement Programme have been provided by the participating Trusts. The data within them has not been validated by the NHS Institute.

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1 Co-production with the NHS, involving all sites visited and national bodies and experts relevant to the pathway
How to use this document

The content of this document has been developed with the help of NHS staff for the benefit of any organisations and stakeholders that play any part in the fractured neck of femur pathway.

Key characteristics have been developed with the expectation that they will be widely adopted across the NHS, so that patients receive a high quality experience irrespective of where they receive their care.

The majority of improvements are applicable and easily transferable to other pathways, and implementation will have numerous benefits for the patient and all health and social care services.

Our aim is to suggest ways to ensure prompt care and treatment of patients who have suffered from a fractured neck of femur. We would like you to read this document carefully and consider using these ideas as a means of improving the care and treatment of these patients, therefore improving their health outcomes.
Fractured neck of femur pathway

Context

Fractured neck of femur is the most serious consequence of falls among older people, with a mortality rate of 10% at one month after a fall, 20% at four months and 30% at one year. Many of those who recover suffer a loss in mobility and independence. Hip fractures account for 87% of the total cost of all fragility fractures, and, as such, they are the most expensive fractures associated with osteoporosis.\(^2\) In 2005/06, 68,416 patients with a fractured neck of femur were operated on in England at a cost to the NHS of at least £384 million.\(^3\) The average age of patients with fractured neck of femur is over 80 years old, and 75% are female. Many of the patients have significant co-morbidities that may delay surgery and their recovery. They are also vulnerable to healthcare-acquired infections. One marker of the quality of care that patients receive is the total length of NHS care following fractured neck of femur (see Figure 2). This varies considerably from trust to trust, with the average length of superspell (total time in NHS care) ranging from 17 to 40 days. In the past year, one third of trusts have seen a rise in the superspell of patients with fractured neck of femur of between one and nine days.

Figure 2

![Variation in superspell (total length of NHS care)](image)

A similar pattern is evident when looking at spell (acute hospital setting only) as shown in Figure 3, where the variation in length of stay is between 11 and 38 days.

\(^{3}\) Based on 2005/06 tariff
In view of the number of neck of femur fractures treated annually by the NHS, it is most important that we look at ways to improve the pathway in all trusts. By focusing on high quality delivery of the pathway, significant savings will be achieved in health and social care costs through reduced length of hospital stay, lower complication rates and improved functional outcomes with reduced long-term care needs. It is acknowledged that there have been significant improvement efforts through the NHS Modernisation Agency’s national Orthopaedic Services Collaborative and the Action On Orthopaedics programmes. This includes pre-hospital care and ensuring that the patients are fast-tracked through the emergency department, receiving both prompt investigation and rapid treatment of co-morbidities. It also includes ensuring that all patients with a neck of femur fracture receive appropriate antiresorptive (anti-osteoporosis) treatment and are assessed for history of and future risk of falls. In order to assess the whole pathway, it is important that each patient’s care is measured to highlight the causes of delays in treatment as well as specific adverse incidents and outcomes.
This pathway illustrates how patients should be treated in order for a trust to achieve optimal health outcomes and, as a result, better value for money.

Standardised assessment process which includes: nutritional state, fluids, oxygen, pressure areas, analgesics, mental health.
Patients with fractured neck of femur are among the most frail admitted to hospital. Outcomes among this group of patients depend critically on how effectively their care pathway is managed. Inappropriate delays, incomplete assessment and inadequate attention to detail – detail such as the rapid optimisation of co-morbidities, fluid and nutritional status as well as the underlying cause of the fall and management of their osteoporotic risk – will result in poorer outcomes among this group of patients.

The key characteristics of organisations providing high quality care and value for money

The following characteristics have been found to be the key features for delivering quality and value for patients who have suffered a fractured neck of femur. These are followed by case studies and then suggested measures for improvement. The suggested measures for improvement are those that we judge to be of value to organisations to enable them to benchmark their current practice against the characteristics described and to further improve it.
Overarching characteristics

1. The pathway is coordinated and designed to reduce variation in length of stay, reduce mortality and re-admissions.
2. Appropriate, medically fit patients receive surgery within 24 hours.
3. Fluid status and any significant co-morbidities are optimised in a timely and appropriate way, allowing patients to be operated on within 24 hours. This commences as soon as possible and is a continuous process throughout the perioperative process.
4. The anaesthetic approach is consistent, thus avoiding unnecessary cancellation of surgery.
5. Patients are mobilised within 24 hours post op and receive therapy input over weekends.
6. Patients are discharged back to their usual address using a criteria based discharge process.
7. Health and social care multi agency teams are coordinated and integrated across the patient pathway.
8. The Multidisciplinary Team (MDT) works in partnership with an orthogeriatrician.

The pathway is coordinated and designed to reduce variation in length of stay, reduce mortality and, re-admissions.

- Patients are greeted at the door.
- A coordinator is in place to oversee and improve the fractured neck of femur pathway.
- From admission fluid status and any significant co-morbidities are optimised in a timely and appropriate way, allowing patients to be operated on within 24 hours.
- There is a dedicated unit for patients with fractured neck of femur, patients are discharged home from this unit.
- A multidisciplinary steering group takes improvement action, eg using improvement methodology to introduce changes in services. The group should meet regularly and should focus on standardisation at all points in the pathway. Based on what we have observed, the membership should include:
  - lead clinicians from orthopaedics, anaesthetics and medicine for the elderly
  - social services
  - community services
  - nursing
  - allied health professionals
  - management.
The Orthopaedic Improvement Group is a multi-professional steering group consisting of members from across the local health and social community. The group, which is action orientated, has a sub-group for care of the fractured neck of femur patient. The outcomes of the group include focusing expertise on elderly patients with complex needs within a perioperative unit and the development of trauma nurse specialists. Funding was provided for one trauma nurse specialist. However, to provide a seven-day service, an additional 0.6 nurse specialist was required. This has been achieved through workforce redesign, resulting in a reduction in length of stay from 20 to 14 days, equating to 1,650 bed days. Based on the excess bed days tariff (2005/06), this equates to a saving of £308,550.

The Statistical Process Control (SPC) chart that follows (Figure 5) shows the reduction of length of stay from 20 to 14 days.

Case study
Barnsley Hospital NHS Foundation Trust
**Case study**

University Hospitals of Leicester NHS Trust

The trust developed the role of the ‘clinical aide’ to ensure that patients are ready for surgery. The aides perform routine procedures such as venepuncture and ECG recording, ensuring that all necessary investigations are undertaken and available for review by medical staff. The aides prepare the patient for theatre and ensure that all relevant documentation is in place prior to escorting the patient to theatre.

**Measures for improvement**

- Admission to a dedicated unit.
- Operated within 24 hours of admission.
- Operated within 48 hours of admission.
- Admitted to a ward within two hours of diagnosis.
- Pressure ulcer grade 2 or over.
- Incidence of HAI is under trust target.

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**Figure 5**

Fractured neck of femur patients
Length of stay by date of discharge
August 05 - July 06

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Preoperative care

Preoperative delays result in an increase in mortality and an increase in length of postoperative stay. ‘Every 7.85 hours of delay to surgery after the initial 48 hours equates to an extra day in hospital.’

• There is a documented integrated care pathway. This document is used at all stages of the patient’s care by all professional groups.
• Patient status is optimised in a timely and appropriate way allowing surgery within 24 hours.
• There is a clear criteria of patients for surgery, agreed by consultant surgeons, orthogeriatrician and anaesthetists. Trauma coordinators should use this criteria to list patients on to the next available fractured neck of femur slot.
• Effective pre-operative care is in place and information is shared across health and social care.
• Effective theatre list management.
• Multidisciplinary trauma meetings are held daily.
• There is adequate provision of trauma lists and/or the flexibility in staffing to allow optimum utilisation of available theatre time. There are processes in place to increase fractured neck of femur theatre capacity when demand outstrips supply.
• There is real time monitoring of the 24-48 hour target, including alerts when patients are delayed.
• Tools are used to understand and to ensure the appropriate utilisation of theatres.
• Each stage of the pathway is coordinated.
• The NHFD (National Hip Fracture Data Base) is populated routinely and this data is used to measure performance and improvement.

Case study

Barnsley Hospital NHS Foundation Trust

The trust has a daily multidisciplinary trauma meeting (including trauma coordinators, theatre staff and the orthogeriatrician), which ensures that the medical status of the patient and the length of time that the patient has been waiting for surgery are known. There is collaboration between the members of the multidisciplinary team to ensure that patients are adequately prepared for surgery.

Rapid Improvement Programme case study

Leeds Teaching Hospitals NHS Trusts

Reducing delays to theatre

A theatres sub-group was set up with the aim to reduce avoidable delays to theatre for patients admitted with a fractured neck of femur.

As a result the trauma co-ordinators have now introduced a system that allows them to allocate theatre slots on the official list without the need of a handover document/or the on-call doctor. The trauma co-ordinators allocate theatre slots to the patients in date of admission order/declared fit for theatre date. Initial feedback from the wards has been very positive. Additional capacity has also been put into the system at weekends to ensure bottlenecks do not occur.

Measures for improvement

- Admission to a dedicated unit.
- Operate within 24 hours of admission.
- Operate within 48 hours of admission.
- Patient assessed pre-operatively by a geriatrician.
- Daily trauma lists.
- Daily MDT trauma meetings.
- In hospital mortality.

Note: Rapid Improvement Programme case study data is provided by the trust and is not validated by the NHS Institute or any independent body.
From admission fluid status and any significant co-morbidities are optimised in a timely and appropriate way, allowing patients to be operated on within 24 hours. This commences as soon as possible and is a continuous process throughout the perioperative period.

- Patient fluid status is optimised in a timely and appropriate way allowing surgery within 24 hours.
- Effective pre-operative care is in place and information is shared across health and social care.

Rapid Improvement Programme case study
Ipswich Hospital NHS Trust

At the next stage of the patients’ journey a work group focussed on the anaesthetics regime, the aim of this was to prevent patients becoming nutritionally compromised or dehydrated pre-operatively. The team at Ipswich Hospital worked together to develop a ‘Nutrition Screener’ for use with every patient admitted with a fractured neck of femur.

The screener is a simple but effective tool that enables staff to determine a nutritional risk factor for each patient and provides suggested actions based on the patient’s level of risk. Close involvement with the anaesthetics department in developing the tool helped reach agreement of specific actions such as allowing patients to receive special energy drinks for up to three hours prior to surgery. This markedly reduces the patients’ risk of malnutrition and better prepares them to make a speedy postoperative recovery. This pre-operative hydration regime has been rolled out across the department so that all trauma and elective patients benefit from this improvement.

Note: Rapid Improvement Programme case study data is provided by the trust and is not validated by the NHS Institute or any independent body.

Measures for improvement

- Discharge on or before agreed discharge date.
- Mobilisation within 24 hours.
The anaesthetic approach is consistent, thus avoiding unnecessary cancellation of surgery.

- There is a local champion anaesthetist for the patient group.
- There is an agreed standardised anaesthetic protocol written for the work up of fractured neck of femur patients.
- Anaesthetic input must optimise pain relief and postoperation nausea to facilitate early mobilisation and discharge.
Figure 6 shows the variation across trusts in the percentage of patients having surgery within 0-2 days (see also the Appendix).

Figure 6

Peterborough and Stamford Hospitals NHS Foundation Trust operated on 65% of patients within 24 hours of admission and 94% of patients within 48 hours.

Measures for improvement

- Operate within 24 hours of admission.
- Operate within 48 hours of admission.
- Mobilisation within 24 hours of surgery.
- Discharge on or before agreed discharge date.
- Percentage use of standardised assessment process.
- Percentage of patients who do not have surgery – all trusts should aspire to achieve a rate of 3% or less.
- The number of actual operations performed against the number planned for each list daily.
  - Reasons for all cancelled operations.
  - Percentage of late starts.
  - Percentage of late finishes.
Patients are mobilised within 24 hours post op and receive therapy input over weekends.

- Staff are trained to deliver basic therapy over the weekend.
- Patients are informed to expect early mobilisation.
- Pain is consistently managed.
- Patients are mobilised within 24 hours as standard. Reasons for any clinical exceptions to this should be recorded in the integrated care pathway paperwork.
- Therapy intervention takes place on a regular basis (eg twice a day if clinically relevant) and there is seven-day therapy input through competency-based training. Therapy is regarded as equally important as any other clinical activity and is not to be compromised (eg due to lack of staff time).

Case study

Barnsley Hospital NHS Foundation Trust

The trust has established a programme of training for nursing assistants to enable the staff to continue mobilising patients over the weekend when physiotherapy staff are not available. The competences include risk assessment, understanding of patients’ documentation, safety of patients and walking aids, provision of appropriate walking aids, and understanding of mobility re-education.

Rapid Improvement Programme case study

United Lincolnshire Hospitals NHS Trust

Mobilising patients early after surgery greatly improves the recovery rate. The Lincoln team has developed a simple mobilisation algorithm which is used by staff to mobilise early. It has improved the number of patients mobilising within 12 – 24 hours to between 73% – 100%.

Note: Rapid Improvement Programme case study data is provided by the trust and is not validated by the NHS Institute or any independent body.

Measures for improvement

- Patients are mobilised within 24 hours of surgery.
- Seven day therapy provision.
- Discharge on or before estimated discharge date.
During August 2006, the medical staff formally recorded in medical records the expected date of discharge when the patient arrived on the trauma unit.

A preliminary review of the evidence suggests that change in medical condition is the main cause of delay in achieving the expected discharge date. It was also noted that medical staff are more consistent in recording in the medical records when a patient is medically stable. This enables a more timely discharge.

**Figure 7**

<table>
<thead>
<tr>
<th>% patients discharged home</th>
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<td>90%</td>
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<td>100%</td>
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</tbody>
</table>

Percentage of fractured neck of femur patients discharged to their usual place of residence.

**Field test**

**Barnsley Hospital NHS Foundation Trust**

During August 2006, the medical staff formally recorded in medical records the expected date of discharge when the patient arrived on the trauma unit.

A preliminary review of the evidence suggests that change in medical condition is the main cause of delay in achieving the expected discharge date. It was also noted that medical staff are more consistent in recording in the medical records when a patient is medically stable. This enables a more timely discharge.

**Rapid Improvement Programme case study**

**United Lincolnshire Hospitals NHS Trust**

Working with the NHS Institute the Lincoln team re-wrote the care pathway in order to increase its use. The Lincoln team also focused on improving discharge planning by using the ‘Welcome’ cards provided by the NHS Institute. Between 50% – 100% of patients are given a predicted discharge date.

Note: Rapid Improvement Programme case study data is provided by the trust and is not validated by the NHS Institute or any independent body.
Rapid Improvement Programme case study
Calderdale and Huddersfield NHS Trust

The team chose to look at estimated date of discharge (EDD). With the help of ward sisters, they set a criterion for EDD.

The EDD is now written on the front of the newly updated fractured neck of femur pathway and is given to a patient when they are admitted on to the ward. The EDD can be altered to account for any delays.

Although the introduction of EDD was a major change in discharge planning, a few other changes have taken place alongside it which has improved the process.

• The multidisciplinary team meetings were moved to the beginning of the week enabling regular attendance by Social Services. This means there is improved planning from Monday onwards.
• A letter to patients that makes it clear what they can expect during their stay in hospital is currently being developed. This will ensure patients are generally informed and will prevent some of the delayed discharges which often arise when people are confused about the services they should be receiving.

Measures for improvement

• Predicted discharge date pre-op.
• Early MDT review for discharge planning.
• Criteria based discharge.
• Discharge to original place of residence. Spell within 19 days.
• Discharge to original place of residence. Superspell within 25 days.

Note: Rapid Improvement Programme case study data is provided by the trust and is not validated by the NHS Institute or any independent body.
Health and social care multi agency teams are coordinated and integrated across the patient pathway

- ED is alerted prior to the patients arrival.
- Information is shared pre-operatively.
- Community services are engaged pre-operatively where appropriate.
- The Diagnostics are fast tracked.
- The patient is informed and empowered.
- All patients have an integrated care plan commencing at ED.

Rapid Improvement Programme case study
Calderdale and Huddersfield NHS Trust

The documentation used by the team has changed to a cover sheet including:

- Estimated date of discharge.
- Start of the fractured neck of femur pathway.
- Visual picture of the pathway.
- A chart to facilitate the optimisation of patients for theatre. The rest of the clinical notes are free hand used by the multidisciplinary team. The new documentation reflects the care a patient has actually received. Work is also underway to develop a nursing document that incorporates nursing assessments and care plans.

Measures for improvement

- Admit to ward within two hours of diagnosis.
- Use of standardised assessment process.
- Early MDT review for discharge planning.
- Assessed for bone health.
- Assessed or referred for multidisciplinary falls risk.

Note: Rapid Improvement Programme case study data is provided by the trust and is not validated by the NHS Institute or any independent body.
Pre-operative assessment includes review by an orthogeriatrician if medically unfit.

The MDT collaborates with an orthogeriatrician on rehabilitation aims and discharge plans.

Standardised assessment of falls and bone health (as per NICE guidance) is agreed.

Patients receive an early referral to the orthogeriatrician if medically unwell.

Case study

West Norfolk Primary Care Trust

West Norfolk Primary Care Trust implemented an integrated falls service, involving a community rehabilitation team, pharmacists and therapists. A single point of access was introduced for primary, acute, mental health and social housing services.

In partnership with the East Anglian Ambulance Service, the Trust introduced a ‘yellow sticker’ system so that when ambulance crews attended patients who had fallen but not fractured, they could refer them, with their consent, to the Trust’s falls service. In the emergency department of the Queen Elizabeth Hospital King’s Lynn, the role of liaison nurses was developed to ensure that patients who might be at further risk of falling would be referred to the falls service. People at high risk of falling would be seen by the falls service, whereas those designated as being at medium or low risk would be seen by a local information and support team.

Audit of results has shown that since the introduction of the service, the length of stay in hospital of patients who have fallen (fractured or not) has reduced from 18.9 days to 11 days. Over a period of eight months, 487 patients were admitted with falls as a diagnosis, and so 3,800 bed days were saved. Based on the excess bed days tariff (2005/06), this equates to a saving of £710,600.
**Rapid Improvement Programme case study**

**Stockport NHS Foundation NHS Trust**

The orthogeriatrician input recognised the need for a full time orthogeriatrician and the lack of pre-op input. A trial of six weeks pre-op input was undertaken by orthogeriatricians. This facilitated early medical assessment and management of medical problems in hip fracture patients and improved time to theatre. A business case for a full time orthogeriatrician is being put together.

Note: Rapid Improvement Programme case study data is provided by the trust and is not validated by the NHS Institute or any independent body.

**Measures for improvement**

- Patients assessed pre-op by geriatrician.
- Operate within 24 hours of admission.
- Operate within 48 hours of admission.
- Assessed for bone health.
- Assessed or referred for multidisciplinary falls risk.
Benefits

Delivering high quality care achieves a wide range of benefits for every sector of the NHS. Figure 8 illustrates that by delivering quality and value for fractured neck of femur patients, a number of common benefits can be realised. These benefits apply to the following four dimensions of NHS care:

- Patient and service outcomes.
- Efficient delivery of services.
- Valuing staff.
- Delivering value for money.

**Figure 8**

*The benefits of delivering high quality care*

- Simple/clear menu for care
- Error free care
- Reduced critical incidents
- Improved staff retention
- Sustainable workforce development
- More positive media
- Consumer satisfaction
- Reduced complaints
- Recognition of ALL involved in pathway
- Reputation of safety/quality of care
- Co-operation/collaboration
- Integral to solution
- Staff rewards and recognition
- Bottom line impact, savings, opportunity costs
- Better value for money
- Financial balance
- Reduced acute bed stock
- Rationalise capital development and equipment services
- Reduced length of stay and readmissions
- Improved equity of access
- Reduced healthcare acquired infections
- Improved public health outcomes
- High public health outcomes
- Improved quality
- Improved staff retention
- Sustainable workforce development
- More positive media
- Consumer satisfaction
- Reduced complaints
- Recognition of ALL involved in pathway
- Reputation of safety/quality of care
- Co-operation/collaboration
- Integral to solution
- Staff rewards and recognition
- Bottom line impact, savings, opportunity costs
- Better value for money
- Financial balance
- Reduced acute bed stock
- Rationalise capital development and equipment services
Conclusion

Optimal delivery of high-quality care for fractured neck of femur patients is an achievable goal. The opportunities for quality improvement in this area are immense: improved outcomes for patients, supported by evidence-based delivery of services; reduced length of hospital stay; reduced mortality; and reduced institutionalisation. Good quality care costs less than sub-optimal care, as length of stay and complication rates are decreased. ‘Looking after hip fractures well is cheaper than looking after them badly’

The contents of this report are based on the Delivering Quality and Value team’s observations of the practices of NHS organisations that are judged to be delivering high quality care and value for money. Although these observations have been tested thoroughly, it should be recognised that they may not be the only ways of delivering high quality care and value for money, but we believe that they will give valuable guidance and direction to those seeking this goal. To improve services, organisations should follow this guidance and take the following simple steps:

- Understand how your organisation performs when compared against the key measures and benchmarks suggested.
- Generate a locally owned change programme for improvement.
- Integrate the local change management programme within health community integrated service improvement programmes (ISIPs) and local delivery plans (LDPs).
- All trusts providing acute care for older people presenting with fractures of the neck of femur should develop improvement networks with local trusts.
- Participation in regular audit should be considered an important factor in delivering a fractured neck of femur service of both high quality and value (eg in the forthcoming national hip fracture registry).

We would value your contributions to our future work. If you would like to be involved, or have any comments, please email enquiries@institute.nhs.uk.

5 British Orthopaedic Association and British Geriatrics Society (2005), National hip fracture registry manifesto (Unpublished)
We wish to thank everyone who has contributed their time to enable us to carry out this work, and in particular the staff who took time out from their busy schedules to show us how they work and for all the information they shared. This includes the organisations we visited and their associated PCTs and local authorities.

The trusts we visited were:
Peterborough and Stamford Hospitals NHS Foundation Trust
Queen Elizabeth Hospital King’s Lynn NHS Trust
Mid Essex Hospital Services NHS Trust
University Hospitals of Leicester NHS Trust
Barnsley Hospital NHS Foundation Trust

We would also like to thank the following for their contribution:
Barking, Havering and Redbridge Hospitals NHS Trust
Norfolk and Norwich University Hospitals NHS Trust
Dr Colin Currie, Senior Lecturer, Department of Geriatric Medicine, School of Clinical Sciences and Community Health, University of Edinburgh

The trusts that took part in the Rapid Improvement Programme for Fractured Neck of Femur were:
• Calderdale and Huddersfield NHS Trust.
• Stockport NHS Foundation Trust.
• Leeds Teaching Hospitals NHS Trust.
• Maidstone and Tunbridge Wells NHS Trust.
• Shrewsbury and Telford NHS Trust.
• The Whittington Hospital NHS Trust.
• Royal Berkshire Hospitals NHS Foundation Trust.
• Poole Hospital NHS Foundation Trust.
• United Lincolnshire Hospitals NHS Trust.
• Ipswich Hospital NHS Trust.
Further information

Published material

Department of Health Older Persons’ Team, in collaboration with the commissioning Directorate, have developed a comprehensive Toolkit for commissioning of falls and fractures prevention services. See (www.dh.gov.uk/en/Publications andstatistics/Publications/DH_103146)

Guidance on Best Practice tariff for Fractured Neck of Femur to be found at: (www.dh.gov.uk/ prod_consum_dh/groups/dh_digitalassets/@dh/ @en/@ps/documents/digitalasset/dh_112970.pdf)


Appendix

Benchmark data 2005/06

The table that follows has been provided to enable individual trusts’ performance to be benchmarked against nationally available data across a range of indicators. The data table relates to the following patients:

- Inpatients with a primary diagnosis of fractured neck of femur who were discharged within the specified financial year. (The ICD 10 codes used were S720–S722.)
- Patients of ages ranging from 0 to 108 years – with a median age of 80 years. 25% of patients were male and 75% were female.
- The average length of spell is defined as the mean of the number of days between the date of admission and the date of discharge.
- The average length of superspell is defined as the mean of the number of days between the date of admission for the first spell and the date of discharge from the last spell in the superspell. A superspell differs from a standard spell in that it includes transfers to other hospitals.

The total number of trusts included in the analysis was 150. (Specialist trusts, such as children’s trusts were excluded from the analysis).
<table>
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<th>Average length of spell</th>
<th>Average length of superspell</th>
<th>In-hospital mortality (unadjusted) within 30 days</th>
<th>% patients operated on days 0-2</th>
<th>% patients with emergency readmission within 28 days</th>
<th>% patients discharged to usual place of residence within 28 days</th>
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<tr>
<td>Maximum</td>
<td>42.4</td>
<td>49.8</td>
<td>20.1%</td>
<td>95.2%</td>
<td>19.0%</td>
<td>91.3%</td>
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<td>Minimum</td>
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<td>5.4%</td>
<td>48.3%</td>
<td>1.5%</td>
<td>26.9%</td>
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<td>Highest 25% performers</td>
<td>19.6</td>
<td>24.8</td>
<td>10.5%</td>
<td>83.8%</td>
<td>7.6%</td>
<td>75.8%</td>
</tr>
<tr>
<td>Lowest 25% performers</td>
<td>26.2</td>
<td>31.2</td>
<td>13.3%</td>
<td>70.4%</td>
<td>10.6%</td>
<td>56.6%</td>
</tr>
<tr>
<td>Median</td>
<td>22.8</td>
<td>27.5</td>
<td>12.1%</td>
<td>77.4%</td>
<td>9.2%</td>
<td>67.2%</td>
</tr>
<tr>
<td><strong>Large trusts more than 1,000 beds (n=44)</strong></td>
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</tr>
<tr>
<td>Maximum</td>
<td>34.6</td>
<td>38.4</td>
<td>19.4%</td>
<td>86.1%</td>
<td>19.0%</td>
<td>85.4%</td>
</tr>
<tr>
<td>Minimum</td>
<td>12.4</td>
<td>14.2</td>
<td>6.0%</td>
<td>58.8%</td>
<td>6.6%</td>
<td>36.3%</td>
</tr>
<tr>
<td>Highest 25% performers</td>
<td>20.1</td>
<td>24.7</td>
<td>10.5%</td>
<td>80.3%</td>
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<td>74.0%</td>
</tr>
<tr>
<td>Lowest 25% performers</td>
<td>25.5</td>
<td>30.6</td>
<td>13.1%</td>
<td>71.6%</td>
<td>10.4%</td>
<td>56.1%</td>
</tr>
<tr>
<td>Median</td>
<td>21.8</td>
<td>27.4</td>
<td>12.3%</td>
<td>76.3%</td>
<td>9.2%</td>
<td>66.6%</td>
</tr>
<tr>
<td><strong>Medium trusts 400 – 999 beds (n=51)</strong></td>
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<tr>
<td>Maximum</td>
<td>42.4</td>
<td>49.8</td>
<td>20.1%</td>
<td>95.2%</td>
<td>13.7%</td>
<td>91.3%</td>
</tr>
<tr>
<td>Minimum</td>
<td>10.7</td>
<td>16.9</td>
<td>5.4%</td>
<td>50.7%</td>
<td>1.5%</td>
<td>30.0%</td>
</tr>
<tr>
<td>Highest 25% performers</td>
<td>20.1</td>
<td>25.1</td>
<td>10.7%</td>
<td>86.4%</td>
<td>7.4%</td>
<td>77.4%</td>
</tr>
<tr>
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<td>26.8</td>
<td>32.6</td>
<td>13.6%</td>
<td>70.6%</td>
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<td>54.6%</td>
</tr>
<tr>
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<td>28.2</td>
<td>12.2%</td>
<td>79.2%</td>
<td>8.8%</td>
<td>67.2%</td>
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<tr>
<td>Maximum</td>
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<td>36.5</td>
<td>16.9%</td>
<td>91.1%</td>
<td>16.7%</td>
<td>84.3%</td>
</tr>
<tr>
<td>Minimum</td>
<td>13.7</td>
<td>17.6</td>
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<tr>
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<td>24.0</td>
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<td>83.9%</td>
<td>6.8%</td>
<td>70.9%</td>
</tr>
<tr>
<td>Lowest 25% performers</td>
<td>24.5</td>
<td>30.0</td>
<td>14.0%</td>
<td>75.5%</td>
<td>11.2%</td>
<td>55.2%</td>
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<tr>
<td>Median</td>
<td>21.5</td>
<td>26.3</td>
<td>11.7%</td>
<td>81.2%</td>
<td>9.3%</td>
<td>64.5%</td>
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<tr>
<td><strong>Teaching trusts (n=23)</strong></td>
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<tr>
<td>Maximum</td>
<td>31.6</td>
<td>38.7</td>
<td>17.8%</td>
<td>90.8%</td>
<td>16.5%</td>
<td>84.7%</td>
</tr>
<tr>
<td>Minimum</td>
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<td>20.1</td>
<td>6.0%</td>
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<td>42.2%</td>
</tr>
<tr>
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<tr>
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<td>60.3%</td>
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<tr>
<td>Median</td>
<td>22.9</td>
<td>28.2</td>
<td>11.6%</td>
<td>74.4%</td>
<td>9.4%</td>
<td>73.0%</td>
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