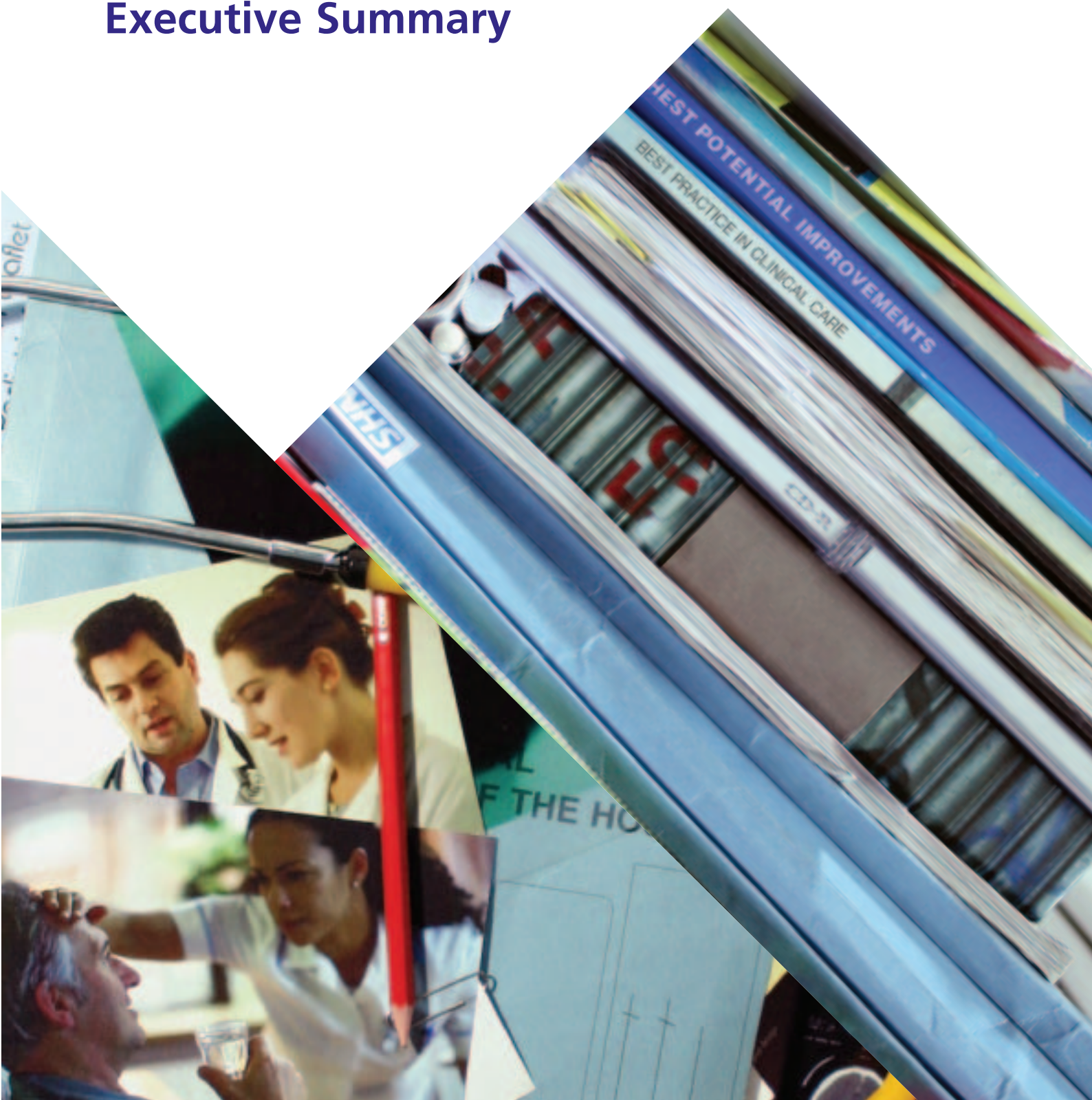


Delivering Quality and Value

# Focus on: High Volume Care Executive Summary





# Introduction

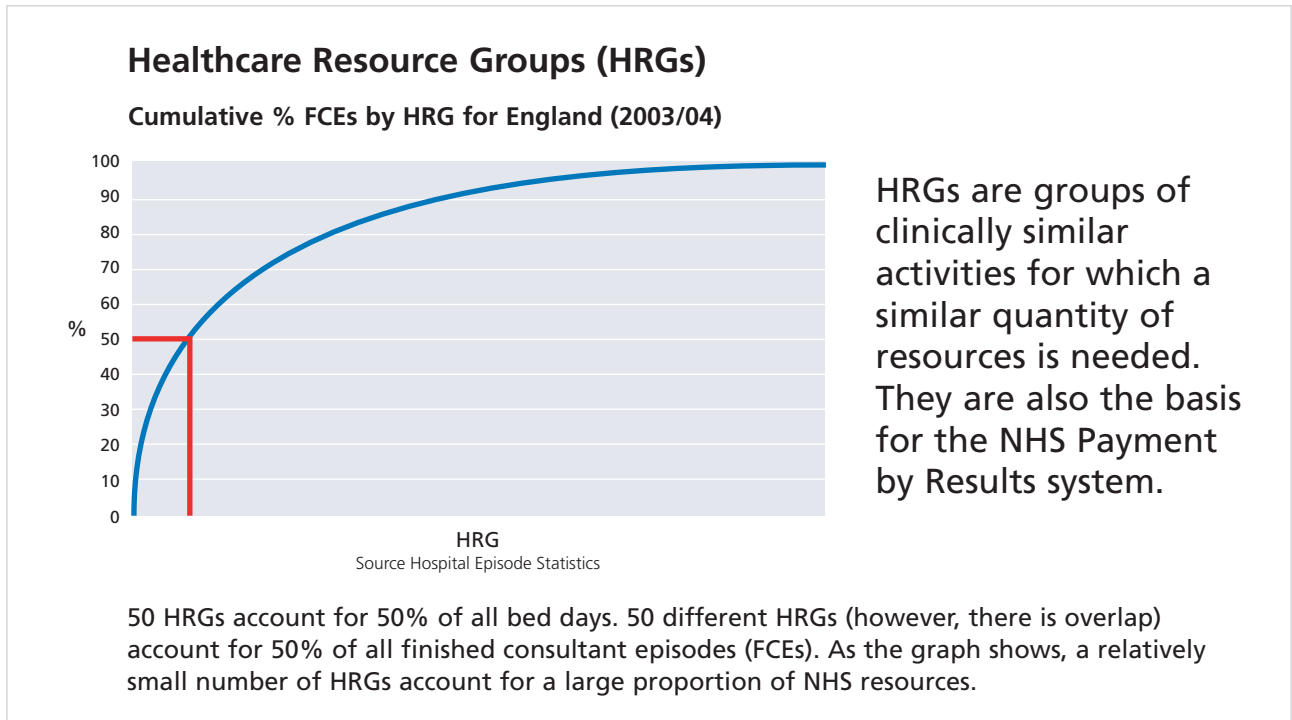
The NHS Institute for Innovation and Improvement's main objective is to 'improve health outcomes and raise the quality of delivery in the NHS by accelerating the uptake of proven innovation and improvements in healthcare delivery models and processes, medical products and devices and healthcare leadership'.

The Delivering Quality and Value programme is one of six current priority areas for the Institute. All of the

work outlined in this summary has been co-produced with a large number of NHS staff from a wide range of NHS organisations. These organisations are listed in each of the individual *Focus On* documents.

The aim of this document is to summarise the initial outcomes of the Delivering Quality and Value programme, focusing on eight high volume areas of care. These were mainly identified and classified using Healthcare Resource Groups (HRGs).

Figure 1



HRGs are groups of clinically similar activities for which a similar quantity of resources is needed. They are also the basis for the NHS Payment by Results system.



The primary aim of the team's work has been to discover how the top performing healthcare organisations in the NHS and elsewhere deliver the highest quality care with the best resource utilisation.

The high volume care areas studied by the programme are:

- acute admissions in adult mental health
- acute stroke
- Caesarean section
- fractured neck of femur
- cholecystectomy
- short stay emergency care (length of stay two days or less)
- urinary tract infections (as a tracker condition for frail older patients)
- primary hip and knee replacement.

The full observations and outcomes for each of these eight care areas are published in a series of Delivering Quality and Value: Focus On documents, which are designed to help local health communities and organisations to improve the quality and value of care.





## Context - why is this important?

The challenge of meeting or exceeding operational performance targets, while maintaining financial balance, is becoming increasingly more difficult - as evidenced by the number of NHS organisations currently experiencing acute financial pressures. A number of contextual and policy drivers affect this area:

- Payment by Results means that trusts with above-average costs will need to focus on productivity and efficiency of service provision.
- The Government's focus is on ensuring that the NHS improves financial management while also continuing to deliver access and other performance targets.
- Primary care trusts, strategic health authorities and trusts all recognise that short-term fixes cannot provide sustainable long-term solutions to these difficulties, and that more fundamental service redesign is required to tackle the problem.

## How did the Delivering Quality and Value team approach this work?

**We identified target HRGs (or related care groups where HRGs were not applicable) with a high potential for gain.**

- We focused on high volume HRGs.
- We focused on HRGs with a high level of variation in their use of resources.
- We consulted and tested this selection with NHS co-producers.

**We engaged with stakeholders across the NHS.**

- We framed the programme content and approach.
- We identified collaborators, contributors and co-producers.
- We identified field test opportunities.

**We studied high and low performing pathways within trusts and their local health systems.**

**We applied a lean management approach to process improvement and waste elimination when studying the existing care pathway in NHS organisations.**

**We compared NHS performance with the best international performance.**

**We studied the variation in:**

- length of stay
- mode of care (inpatient/day case/outpatient)
- admission/conversion rates
- techniques (open/minimally invasive)
- location of care (primary care/secondary care/community/home)
- diagnostics protocols
- staff skill level (consultant/practitioner)
- clinical supplies use.

**In addition, we looked at the impact of this variation on:**

- patient and carer satisfaction
- clinical outcomes
- staff morale
- cost.

**We identified the key characteristics of high performance pathways within trusts.**

**We developed concepts for field testing.**

**We ran field tests with a range of NHS organisations to:**

- test concepts
- refine solutions and approaches.

**We designed and developed products and tools to help implementation. These will follow on from the publication of this document.**

This set of documents is designed to be as flexible as possible: it can either be used as a set, or each pathway focusing on a particular area of high volume care can be used individually. All of the documents include case studies and practical ideas for achieving high quality care and value for money. They cover:

**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.**

# Focus on: Acute Admissions in Adult Mental Health

## Context

Developments in adult mental health as a result of community care policies and encouraged through the National Service Framework have seen investment and the redirection of resources into services in the community. The aim is to improve the quality of care and to reduce the need for inpatient admissions as well as reducing the length of stay for the majority of acutely ill people.

Acute home treatment, assertive outreach teams and other community developments have dramatically reduced the demand for acute beds. In some areas, this has led to the closure of wards or has removed the demand for private facilities to complement bed numbers.

However, these developments have had little impact on those patients for whom alternative and more appropriate accommodation cannot be found. The mean length of stay for adult mental illness has remained relatively steady, rising from

52.5 days in 2002/03 to 55.7 in 2004/05. Care delivered at home is both cheaper and usually more acceptable to service users and their carers. However, inpatient care is still needed in some instances albeit generally for shorter periods than in the past.

Services that follow the optimised pathway and exhibit the key characteristics outlined below offer considerable benefits to service users, carers and staff:

- Delays and inappropriate lengths of stay are reduced, and home-based care is increased.
- Patient satisfaction increases.
- Financial savings are made.
- There is an optimum working environment.
- Team working is improved.

## Key characteristics of organisations providing high quality care and value for money

- There is effective, integrated, system-wide communication.
- Trusts have robust clinical leadership.
- Alternatives to admission are used when possible.
- Staff plan proactively for discharge and overcome barriers when admission is necessary.
- There is effective multidisciplinary working and training.
- There is a continuous and seamless service.
- Services are focused on users and carers.
- Care is high quality and effective, and includes psychological interventions.
- A balanced approach to risk taking is supported from the top of the organisation.
- Inpatients are cared for in a therapeutic, safe and sensitive environment.
- The health community is based on committed commissioning and strategic support.



## Further products

To help local health communities and organisations to improve the quality and value of care, the NHS Institute is planning to produce the following:

- A website with the pathway measures, documents and resources for implementing the pathway.
- A hard copy pathway and principles discussion tool for use by staff and service users.



## Focus on: Acute Stroke Context

Stroke is a leading cause of death and disability. Its financial consequence is £2.8 billion in direct costs for the NHS and £1.9 billion in indirect costs for the wider community.<sup>1</sup>

Recent research has demonstrated that treating stroke as an acute emergency condition improves the outcome. This has been described as the concept of 'time lost is brain lost'.

The management of stroke patients on an acute and rehabilitation stroke unit - and the use of thrombolysis for eligible patients have both been shown to improve the quality of care and value for money.

The optimum stroke pathway has been designed from observed best practice, and through discussion with specialist clinicians and managers.

### Key characteristics of organisations providing high quality care and value for money

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- The health community recognises that acute stroke is a medical emergency.
- There is an acute stroke pathway within the acute stroke unit.
- There is immediate, 24/7 access to acute brain imaging (CT head scanning).
- Stroke patients are admitted to a specialist acute stroke unit.
- There are current, agreed drug protocols for secondary prevention.
- All patients receive specialist rehabilitation with clear goals and standardised assessment.
- There is regular multidisciplinary discharge planning.
- There is a high degree of involvement from patients and the public.

<sup>1</sup> National Audit Office (2005), *Reducing brain damage: Faster access to better stroke care*, NAO, London



## Further products

To help local health communities and organisations to improve the quality and value of care, the NHS Institute is planning to produce the following:

- A business case template to support acute stroke service development.
- An interactive website with information and training resources aimed at patients, carers and professionals.





## Focus on: Caesarean Section Context

In the past 15 years, the proportion of births by Caesarean section (CS) has been increasing steadily in England. In 1989/90, CS births accounted for 12% of all births, while in 2005/06 the rate rose to 24%. There is also wide variation in the CS rate from one maternity unit to another, ranging from 12.5% to 34.6%. The highest performing maternity units achieve a CS rate that is consistently below 20%, and have aspirations to reduce that rate to

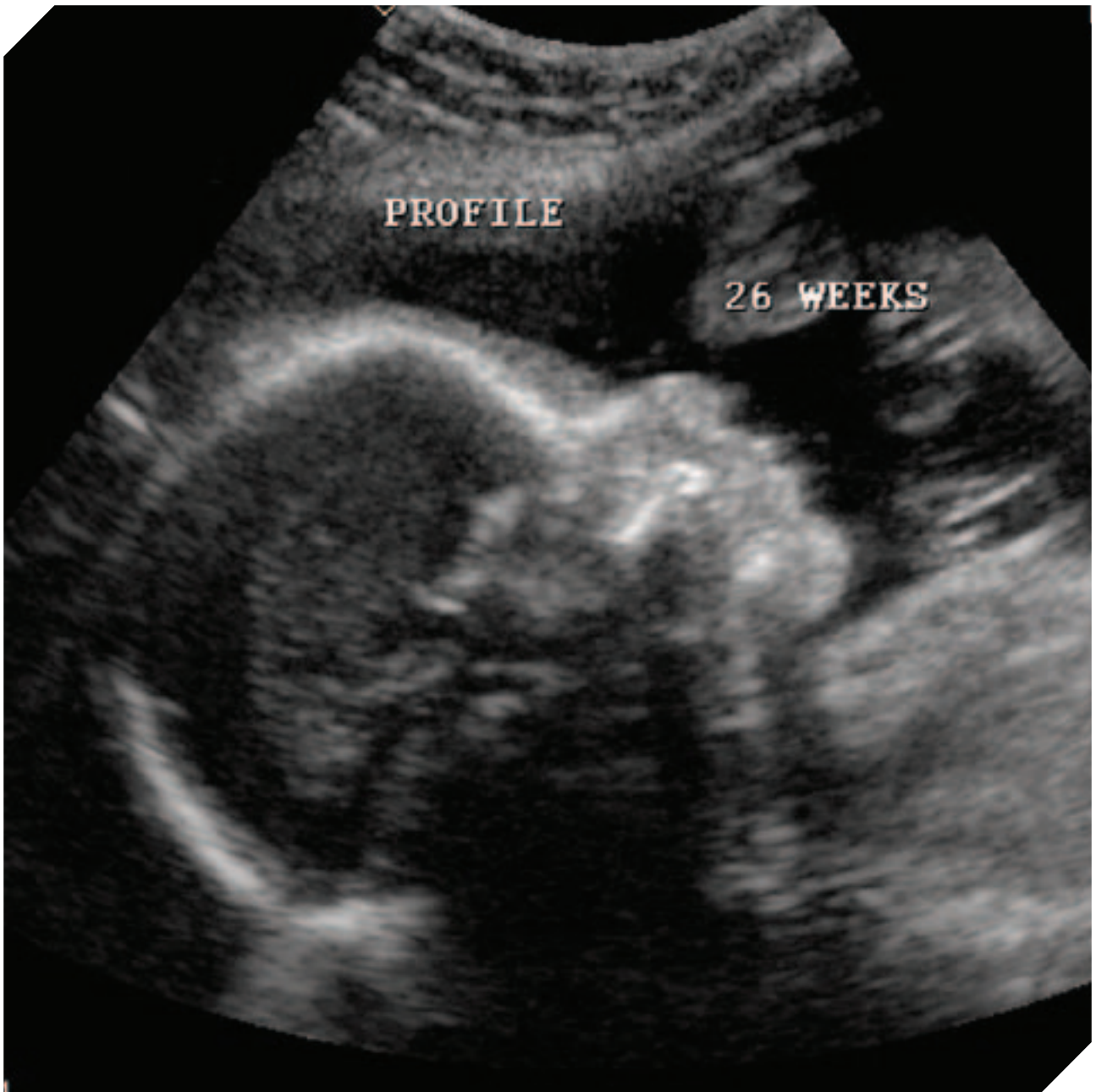
15% through the management of three key pathways:

- The management of women in their first pregnancy and labour.
- The management of women to promote vaginal birth after Caesarean (VBAC).
- The management of women undergoing an elective CS.

### Key characteristics of organisations providing high quality care and value for money

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- 'We focus on keeping pregnancy and birth normal.'
- 'We are a real team - we understand and respect roles and expertise.'
- 'Our leaders are visible and vocal.'
- 'Our guidelines are evidence-based and up to date.'
- 'We all practise to the same guidelines - no opting out.'
- 'We manage women's expectations and prepare them for the reality of labour.'
- 'We give accurate information about risks and benefits, but with a positive spin.'
- 'If a Caesarean section is planned, the process is efficient and effective.'
- 'We get accurate, timely and relevant information on our performance.'
- 'We are involved with our patients, carers and families.'



## Further products

To help local health communities and organisations to improve the quality and value of care, the NHS Institute is planning to produce the following:

- Pathway to Success Caesarean section: A self-assessment tool

(available March 2007): a tool that will help trusts to assess their current practice and capacity, identify potential improvements and provide practical support for making changes.





## Focus on: Fractured Neck of Femur

### 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. 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.<sup>2</sup> Many of the patients have significant co-morbidities that may delay surgery or their recovery, and they are also vulnerable to healthcare-acquired infections.

superspell (total time in NHS care, including community care) ranges from 17 to 40 days.

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 such as the rapid optimisation of co-morbidities, fluid and nutritional status, as well as the underlying cause of the fall, and management of the osteoporotic risk will result in poorer outcomes.

The length of stay across trusts in England ranges from 11 to 38 days. The average length of


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## Key characteristics of organisations providing high quality care and value for money

- The average acute length of stay is less than 15 days and the average superspell is less than 21 days.
- More than 76% of all hip fractures are operated on within two days. (Preoperative delays result in an increase in mortality and an increase in postoperative stay; every eight hours of delays to surgery after the initial two days equate to an extra day's stay in hospital).
- 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 fractured neck of femur patients, with a focus on rapid rehabilitation, ensuring optimal health outcomes and timely discharge. (This has been shown to reduce the average length of stay by up to eight days per patient).
- 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.
- An 'admit, operate and discharge home' mindset is owned by and delivered through a designated multidisciplinary team, which meets daily and collaborates on all patients, including liaison with an orthogeriatrician.<sup>3</sup>

<sup>2</sup> Based on 2005/06 tariff

<sup>3</sup> British Orthopaedic Association (2003), *The care of fragility fracture patients*, BOA, London ([www.boa.ac.uk/site/showpublications.aspx?ID=59](http://www.boa.ac.uk/site/showpublications.aspx?ID=59))





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## Further products

To help local health communities and organisations to improve the quality and value of care, the NHS Institute is planning to produce the following:

- Fractured neck of femur networks linking hospitals, to share best practice and learning, and to provide support among organisations.
- Interactive multimedia patient information and a message campaign targeting public and staff perceptions of care, eg a DVD explaining to patients and carers what to expect regarding their care and when they will receive it.
- Pathway information presented for staff in different forms, eg pocket-sized information regarding care for patients with fractured neck of femur.





## Focus on: Cholecystectomy

### Context

A total of 49,077 cholecystectomy procedures took place in England between April 2005 and March 2006, of which 86% were performed electively and 14% during an emergency admission. Overall, 84% of cholecystectomies were undertaken laparoscopically. There is large variation between trusts, with high performers achieving over 90%


laparoscopic rates (includes day case and inpatients' cholecystectomies) compared with some low performers where the rate of laparoscopic cholecystectomy is under 50%. The national average day case cholecystectomy rate is only 6.4%. The average length of stay ranges from 1.2 to 6 days.

## Key characteristics of organisations providing high quality care and value for money

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- The day case rate is between 40 and 50% (and the highest performers are now aspiring to achieve at least 70%).<sup>4</sup>
- The average length of stay is less than two days.
- The pathway is a standardised process which should cover 95% of laparoscopic cholecystectomy cases, but it does have the flexibility to allow for exceptions.
- The pathway is applicable to all patients undergoing surgery irrespective of whether they are cared for within a day case, 23-hour or inpatient environment.
- Inpatient care is the exception rather than the norm in the majority of elective procedures; this requires the development of a day case mindset across the organisation.
- Patient expectations are managed consistently across the entire patient journey from GP referral to hospital discharge.
- Surgical sub-specialisation reduces patient morbidity, increases productivity and reduces length of stay. Recent publications recommend a minimum number of 200 laparoscopic cholecystectomies per surgeon over five years.
- Emergency laparoscopic cholecystectomy is safe in the hands of sub-specialised laparoscopic surgeons.
- Conversion rates from laparoscopic to open should be less than 5% for elective laparoscopic cholecystectomy and less than 10% for emergencies.
- There are no routine postoperative follow-ups for outpatients.
- Emergency patients have rapid access to diagnostic investigations (within 48 hours of presentation) to enable early operative intervention.
- Redesigning the emergency pathway will reduce costs by preventing avoidable emergency readmissions, as well as improving the patient experience.
- Day surgery facilities are designed/redesigned to aid flow (a combined day surgery and 23-hour facility might provide more flexibility, but overnight stays should be based on clinical criteria rather than on the availability of beds).

<sup>4</sup> This may include some highly specialised units doing complex surgery, and therefore 50% may be an appropriate rate in this setting





## Further products

To help local health communities and organisations to improve the quality and value of care, the NHS Institute is planning to produce the following:

- Guidance for commissioners (to be published in early December 2006).
- Information for GPs and patients (to be published in early December 2006).





## Focus on: Short Stay Emergency Care

### Context

Short stay emergency care focuses on the emergency care interface between primary and secondary care.

Optimisation of the clinical pathway for patients requiring short stay emergency care will result in marked improvements in the quality of care for this group of patients and other patients accessing acute and elective care. Conversely, poor management of this group of patients will result in poor quality outcomes, longer length of stay, more in-hospital moves and higher numbers of healthcare-acquired infections. Poor management also has knock-on effects for other patient groups

within the hospital, such as medical outliers on surgical wards.

The short stay emergency care pathway should be used for all groups of patients potentially requiring admission. Even frail older patients can be managed through this process; this will ensure that their acute need is managed quickly and that they are able to progress quickly to treatment, therapy and discharge.

The majority of the suggested improvements are applicable and easily transferable to other emergency pathways.

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## Key characteristics of organisations providing high quality care and value for money

- There is a focus on reducing the number of bed days needed for emergency care.
- Admissions are avoided as far as possible by managing patients in emergency clinics or as day cases. Guidance on the proportion of patients with defined conditions who can expect to be managed without admission will be included in the Institute's directory of ambulatory emergency care (see below). Admission avoidance is applicable to patients with all lengths of stay, but is particularly applicable to those with a length of stay of zero (an episode of care that doesn't include an overnight stay). In 2004/05, these accounted for at least 20% of the 4,428,680 emergency admissions to acute hospitals in England, suggesting that a large number of patients would be amenable to alternatives to acute care.
- The proportion of short stays (one to two days) is increased by managing part of a patient's care in an ambulatory manner (out of hospital) after the initial hospital admission. Short stays (excluding paediatrics, obstetrics and gynaecology) currently make up between 28 and 64% of all emergency admissions for Trusts in England.
- There is effective integration across the health and social care sector (between primary, community, mental health, social and secondary care), ensuring that comprehensive assessments of illness severity, co-morbidity, disability and social support take place. This aids and speeds up clinical decision making about patients who require emergency care.



23 IMPROVEMENTS IN: SHORT STAY EMERGENCY CARE



## Further products

To help local health communities and organisations to improve the quality and value of care, the NHS Institute is planning to produce the following:

- A directory of ambulatory emergency care, which will guide and support clinical teams in making appropriate assessment and decisions for alternatives to acute care, eg 'emergency outpatients'.
- Interactive multimedia patient information and a message campaign targeting public and staff perceptions of care, eg a DVD explaining to patients and carers what to expect regarding their care and when they will receive it.
- Pathway information presented for staff in different forms, eg pocket-sized information regarding algorithms and protocols for care.





## Focus on: Frail Older People

### Context

England has an ageing population; the over-80s are the fastest growing segment of the population, and their numbers will increase by 50% by 2020. In 2005/06 in England, 55,568 patients aged over 75 years were admitted as an emergency, diagnosed with a urinary tract infection. This cost the NHS at least £146 million.<sup>5</sup>


The mortality rates, length of stay and institutionalisation rates for frail older people are all much greater than for younger and less complex patients. For a frail older person, a stay in hospital should be a beneficial intervention at a time of

greatest need: it should involve the appropriate and timely treatment of acute medical problems and a comprehensive, multidisciplinary evaluation of overall health status. Without proper care, hospital admission becomes a critical life event for older people, precipitating a medical, social, emotional and financial crisis, with poor recovery and subsequent transfer to institutional care.

Length of stay (superspell) for patients over 75 admitted with a urinary tract infection varies from 9 to 27 days across English trusts.



## Key characteristics of organisations providing high quality care and value for money

- 
- The average length of superspell stays is less than 13 days.
  - Specialist teams pull patients through to the appropriate clinical environment. As well as achieving better health outcomes, this can reduce by up to six days the time taken to get patients to the appropriate clinical area and to have them seen by the correct teams. (This system has also been shown to reduce the length of stay by up to four days once the patient is in the appropriate clinical area).
  - 90% of patients are discharged back to their usual place of residence. (This rate is currently as low as 53% for some organisations).
  - There is comprehensive multidisciplinary assessment and treatment for frail older people. This reduces mortality, reduces discharges to care homes and prevents readmission to hospital.
  - There is specialist mental health input into intermediate care. This is crucial for the wellbeing of the patient and for preventing delays in discharge; up to 60% of general hospital admissions over 65 years of age will have or will develop a mental health disorder during their admission.
  - High performing organisations use a 'bundle' of care for patients aged over 65 with delirium (acute confusional state). It is a good marker of quality of care for frail older people. Key elements of the bundle are:
    - Cognitive assessment takes place for all patients.
    - Restraints are kept to a minimum.
    - Urinary catheterisation is kept to minimum.
    - There are comprehensive procedures to minimise pressure sores, falls, continence problems, functional decline due to deconditioning, malnutrition and dehydration.



## Further products

To help local health communities and organisations to improve the quality and value of care, the NHS Institute is planning to produce the following:

- Interactive multimedia patient information and a message campaign targeting public and staff perceptions of care, eg a
- DVD explaining to patients and carers what to expect regarding their care and when they will receive it.
- Pathway information presented for staff in different forms, eg pocket-sized information regarding comprehensive assessment for older people.





## Focus on: Primary Hip and Knee Replacement Context

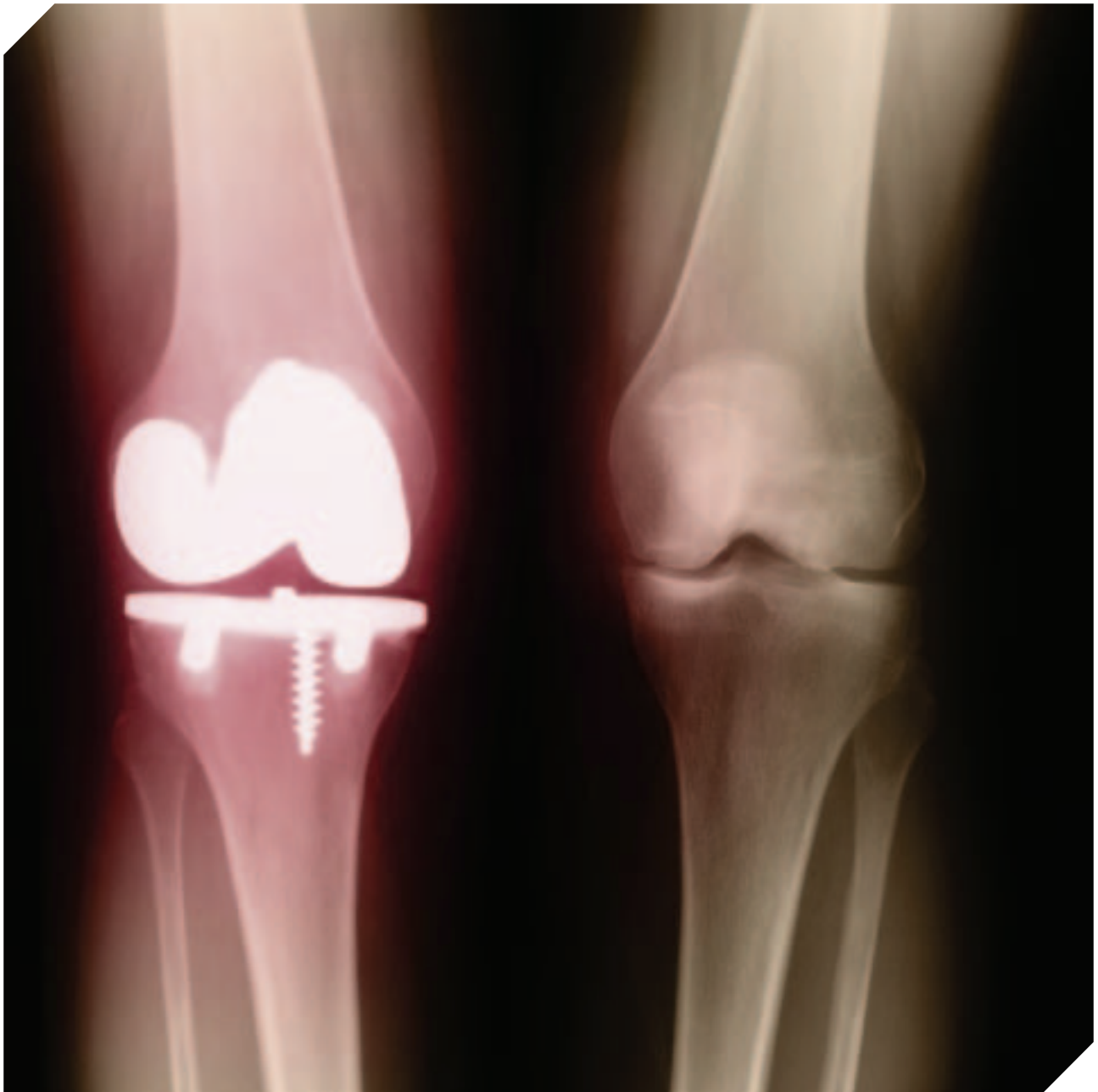
The demand for orthopaedic services and particularly for primary hip and knee replacements has grown steadily over the past 20 years and continues to do so. The complexity of both the conditions treated and the treatments available has also increased. The waiting times for joint replacements have been up to two years in the past, but current waiting targets are six months, and services are working towards achieving the 18-week target in 2008.

The introduction of Payment by Results has imposed a financial discipline not experienced before, and this is having a major influence on the clinical process. The challenge is to deliver high quality care and high levels of patient satisfaction and to maintain or improve the outcomes of joint replacement for greater numbers of patients within existing or reduced capacity and facilities.

### Key characteristics of organisations providing high quality care and value for money

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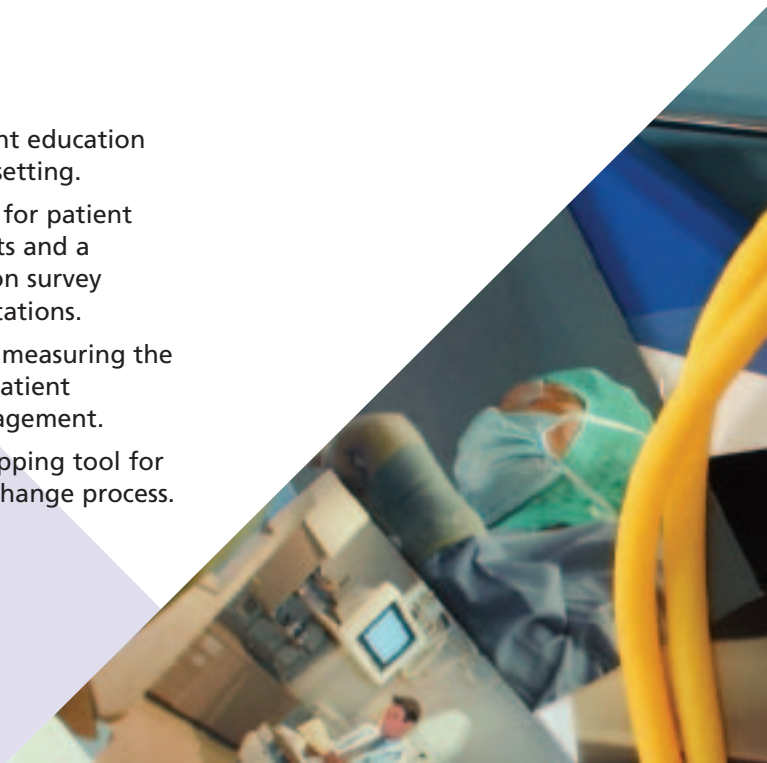
- The average length of stay is less than 6.7 days for hip replacements and 6.5 days for knee replacements.
- 100% of patients are assessed prior to admission.
- 99% of patients are admitted on the day of surgery.
- The length of time between admission and surgery is four hours, and the highest performers aspire to reduce this even further.
- The number of cancellations within 48 hours of the planned surgery time is less than 2% of the total.
- 95% of patients are mobilised within 12-18 hours of surgery.
- Postoperative pain management protocols allow proactive management of pain.
- 40% or more of patients are discharged within four days of their procedure; this is facilitated by criteria-based discharge.
- A unified multidisciplinary care team is developed.
- Patients' expectations are consistently managed. (The improved preparation of patients prior to admission can virtually abolish cancellations for medical reasons).



## Further products

To help local health communities and organisations to improve the quality and value of care, the NHS Institute is planning to produce the following:

- Aide Memoir and Measures for Improvement Guides for managers and clinical leaders containing key information on how to implement each characteristic.
- A video for patient education and expectation-setting.
- Online templates for patient information sheets and a patient satisfaction survey relating to expectations.
- An audit tool for measuring the effectiveness of patient expectation management.
- An aspiration mapping tool for the initiation of change process.



We would value your contributions to our future work. If you would like to be involved, or have any comments, please contact the Delivering Quality and Value team at [HRG@institute.nhs.uk](mailto:HRG@institute.nhs.uk).





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