

# HOW SAFE IS YOUR HOSPITAL?

Do not use if seal is broken

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# Editors' letter

*It's that time again: the latest Hospital Guide has arrived. Over the years, the report has remained a constant as an independent, authoritative guide to hospital care written for the patient, the politician, the civil servant, the manager and the clinician. This year, our second as editors, we wanted to go back to basics but also to push new boundaries. Two conflicting ambitions? Perhaps not.*

*To do this, we set ourselves a couple of exam questions. What does a good hospital look like? And what, as patients, do we expect from our hospitals? There is no shortage of opinion out there, but when reflecting on 'good quality care' and what it means, we found it boiled down to one thing: safety. Safety has to be the single most important element of good patient care. It protects patients, it improves care, and it can even save money.*

*So this year the Guide is all about safety and we're delighted to have been able to collaborate with the National Patient Safety Agency on this. Martin Fletcher gives his three steps to improving safety on page 11, Professor James Reason offers top tips for choosing a safe hospital on page 12, and Dr Tanya Huehns puts herself in a patient's shoes on page 13.*

*The die-hard followers of the Hospital Guide among you will recognise one or two familiar themes (mortality ratios still feature), but you will also see where we have pushed the boundaries and tried new things. For the first time, we have attempted to derive a single patient safety score that the public can use to identify the highest achieving hospitals. This was no small task, and even though we are familiar with statistical conundrums, we found it a tough exercise. By pooling some of the best brains in Britain and taking advice from both sides of the Atlantic, we finally got there. You will find the results on pages 29-31. Inevitably not everyone will agree, but nonetheless it is a departure from our usual approach and an important step forward – one that we hope will spark an interesting debate.*



**Zoe Bedford**



**Alex Kafetz**

*We have also produced a 'quality account' for every English NHS trust by measuring hospitals across three aspects of care (find the accounts at [www.drfoosterhealth.co.uk](http://www.drfoosterhealth.co.uk)). In doing this, our aim is to help you – the patients, carers and medical professionals – to understand more about your local hospital by using comparative data produced in a user-friendly way.*

*We remain committed to the Hospital Guide but we could not do this alone. So we are enormously grateful to all the NHS trusts who responded to our questionnaire, making this our best year yet with a response rate of 99 per cent. Thank you also to Martin, Tanya, Simon, Paul, Lois and the scores of other people who lent their expertise to this report.*

# 20

## things you need to know about our hospitals

<b>1</b>	12 trusts significantly underperform on basic safety measures	<b>11</b>	82 incidents of 'wrong-site' surgery were recorded last year (operating on the wrong part of the body)
<b>2</b>	Nationally the HSMR (mortality ratio) decreased by 7 per cent in 2008/09	<b>12</b>	1 in 5 trusts do not check patients admitted through A&E for MRSA
<b>3</b>	32 trusts have significantly low death rates	<b>13</b>	478 operations were cancelled in 2008/09 because patient notes were missing
<b>4</b>	27 trusts have significantly high death rates	<b>14</b>	5,024 people admitted with 'low-risk' conditions died in hospital last year
<b>5</b>	Mid Staffordshire NHS Foundation Trust improved its mortality ratio by 34 per cent over the past three years	<b>15</b>	848 people who died after being admitted with 'low-risk' conditions were under the age of 65
<b>6</b>	Basildon and Thurrock University Hospitals NHS Foundation Trust has a mortality ratio 31 per cent above the national average	<b>16</b>	Over 8,000 more operations could have been performed last year if hospitals had treated all hip fractures on time
<b>7</b>	100 per cent of trusts have someone responsible for patient safety at board level	<b>17</b>	Strokes cost the NHS £375.5m last year
<b>8</b>	39 per cent of hospitals do not investigate all unexpected deaths or cases of serious harm that occur on their wards	<b>18</b>	10 trusts scan fewer than 40 per cent of stroke patients within 24 hours
<b>9</b>	Only 37 per cent of trusts routinely ask patients and carers for opinions about their end-of-life care programme	<b>19</b>	If you have a heart attack in south-central England or the east Midlands, you are more likely to receive the preferred treatment of primary angioplasty than if you're in the east of England or the north-west
<b>10</b>	7 trusts are not responding quickly enough to national safety alerts	<b>20</b>	In 2008/09 the NHS spent over £1.5bn on people being readmitted within a month

# Openness is the key to safer hospitals

What does a safe hospital look like? How should patients and the public judge the safety performance of their local hospitals? Are hospitals getting safer?

These are all crucial questions and the Hospital Guide makes an important contribution to answering them. It brings together both new and established markers of safe care, using a mixture of information in the public domain and hospitals' own self-assessments.

The report helps to equip patients and the public to better understand safety in their hospitals. Such openness is a powerful weapon for tackling unsafe care.

So why is publicly reported information about patient safety so important?

First of all, improving patient safety is at the heart of the vision for quality in the NHS. This is a welcome development. Patient safety needs to be high on the healthcare policy agenda, not only in this country but across the world.

Second, an organisation which promotes safety has distinct and consistent characteristics. These include strong and visible leadership from the top, robust systems for reporting and learning, strong clinical engagement, careful attention to implementing safer practices at the frontline, and openness with patients and their carers. Attributes such as these can be measured and reported, and indeed should be.

Third, measuring efforts to improve patient safety – and reporting these efforts publicly – is essential to demonstrate safer care and set priorities for action. The currency of patient safety is harm being averted and lives being saved. Robust systems and processes are essential to ensure safe outcomes.

I am heartened that the report shows that many hospitals are seriously taking up the challenge of providing safer care. But there is clearly room for improvement and there are some areas of concern. Hospitals need to address these concerns urgently, and patients should use this report to hold their local hospitals to account.



**Martin Fletcher**

Chief Executive  
National Patient Safety Agency

# Information is not a privilege



*Tim Kelsey*  
Co-founder of Dr Foster

I don't think there is a single person in the NHS who would seriously question the need for quality measurement and public reporting today. A decade ago, it was very different. I remember a bizarre moment in which a senior clinical leader involved with Dr Foster was accused by a colleague of being a "terrorist" for promoting the idea that patients and the public had a right to know about standards in their local hospital.

There has been a sea change in attitude, and we must recognise and reward that. There is nothing like the independent Dr Foster Hospital Guide in any other health economy in the world, publishing detailed comparative outcomes for every hospital in the country. Patients in England also have access to vast amounts of useful quality information through NHS Choices ([www.nhs.uk](http://www.nhs.uk)) and other sources. We are irrevocably committed to transparency in our health system.

But we haven't done enough. The facts in this guide speak for themselves: there is still significant variation in quality between different trusts, and evidence of systemic underperformance in some. Neither clinicians, managers nor patients and their families should tolerate such variation. We must demand an NHS that demonstrates how it is improving standards and encouraging innovation in quality.

We should insist on more data on our hospitals. For example, we have very limited insight into the quality of patient experience. As financial pressure intensifies, we must demand evidence that the NHS is not sacrificing innovation and improvement in the search for cost savings. I would like every hospital to be required to publish comparative data on patient experience every month.

We should also insist on more data on the NHS as a whole, including guides to the quality of GPs, mental health services and social care services. Why can't we tell which local GPs perform more effectively than others, based on the measure of quality that we, individually, value the most? There is no good reason.

Quality is here to stay. All the main political parties agree that it should be the organising principle of the health and social care system. But we need to keep the pressure up and force the pace of the revolution in consumer information. The essential truth is that, when we know something, we can demand that something is done about it.

# How safe

# are our hospitals?

## FACT BOX

### DID YOU KNOW?

**5,024** people admitted with 'low-risk' conditions died in our hospitals last year, 848 of whom were under 65 years old

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**220** people died after being admitted for asthma

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**57** people died after being diagnosed with viral infections

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**56** people died with an admission for appendicitis

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**1 in 5** trusts do not check patients admitted through A&E for MRSA

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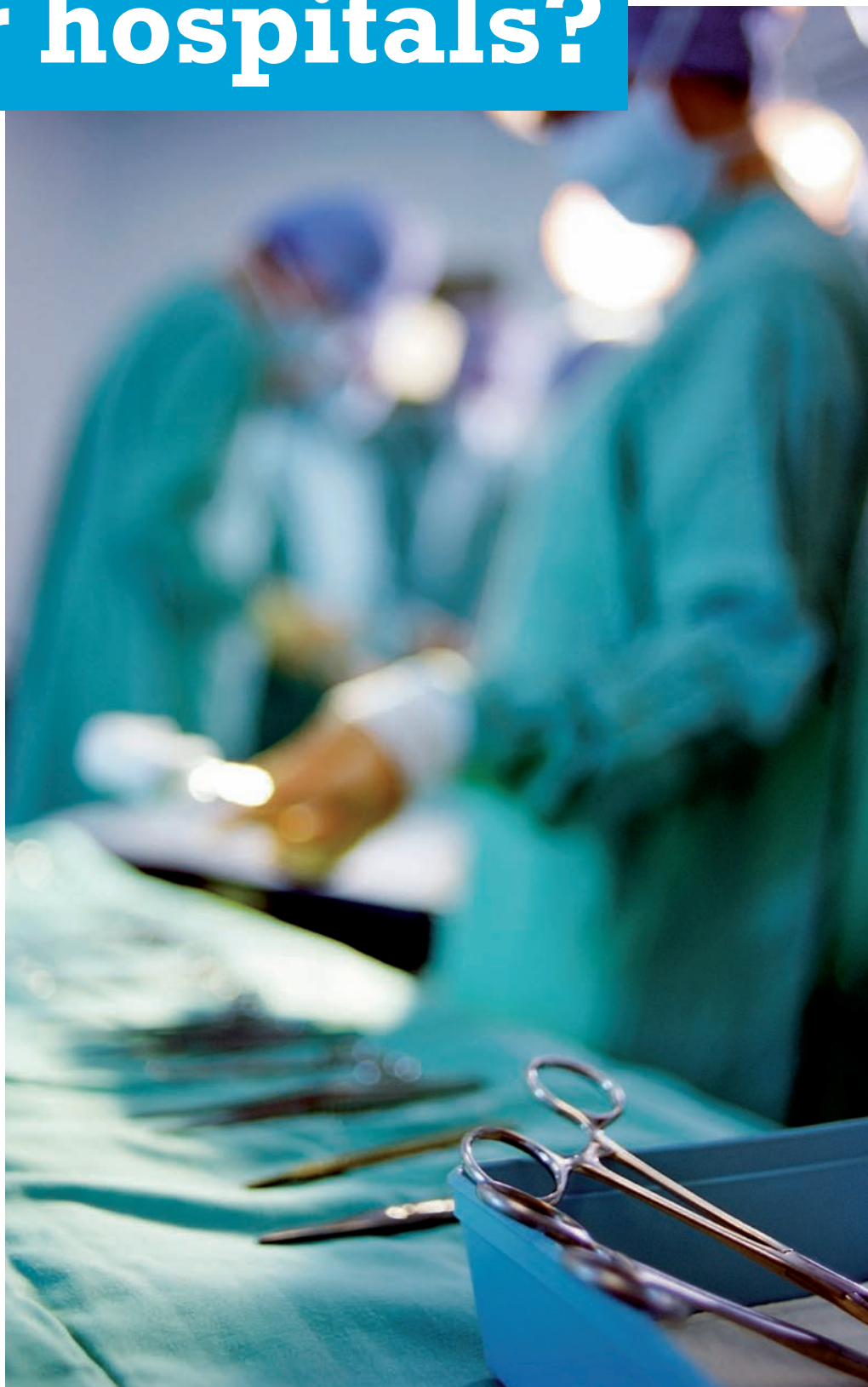
**82** incidents of 'wrong-site' surgery happened last year

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**209** 'foreign objects' were left behind in patients after surgery last year (and 5 trusts could not even report a number)

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**9** trusts recorded 6 or more incidents of 'foreign objects' last year



Latest analysis shows there is still wide variation in safety standards among our hospitals, with patients often at risk from clinical errors and poor management. Here we investigate attitudes to safety.

The recent roll-out of hospital guidelines, operating checklists and incident reporting systems have still not created the safety culture that NHS patients should expect.

Some hospitals are beacons of good practice and there is evidence of a vastly improved reporting culture within the health service. Patient safety is regularly discussed at board level and, encouragingly, out of all the trusts who responded to Dr Foster's annual survey, 100 per cent stated there was someone at board level responsible for safety.

Yet the latest analysis shows that there is still some way to go, highlighting widely inconsistent standards, with patients at some hospitals suffering life-threatening errors.

Such errors include being given the wrong operation, having 'foreign objects' left behind inside their bodies after surgery, or being turned away from operating theatres because doctors cannot find their notes.

### Avoiding the avoidable

To investigate attitudes to safety, Dr Foster chose for the first time to compare death rates among patients suffering 'low-risk' conditions. These are defined as diagnoses with an overall death rate of 0.5 per cent or less, including abdominal pain, hernias, asthma and viral infections. This technique is used widely in the USA.

In the year to March 2009, a total of 5,024 people classified as suffering from low-risk conditions nevertheless died after receiving treatment in our hospitals. Among these deaths, 848 patients were under 65 years old, 220 had a diagnosis of asthma and 57 were admitted with viral infections. In addition to this, a further 56 died after admission for appendicitis operations, and 15 died after treatment for haemorrhoids.

It should be recognised that many of these deaths are likely to be among the elderly, but it's the variation from one hospital to another that is of concern.

### ASK AN EXPERT

## What makes a good hospital?

*"In a good hospital, staff are united around a common purpose of helping to treat the sick and their families. Specialty then matters less, and they cooperate with each other so that the patient comes first. Management focuses on enabling this to happen, and nothing else matters unless it helps towards this end."*

**Dr Peter Davies, GP and Author of 'Putting Patients Last' (Civitas, 2009)**

### Trusts with a higher than expected rate of deaths in low-mortality conditions

- Aintree University Hospitals NHS Foundation Trust
- The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust
- University Hospital Birmingham NHS Foundation Trust
- Western Sussex Hospitals NHS Trust

### Trusts with a lower than expected rate of deaths in low-mortality conditions

- Central Manchester University Hospitals NHS Foundation Trust
- Chelsea and Westminster Hospital NHS Foundation Trust
- Frimley Park Hospital NHS Foundation Trust
- Imperial College Healthcare NHS Trust
- Mid Staffordshire NHS Foundation Trust
- South Tees Hospitals NHS Foundation Trust
- The Newcastle upon Tyne Hospitals NHS Foundation Trust
- University Hospitals Bristol NHS Foundation Trust
- Wrightington, Wigan and Leigh NHS Foundation Trust

**Safety also saves money. Read how on p19.**

## Admitting mistakes

Through our annual survey of NHS trusts, we also found that some hospitals have frequent accidents in which 'foreign objects' are left behind in people's bodies after surgery, or where patients receive an operation on the wrong part of the body, which is known as 'wrong-site' surgery.

All NHS trusts were asked if they measured those two types of event. Reassuringly, they all confirmed that they had systems in place for monitoring operations that leave behind foreign objects. The systems themselves were broadly comparable, with most trusts saying they used the 'serious untoward incident' reporting process.

Perhaps counter-intuitively, high levels of reporting are widely considered a good thing

as it suggests an open and honest culture. In total, 209 incidents involving foreign objects were reported in 2008/09. The following trusts each reported six or more incidents, indicating that they encourage an honest clinical environment and are monitoring potential issues of patient safety:

- Barnsley Hospital NHS Foundation Trust
- Dorset County Hospital NHS Foundation Trust
- East and North Hertfordshire NHS Trust (two of which were near misses)
- East Kent Hospitals University NHS Foundation Trust
- East Sussex Hospitals NHS Trust
- Sandwell and West Birmingham Hospitals NHS Trust

**“Unless an organisation has a leader taking personal responsibility for what’s going on, you will never have a truly great organisation. You’ll maybe have an organisation that gets away with things.”**

**Zenna Atkins, Chairman, OFSTED**

- University College London Hospitals NHS Foundation Trust
- University Hospital Birmingham NHS Foundation Trust
- University Hospital of South Manchester NHS Foundation Trust

## PATIENT'S VIEW

**“I was told they were busy that day”**

**Jenny Morgan, 58, from Hockley in the West Midlands, suffered a stroke one morning last November. She couldn't speak or walk. Her GP quickly recognised the symptoms and advised her husband to take her straight to Solihull Hospital, calling ahead to say she was on her way.**

*After 90 minutes in A&E, Jenny decided to leave. “I thought I was going to die and decided I would rather do it at home,” she said. But as she lay half-blinded by an excruciating headache, her husband called the doctor again. She was sent back to hospital, and had the crucial CT scan recommended by the guidelines. Although the results confirmed she had suffered a stroke, she was told that the Solihull stroke unit was full. There were no beds and she was told to go home. Drug treatment was not started for a further three weeks – too late to prevent permanent damage – and she did not see a specialist stroke consultant until March 2009. Jenny, who has two adult daughters (one of them a doctor herself), has been left with speech and balance problems, and can no longer work in the family music shop business. “I was told that, as I was not admitted when I came into A&E, I wasn't counted as a stroke patient,” she said. “I have complained to the hospital chief executive, but I was just told that they were busy that day.” Heart of England NHS Foundation Trust says it always endeavours to see 98 per cent of patients within four hours of admission to A&E.*

By contrast, in spite of saying they had systems to record such events, the following trusts were unable to provide any numbers:

- Central Manchester University Hospitals NHS Foundation Trust
- Lancashire Teaching Hospitals NHS Foundation Trust
- Sherwood Forest Hospitals NHS Foundation Trust
- South London Healthcare NHS Trust
- Southampton University Hospitals NHS Trust

For wrong-site surgery, every trust except The Queen Elizabeth Hospital King's Lynn NHS Trust said they had systems for measuring how often this happened, and again these systems were broadly comparable.

A total of 82 incidents were reported, with City Hospitals Sunderland NHS Foundation Trust and University Hospital Birmingham NHS Foundation Trust recording six or more incidents each.

## Checking for infections

Even though infection rates are reported to have fallen nationwide, the overall control and treatment of dangerous hospital-acquired infections, which include Methicillin-resistant staphylococcus aureus (MRSA), still remains a problem for some hospitals.

In responding to the survey, one in five trusts said they do not check patients being admitted through accident and emergency departments to see if they are carrying the bacteria. Nor do they always check cancer patients, who may be more vulnerable to infection because of the immune-system damage associated with cancer treatment.

**How has your local hospital scored? Find out on p29-31.**

# How our hospitals perform

Using a set of indicators and a methodology called z-scoring (more details on page 28), Dr Foster assessed all NHS acute trusts across a range of safety indicators and assigned a banding and score based on their performance: the lowest scoring hospitals performed poorly against our measures, whereas the highest scorers performed well (shown here in alphabetical order).

## Highest scores

- Airedale NHS Trust
- Brighton and Sussex University Hospitals NHS Trust
- Cambridge University Hospitals NHS Foundation Trust
- Chelsea and Westminster Hospital NHS Foundation Trust
- East Kent Hospitals University NHS Foundation Trust
- Frimley Park Hospital NHS Foundation Trust
- Guy's and St Thomas' NHS Foundation Trust
- Imperial College Healthcare NHS Trust
- Mid Staffordshire NHS Foundation Trust
- North Bristol NHS Trust
- South Tees Hospitals NHS Foundation Trust
- St George's Healthcare NHS Trust
- Trafford Healthcare NHS Trust
- University College London Hospitals NHS Foundation Trust

## Lowest scores

- Basildon and Thurrock University Hospitals NHS Foundation Trust
- Blackpool, Fylde and Wyre Hospitals NHS Foundation Trust
- Hereford Hospitals NHS Trust
- Mid Yorkshire Hospitals NHS Trust
- Scarborough and North East Yorkshire Health Care NHS Trust
- South London Healthcare NHS Trust
- St Helens and Knowsley Hospitals NHS Trust
- Tameside Hospital NHS Foundation Trust
- The Lewisham Hospital NHS Trust
- University Hospital of South Manchester NHS Foundation Trust
- University Hospitals Coventry and Warwickshire NHS Trust
- Weston Area Health NHS Trust

# STAYING ALERT to the dangers



**Martin Fletcher**, chief executive of the NPSA, gives his view on how the NHS can improve safety.

Admitting to mistakes isn't easy for most of us, let alone when the mistakes cause harm to others or at worst death. We, the NPSA, set up the national Reporting and Learning System to help the NHS learn from incident reporting through feedback, safety alerts, recommendations, tools and advice.

Let's be clear: reporting errors is a good thing. Hospitals with high levels of reporting usually have a stronger culture of safety because staff are more likely to raise concerns. This culture is getting better all the time. However, the response system is always more important than the reporting system.

I am heartened to see where hospitals are tackling patient safety head-on, and we have seen a growing number of examples of NHS organisations that we can all learn from. Yet some hospitals appear to be struggling. They do not demonstrate reporting and learning, are unable to show they are implementing safer practices, and, like the trusts listed opposite, are not making the best use of available guidance. This is a concern.

## What is the NPSA?

The National Patient Safety Agency helps the NHS to focus on safety by reporting, setting local priorities and implementing safety measures that reduce the risk to patients.

If knowledge and expertise are properly planned, executed and mobilised then there can be reliable and sustainable solutions for potentially dangerous situations, making them safer for patients.

### Three suggested actions:

**First**, nobody can be complacent. To avoid the pitfall of thinking "it couldn't happen here" there needs to be an atmosphere of constant unease around safety.

**Second**, all hospitals need strong, informed leadership from their boards on patient safety. The good news is that organisations which have poor safety records can transform themselves into highly resilient operations.

**Third**, commissioning organisations such as primary care trusts (PCTs) should take a lead by discussing patient safety with hospitals, asking questions, and supporting and suggesting improvements. All systems for accountability, monitoring and commissioning should prioritise safety.

Hospitals report to the national Reporting and Learning System to identify hazards and risks, and to find opportunities to improve safety. This information helps us understand why things have gone wrong and how to stop them happening again.

### Not complying with alerts

The following trusts told Dr Foster that, for at least one NPSA alert, they will not be compliant in the next six months (and their reasons why):

Basildon and Thurrock University Hospitals NHS Foundation Trust  
(staffing levels and recruitment)

East Lancashire Hospitals NHS Trust  
(need to work through competency assessment requirement for specific alerts)

Epsom and St Helier University Hospitals NHS Trust  
(still to get clinician and board agreement)

Mid Cheshire Hospitals NHS Foundation Trust  
(change in policy required, currently in development)

Nottingham University Hospitals NHS Trust  
(still to get clinician agreement)

The Royal Wolverhampton Hospitals NHS Trust  
(training requirements)

Weston Area Health NHS Trust  
(still to get clinician and board agreement)

# How can you tell which hospitals are the safest?

<p><b>1. They are so-called 'high reliability organisations'</b></p>	<ul style="list-style-type: none"> <li>• To be 'high reliability', hospitals should be aware of safety at the highest level and raise patient safety wherever possible throughout the organisation.</li> <li>• Hospitals should discuss clinical outcomes and patient safety at least monthly at board level.</li> </ul> <p><b>But did you know?</b> 9 per cent of hospitals do not discuss clinical outcomes, and 10 per cent do not have patient safety as a constant item on their board agenda.</p>
<p><b>2. They see patient safety incidents as related to issues with systems rather than with people</b></p>	<ul style="list-style-type: none"> <li>• Hospitals clearly should be investigating the factors contributing to incidents and therefore finding out which system changes will prevent them happening again.</li> <li>• Investigations should be carried out to find these contributing factors, particularly when there is severe harm, death and/or cardiac arrest. Otherwise, hospitals will not know which systems need to be changed.</li> </ul> <p><b>But did you know?</b> 12 per cent of hospitals carried out fewer than 10 investigations of root cause analysis (RCA) in one year, and 39 per cent of hospitals failed to carry these out on all deaths or cases of severe harm that occurred.</p>
<p><b>3. They use the systems approach to anticipate the worst and equip themselves to deal with it at all levels of the organisation</b></p>	<ul style="list-style-type: none"> <li>• Hospitals should put systems in place that anticipate problems and suggest actions.</li> <li>• Regular observations and 'track and trigger' systems should be in place for acute patients, with plans for action when parameters are worrying.</li> </ul> <p><b>But did you know?</b> 36 per cent of hospitals do not have a 'track and trigger' system in place for monitoring all acute patients, and 14 per cent fail to audit all cardiac arrests on the wards.</p>
<p><b>4. They have a strong culture of reporting</b></p>	<ul style="list-style-type: none"> <li>• High numbers of reports are good, and show a willingness among staff to share concerns.</li> <li>• Hospitals should be reporting patient safety incidents and sharing concerns within their organisation in a timely manner.</li> </ul> <p><b>But did you know?</b> Although 98 per cent of trusts now provide incident reports to the NPSA (increasing by 3 per cent from the previous period), some of these still do not report consistently.</p>
<p><b>5. They are ready to act to make changes that improve safety</b></p>	<ul style="list-style-type: none"> <li>• Hospitals should be sharing data such as in this report with commissioners and the public, as well as showing that they are acting or are ready to act.</li> <li>• Commissioners should be driving change and regularly discussing how this will take place.</li> </ul> <p><b>But did you know?</b> Between 5 and 17 per cent of hospitals say they do not discuss safety with commissioners.</p>
<p><b>6. They see external advice and support on potential safety issues as useful</b></p>	<ul style="list-style-type: none"> <li>• Hospitals should be responsive to external support and guidance.</li> <li>• The NHS is lucky to have a national body that gives it support and recommends actions based on its own data on incidents occurring.</li> <li>• Hospitals should act on advice from the NPSA on emerging patient safety issues, and have methods for ensuring that this action takes place.</li> </ul> <p><b>But did you know?</b> 12 per cent of hospitals said it would still take longer than six months from now to implement the Rapid Response Reports issued by the NPSA in 2008/09.</p>

# What should patients expect?



This report raises some concerns for patients about what they might expect in hospital. **Dr Tanya Huehns** looks at examples of where, as a patient, you might feel anxious or let down.

As part of a push to improve safety around the globe, the World Health Organisation has developed a safe surgery checklist. The list is quite simple. It asks the operating team to discuss key checks before the operation, such as confirming the identity of the patient and which part of their body is going to be operated on.

The NPSA has tailored a version for use in the NHS. But eight hospitals say they don't bother to use it. Do they use something different, or better, or have they not got around to it? We don't know at this point, but the chief executives of these organisations should do, as should the commissioners responsible for arranging hospital care on our behalf and for advising us where to go.

## Some hospitals fail to discuss patient safety every month

At board level, patient safety should be a key part of discussions. The NPSA has suggested it should make up at least a quarter of the time of every board meeting, which is what I would expect as a patient. All hospitals say they have someone at board level who is responsible for patient safety. This is excellent news and illustrates how patient safety has risen up the agenda in recent years. But some hospitals don't discuss basic issues every month, even issues such as patient safety

and clinical outcomes. So what have these hospitals been discussing in that time instead?

As a patient, if I become more ill while in hospital, I would expect regular observations by nurses to pick this up, and to be referred urgently if necessary to get clinical advice and treatment. The NPSA has worked with the National Institute for Health and Clinical Excellence (NICE) to suggest how to do this.

The best way of ensuring that this happens consistently to every single patient is to use a systematic method of recording observations, and to follow clear guidelines as to when there should be referral for further clinical opinions. This is often referred to as a 'track and trigger' system. Deterioration must always be noticed and acted upon, otherwise a patient may be left to have a cardiac arrest and perhaps even die.

Dr Foster asked hospitals whether all acute patients have a 'track and trigger' system in place. You would expect so. But only 64 per cent did. And when a cardiac arrest takes place on the wards, patients expect the hospital to want to know why this happened and if it could have been prevented. But 14 per cent of hospitals don't always carry out this type of investigation or root cause analysis. I can't imagine the airline industry saying they would not investigate some deaths.

The NPSA provides clear recommendations via its patient safety alerts for the NHS around clinical issues where hospitals should look at their own systems and implement changes to make patients safer. A need for change is also backed up by 'patient safety incident reports' from the NHS itself.

However, as we have seen (page 11), seven hospitals in particular show long delays in considering these recommendations and making sure they comply. As a patient, I'm not interested in how these recommendations reach the hospital, or even about a policy being 'adopted' or 'created' locally. For me it's broader; it's about real action as a result. Hospitals need to assure themselves that actions happen, by 'walkrounds', audits or other methods, and make this clear to their boards, commissioners, patients and the public.

Patient safety is clearly being taken seriously by many hospitals, but we should ask who knows about the failings – large or small – and who is taking action on our behalf.

## Deterioration must always be noticed

This focus should not stop at the hospital door. This is also what commissioners should be doing on behalf of their patients, and it's knowledge they should have already. They need to be discussing this with their hospitals, talking about it at board level themselves, and sharing it with patients who they commission on behalf of. Indeed, this is what is meant by 'world-class commissioning'.

## Working together for better care

Patient care works best when local NHS organisations work hard together. NHS Lincolnshire is the body responsible for commissioning hospital services on behalf of its local residents in the county. Together with United Lincolnshire Hospitals NHS Trust (ULHT), they are looking for new ways to improve patient care. The hospital knew it had a high mortality ratio so wanted to concentrate on reducing this rate and eradicating 'never events'.

Problems that affect hospital mortality can be influenced by factors outside of the hospital walls and it is therefore important to understand the quality of care delivered across the entire patient pathway (the journey a patient takes from diagnosis to treatment). So the two organisations have joined forces and are making this pathway their focus. They recognise that improvements to patient experience and outcomes must work across organisational boundaries.

Learning from the Mid Staffordshire case, they report patient safety to both the PCT and hospital boards, and to frontline clinical teams. Both organisations are using Dr Foster's online monitoring system (Real Time Monitoring) that helps them identify potential issues by triggering alerts when outcomes differ from what is expected.

David Furley, who is assistant director of clinical improvement, explains that, as well as improving open dialogue, "We've incorporated explicit quality metrics into contracts that are reported on at monthly and quarterly face-to-face meetings." This helps put patient safety and care at the top of everyone's agenda.

**What happened after the deaths in Mid Staffordshire? PTO.**

## International perspective on what makes a

# SAFER HOSPITAL



*As a clinician myself, much of my work in patient safety has involved convincing clinicians and other senior managers in healthcare organisations that interventions make a difference, and make patients safer. As a researcher, I try to ensure these interventions actually improve patient outcomes, and as a policy person, I seek to ensure that the interventions which work are broadly put into practice.*

*My recent work has focused on implementing an evidence-based intervention in the 103 intensive care units in Michigan. The programme showed a large sustained reduction in catheter-related bloodstream infection rates. The NHS is learning from this work and adapting it through its so-called 'Matching Michigan' programme that all trusts are invited to join. In my journey, working with US and international collaborators, I have found that developing successful interventions requires a reason to act, good evidence and relevant achievable recommendations. For this to work in practice, there must be robust measurement such as is reported here, and also, importantly, a culture change.*

*The NHS is currently at a key stage in evolving to respond to patient safety challenges. The Dr Foster report illustrates some of the progress that has been made, and identifies where there is work to be done. Taking safety seriously requires senior understanding, priority setting and appropriate resource allocation. It is not just about implementing simple checklists; instead it is about embedding complex ideas about what safe care is, right at the centre of every healthcare organisation. The report shows that some hospitals can demonstrate they are doing this, engaging at board level and talking to commissioners about safety issues. Others are falling down in these areas, while others still are seemingly complacent about acting on national recommendations and really understanding what goes wrong by investigating locally.*

*In England, you are privileged to have a funded agency, the NPSA, that supports collection of evidence through collaboration with the NHS itself, that is able to feed back recommendations after discussion with the NHS, and that also supports tools that help frontline staff in hospitals to be responsive to these. Sometimes the labour involved in pulling all this together is underestimated. All of these should be key components of implementing safer care for hospitals.*

Professor Peter Pronovost is an intensive-care specialist physician at Johns Hopkins Hospital in Baltimore, USA. In 2008 he was listed in Time magazine's 100 most influential people for his ground-breaking work on patient safety.

# Is hospital mortality still a worry?

## Most improved HSMRs

Dr Foster identified trusts whose HSMRs have improved the most over the past three financial years.

These are the rates that have fallen year on year and with the largest percentage drop over the whole period, which is a good way to find out which organisations are really driving improvements.

The five trusts below have improved their mortality ratio by over 30 per cent. Note that Mid Staffordshire NHS Foundation Trust is top of this table, following public scrutiny since the recent investigation into substandard care.

Mid Staffordshire NHS Foundation Trust	-34%
Medway NHS Foundation Trust	-34%
Trafford Healthcare NHS Trust	-33%
Walsall Hospitals NHS Trust	-32%
George Eliot Hospital NHS Trust	-31%

Death rates in the NHS continue to improve, suggesting that publishing this data over the past decade has driven improvements. Since last year, 11 trusts have significantly improved their mortality ratios, but 14 have now moved into the bottom category.

Measuring and monitoring death rates has done much to highlight the problem of underperforming hospitals. Dr Foster was the pioneer in this field when we published a mortality measure known as HSMRs\* for the first time in 2001.

The measure has drawn attention to hospitals of concern, most notably Mid Staffordshire NHS Foundation Trust, which was reported to have had 400 unnecessary deaths and was subject to a Healthcare Commission investigation into poor care. From suffering a mortality ratio more than 27 per cent above average, Mid Staffordshire has transformed in just two years, and today its mortality ratio is more than 7 per cent below average.

This success is repeated elsewhere. The NHS is showing considerable improvements in mortality ratios, which continue to decline year on year: nationally the HSMR fell by 7 per cent in 2008/09 compared with 2007/08. And whereas last year we reported that 30 trusts had higher than expected HSMRs, this year the number has dropped to 27.

In addition, 17 trusts that had higher than average rates in 2007/08 have improved their

figures so much that they are no longer a concern, including Wrightington, Wigan and Leigh NHS Foundation Trust, North Middlesex University Hospital NHS Trust and James Paget University Hospitals NHS Foundation Trust.

There remains, however, a considerable variation in death rates. A total of 14 trusts have moved into the bottom category with a higher than expected HSMR, suggesting either that their mortality ratios have become worse in the past year, or that they are not improving at the same rate as other hospitals. These trusts may be getting better in absolute terms, but not in relation to others that are improving further and quicker.

Of more concern are the seven trusts which have had consistently high HSMRs for the past five years. These trusts are listed on page 17. One of them, Basildon and Thurrock University Hospitals NHS Foundation Trust, currently has a mortality ratio 31 per cent above average.

Often such variation can be partially explained by factors such as patchy data or poor coding. Yet these trusts still need to review their procedures to understand the root causes.

\*Hospital Standardised Mortality Ratios, or HSMRs, are a statistical way of measuring hospital mortality. See page 17 for more details or visit [www.drfoosterhealth.co.uk](http://www.drfoosterhealth.co.uk)

### Mid Staffordshire NHS Foundation Trust

"The Dr Foster Hospital Guide provides a welcome comparison of our mortality data against other hospitals.

"While we are pleased to see that our mortality ratios are falling, we are not complacent as these numbers are real people who have died. Our main priority is to improve the care to patients and we aim to see zero-harm as our target for keeping patients safe in our hospitals.

"A number of things have contributed to our reduction over the past year. The most significant of these has been the way we manage our emergency patients, giving them access to senior medical staff early on in their care. We have also made changes as to where our stroke patients are treated."

**Antony Sumara, Chief Executive**

### George Eliot Hospital NHS Trust

"We reduced our HSMR by focusing on sustainable improvements to patient safety and more accurate recording of patient information.

"We conducted a thorough review and identified a number of areas that needed tackling. Thanks to this review and the hard work and vigilance of staff we have seen dramatic reductions in healthcare-associated infections and also reduced the number of patients suffering falls. Improved care, along with strict adherence to the trust's hygiene code and better recording of patient information, has contributed to this considerable drop in our mortality ratio.

"We will continue to work hard to improve patient care and recognise that we have a lot more to do to sustain this improvement."

**Ray Steingold, Medical Director**

### Trafford Healthcare NHS Trust

"Our mortality ratio has been steadily decreasing over the past three years, following concerted efforts to tackle it from a number of different angles.

"The accuracy of observations such as patients' temperature, oxygen and pain levels have all been improved. Observations are audited frequently and then fed back to nursing staff and doctors, leading to greater ownership by clinicians of the importance of full and accurate recording.

"We have also reinforced 'early warning scores' based on these observations, so we can quickly respond to patients at risk of becoming very seriously unwell and provide the additional care they need.

"Similarly, we restarted the critical care outreach team which assesses deteriorating patients on the wards and provides specialist support.

"All in all, we have used several methods to improve patient care and they are beginning to show their worth. We are not complacent, however, and believe there is still more we can do."

**Simon Musgrave,  
Medical Director**

### Wrightington, Wigan and Leigh NHS Foundation Trust

"We are proud to be included in the Hospital Guide by Dr Foster as a 'significantly improved trust' with regards to HSMRs.

"I am delighted that our spectacular success in the rapid reduction of HSMR has been recognised by Dr Foster. There are three main reasons why this has happened. First, we identified a wide range of internationally evidence-based interventions. Second, we had

a huge internal campaign so that every member of staff was galvanised and motivated to play their part. Third, we had the Dr Foster data to analyse exactly where to focus our efforts and to monitor progress and success. The bottom line is a significant reduction in death rates of which we are very proud."

**Andrew Foster, Chief Executive**

## The following trusts had significantly high HSMRs in 2008/09

Those marked\* have had high ratios for the past five years

100 is the score used to represent the national average. A number below 100 means a trust has a lower than average mortality ratio, so a low score is a good score. Above 100 means they have a higher than average score. For example, 110 indicates a death rate 10 per cent above average.

Organisation	HSMR (100 is average)
Barking, Havering and Redbridge University Hospitals NHS Trust	111
Basildon and Thurrock University Hospitals NHS Foundation Trust*	131
Basingstoke and North Hampshire NHS Foundation Trust	115
Blackpool, Fylde and Wyre Hospitals NHS Foundation Trust*	115
Buckinghamshire Hospitals NHS Trust	114
Calderdale and Huddersfield NHS Foundation Trust	111
Colchester Hospital University NHS Foundation Trust	112
Dartford and Gravesham NHS Trust	111
Derby Hospitals NHS Foundation Trust	107
East and North Hertfordshire NHS Trust	116
Hull and East Yorkshire Hospitals NHS Trust	110
Kettering General Hospital NHS Foundation Trust*	112
Mayday Healthcare NHS Trust	112
Mid Cheshire Hospitals NHS Foundation Trust	117
Mid Yorkshire Hospitals NHS Trust	113
Newham University Hospital NHS Trust	117
North Tees and Hartlepool NHS Foundation Trust	112
Pennine Acute Hospitals NHS Trust*	110
Peterborough and Stamford Hospitals NHS Foundation Trust	112
Royal Bolton Hospital NHS Foundation Trust*	122
South Warwickshire General Hospitals NHS Trust	116
Southampton University Hospitals NHS Trust	110
Tameside Hospital NHS Foundation Trust*	119
The Dudley Group of Hospitals NHS Foundation Trust	113
United Lincolnshire Hospitals NHS Trust	114
University Hospital Birmingham NHS Foundation Trust	109
University Hospitals Coventry and Warwickshire NHS Trust*	112

## HSMRs explained

Professor Sir Brian Jarman of Imperial College London came up with the idea of comparing 'hospital standardised mortality ratios' (HSMRs). These came to prominence in the wake of the 1990s public inquiry into the Bristol Royal Infirmary. HSMRs measure the likelihood of individual patients dying – given their underlying condition, age and deprivation group – and then compare this against the actual number of deaths that occurred in different hospitals.

There is much debate over HSMRs and whether a single figure can give an accurate idea of hospital mortality. The debate is valuable as it encourages hospitals to dig below the numbers

to understand what's behind them. HSMRs can be affected by factors such as data quality or the underlying health of different populations, but trusts with high HSMRs must be prepared to consider that they are failing to treat and care for patients as well as they should.

Where a hospital has a high HSMR, further investigation should always take place to exclude or identify particular care issues. Every year the benchmark is readjusted to take into account changes and improvements in hospital performance. Further details on the HSMR methodology can be found at [www.drfoosterhealth.co.uk](http://www.drfoosterhealth.co.uk).

**The following trusts had significantly low HSMRs in 2008/09**

<b>Organisation</b>	<b>HSMR (100 is average)</b>
Airedale NHS Trust	86
Ashford and St Peter's Hospitals NHS Trust	89
Barts and The London NHS Trust	88
Bradford Teaching Hospitals NHS Foundation Trust	74
Brighton and Sussex University Hospitals NHS Trust	88
Cambridge University Hospitals NHS Foundation Trust	80
Chelsea and Westminster Hospital NHS Foundation Trust	86
East Kent Hospitals University NHS Foundation Trust	82
Epsom and St Helier University Hospitals NHS Trust	90
Frimley Park Hospital NHS Foundation Trust	90
Guy's and St Thomas' NHS Foundation Trust	89
Imperial College Healthcare NHS Trust	77
Kingston Hospital NHS Trust	88
Leeds Teaching Hospitals NHS Trust	92
Maidstone and Tunbridge Wells NHS Trust	92
North Bristol NHS Trust	90
North West London Hospitals NHS Trust	91
Nottingham University Hospitals NHS Trust	95
Plymouth Hospitals NHS Trust	91
Royal Free Hampstead NHS Trust	71
Royal Surrey County Hospital NHS Trust	85
Salford Royal NHS Foundation Trust	80
Sheffield Teaching Hospitals NHS Foundation Trust	84
South Tees Hospitals NHS Foundation Trust	92
St George's Healthcare NHS Trust	82
Taunton and Somerset NHS Foundation Trust	86
The Newcastle upon Tyne Hospitals NHS Foundation Trust	80
The Whittington Hospital NHS Trust	78
Trafford Healthcare NHS Trust	82
University College London Hospitals NHS Foundation Trust	77
University Hospitals Bristol NHS Foundation Trust	90
Walsall Hospitals NHS Trust	89

**Are hospitals really taking safety seriously? See p12.**

**“We are determined to put patients at the heart of everything we do and nothing signifies overall care of the highest quality more than a consistently low hospital mortality ratio.”**

**Adam Cairns, Chief Executive, Airedale NHS Trust**

# Why does being safe save money?



The NHS is faced with budget cuts and less money, and many people fear this will mean poorer care or fewer services. But when we examined five areas of hospital care, not only did we find that these fears are unfounded, we also found evidence of the emerging relationship between good quality and value for money.

How many hospitals are offering all their patients the best possible treatment for their condition? How many are offering treatment

which works the first time round? And how many patients are readmitted within one month of being discharged?

The Dr Foster team looked closely at five commonly performed procedures, including hip replacement and CT scans for stroke, to identify where hospitals are using the most up-to-date techniques and where money could be saved if more of them adopted best practice. The analysis revealed significant variation in outcomes and performance, and

uncovered areas where hospitals are yet to adopt newer surgical techniques that are more cost-effective.

Readmissions also remain a major drain on NHS budgets. In a number of procedures, such as excision of the colon or endoscopic procedures on the upper gastrointestinal tract, 10 per cent or more of patients have to return to hospital as an emergency admission less than a month after being there for their first operation.

## PATIENT'S VIEW

**“I should have looked around for a consultant”**

**Julie Ashton, a 40-year-old mother of three from Wirral, had a hysterectomy in April this year. Despite requesting a vaginal operation, she was told she could not have one. Following the operation at her local Arrowe Park Hospital, she was discharged after just three days, but had to take three months off work.**

*“It was one of the most painful things I have ever had to go through,” said Julie, who is a magistrate and book-keeper for her family electrical business. “I was never examined, I was just told that I would have to have an open operation. At the time I just wanted to get it over with, but with hindsight I should have looked around for a consultant who was prepared to do it vaginally.” The hospital has since arranged to meet with Julie to discuss her individual care and treatment.*

**“We’re looking at unsteady state funding for many years, so unless we start delivering better quality care for less money, we’re going to get lost.”**

**Zenna Atkins, Chairman, OFSTED**

### Immediate operations

Osteoporosis, or ‘brittle bone disease’, which causes hip fractures among the elderly, represents a huge burden for the NHS. Up to 70 per cent of all women will suffer an osteoporotic fracture in the course of their lives, and falls resulting in broken hips represent more than half of all hospital admissions for accidental injury. Half of those affected are left with permanent damage, and one in five die from complications within three months.

Speedy surgery on joints is crucial if people are to return to independent living, but despite national guidelines requiring hospitals to operate within two days, many do not.

Pre-operative bed days (the number of days a patient spends in hospital before being operated on) accounted for 11 per cent of all bed days for patients with a hip fracture during 2008/09. Dr Foster’s statisticians calculated that, if all hip fracture patients had

### ASK AN EXPERT

## What makes a good hospital?

*“For someone who’s had a stroke, the single most important element of a good hospital is that they can be admitted 24 hours a day, straight onto a stroke unit that’s well staffed with stroke specialist doctors, nurses and allied health professionals, and that it provides access to brain-scanning and treatment within three hours of the onset of stroke symptoms.”*

**Joe Korner, Stroke Association**

their operations on the day of admission, 139,198 bed days could have been saved across the country. Given that the median length of stay for these patients was 22 days in 2008/09, this also means that 8,327 more operations could have been performed.

The variation in efficiency is particularly noteworthy along the retirement belt of the south coast. Whereas 97 per cent of patients in Bournemouth are treated within the recommended maximum delay of two days, five miles away in Poole less than a third are operated on within this time.

### Dangerous delays

According to the Stroke Association, each year around 150,000 people in the UK are affected by strokes. A third of them die almost immediately, another third recover fully, and the remainder are left with varying degrees of brain damage, which causes paralysis, blindness, and difficulty with swallowing, talking or understanding. The financial price

### Trusts operating on a significantly low number of hip fracture patients within the two-day guidelines

- Ashford and St Peter’s Hospitals NHS Trust
- Bradford Teaching Hospitals NHS Foundation Trust
- Calderdale and Huddersfield NHS Foundation Trust
- Central Manchester University Hospitals NHS Foundation Trust
- County Durham and Darlington NHS Foundation Trust
- Dartford and Gravesend NHS Trust
- Doncaster and Bassetlaw Hospitals NHS Foundation Trust
- Gloucestershire Hospitals NHS Foundation Trust
- Hull and East Yorkshire Hospitals NHS Trust
- Lancashire Teaching Hospitals NHS Foundation Trust
- Leeds Teaching Hospitals NHS Trust
- Nottingham University Hospitals NHS Trust
- Oxford Radcliffe Hospitals NHS Trust
- Pennine Acute Hospitals NHS Trust
- Plymouth Hospitals NHS Trust
- Poole Hospital NHS Foundation Trust
- Royal Cornwall Hospitals NHS Trust
- Royal Liverpool and Broadgreen University Hospitals NHS Trust
- South Devon Healthcare NHS Foundation Trust
- St Helens and Knowsley Hospitals NHS Trust
- Surrey and Sussex Healthcare NHS Trust
- United Lincolnshire Hospitals NHS Trust
- University Hospital Birmingham NHS Foundation Trust
- University Hospitals of Leicester NHS Trust
- Western Sussex Hospitals NHS Trust
- Weston Area Health NHS Trust
- Worcestershire Acute Hospitals NHS Trust

## DID YOU KNOW?

**Over £1.5bn** was spent by the NHS in 2008/09 on emergency readmissions

**10 per cent or more** of patients have to go back into hospital within a month after some procedures such as excision of the colon

**Around 70 per cent** of all women will suffer an osteoporotic fracture

**Over half** of all hospital admissions for accidental injury are a result of broken hips caused by falls

**138,198** bed days were wasted in 2008/09 by hospitals failing to treat emergency hip fracture patients in time

**Over 8,000** more hip fracture operations could have happened if hospitals operated on patients within the recommended time frame. Across the country in 2008/09 there were 21,035 pre-op bed days and 69,324 excess bed days for those having the operation, costing £14,666,300

**18 per cent** of trusts treat a very low number of hip fracture patients within the recommended standard of two days

**10 trusts** admitted scanning less than 40 per cent of stroke patients within 24 hours

**£375.5m** was the cost to the NHS from strokes in 2008/09

## DOCTOR'S VIEW

## Sometimes you choose not to take the risk



*"Communication between the doctor and patient is always a key issue. Both sides should be clear what the other understands, and we have got to stop patients feeling they will be disadvantaged if they complain or ask for a second opinion. There are many reasons why you might do a particular procedure in preference to the one the patient thinks they want, but it's important they know what those reasons are. If you are going to adopt newer ways of doing things, it's not just a question of expertise, but of having the right equipment and an experienced team. Working time restrictions, plus rotas and shift-working, mean you don't know in advance whether there will be someone available who is properly competent to handle the camera for keyhole surgery. For that reason, you might well choose not to take the risk. Doctors and managers are striving all the time to get the right equipment and improve the service to patients. It just doesn't always work."*

**Christopher Welch, consultant gynaecologist in the NHS for the past 23 years**

is also significant, with strokes costing the NHS £375.5m last year:

The level of permanent damage suffered is related to how quickly people are diagnosed and receive expert treatment. Despite improvements in stroke services over the past decade, the Stroke Association says only one in four stroke patients are treated in a dedicated stroke unit. National guidelines say hospitals must carry out a computerised tomography (CT) scan within 24 hours, to see where exactly the stroke took place, whether it was caused by a clot or a bleed, and therefore what treatment would be most effective. Most strokes are caused by blood clots, which can be treated very effectively with a 'clot-busting' drug within three hours.

Our analysis shows varying degrees of compliance with this guidance. In our recent survey, 10 trusts (listed on page 23) admitted scanning less than 40 per cent of their patients within the 24-hour window. Also of concern is that an additional 17 trusts did

not know whether they were complying with the guidelines because they failed to record the number of patients being scanned.

### Adopting new techniques

For heart attack survivors, prompt treatment is equally important if they are to avoid permanent damage, which would put them at risk of further heart attacks, heart failure, strokes and early death. Primary angioplasty is both a cost-effective and clinically effective procedure for treating heart attacks safely and promptly, and is recommended by the Myocardial Ischaemia National Audit Project of the Royal College of Physicians. The procedure – carried out under local anaesthetic – involves a tiny 'stent' scaffolding which is threaded into the arm or groin then guided to the blocked artery to prop it open.

Primary angioplasty is a relatively recent development that requires new infrastructure and equipment, which means a significant investment. In the survey only 37 per cent of trusts said they provide it. Of these, 33 said

they offer it as a 24-hour service. See page 23 for a list of who performs best.

Some regions or strategic health authorities (SHAs), namely NHS South Central and NHS East Midlands, have high take-up of the procedure, with many of their hospitals offering the operations to everyone, 24 hours a day. In other areas, notably NHS East of England and NHS North West, very few patients receive it. A further 21 trusts said that less than half of those who would benefit from the treatment actually receive it, and many centres said they do not have enough cardiologists to offer a 24-hour service.

The survey confirmed that all hospitals are offering thrombolytic or 'clot-busting' drugs to heart attack survivors who do not get angioplasty, but this is a major drain on hospital budgets because patients who receive the drugs have to stay in hospital for up to nine days – three times longer than those who have undergone angioplasty.

### Wasting time and money

Dr Foster also asked hospitals if they record the number of operations cancelled due to missing patient notes, and if so, how many times this had happened in the past year:

In response, 96 per cent of trusts told us they did record this, and a total of 478 operations were cancelled in 2008/09 (see page 23 for more details). This means that nearly five hundred patients turned up to hospital expecting to be operated on, only to be told this was not possible because the hospital did not have the correct information to hand. Each patient, most of whom would have taken time off work or arranged childcare, would have had to go home and return at a later date. These mistakes also result in wasted theatre time, which is costly to the hospital.

Clearly the hospitals have put safety first by not going ahead with the operations, but equally they should be organised enough to have the appropriate notes ready and available.

### Revolving doors

Readmissions cover circumstances where patients return to hospital as an emergency within 28 days of discharge. Reasons for this include being discharged too soon or having an additional health problem that was not originally diagnosed. Unsurprisingly, going back to hospital is not good for the patient and not good for the NHS budget.

Gall bladder surgery was one of seven areas where Dr Foster focused on variation in readmission rates between hospitals, along with hip fractures, planned hip replacements, heart surgery, urinary procedures, coronary atherosclerosis and hysterectomies.

In some centres the number of emergency readmissions in 2008/09 was in single figures, but in others it was 10 per cent or more of all patients. The cost of this can run into many hundreds of thousands of pounds. The Pennine Acute Hospitals NHS Trust, for example, spent a record-breaking £1m on people who needed to go back to hospital after treatment for urinary problems.

In fact, we calculated that in 2008/09 the NHS spent more than £1.5bn on emergency readmissions and could have saved nearly £400m if all trusts reduced these by a quarter:

**“An excellent clinical service has innovation at its heart. Using the latest techniques, which are less invasive but still have the best possible outcomes, is one way we can ensure we provide first-rate care for our patients.”**

*Dr Andrew Catto, Executive Medical Director, Airedale NHS Trust*

## TOP TIPS

### 10 questions to help you think about hospital effectiveness

- How good is your hospital at treating heart attack victims – does it do routine angioplasties?
- How often do patients need follow-up 'repair' operations because their surgery did not work the first time?
- How many operations are done using up-to-date keyhole (laparoscopic) techniques?
- Are vital brain-scans carried out rapidly when patients arrive with a suspected stroke?
- Are gall bladder removal operations routinely done as day cases, or do patients have to stay in overnight?
- Do sick patients often have to go back into hospital within days of being discharged because they were rushed home too early?
- Are frail, elderly patients with broken hips left waiting for more than two days for joint-replacement operations to get them walking again?
- How often do people need to go back to have hip and knee joint-replacement operations done again?
- How will the hospital make sure surgeons have all the necessary information about your procedure before they operate?
- Does the hospital follow national guidelines to protect patients against the risk of developing potentially fatal blood clots as a result of being immobile?

**So who are the trusts of the year 2009? Find out on p32-33.**

## STROKE

### Trusts that did less than 40 per cent of CT scans within 24 hours

• South London Healthcare NHS Trust	38%
• Royal Devon and Exeter NHS Foundation Trust	38%
• South Warwickshire General Hospitals NHS Trust	36%
• Barnsley Hospital NHS Foundation Trust	35%
• Mid Yorkshire Hospitals NHS Trust	33%
• The Dudley Group of Hospitals NHS Foundation Trust	32%
• Blackpool Fylde and Wyre Hospitals NHS Foundation Trust	29%
• Hinchingbrooke Health Care NHS Trust	27%
• Sandwell and West Birmingham Hospitals NHS Trust	23%
• The Lewisham Hospital NHS Trust	23%

### Trusts unable to answer whether patients were scanned within 24 hours

• Chesterfield Royal Hospital NHS Foundation Trust
• Doncaster and Bassetlaw Hospitals NHS Foundation Trust
• Ealing Hospital NHS Trust
• Epsom and St Helier University Hospitals NHS Trust
• Gloucestershire Hospitals NHS Foundation Trust
• Hereford Hospitals NHS Trust
• Kettering General Hospital NHS Foundation Trust
• Lancashire Teaching Hospitals NHS Foundation Trust
• Leeds Teaching Hospitals NHS Trust
• Mid Essex Hospital Services NHS Trust
• North Bristol NHS Trust
• Northumbria Healthcare NHS Foundation Trust

• Royal United Hospital Bath NHS Trust
• The Rotherham NHS Foundation Trust
• United Lincolnshire Hospitals NHS Trust
• University Hospital Birmingham NHS Foundation Trust
• Winchester and Eastleigh Healthcare NHS Trust

## HEART ATTACK

### Trusts that offered primary angioplasty to 90 per cent or more of patients

• Barts and The London NHS Trust	100%
• Basingstoke and North Hampshire NHS Foundation Trust	100%
• City Hospitals Sunderland NHS Foundation Trust	100%
• Guy's and St Thomas' NHS Foundation Trust	100%
• Imperial College Healthcare NHS Trust	100%
• Mayday Healthcare NHS Trust	100%
• Northampton General Hospital NHS Trust	100%
• Oxford Radcliffe Hospitals NHS Trust	100%
• Royal Devon and Exeter NHS Foundation Trust	100%
• South Tees Hospitals NHS Foundation Trust	100%
• St George's Healthcare NHS Trust	100%
• University Hospitals Coventry and Warwickshire NHS Trust	100%
• University Hospital of South Manchester NHS Foundation Trust	100%
• West Hertfordshire Hospitals NHS Trust	100%
• The Newcastle upon Tyne Hospitals NHS Foundation Trust	99.2%
• Sheffield Teaching Hospitals NHS Foundation Trust	99%
• The Royal Wolverhampton Hospitals NHS Trust	99%

• University College London Hospitals NHS Foundation Trust	98.3%
• Sandwell and West Birmingham Hospitals NHS Trust	98%
• Southampton University Hospitals NHS Trust	98%
• Central Manchester University Hospitals NHS Foundation Trust	97.9%
• King's College Hospital NHS Foundation Trust	95%
• University Hospital Birmingham NHS Foundation Trust	95%
• University Hospital of North Staffordshire NHS Trust	94.9%
• University Hospitals Bristol NHS Foundation Trust	93.3%
• Leeds Teaching Hospitals NHS Trust	92%

## MISSING PATIENT NOTES

### Trusts that cancelled more than 20 operations due to missing notes

• East and North Hertfordshire NHS Trust
• East Lancashire Hospitals NHS Trust
• Guy's and St Thomas' NHS Foundation Trust
• Maidstone and Tunbridge Wells NHS Trust
• Portsmouth Hospitals NHS Trust
• Whipps Cross University Hospital NHS Trust

### Trusts unable to say how many operations were cancelled

• Central Manchester University Hospitals NHS Foundation Trust
• Sherwood Forest Hospitals NHS Foundation Trust
• South London Healthcare NHS Trust

# Completing the picture

**During the final months and weeks of life, medical issues may become less important to patients than the human issues of how they are cared for. End-of-life care is something that will affect almost all of us, either as relatives or patients. Here we look at whether patients' needs and expectations are being met during end-of-life care.**

Kindness and compassion are often the elements of healthcare that make the most difference to patients. How people feel they have been treated often comes down to the way doctors and nurses address the patient, and how patients and relatives are kept informed about the progress of an illness.

Three quarters of NHS users are 65 or older, and at least two thirds of us are destined to die in acute hospitals even though the majority of us would prefer to die at home. The question of how to manage death is significant to everyone. Therefore our focus on patient experience this year surrounds the way people are treated at the end of their lives.

## Caring to the very end

When asked in our survey about end-of-life care, almost all hospitals told Dr Foster they use the Liverpool Care Pathway (LCP).

The LCP is a treatment developed in the Liverpool Marie Curie hospice in the 1990s where food and medication is withdrawn

from patients who are very close to death. They are kept comfortable and given pain relief and sedation for their final few days. The guideline has been repeatedly recommended by NHS reviews as the most appropriate vehicle for managing death.

However, our survey revealed that, because of the way the pathway is applied, it may not be such a fail-safe template after all.

Less than a third of hospitals (28 per cent) have specialist palliative care teams available 24 hours a day, and more than one in seven do not provide any facilities to support relatives and carers who wish to stay in hospital with a patient during their final hours. Only 37 per cent of trusts said that they routinely ask for the views of patients and bereaved relatives and carers regarding the delivery of care on the end-of-life programme.

Patients' experiences provide all-important insight into what is happening on the wards and whether a hospital provides humane care as well as clinically effective care. A hospital can offer poor surgery, have low compliance

## ASK AN EXPERT

### What makes a good hospital?

*"A good hospital is a place where patients feel supported by well-organised, multidisciplinary teams. Being treated with dignity and respect, with good quality environments, information and coordination, all helps in supporting patients. At the centre of this should be good communication between patients and health professionals. It is also vital for dialogue to flow between professionals working in hospitals and those working in the community."*

**Professor Jane Maher,  
Chief Medical Officer,  
Macmillan Cancer Support**

*"A good hospital is made up of four elements starting with the letter A: access, availability, affordability of staff, and ability to treat effectively."*

**Karol Sikora, Former Head  
of the WHO Cancer Programme  
and Dean of the University  
of Buckingham Medical School**

with safety standards and show very little communication between its clinicians and managers, but if the doctors and nurses are helpful and sympathetic to patients then they will be happy they have been treated well. Encouragingly, most respondents to the National Patient Survey are positive about their experience of the NHS.

# What is a quality account?

**Quality accounts are a new way for NHS trusts to demonstrate how well they are performing across a number of indicators. Each trust must produce a quality account, but because Dr Foster aims to offer accessible, comparative information on every hospital in England, we have also developed our own accounts for them all.**

Patients, families and carers can use this information to understand how good or bad their local hospital is. Our versions use indicators that give both a local and national flavour of the quality, effectiveness and humanity of the care at each hospital.

This is based on the best available routine data as well as information from our annual survey of NHS trusts. The set of measures we used is relevant and up to date, in order to help you understand which hospital is right for your treatment.

It is important to note that the performance of hospitals will depend on the selection of indicators they are measured against. In our example on the next page, we give a score and banding for patient safety.

On page 27 we explain what you should look for in any quality account, whether it has been produced by Dr Foster or your local hospital. Go to [www.drfoosterhealth.co.uk](http://www.drfoosterhealth.co.uk) to find all our accounts.

**Turn to p26-27  
to see how quality  
accounts work.**

# An example of a Dr Foster quality account

you are here: [Quality accounts](#) » [A.N. Other University Hospitals NHS Foundation Trust](#)

## A.N. Other University Hospitals NHS Foundation Trust

A.N. Other University Hospitals NHS Foundation Trust, The Street, The City, England, T9 7ZT Tel: 01645 221 322

Quality account for 2008/09

**Patient Safety**

1. Summary: [A.N. Other University Hospitals NHS Foundation Trust](#)

This is a summary of the Trust's performance. Select a section from the left to see information on the relevant indicator.

Trust says:

Our HSMR has been steadily decreasing over the last three years, following concerted efforts to tackle it from a number of different angles. The accuracy of observations such as patients' temperature, oxygen and pain levels have been improved. Observations are audited frequently and then fed back to nursing staff and doctors, leading to greater ownership by clinicians of the importance of full and accurate recording.

**Patient Safety Summary Score**

80

2. Patient safety summary

This section measures how well a hospital is complying with guidelines laid out by the National Patient Safety Agency (NPSA), and the relative safety for patients compared to national averages across a range of areas. A.N. Other University Hospitals NHS Foundation Trust has performed above expectations overall in relation to patient safety.

Select another section -- select indicator --

3. Indicators for patient safety

These indicators combined decide whether a trust passes or fails a section. Select more from an indicator to view further details.

Is the hospital's overall death rate higher or lower than expected?	78.68	<span style="color: green;">●</span>
What is the ratio of actual deaths to expected deaths for patients admitted with a stroke?	142.31	<span style="color: red;">●</span>
What is the ratio of observed deaths to expected deaths for patients admitted with a heart attack?	105.41	<span style="color: orange;">●</span>
What is the ratio of observed deaths to expected deaths for patients admitted with a broken hip?	81.40	<span style="color: green;">●</span>
What is the ratio of deaths that occurred when a patient was admitted with a serious but treatable condition?	99.82	<span style="color: orange;">●</span>
How safe is the hospital for patients admitted for low-risk procedures such as a vasectomy or tonsillectomy?	2.42	<span style="color: orange;">●</span>
How good is the hospital at filing national RLS reports?	8	<span style="color: green;">●</span>
How compliant is the hospital with the National Patient Safety Agency (NPSA) guidelines?	70:100	<span style="color: green;">●</span>
<p>Staff to bed ratio: 70</p> <p>How many members of staff are there per bed, on average? This is a relatively high staff to bed ratio.</p> <p>national avg: 66 trust rate: 70</p> <p>The chart above shows how many clinical staff there are per bed in the hospital</p>		
Is the hospital doing all it can to reduce infections?	60%	<span style="color: orange;">●</span>
Is the hospital board committed to keeping patients and staff as safe as possible?	81.82%	<span style="color: green;">●</span>

See the next page for explanations

## Your questions answered

1

**Question**

**Which areas of care should a quality account measure?**

**Answer**

The three key issues are patient safety, clinical effectiveness and patient experience. In the Dr Foster quality accounts we have published indicators for all three domains. Here we show an example of the patient safety section.

2

**Question**

**How can I use a quality account to know how my hospital is performing overall?**

**Answer**

There should be measures that help you understand how your hospital is doing and decide if you want to be treated there. At Dr Foster we believe patient safety is the most important concern, so we have used measures of safety to give each hospital a score out of 100. Quality accounts are just one piece of information which you can use alongside other sources such as NHS Choices, [www.drfoosterhealth.co.uk](http://www.drfoosterhealth.co.uk) and the Care Quality Commission.

3

**Question**

**Which measures or indicators should I expect to see within a quality account?**

**Answer**

Each hospital will choose a range of indicators to demonstrate how they are caring for patients, letting people know the areas where they are doing well and not so well. Dr Foster has chosen a relevant and up-to-date set of measures that can be applied to and compared with every hospital.

4

**Question**

**What do the measures really mean?**

**Answer**

The measures should show how well the hospital has done and compare it with others. In the Dr Foster quality accounts we have given an individual score and compared this with the national average.

**For the full list of our chosen indicators, the methodology, and to see how your hospital scores, go to [www.drfoosterhealth.co.uk](http://www.drfoosterhealth.co.uk)**

# How is my hospital **PERFORMING?**

**How good is my local hospital? Which hospital is the best in the country? Dr Foster is often asked these questions and they are difficult to answer. There are thousands of different methods of measuring hospital performance, because hospitals are made up of many different departments treating different groups of patients in countless different ways.**

No single measure can provide the whole picture, and no single number can possibly capture the complexity of what hospitals do.

Nonetheless, it is often useful to combine different measures to give each hospital a score. This inevitably involves making some arbitrary judgements. But for patients and managers trying to come to some overall assessment of a hospital's performance, it can be helpful.

For our own scoring system we decided to concentrate on the area we think is most important – patient safety. We have used the relevant indicators from our quality accounts and combined them using an established statistical technique to give an overall measure of each hospital.

The result is a score between 0 and 100, with 100 being the best. However, the scores

are not so accurate that you can draw strong distinctions between hospitals with similar scores. For that reason we have grouped them into five bands, giving 1 for the poorest performers and 5 for the best.

To arrive at the scores, we have applied a methodology called z-scoring, more details of which can be found in the appendix or at [www.drfoosterhealth.co.uk](http://www.drfoosterhealth.co.uk).

The methodology identifies top and bottom performers by looking at their score for a certain measure of care and seeing how different this is to other hospitals. Those who are doing much better than the average get high scores and those who are not doing as well get low scores.

To put them in bandings, we have calculated the probability that hospitals are among the best or worst, based on their scores.

**How did UCLH become  
our overall winner?  
See p33.**

5

4

Trust	Patient safety	
	Score	Banding
University College London Hospitals NHS Foundation Trust	100.00	5
Cambridge University Hospitals NHS Foundation Trust	99.32	5
Guy's and St Thomas' NHS Foundation Trust	98.63	5
St George's Healthcare NHS Trust	97.26	5
Chelsea and Westminster Hospital NHS Foundation Trust	97.26	5
South Tees Hospitals NHS Foundation Trust	95.89	5
Brighton and Sussex University Hospitals NHS Trust	94.52	5
Frimley Park Hospital NHS Foundation Trust	94.52	5
Mid Staffordshire NHS Foundation Trust	93.84	5
Imperial College Healthcare NHS Trust	93.84	5
North Bristol NHS Trust	93.15	5
East Kent Hospitals University NHS Foundation Trust	92.47	5
Trafford Healthcare NHS Trust	92.47	5
Airedale NHS Trust	91.78	5
Kingston Hospital NHS Trust	90.41	4
Royal Free Hampstead NHS Trust	89.73	4
Poole Hospital NHS Foundation Trust	88.36	4
Royal Surrey County Hospital NHS Trust	87.67	4
Bradford Teaching Hospitals NHS Foundation Trust	87.67	4
York Hospitals NHS Foundation Trust	86.99	4
The Whittington Hospital NHS Trust	86.30	4
University Hospitals of Leicester NHS Trust	84.25	4
Barts and The London NHS Trust	84.25	4
Leeds Teaching Hospitals NHS Trust	83.56	4
Central Manchester University Hospitals NHS Foundation Trust	83.56	4
Luton and Dunstable Hospital NHS Foundation Trust	82.19	4
West Middlesex University Hospital NHS Trust	82.19	4
Bedford Hospital NHS Trust	80.82	4
The Queen Elizabeth Hospital King's Lynn NHS Trust	80.14	4
The Newcastle upon Tyne Hospitals NHS Foundation Trust	79.45	4
Southampton University Hospitals NHS Trust	78.77	4
Gloucestershire Hospitals NHS Foundation Trust	78.08	4
South Devon Healthcare NHS Foundation Trust	75.34	4
Royal Cornwall Hospitals NHS Trust	74.66	4
West Hertfordshire Hospitals NHS Trust	73.97	4
Northern Devon Healthcare NHS Trust	73.97	4
Royal Devon and Exeter NHS Foundation Trust	73.97	4
Maidstone and Tunbridge Wells NHS Trust	72.60	4
University Hospitals Bristol NHS Foundation Trust	71.92	4
Ealing Hospital NHS Trust	71.92	4
Sheffield Teaching Hospitals NHS Foundation Trust	71.23	4
Whipps Cross University Hospital NHS Trust	71.23	4
Sandwell and West Birmingham Hospitals NHS Trust	69.18	4
Ashford and St Peter's Hospitals NHS Trust	69.18	4
Royal Berkshire NHS Foundation Trust	68.49	4
Countess of Chester Hospital NHS Foundation Trust	67.81	4
George Eliot Hospital NHS Trust	67.12	4
Salford Royal NHS Foundation Trust	66.44	4
Northern Lincolnshire and Goole Hospitals NHS Foundation Trust	65.75	4

4

3

2

Trust	Patient safety	
	Score	Banding
Portsmouth Hospitals NHS Trust	65.75	4
Winchester and Eastleigh Healthcare NHS Trust	65.75	4
Milton Keynes Hospital NHS Foundation Trust	65.75	4
Norfolk and Norwich University Hospitals NHS Foundation Trust	65.07	4
Oxford Radcliffe Hospitals NHS Trust	63.70	4
Ipswich Hospital NHS Trust	63.70	4
Aintree University Hospitals NHS Foundation Trust	63.01	4
Walsall Hospitals NHS Trust	61.64	4
City Hospitals Sunderland NHS Foundation Trust	60.96	4
The Rotherham NHS Foundation Trust	58.90	4
Southport and Ormskirk Hospital NHS Trust	58.22	4
Shrewsbury and Telford Hospital NHS Trust	57.53	4
Heatherwood and Wexham Park Hospitals NHS Foundation Trust	56.85	4
Salisbury NHS Foundation Trust	54.79	3
Wirral University Teaching Hospital NHS Foundation Trust	54.79	3
Calderdale and Huddersfield NHS Foundation Trust	54.79	3
Great Western Hospitals NHS Foundation Trust	53.42	3
Stockport NHS Foundation Trust	53.42	3
Harrogate and District NHS Foundation Trust	52.74	3
Royal United Hospital Bath NHS Trust	52.74	3
University Hospitals of Morecambe Bay NHS Trust	52.74	3
Lancashire Teaching Hospitals NHS Foundation Trust	52.74	3
Dartford and Gravesham NHS Trust	52.05	3
East Cheshire NHS Trust	51.37	3
Plymouth Hospitals NHS Trust	51.37	3
Worcestershire Acute Hospitals NHS Trust	51.37	3
North West London Hospitals NHS Trust	50.68	3
Southend University Hospital NHS Foundation Trust	50.00	3
Kettering General Hospital NHS Foundation Trust	49.32	3
Gateshead Health NHS Foundation Trust	47.95	3
The Hillingdon Hospital NHS Trust	47.26	3
King's College Hospital NHS Foundation Trust	46.58	3
Warrington and Halton Hospitals NHS Foundation Trust	46.58	3
Northumbria Healthcare NHS Foundation Trust	43.84	3
East Sussex Hospitals NHS Trust	43.15	3
Royal Liverpool and Broadgreen University Hospitals NHS Trust	42.47	3
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	42.47	3
Newham University Hospital NHS Trust	41.78	3
North Tees and Hartlepool NHS Foundation Trust	37.67	2
Taunton and Somerset NHS Foundation Trust	36.99	2
Medway NHS Foundation Trust	36.30	2
Barnet and Chase Farm Hospitals NHS Trust	36.30	2
West Suffolk Hospitals NHS Trust	35.62	2
The Dudley Group of Hospitals NHS Foundation Trust	35.62	2
County Durham and Darlington NHS Foundation Trust	35.62	2
University Hospital Birmingham NHS Foundation Trust	35.62	2
Colchester Hospital University NHS Foundation Trust	34.93	2
Buckinghamshire Hospitals NHS Trust	34.25	2
Royal Bolton Hospital NHS Foundation Trust	34.25	2

2

Trust	Patient safety	
	Score	Banding
Burton Hospitals NHS Foundation Trust	33.56	2
Northampton General Hospital NHS Trust	32.88	2
Homerton University Hospital NHS Foundation Trust	32.88	2
University Hospital of North Staffordshire NHS Trust	32.19	2
South Tyneside NHS Foundation Trust	31.51	2
The Royal Wolverhampton Hospitals NHS Trust	29.45	2
Chesterfield Royal Hospital NHS Foundation Trust	28.77	2
North Cumbria University Hospitals NHS Trust	28.08	2
Barking, Havering and Redbridge University Hospitals NHS Trust	28.08	2
East Lancashire Hospitals NHS Trust	27.40	2
Heart of England NHS Foundation Trust	26.71	2
Western Sussex Hospitals NHS Trust	26.03	2
Epsom and St Helier University Hospitals NHS Trust	26.03	2
Derby Hospitals NHS Foundation Trust	23.97	2
Barnsley Hospital NHS Foundation Trust	23.97	2
Hull and East Yorkshire Hospitals NHS Trust	23.29	2
East and North Hertfordshire NHS Trust	22.60	2
Yeovil District Hospital NHS Foundation Trust	20.55	2
Nottingham University Hospitals NHS Trust	19.86	2
Basingstoke and North Hampshire NHS Foundation Trust	19.18	2
The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	19.18	2
Mid Essex Hospital Services NHS Trust	19.18	2
South Warwickshire General Hospitals NHS Trust	17.81	2
Sherwood Forest Hospitals NHS Foundation Trust	15.75	2
United Lincolnshire Hospitals NHS Trust	15.75	2
Surrey and Sussex Healthcare NHS Trust	15.75	2
Mid Cheshire Hospitals NHS Foundation Trust	15.07	2
Wrightington, Wigan and Leigh NHS Foundation Trust	14.38	2
Mayday Healthcare NHS Trust	13.01	2
The Princess Alexandra Hospital NHS Trust	12.33	2
Dorset County Hospital NHS Foundation Trust	10.96	2
Hinchingbrooke Health Care NHS Trust	10.96	2
North Middlesex University Hospital NHS Trust	10.27	2
James Paget University Hospitals NHS Foundation Trust	10.27	2
Peterborough and Stamford Hospitals NHS Foundation Trust	10.27	2
Pennine Acute Hospitals NHS Trust	8.90	2
Hereford Hospitals NHS Trust	6.85	1
Blackpool, Fylde and Wyre Hospitals NHS Foundation Trust	6.16	1
Mid Yorkshire Hospitals NHS Trust	6.16	1
St Helens and Knowsley Hospitals NHS Trust	5.48	1
South London Healthcare NHS Trust	4.79	1
Tameside Hospital NHS Foundation Trust	4.79	1
University Hospital of South Manchester NHS Foundation Trust	4.79	1
Weston Area Health NHS Trust	4.11	1
University Hospitals Coventry and Warwickshire NHS Trust	3.42	1
The Lewisham Hospital NHS Trust	3.42	1
Scarborough and North East Yorkshire Health Care NHS Trust	2.05	1
Basildon and Thurrock University Hospitals NHS Foundation Trust	0.00	1

1

# Dr Foster trust of the year



University College London Hospitals NHS Foundation Trust

We tend to interact with hospitals under bad circumstances: when we or our friends or family are unwell. Yet for the vast majority of us, our experience of the NHS is a positive one. The health service is something to be celebrated, and we as taxpayers and patients recognise all too infrequently the good work it does.

Each year Dr Foster celebrates the very best of NHS hospitals by awarding the 'trust of the year' prize to the most outstanding foundation, large, medium and small trusts in England. This year we have awarded them based on their performances across patient safety indicators. Their scores are listed on page 29. But it's through their stories below that another common theme starts to emerge: all four of them attribute their success to teamwork and staff commitment.

## Foundation trust of the year and overall winner

### University College London Hospitals NHS Foundation Trust

University College London was recently recognised as the fourth best biomedical research centre in the world, after Harvard, Cambridge and Yale. With its six smaller satellite hospitals, it is the biggest and possibly most prestigious university hospital campus in Europe. But this did not make it inevitable that Dr Foster would judge it the best performer in the foundation trust category.

According to its chief executive, Sir Robert Naylor, winning the award reflects a collective achievement by the management in getting staff working together and pulling in the same direction. New buildings and ambitious new projects in the pipeline, coupled with an enviable research base, have attracted very high quality staff.

Naylor was instrumental in persuading the Blair government to recognise foundation trust status, allowing major hospitals to retain their own profits, including those from property deals. He has reaped dividends and is now presiding over a centre of medical excellence second to none. "I have become like a football manager in identifying weaknesses in the team and strategies that

can make us world class," he explained. It is a policy which at the moment is paying off very nicely indeed.

## Large trust of the year

### St George's Healthcare NHS Trust

St George's Healthcare NHS Trust, the first hospital in the world to pioneer heart pacemakers, is nowadays leading the way in a variety of fields and achieving a level of performance which has won it the Dr Foster award for large trust of the year.

The hospital, which moved from its historic Hyde Park Corner site to Tooting in south London almost 30 years ago, is now firmly rooted in its local community. It has the lowest staff turnover of any London teaching hospital, and the lowest vacancy rate.

Chief executive David Astley attributes much of its success to promoting good 'customer care'. Groups of junior staff were recently trained in this philosophy by managers in West End department stores. "We have a hyper-acute stroke unit, are designated as the new major trauma centre for south London, and are pioneering robot surgery for prostate removal," Mr Astley said. "At the same time, we have had a successful board-to-ward commitment to controlling infection. We are a frontline hospital for many conditions, but the biggest point in our favour is the commitment of staff."

## Medium trust of the year

### Trafford Healthcare NHS Trust

Trafford Healthcare NHS Trust has emerged as this year's winner of the Dr Foster award for medium-sized trust of the year.

The trust covers Trafford and Altrincham General Hospitals plus Stretford Memorial Hospital, all in the Greater Manchester area, and has been doing more than almost anywhere else to monitor across-the-board performance.

Many other hospitals would do well to invest in similar, comprehensive audits. There are six weekly procedures covering basic hygiene, ward environment, ward kitchens,

and adherence to a care plan to cut infection risk when drips are inserted. In addition, there is an audit of any bed-sores that develop, plus a weekly bio-luminescence test, which involves screening computer keyboards and desktops with a gel that shows whether they are free of MRSA and other infections.

A series of eight further monthly audits cover medications, pain management, patient observation checks, and the safe disposal of all dangerous waste. "We have only had one case of MRSA this year," said Ron Calvert, the trust's chief executive. "There is a good attitude here towards learning. People want to try new things that come through from Research and Development and the benefits are demonstrated in lots of ways, not least in infection control."

## Small trust of the year

### Airedale NHS Trust

Airedale General Hospital, nestling in a semi-rural area between Keighley, Ilkley and Skipton in North Yorkshire, has won Dr Foster's award for the highest performing small trust in three of the past four years.

It has risen to the particular challenges of how to provide high-quality 24-hour care on a smaller scale. Although a significant proportion of its 210,000 population are elderly and suffer from chronic conditions, it has been able to treat them well. For example, it offers a stroke service recognised by the Stroke Association as among the top 25 per cent in the country. It also has specialist cardiac care facilities and the full range of acute treatment provision, with a small but loyal team of clinicians who have moved to the area for quality of life.

"If I want to get people together and rally them to a particular cause, it's much easier here than if we were on a sprawling two-acre site," explained chief executive Adam Cairns. "This place works. As a local hospital for local people, it does the job."

*To categorise trusts, we used the Healthcare Commission's definitions (based on the number of beds per hospital). Foundation trusts are automatically in that category.*

# How did we produce the scores and bandings?

The Dr Foster statisticians explain below how we derived the hospital scores that are displayed on pages 29-31. This is to help clinicians and hospital managers to understand the process we took. You can also go to [www.drfoosterhealth.co.uk](http://www.drfoosterhealth.co.uk) for more information and further explanation.

## Step 1: produce individual z-scores

Different types of indicators have different methods of calculating a z-score that are summarised below.

Based on the recommendation from the Healthcare Commission (2009), relative risk-based indicators were transformed thus:  $z=2(\sqrt{\text{observed}} - \sqrt{\text{expected}})$ . Rates were transformed by subtracting the mean value for the rate then dividing by its standard deviation. Categorical data (eg yes or no questions) were mapped onto a scale between -2.5 and +2.5. Before aggregating, all z-scores were capped at  $\pm 3$  to stop a single extreme value dominating the aggregate score.

For this methodology to work, all indicators need to be in the form that 'high is bad'. Therefore z-scores where this was not the case were multiplied by -1.

## Step 2: produce aggregate z-scores

The z-scores for each of the indicators were averaged to produce the domain z-score for

patient safety. Missing values were excluded from the z-score. To ensure that the domain score behaves like proper z-scores, the score for each trust is transformed by subtracting the mean value and then dividing this by its standard deviation.

## Step 3: produce Bayesian ranking

Each indicator has an associated degree of uncertainty which must be taken into consideration when attempting to rank trusts.

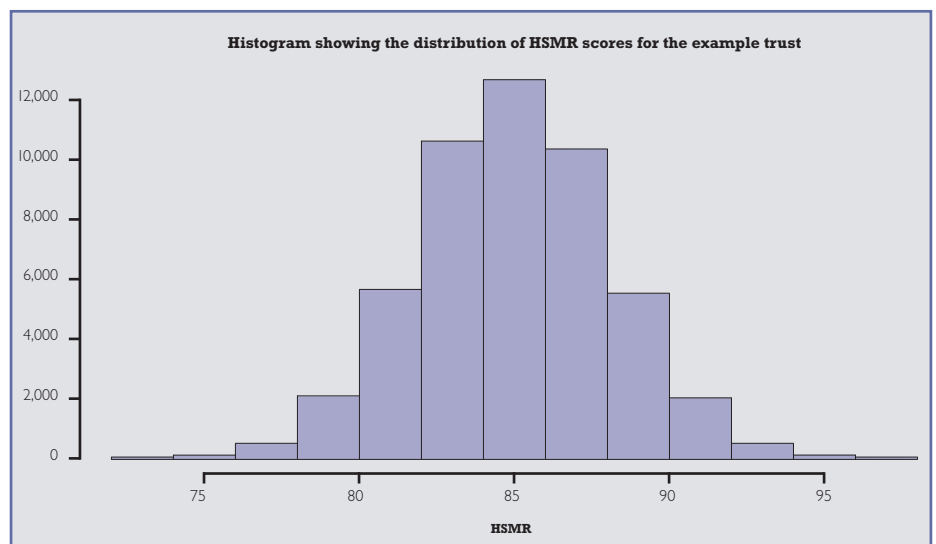
For instance, our example trust has an HSMR of 84.96073 with a Poisson-distributed 95 per cent confidence interval (CI) between 79.0 and 91.2. We used a statistical package called R to generate 50,000 credible estimates for each indicator for every trust.

The graph below shows the distribution of HSMR scores for the example trust that were used in the ranking process.

In effect, Bayesian ranking repeatedly picks HSMRs from this distribution and sees how this changes the ranking. It is often called a Monte Carlo procedure because it makes use of many random numbers.

The Bayesian ranking's key effect is to move trusts with extreme scores and wide CIs towards the overall average. In the example about school marks (see page 35), the Bayesian ranking takes this effect into account.

Each indicator has an associated degree of uncertainty to be incorporated into the Bayesian ranking in the following manner:



- SMRs – Poisson distribution with lambda = number of deaths.
- SARs – Poisson distribution with lambda = number of admissions.
- Crude event rates – depends on the rate (r):
  - If  $0.1 < r < 0.9$  then normal approximation to the binomial distribution.
  - If  $r < 0.1$  or  $r > 0.9$  then Poisson distribution with lambda = number of events.
- Crude ratio – currently the only crude ratio is the staff/bed ratio and this will be kept fixed as it is within a hospital's control.
- Response to the Hospital Guide questionnaire – kept fixed as they are within the hospital's control.

In their research, Marshall and Spiegelhalter (1998) used 10,000 iterations. But computing power has dramatically increased since 1998, so we used 50,000 iterations. To ensure this was sufficient, we ran the procedure for an additional 50,000 iterations and verified that the trusts in the top and bottom 10 remained unchanged for each domain indicator:

**Output**

Scores were calculated by taking the trusts' median rank (which goes from 1 to 147) and rescaling it, so it lay between 0 and 100.

The bandings were designed to reflect the uncertainty over the ranking. Conventionally, median ranks are shown alongside a 75 per cent credible region and perhaps the probability of a trust being in the top or bottom 10. But we were advised that this approach needed refining for a public guide.

Instead, trusts with a very high probability of being in the top and bottom 10 were allocated a 5 or 1 banding respectively. Trusts whose

75 per cent credible region overlapped the mid-point were allocated a banding of 3. The remainder were allocated a banding of 4 or 2 depending on whether their median rank was above or below the half-way point.

Occasionally the Bayesian ranking process produced a banding for a trust that was very much out of tune with its neighbours. Each time this occurred, we gave the trust the benefit of the doubt and promoted it to a higher banding.

**Question:** *All my trust's data is defined as 'within expected range' so why has it been banded 1 in Dr Foster's analysis?*

It is important to note that z-scores only look at the point-estimate of a trust's score (for example, the HSMR value not the control limit banding) and, without Bayesian ranking, ignore the uncertainty about a score. In this respect they differ from our other reports that show indicators as low, high and within the expected range.

This effect is illustrated in the following example. A school may impose a pass mark of 50 per cent for all exams. It may also say that, as marks are subjective, they are only valid to the nearest 5 per cent. Consider a student with the following marks:

- Geography: 45 per cent – but CI includes 40 to 50 per cent, giving a pass.
- English: 45 per cent – but CI includes 40 to 50 per cent, giving a pass.
- History: 45 per cent – but CI includes 40 to 50 per cent, giving a pass.
- Overall mark – pass.

In this case the pass is the equivalent to 'within expected range'. However, the actual mark for every course was a fail, so perhaps we might want to give them a fail, even though they were given a pass in every module.

**Turn back to p29-31 to see all the results.**

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Improvement, United Lincolnshire Hospitals  
NHS Trust

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of Psychology, University of Manchester

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Dr Foster Intelligence aims to help bridge the gap between data and knowledge.

We are a joint venture between The Information Centre for health and social care and Dr Foster Holdings LLP, and provide a unique, innovative public service.

One of Dr Foster Intelligence's key objectives is to promote the development of an information culture in the NHS by providing appropriate information and analysis to clinicians and managers in order to help them deliver the best quality healthcare.

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