

# TRANSPARENT COMPARISONS: IMPROVED CARE ?

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AHIA November 2011

Tim Baker CEO Dr Foster

# Does transparency work?

*“There are people walking around today only because of the performance data published by Dr Foster and the resulting drive by organisations to improve.”*

**Matthew Swindells**, former Chief Information Officer for Health, Department of Health

# Key events

- Heart operations at the BRI

“Inadequate care for one third of children”



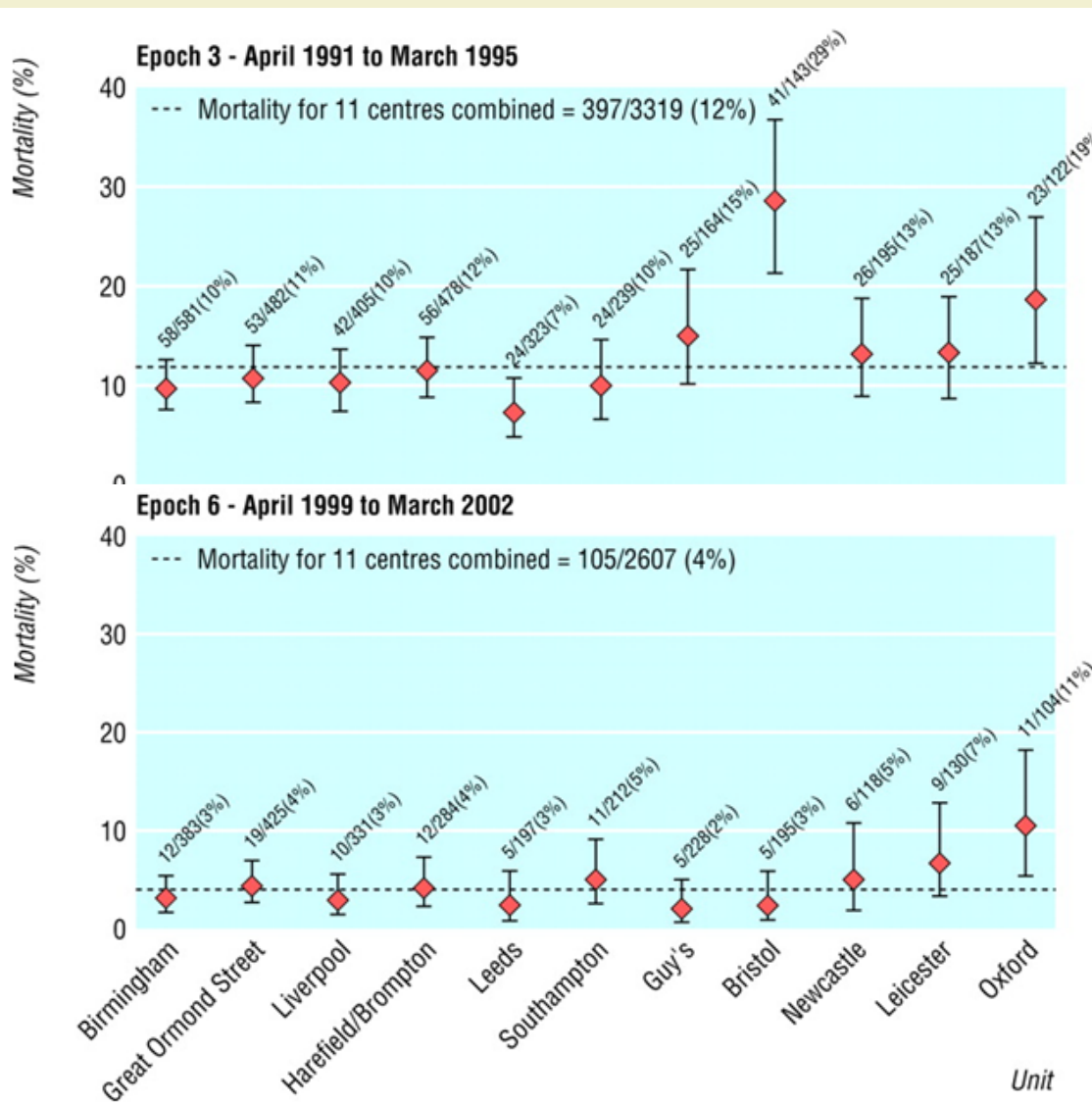
- Harold Shipman

Murdered more than 200 patients



# PAEDIATRIC CARDIAC SURGICAL MORTALITY IN ENGLAND AFTER BRISTOL:

AYLIN P, BOTTLE R, JARMAN B, ELLIOTT P. BMJ 2004; 329 : 825 DOI: 10.1136/BMJ.329.7470.825 (PUBLISHED 7 OCTOBER 2004)



# Bristol Inquiry Report

- “First, trust can only be sustained by openness.”
- “Secondly, openness means that information be given freely, honestly and regularly.”
- “Thirdly, it is of fundamental importance to be honest about the twin concerns of risk and uncertainty.”
- “Informing patients must be regarded as a process and not a one-off event.”
- “The public and patients should have access to relevant information”

# Florence Nightingale (1820-1910)



# Florence Nightingale

## Uniform hospital statistics would:

- “Enable us to ascertain the relative mortality of different hospitals as well as of different diseases and injuries at the same and at different ages, the relative frequency of different diseases and injuries among the classes which enter hospitals in different countries, and in different districts of the same country”

*Nightingale 1863*

# GOOD THE SUNDAY TIMES HOSPITAL FOR BRITAIN AND IRELAND • PART 2 GUIDE

JANUARY 21, 2001 [www.sunday-times.co.uk/hospitalguide](http://www.sunday-times.co.uk/hospitalguide)



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**THE 15 ENGLISH TRUSTS WITH THE LOWEST MORTALITY RATES**

Region	NHS Trust	Mortality Index (3yr)	Probability of being in top 10%	Page
1 London	Barts and The London	60.7	100%	(19)
2 London	University College London Hospitals	71.0	100%	(25)
3 Eastern	Bedford Hospital	73.5	100%	(12)

**THE 15 ENGLISH TRUSTS WITH THE HIGHEST MORTALITY RATES**

Region	NHS Trust	Mortality Index (3yr)	Probability of being in top 10%	Page
1 West Midlands	Walsall Hospitals	126.0	100%	(70)
2 Northwest	Bolton Hospitals	121.0	100%	(35)
3 Southeast	Heatherwood and Wexham Park Hospitals	120.4	100%	(44)
4 Southeast	The Medway	120.2	100%	(46)
5 Southwest	The Royal Bournemouth and Christchurch Hospitals	119.1	100%	(56)
6 West Midlands	Sandwell Healthcare (Sandwell & West Birmingham)	118.2	100%	(69)
7= Northwest	Tameside & Glossop Acute Sevices	116.2	79%	(40)
7= West Midlands	George Eliot Hospital	116.2	91%	(66)
9 London	Barnet and Chase Farm Hospitals	116.1	98%	(18)
10 Eastern	The Princess Alexandra Hospital, Harlow	115.7	86%	(15)
11 London	Newham Healthcare	115.1	76%	(23)
12 Eastern	Essex Rivers Healthcare	115.0	93%	(12)
13 London	Queen Elizabeth Hospital	114.9	81%	(24)
14 London	Barking, Havering and Redbridge Hospitals	114.3	90%	(18)
15 Northwest	Blackpool Victoria Hospital (Blackpool, Fylde & Wyre)	114.1	87%	(35)

5 London	Barnet and Chase Farm Hospitals	125.6	12.1	(18)
6 Northern and Yorkshire	North Durham Health Care (Co Durham & Darlington Acute)	100.3	11.6	(29)
7 Southeast	Dartford and Gravesham	119.0	11.5	(43)
8 Southeast	Royal Berkshire and Battle Hospitals	110.2	10.7	(48)
9 Northern and Yorkshire	Northallerton Health Services (South Tees Hospitals)	88.5	9.1	(33)
10 Southeast	Portsmouth Hospitals	95.3	8.7	(48)

Source: Dr Foster

## Use of administrative data or clinical databases as predictors of risk of death in hospital: comparison of models

Paul Aylin, clinical senior lecturer,<sup>1</sup> Alex Bottle, lecturer,<sup>1</sup> Azeem Majeed, professor of primary care and social medicine<sup>2</sup>

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doi: 10.1136/bmj.39168.496366.55

### ABSTRACT

**Objective** To compare risk prediction models for death in hospital based on an administrative database with published results based on data derived from three national clinical databases: the national cardiac surgical database, the national vascular database and the colorectal cancer study.

**Design** Analysis of inpatient hospital episode statistics. Predictive model developed using multiple logistic regression.

**Setting** NHS hospital trusts in England.

**Patients** All patients admitted to an NHS hospital within England for isolated coronary artery bypass graft (CABG), repair of abdominal aortic aneurysm, and colorectal excision for cancer from 1996-7 to 2003-4.

**Main outcome measures** Deaths in hospital. Performance of models assessed with receiver operating characteristic (ROC) curve scores measuring discrimination ( $<0.7$ =poor,  $0.7-0.8$ =reasonable,  $>0.8$ =good) and both Hosmer-Lemeshow statistics and standardised residuals measuring goodness of fit.

**Results** During the study period 152 523 cases of isolated CABG with 3247 deaths in hospital (2.1%), 12 781 repairs of ruptured abdominal aortic aneurysm (5987 deaths, 46.8%), 31 705 repairs of unruptured abdominal aortic aneurysm (3246 deaths, 10.2%), and 144 370 colorectal resections for cancer (10 424 deaths, 7.2%) were recorded. The power of the complex predictive model was comparable with that of models based on clinical datasets with ROC curve scores of 0.77 (*v* 0.78 from clinical database) for isolated CABG, 0.66 (*v* 0.65) and

### INTRODUCTION

Routine administrative databases are increasingly being used for performance monitoring in healthcare in the United Kingdom (such as [www.healthcarecommission.org.uk](http://www.healthcarecommission.org.uk) and [www.drfooster.co.uk](http://www.drfooster.co.uk)), United States (such as [www.ihl.org/IHI/Programs/Campaign/](http://www.ihl.org/IHI/Programs/Campaign/)), and elsewhere.<sup>1</sup> In comparisons of performance between clinicians or organisations it is essential to adjust for several parameters including comorbidity and severity of disease (case mix). Routine data, however, might contain insufficient information for adequate adjustment. Clinical databases, run by various bodies including professional societies, could potentially record more detailed clinical information and might permit better adjustment for case mix. A survey of 105 multi-centre clinical databases (which included hospital episode statistics, the administrative database available within England) found that their distribution was uneven and that their scope and the quality of the data was variable.<sup>2</sup> The report from the public inquiry into deaths at a paediatric cardiac unit at Bristol criticised this “dual” system as “wasteful and anachronistic.”<sup>3</sup> It also suggested that hospital episode statistics should be supported as a major national resource and used to undertake monitoring of a range of healthcare outcomes.

We examined mortality for three index procedures (coronary artery bypass graft, abdominal aortic aneurysm repair, and colectomy for bowel cancer) used in three large clinical datasets (the national adult cardiac surgical database, the national vascular database, and a

CABG, the c statistic 0.83 from the national

ts based on the most procedures giving as for tenths of risk t. Although there is mation of risk for an underestimation rhaps to be expected o be close agreement ficted numbers and The Hosmer-Lemeshow suggest a highly sig- eaths predicted from r colorectal excision t model). Repair of eurysm also shows . The proportion of he range -1.96 to BG, 0.5% for repair neurysm, 7.3% for ortic aneurysm, and No influential points

cal models with good operative death as an with those derived

# Current Casemix Adjustment Model For Each Procedure Or Diagnosis Groups

## Adjusts for

- Age
- Sex
- Method of admission
- Socio-economic deprivation
- Diagnosis subgroup (3 digit ICD10) or procedure subgroup
- Co-morbidity – Charlson index
- Adjust for interaction between age & co morbidity score
- Source of admission- 7 categories
- Number of emergency admissions in last 12 months
- Palliative care
- Year
- Month of admission (for some respiratory diseases)

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In 2008/09, nearly 30 million working days were lost in the UK due to workplace injury and ill-health. Read on for tips on dealing with stress, RSI, back pain, exercise, good posture and healthy eating

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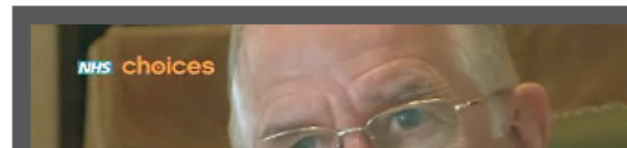
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NHS Choices' homepage is changing. [Learn about the flexible new-look page](#) that can deliver content tailored for you

## Living with dementia



NHS choices



# Planning treatment for: Aortic valve replacement

You can compare hospitals on a range of important areas. Click the name of the hospital to read full information about its services. The indicators and scores for hospitals and the organisations (e.g. Trusts) that run them are for adult procedures only and do not cover paediatric treatments. Your doctor will decide the best place for you to receive your treatment but you can discuss your preferences with them.

## More choice

You can choose from a wider selection of hospitals.

[Compare more](#)

## Information about the organisations (e.g. Trusts) running the hospitals that provide this treatment

Summary	Questions to consider	Patient respect	People's opinions	Hospital locations	Contact and travel
<p><a href="#">Click on the questions below to link to a full explanation of what they mean</a></p>	<p><a href="#">St George's Healthcare NHS Trust</a></p>	<p><a href="#">The Wellington Hospital</a></p>	<p><a href="#">University College London Hospitals NHS Foundation Trust</a></p>	<p><a href="#">Barts and The London NHS Trust</a></p>	<p><a href="#">London Bridge Hospital</a></p>
<p><a href="#">How long will I wait from referral to treatment? (note that NHS and independent hospitals report their waiting times in different ways, which may mean they are not comparable – <a href="#">click here to see details</a>)</a></p>	Data not available	Data not available	Data not available	95% of patients were treated within 18 weeks	Data not available
	Data not available	Data not available	Data not available	50% of patients were treated within 4 weeks	Data not available
Data Source: Department of Health					
<p><a href="#">How long am I likely to spend in hospital?</a></p>	Patients stay in hospital for an average length of 7 days	Data not available	Patients stay in hospital for an average length of 8 days	Patients stay in hospital for an average length of 8 days	Data not available
Data Source: Commissioning Data Sets					
<p><a href="#">What is the risk that I will be readmitted to hospital?</a></p>	<p>★★☆</p> <p>22.1 per cent of patients are readmitted to hospital within a month of being discharged</p>	Data not available	<p>★★☆</p> <p>10.6 per cent of patients are readmitted to hospital within a month of being discharged</p>	<p>★★☆</p> <p>10.91 per cent of patients are readmitted to hospital within a month of being discharged</p>	Data not available
Data Source: Commissioning Data Sets					
<p><a href="#">Does the surgical department have a lot of experience in this operation?</a></p>	This service performs this operation 87 times per year	Data not available	This service performs this operation 99 times per year	This service performs this operation 129 times per year	Data not available
Data Source: Commissioning Data Sets					
<p><a href="#">How well does this organisation control MRSA blood infections for elective patients</a></p>	The organisation running these hospitals had 2.24 infections for	Data not available	The organisation running these hospitals had 1.57 infections for	The organisation running these hospitals had 1.57 infections for	Data not available

## Dr Foster health & medical guides

### Take control of your health

Dr Foster is the UK's leading provider of comparative information on health and social care services.

Dr Foster's online tools and consumer guides enable both health and social care users and providers to make better informed decisions.

Dr Foster produces unique consumer guides to health services, the first of which was published in 2001 - the first time that comparative adjusted death rates for all NHS hospital trusts had ever been published.

Our annual report summarizes our key findings, it is known as the Hospital Guide and can be downloaded below. To accompany this we have created a [report card](#) for every NHS Hospital using a number of key measures. It's this data that we use to award our Hospitals of the Year. You can find out how your local hospital performs by clicking on the link to the [Hospital report cards](#)

Finally, we have selected a variety of common procedures where patients can choose where they would like to be treated, and presented some information on every unit. To access this, use the [Find a hospital](#) link.

The data on this site updates monthly, for reminders and other helpful information

FOLLOW US ON [twitter](#)

### The 2010 Dr Foster Hospital Guide

Patients need information to ensure they get the care

## Medical dictionary



### Dr Foster's medical dictionary

Dr Foster's medical dictionary contains definitions of conditions, treatments, diagnostic tests and other medical information. You can also scroll through the full A-Z medical dictionary index.

[Read more](#)

[Find a hospital](#)

[Hospital report cards](#)

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[Medical dictionary](#)



# Performance Summary - Alerts

Real Time Monitoring 8.0

Performance Summary (Jun-10 to May-11) ⓘ

Criteria selection

Time Period: 12 Months (Jun-10 to May-11) Level: Trust Display: All Alerts

Generate report

Peers - My current group - HSMR Basket of 56 Diagnosis Groups		Mortality	Length of Stay	Day Case Rate	Readmissions
Leeds Teaching Hospitals NHS Trust		🟢	🟢		
Trust Totals - Leeds Teaching Hospitals NHS Trust		Mortality	Length of Stay	Day Case Rate	Readmissions
Diagnoses		🟢 🟡 🟢	🟢 🟡 🟢		🟢 🟡 🟢
Procedures		🟢 🟡 🟢	🟢 🟡 🟢	🟢 🟡 🟢	🟢 🟡 🟢
Diagnoses		Mortality	Length of Stay	Day Case Rate	Readmissions
HSMR Basket of 56 Diagnosis Groups		🟢	🟢		
Abdominal pain		🟢	🟢		🟡 🟢
Acute and unspecified renal failure		🟢	🟢		🟢
Acute bronchitis		🟢	🟢		🟢
Acute cerebrovascular disease		🟢	🟢	🟡 🟢	🟢
Acute myocardial infarction		🟢	🟢		🟡 🟢
Affective disorders		🟢	🟢		🟢
Alcohol-related mental disorders		🟢	🟢		🟢
Anxiety, somatoform, dissociative, and personality disorders		🟢	🟢		🟢
Asthma		🟢	🟢		🟢
Biliary tract disease		🟢	🟢	🟡 🟢	🟢
Cancer of bladder		🟢	🟢		🟢
Cancer of brain and nervous system		🟢	🟢		🟢
Cancer of breast		🟢	🟢	🟡 🟢	🟢
Cancer of bronchus, lung		🟢	🟢		🟢
Cancer of colon		🟢	🟢		🟢
Cancer of oesophagus		🟢	🟢		🟢
Cancer of ovary		🟢	🟢		🟢
Cancer of pancreas		🟢	🟢		🟢

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Home

About

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## The Mid Staffordshire NHS Foundation Trust Public Inquiry

On 9 June 2010 the Secretary of State for Health, Andrew Lansley MP, announced a full public inquiry into the role of the commissioning, supervisory and regulatory bodies in the monitoring of Mid Staffordshire Foundation NHS Trust.

The Inquiry is established under the Inquiries Act 2005 and is chaired by Robert Francis QC, who will make recommendations to the Secretary of State based on the lessons learnt from Mid Staffordshire. It will build on the work of his [earlier independent inquiry](#) into the care provided by Mid Staffordshire NHS Foundation Trust between January 2005 and March 2009.

### Latest updates



#### [Inquiry hearings - transcript for day two](#) (NEWS)

TUE 9TH NOVEMBER 2010

The transcript for the second day of the Inquiry's hearings is now available.

#### [Inquiry hearings - first day](#) (NEWS)

MON 8TH NOVEMBER 2010

The Inquiry began its main hearings today, with opening statements from the Inquiry Chairman and Counsel to the Inquiry.

#### [Appointment of assessors](#) (NEWS)

FRI 15TH OCTOBER 2010

Robert Francis QC today announced that four assessors had been appointed to the Inquiry. Further detail is set out in the assessor biographies, which are available under 'key documents'.



# How to tackle readmissions?

- From the 2010 hospital guide
- Ben Bridgewater, Consultant Cardiac Surgeon at the University Hospital South Manchester NHS Trust
- Government policy is create incentives to reduce readmissions
- In cardiac surgery readmission rates are between 10% and 16% across different hospitals
- Data enables distinction between avoidable and unavoidable readmissions
- Hospitals need to address this issue

# Why Transparency?

- Public engagement
  - need to engage public in future shape of public services
  - need to engage consumers in managing their health
- Professional engagement
  - reducing variation
  - engaging clinicians to change the way they work
- Academic evidence
  - transparency in health improves outcomes

# Why Not?

- The data's rubbish
- Risk adjustment doesn't work
- Makes doctors more conservative
- Data is too complex – consumers won't understand it

# To really engage consumers?

- Data needs to be presented in ways that engage consumers
- Needs to be current
- Needs to be comprehensive and at doctor level
- Needs to cover all aspects – safety, quality, experience and outcomes
- Need access to their own data on line

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# Does transparency work?

*“There is lots and lots of potential benchmarking data out there. The approach that Dr Foster have developed to analysing that data simply and clearly has the potential to make a significant impact on our ability to work with clinical teams to deliver improvements in productivity and quality of services.”*

***Richard Kirby, Chief Operating Officer, Sandwell and West Birmingham Hospitals NHS Trust***

# Does transparency work?

*“The development and publication of comprehensive, reliable and clearly understood, statistically based information about the performance of hospitals is clearly vital not only to the NHS to assist in the management and provision of high quality health service, but also to enable the public to judge for themselves the standard of performance achieved, to inform their own healthcare choices and to enable them to monitor the performance of an important public service.”*

*“It is therefore particularly important that such information should be available from unimpeachably independent and reliable sources, and that it should be accompanied by clear explanations of what any figures mean, and, just as importantly, what they do not mean.”*

Robert Francis QC, Independent mid Staff inquiry 2009

# Conclusion

- Healthcare systems face enormous cost challenges
- Variation in clinical practice is a key underlying cause
- We need engaged consumers to restructure services into more efficient and higher quality facilities
- Engaged consumers are inevitably more conservative about managing their own health than the professionals
- Digital media will transform the way consumers can engage