

Bradford Teaching Hospitals NHS Foundation Trust

YORKSHIRE AND THE HUMBER N53

The Bradford Teaching Hospitals NHS Foundation Trust incorporates Bradford Royal Infirmary <https://www.bradfordhospitals.nhs.uk/>  
<[https://www.bradfordhospitals.nhs.uk](https://www.bradfordhospitals.nhs.uk/)>

## Patient inclusion and data sources

The majority of these results are for patients in England and Wales diagnosed with bowel cancer 1 Apr 2014 – 31 Mar 2015. The exceptions are for 2-year mortality and 18-month stoma rate. Two-year mortality estimates include patients undergoing a major resection between 1 April 2012 and 31 March 2013. 18-month stoma rates include rectal cancer patients undergoing a major resection between 1 April 2012 and 31 March 2015. The Audit dataset is linked to Hospital Episode Statistics (HES) at the patient level to obtain further information on patient care and follow-up such as stoma reversal and emergency readmissions in England, and to the National Radiotherapy Dataset (RTDS) for information on radiotherapy treatment in England.

## Data Quality

### Data completeness

% of relevant patient group with useable value of data item.

### Case ascertainment

Number of patients reported to the Audit as a percentage of the number of patients admitted for the first time to the trust/network with a diagnosis of bowel cancer within the audit period according to HES. This can be larger than 100 if more patients are reported to the Audit than identified in HES.

### 7 audit items for risk-adjustment

The per cent of patients with complete data items on all of age, sex, ASA grade, pathological T-stage, pathological N-stage, distant metastases and site of cancer.

## Management of all patients

### **No major resection: too little cancer**

Those undergoing a local resection of polypectomy.

### **No major resection: too much cancer**

No excision and reason for no treatment includes advanced stage cancer OR no excision and non-curative intent and metastatic disease.

### **No major resection: too frail**

not in too much cancer group AND no excision and reason for no treatment includes significant co-morbidity OR no excision and performance status 3 or 4.

### **No major resection: unknown/other reason:**

no excision and does not meet any of the above criteria.

## Compare trust outcomes

Funnel plots display trust risk-adjusted outcomes for 90-day mortality, 30-day unplanned readmission, 2-year mortality and, for rectal cancer patients, 18-month stoma rate. The funnel regions represent the 95 per cent limit and the 99.8 per cent limit for trusts compared to the national average. Those trusts with results outside the outer (99.8 per cent) limit are considered potential outliers.

Risk adjustment is performed using the seven items listed under Data Quality as well as mode of admission (elective/emergency) and number of co-morbidities according to HES, and an interaction between age and distant metastases. Missing values are imputed using Multiple Imputation. The model for two-year mortality additionally includes interactions between follow-up time (0-3 months after surgery vs. 3-24 months after surgery) and all of the risk factors.

A stoma is considered to be reversed if a HES record with relevant code is identified with 18 months of the initial surgical procedure.

See [FAQs <https://www.nboca.org.uk/about/faq/>](https://www.nboca.org.uk/about/faq/) for more details.

## Data Quality

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<b>All Patients:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	155	3008	28013
Case ascertainment (%)	85	94	93
Data completeness of:			
– Pre-treatment TNM (%)	75	71	71
– Performance status (%)	80	77	77

<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	108	1893	18809
ASA grade 1 (%)	N/A	20	14
ASA grade 2 (%)	97	52	53
ASA grade 3 (%)	2	22	25
ASA grade 4+ (%)	N/A	3	3
ASA grade not recorded (%)	1	4	5
Data completeness of:			
7 Audit items for risk-adjustment (%)	94	85	82

**Key:**

## Management of all patients

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<b>All Patients:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	155	3008	30122
Seen by Clinical Nurse Specialist (%)	5	82	92

## Management of patients having major resection

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<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	108	1893	18809
Distant metastases (%)	1	7	9
Urgent or emergency surgery (%)	2	12	16
Median number of lymph nodes excised	20	18	17
Laparoscopic surgery attempted (%)	94	55	61

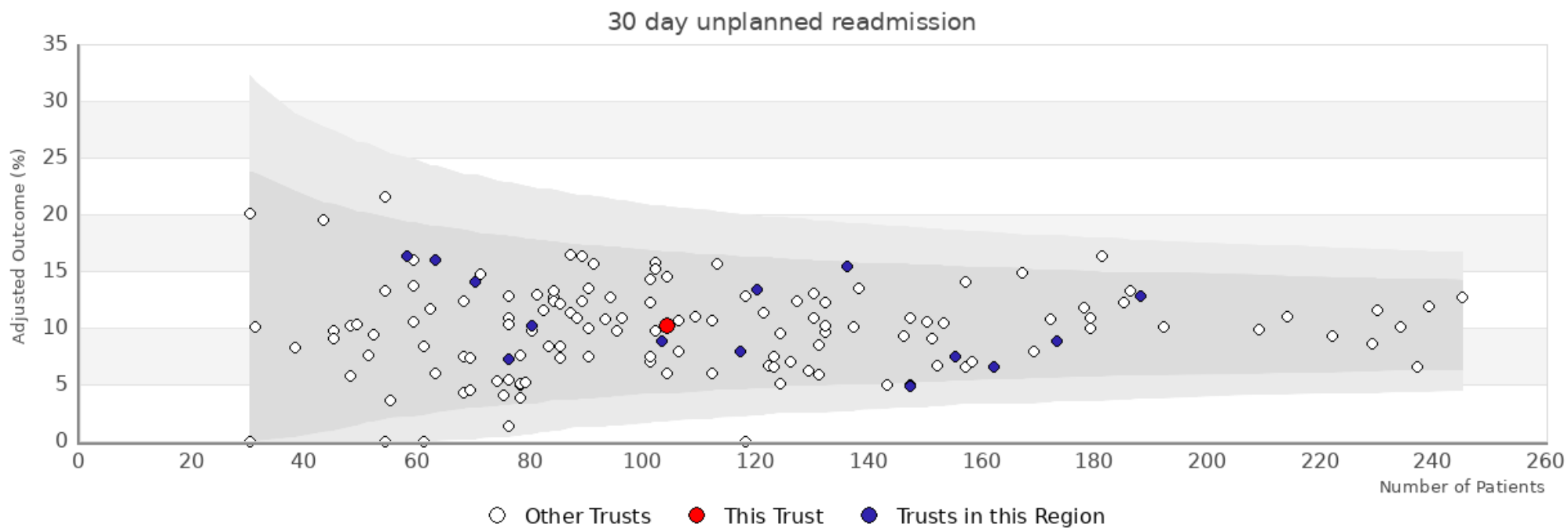
<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Length of stay > 5 days (%)	72	76	69

## Rectal cancer patients

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<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	30	498	4769
Neoadjuvant therapy (%)	60	51	37
Circumferential resection margin: Recorded (%)	N/A	23	25
Circumferential resection margin: Positive (%)	13	8	7
Rectal volume	N/A	N/A	N/A

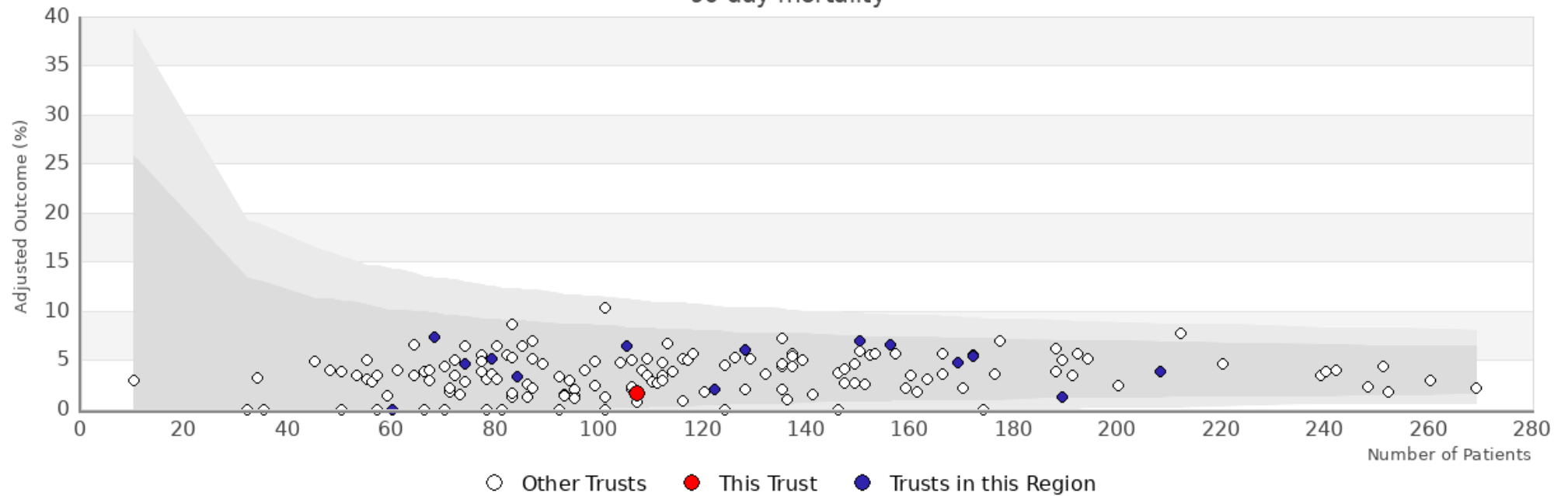
<b>Patients in APER/Hartmanns estimate:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in APER/Hartmanns estimate	N/A	N/A	N/A
APER/Hartmanns (%)	N/A	N/A	N/A



Trust	Number	Adjusted	Observed
Bradford Teaching Hospitals NHS Foundation Trust	104	10.2%	10.6%
Other trusts within the region: YORKSHIRE AND THE HUMBER			
Airedale NHS Foundation Trust	76	7.2%	6.6%
Barnsley Hospital NHS Foundation Trust	63	16%	15.9%

Trust	Number	Adjusted	Observed
Calderdale and Huddersfield NHS Foundation Trust	103	8.8%	8.7%
Chesterfield Royal Hospital NHS Foundation Trust	117	7.9%	7.7%
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	120	13.4%	14.2%
Harrogate and District NHS Foundation Trust	80	10.2%	10%
Hull and East Yorkshire Hospitals NHS Trust	173	8.8%	8.7%
Leeds Teaching Hospitals NHS Trust	188	12.8%	12.8%
Mid Yorkshire Hospitals NHS Trust	162	6.5%	6.2%
Northern Lincolnshire and Goole NHS Foundation Trust	136	15.4%	16.2%
Sheffield Teaching Hospitals NHS Foundation Trust	155	7.5%	7.7%
The Rotherham NHS Foundation Trust	70	14.1%	14.3%
York Teaching Hospital NHS Foundation Trust- The York Hospital	147	4.8%	4.8%
York Teaching Hospital NHS Foundation Trust- Scarborough Hospital	58	16.3%	15.5%

### 90 day mortality

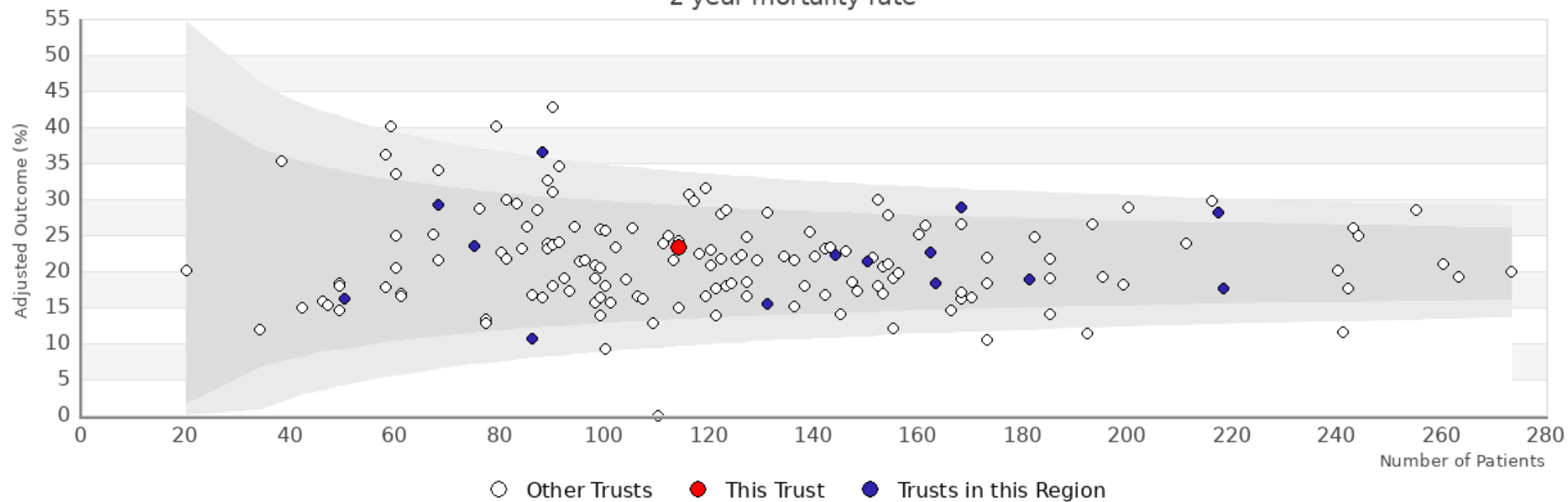


Trust	Number	Adjusted	Observed
Bradford Teaching Hospitals NHS Foundation Trust	107	1.6%	0.9%
Other trusts within the region: YORKSHIRE AND THE HUMBER			
Airedale NHS Foundation Trust	79	5.2%	2.5%
Barnsley Hospital NHS Foundation Trust	68	7.4%	5.9%



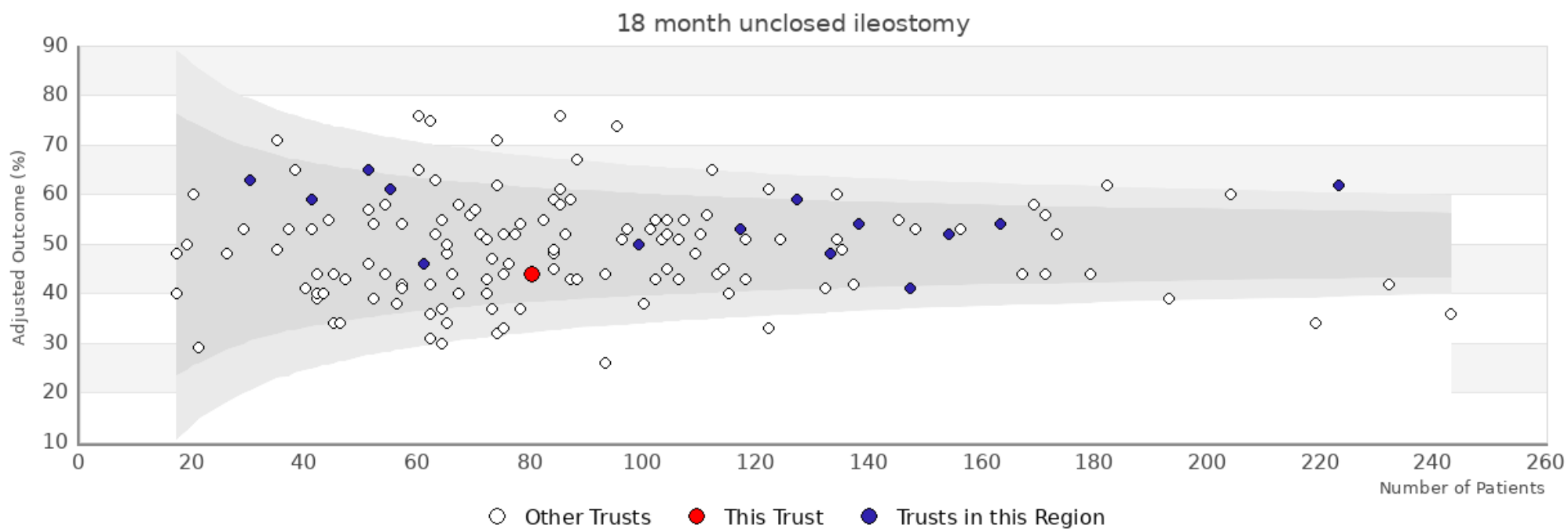
Trust	Number	Adjusted	Observed
Calderdale and Huddersfield NHS Foundation Trust	105	6.4%	3.8%
Chesterfield Royal Hospital NHS Foundation Trust	122	2%	1.6%
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	128	6.1%	4.7%
Harrogate and District NHS Foundation Trust	84	3.3%	2.4%
Hull and East Yorkshire Hospitals NHS Trust	189	1.2%	1.1%
Leeds Teaching Hospitals NHS Trust	208	3.8%	4.8%
Mid Yorkshire Hospitals NHS Trust	172	5.4%	2.9%
Northern Lincolnshire and Goole NHS Foundation Trust	150	6.9%	8%
Sheffield Teaching Hospitals NHS Foundation Trust	169	4.8%	4.1%
The Rotherham NHS Foundation Trust	74	4.6%	4.1%
York Teaching Hospital NHS Foundation Trust- The York Hospital	156	6.6%	6.4%

2 year mortality rate



Trust	Number	Adjusted	Observed
Bradford Teaching Hospitals NHS Foundation Trust	114	23.3%	23.9%
Other trusts within the region: YORKSHIRE AND THE HUMBER			
Airedale NHS Foundation Trust	86	10.6%	12.3%
Barnsley Hospital NHS Foundation Trust	88	36.6%	42%

Trust	Number	Adjusted	Observed
Calderdale and Huddersfield NHS Foundation Trust	150	21.4%	19.7%
Chesterfield Royal Hospital NHS Foundation Trust	131	15.4%	15.7%
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	163	18.3%	13.1%
Harrogate and District NHS Foundation Trust	75	23.5%	24.4%
Hull and East Yorkshire Hospitals NHS Trust	168	28.8%	23.7%
Leeds Teaching Hospitals NHS Trust	217	28.1%	28.4%
Mid Yorkshire Hospitals NHS Trust	181	18.9%	17.8%
Northern Lincolnshire and Goole NHS Foundation Trust	162	22.7%	24.9%
Sheffield Teaching Hospitals NHS Foundation Trust	218	17.6%	14.3%
The Rotherham NHS Foundation Trust	68	29.3%	24.8%
York Teaching Hospital NHS Foundation Trust- The York Hospital	144	22.2%	19.2%
York Teaching Hospital NHS Foundation Trust- Scarborough Hospital	50	16.1%	15.1%



Trust	Number	Adjusted	Observed
Bradford Teaching Hospitals NHS Foundation Trust	80	44%	49%
Other trusts within the region: YORKSHIRE AND THE HUMBER			
Airedale NHS Foundation Trust	51	65%	67%
Barnsley Hospital NHS Foundation Trust	55	61%	60%

<b>Trust</b>	<b>Number</b>	<b>Adjusted</b>	<b>Observed</b>
Calderdale and Huddersfield NHS Foundation Trust	117	53%	50%
Chesterfield Royal Hospital NHS Foundation Trust	99	50%	47%
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	154	52%	50%
Harrogate and District NHS Foundation Trust	61	46%	46%
Hull and East Yorkshire Hospitals NHS Trust	147	41%	41%
Leeds Teaching Hospitals NHS Trust	223	62%	64%
Mid Yorkshire Hospitals NHS Trust	138	54%	50%
Northern Lincolnshire and Goole NHS Foundation Trust	127	59%	62%
Sheffield Teaching Hospitals NHS Foundation Trust	163	54%	53%
The Rotherham NHS Foundation Trust	41	59%	56%
York Teaching Hospital NHS Foundation Trust- The York Hospital	133	48%	45%
York Teaching Hospital NHS Foundation Trust- Scarborough Hospital	30	63%	67%