

## Plymouth Hospitals NHS Trust

SOUTH WEST N57

The Plymouth Hospitals NHS Trust incorporates Derriford Hospital in Plymouth <https://www.plymouthhospitals.nhs.uk/>  
<<https://www.plymouthhospitals.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

---

<b>All Patients:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	254	2718	28013
Case ascertainment (%)	100	97	93
Data completeness of:			
– Pre-treatment TNM (%)	70	76	71
– Performance status (%)	22	79	77

<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	169	1703	18809
ASA grade 1 (%)	9	13	14
ASA grade 2 (%)	54	55	53
ASA grade 3 (%)	30	28	25
ASA grade 4+ (%)	2	2	3
ASA grade not recorded (%)	5	1	5
Data completeness of:			
7 Audit items for risk-adjustment (%)	89	86	82

**Key:**

## Management of all patients

---

<b>All Patients:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	254	2718	30122
Seen by Clinical Nurse Specialist (%)	92	97	92

## Management of patients having major resection

---

<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	169	1703	18809
Distant metastases (%)	3	7	9
Urgent or emergency surgery (%)	17	15	16
Median number of lymph nodes excised	18	17	17
Laparoscopic surgery attempted (%)	77	72	61

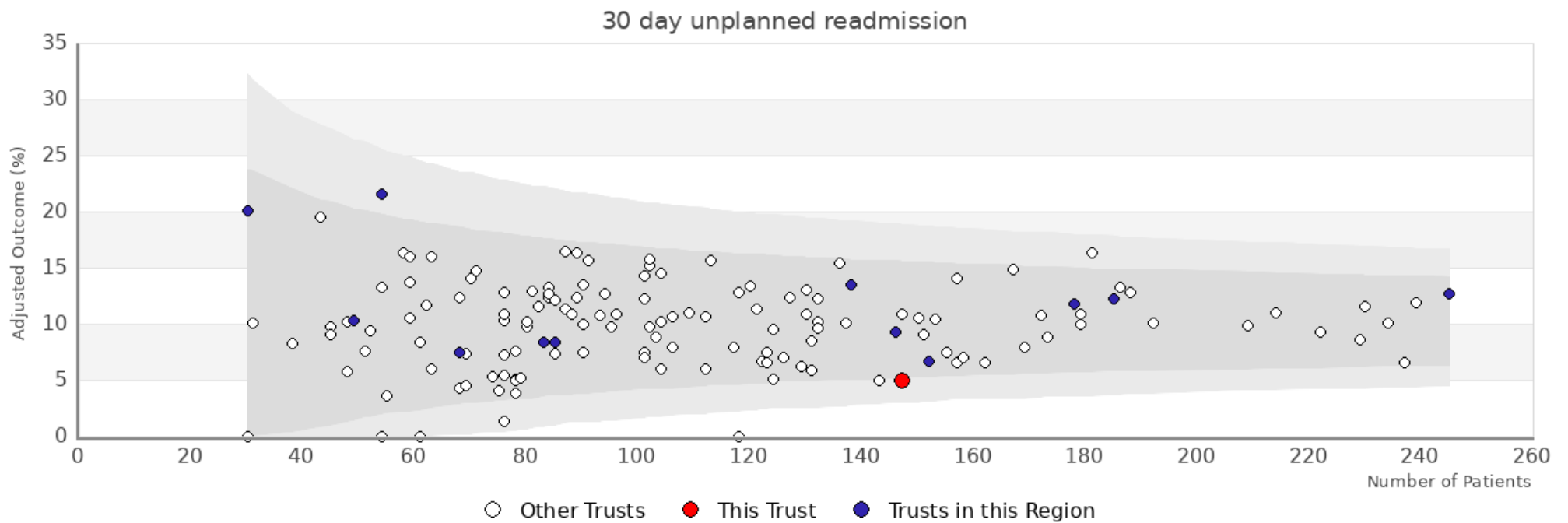
<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Length of stay > 5 days (%)	75	59	69

## Rectal cancer patients

---

<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	39	454	4769
Neoadjuvant therapy (%)	67	29	37
Circumferential resection margin: Recorded (%)	8	29	25
Circumferential resection margin: Positive (%)	10	7	7
Rectal volume	N/A	N/A	N/A

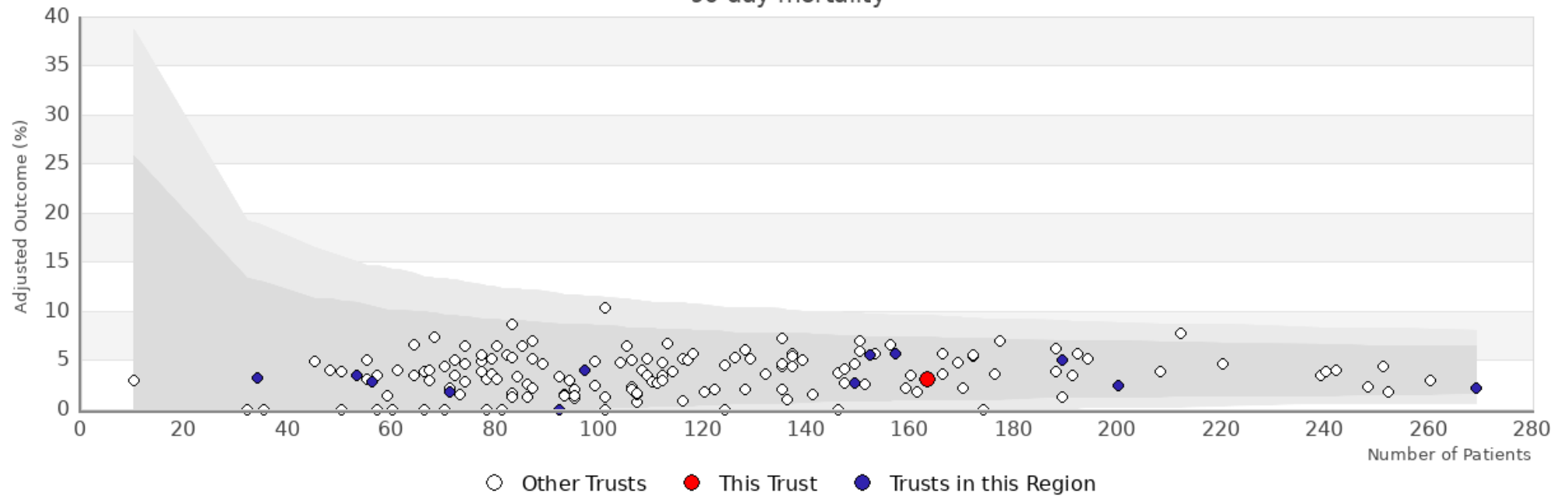
<b>Patients in APER/Hartmanns estimate:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in APER/Hartmanns estimate	N/A	N/A	N/A
APER/Hartmanns (%)	N/A	N/A	N/A



Trust	Number	Adjusted	Observed
Plymouth Hospitals NHS Trust	147	4.9%	4.8%
Other trusts within the region: SOUTH WEST			
Gloucestershire Hospitals NHS Foundation Trust	245	12.7%	13.1%
North Bristol NHS Trust	138	13.5%	13.8%

Trust	Number	Adjusted	Observed
Northern Devon Healthcare NHS Trust	68	7.4%	7.4%
Royal Cornwall Hospitals NHS Trust	185	12.2%	11.9%
Royal Devon and Exeter NHS Foundation Trust	178	11.8%	11.2%
Royal United Hospitals Bath NHS Foundation Trust	152	6.7%	6.6%
Salisbury NHS Foundation Trust	54	21.6%	22.2%
Taunton and Somerset NHS Foundation Trust	85	8.4%	8.2%
Torbay and South Devon NHS Foundation Trust	146	9.3%	8.9%
University Hospitals Bristol NHS Foundation Trust	83	8.4%	8.4%
Weston Area Health NHS Trust	49	10.3%	10.2%
Yeovil District Hospital NHS Foundation Trust	30	20.1%	20%

### 90 day mortality

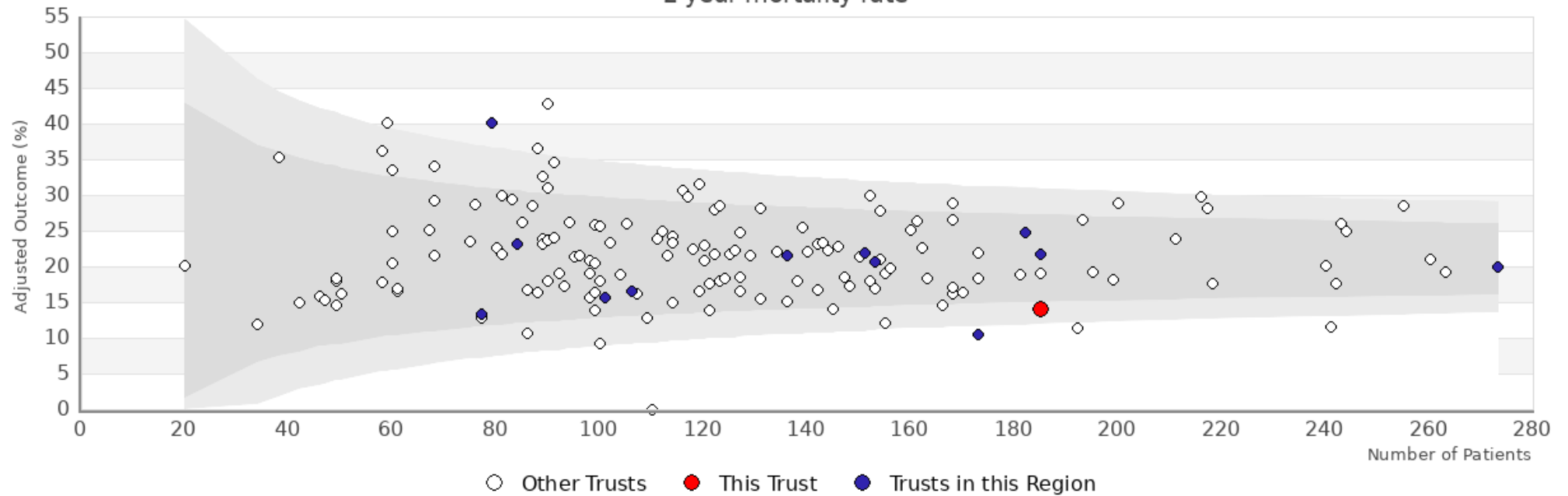


Trust	Number	Adjusted	Observed
Plymouth Hospitals NHS Trust	163	3%	3.1%
Other trusts within the region: SOUTH WEST			
Gloucestershire Hospitals NHS Foundation Trust	269	2.2%	2.2%
North Bristol NHS Trust	149	2.7%	2%



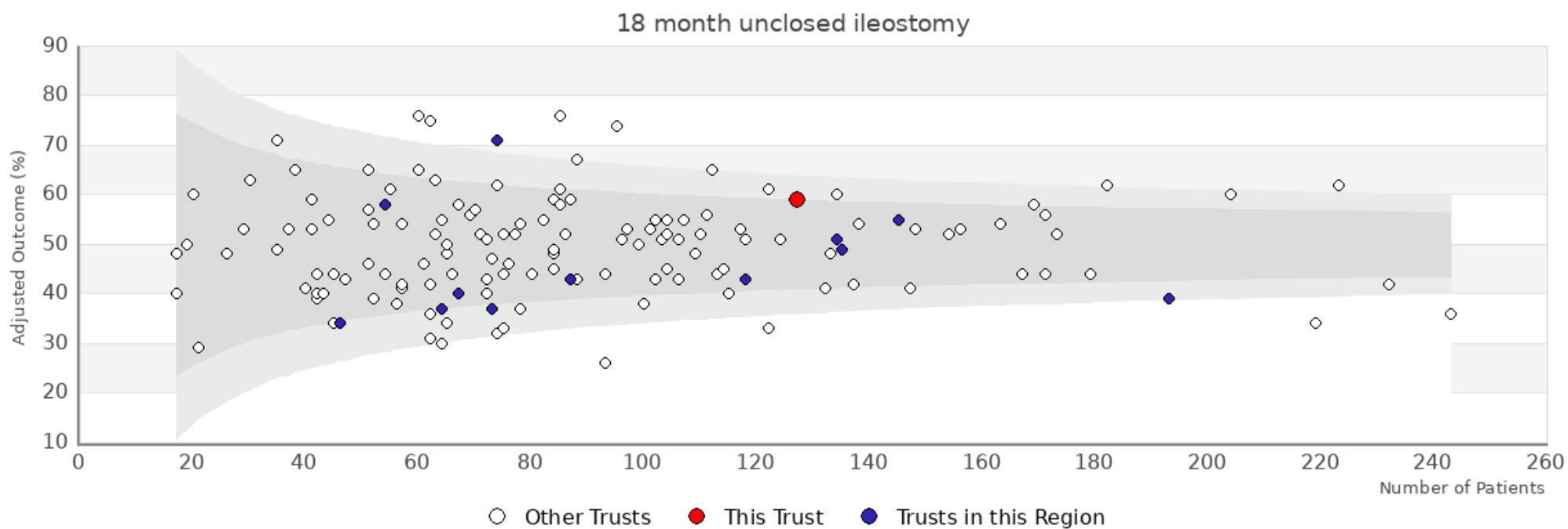
Trust	Number	Adjusted	Observed
Northern Devon Healthcare NHS Trust	71	1.7%	1.4%
Royal Cornwall Hospitals NHS Trust	200	2.4%	2.5%
Royal Devon and Exeter NHS Foundation Trust	189	5%	5.3%
Royal United Hospitals Bath NHS Foundation Trust	157	5.7%	6.4%
Salisbury NHS Foundation Trust	56	2.8%	3.6%
Taunton and Somerset NHS Foundation Trust	97	4%	3.1%
Torbay and South Devon NHS Foundation Trust	152	5.5%	4.6%
Weston Area Health NHS Trust	53	3.5%	3.8%
Yeovil District Hospital NHS Foundation Trust	34	3.2%	2.9%

2 year mortality rate



Trust	Number	Adjusted	Observed
Plymouth Hospitals NHS Trust	185	14.1%	14.1%
Other trusts within the region: SOUTH WEST			
Gloucestershire Hospitals NHS Foundation Trust	273	19.9%	20.5%
North Bristol NHS Trust	173	10.5%	17.7%

Trust	Number	Adjusted	Observed
Northern Devon Healthcare NHS Trust	77	13.3%	20.2%
Royal Cornwall Hospitals NHS Trust	182	24.8%	25.1%
Royal Devon and Exeter NHS Foundation Trust	185	21.8%	18.1%
Royal United Hospitals Bath NHS Foundation Trust	153	20.7%	15.3%
Salisbury NHS Foundation Trust	101	15.7%	14%
Taunton and Somerset NHS Foundation Trust	151	21.9%	21.3%
Torbay and South Devon NHS Foundation Trust	136	21.6%	20%
University Hospitals Bristol NHS Foundation Trust	106	16.6%	18.7%
Weston Area Health NHS Trust	79	40.1%	41.7%
Yeovil District Hospital NHS Foundation Trust	84	23.1%	21.4%



Trust	Number	Adjusted	Observed
Plymouth Hospitals NHS Trust	127	59%	57%
Other trusts within the region: SOUTH WEST			
Gloucestershire Hospitals NHS Foundation Trust	193	39%	39%
North Bristol NHS Trust	118	43%	46%

Trust	Number	Adjusted	Observed
Northern Devon Healthcare NHS Trust	64	37%	36%
Royal Cornwall Hospitals NHS Trust	145	55%	56%
Royal Devon and Exeter NHS Foundation Trust	134	51%	50%
Royal United Hospitals Bath NHS Foundation Trust	135	49%	49%
Salisbury NHS Foundation Trust	73	37%	36%
Taunton and Somerset NHS Foundation Trust	74	71%	73%
Torbay and South Devon NHS Foundation Trust	87	43%	43%
University Hospitals Bristol NHS Foundation Trust	67	40%	39%
Weston Area Health NHS Trust	54	58%	63%
Yeovil District Hospital NHS Foundation Trust	46	34%	35%