

## Brighton and Sussex University Hospitals NHS Trust

### SOUTH EAST COAST N58

The Brighton and Sussex University Hospitals NHS Trust incorporates Royal Sussex County Hospital in Brighton and Princess Royal Hospital in Haywards Heath <https://www.bsuh.nhs.uk/> <<https://www.bsuh.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	193	2248	28013
Case ascertainment (%)	89	85	93
Data completeness of:			
– Pre-treatment TNM (%)	54	71	71
– Performance status (%)	98	84	77

<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in Audit	55	1439	18809
ASA grade 1 (%)	7	15	14
ASA grade 2 (%)	62	57	53
ASA grade 3 (%)	25	22	25
ASA grade 4+ (%)	2	2	3
ASA grade not recorded (%)	4	4	5
Data completeness of:			
7 Audit items for risk-adjustment (%)	62	87	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	193	2248	30122
Seen by Clinical Nurse Specialist (%)	100	84	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	55	1439	18809
Distant metastases (%)	8	9	9
Urgent or emergency surgery (%)	2	15	16
Median number of lymph nodes excised	16	18	17
Laparoscopic surgery attempted (%)	85	62	61

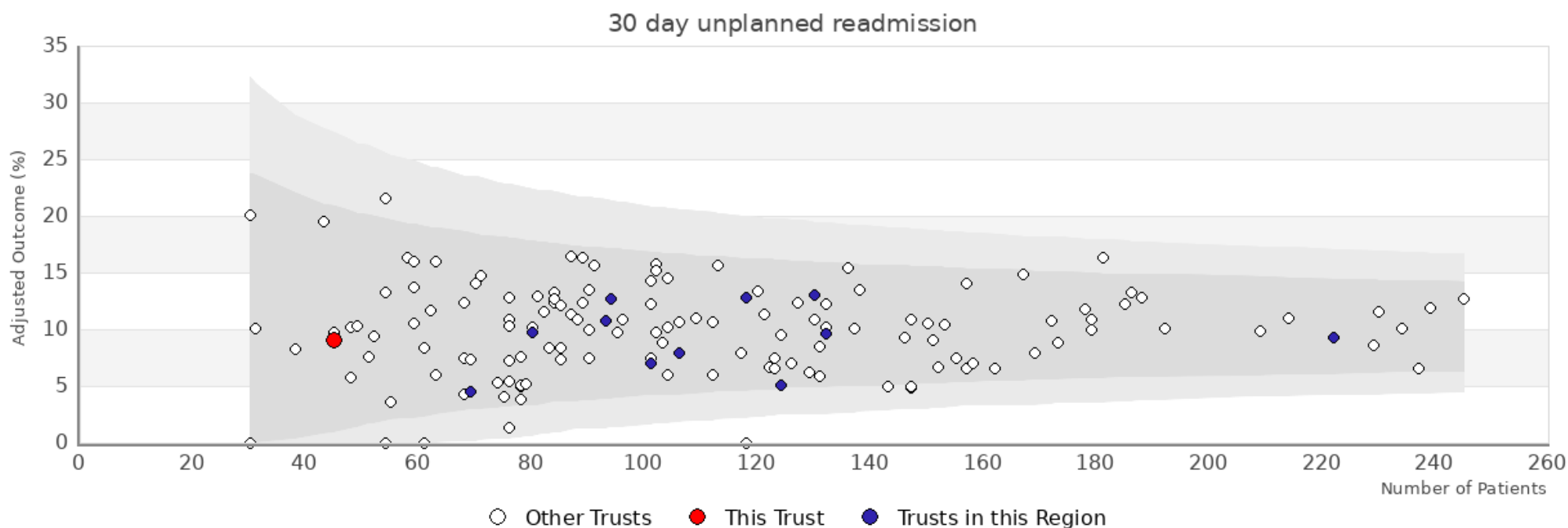
<b>Patients having major resection:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Length of stay > 5 days (%)	67	65	69

## 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	15	316	4769
Neoadjuvant therapy (%)	54	29	37
Circumferential resection margin: Recorded (%)	100	32	25
Circumferential resection margin: Positive (%)	N/A	5	7
Rectal volume	N/A	N/A	N/A

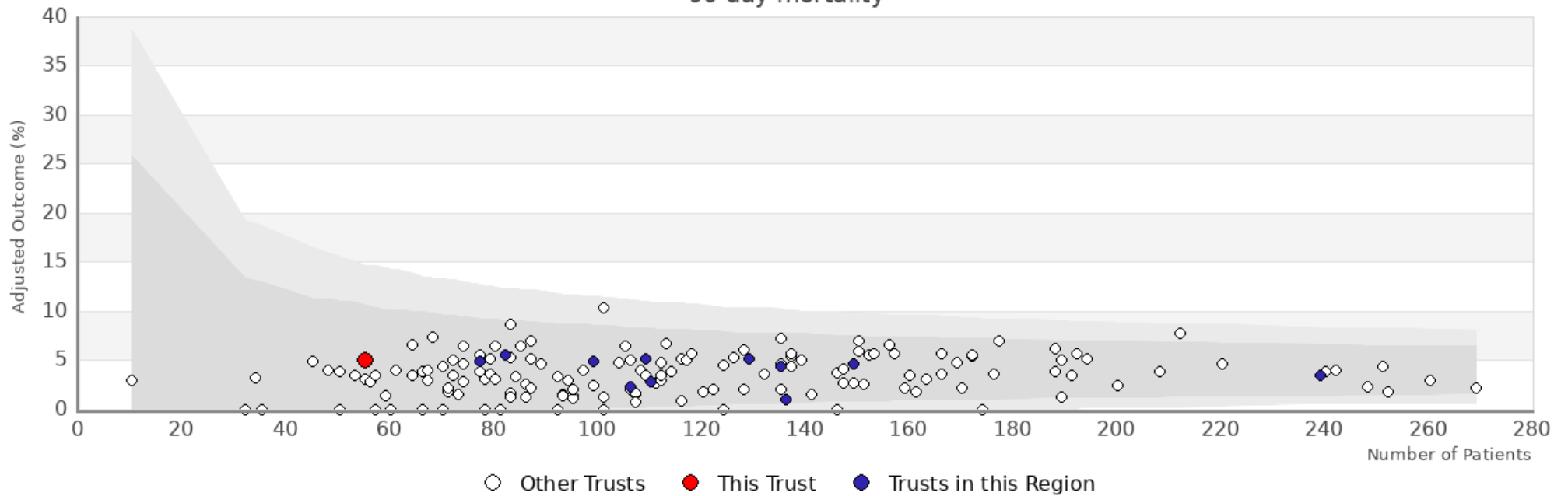
<b>Patients in APER/Hartmanns estimate:</b>	<b>Trust</b>	<b>Network</b>	<b>National</b>
Number of patients in APER/Hartmanns estimate	N/A	N/A	N/A
APER/Hartmanns (%)	N/A	N/A	N/A



Trust	Number	Adjusted	Observed
Brighton and Sussex University Hospitals NHS Trust	45	9%	8.9%
Other trusts within the region: SOUTH EAST COAST			
Ashford and St Peter's Hospitals NHS Foundation Trust	106	7.9%	7.5%
Dartford and Gravesham NHS Trust	94	12.7%	12.8%

Trust	Number	Adjusted	Observed
East Kent Hospitals University NHS Foundation Trust	222	9.3%	8.6%
East Sussex Healthcare NHS Trust	124	5.1%	4.8%
Frimley Health NHS Foundation Trust - Frimley Park Hospital	93	10.7%	10.8%
Maidstone and Tunbridge Wells NHS Trust	132	9.6%	9.1%
Medway NHS Foundation Trust	101	7%	6.9%
Royal Surrey County Hospital NHS Foundation Trust	69	4.5%	4.3%
Surrey and Sussex Healthcare NHS Trust	118	12.8%	12.7%
Western Sussex Hospitals NHS Foundation Trust- St. Richard's Hospital	130	13%	12.3%
Western Sussex Hospitals NHS Foundation Trust- Worthing Hospital	80	9.7%	8.8%

### 90 day mortality

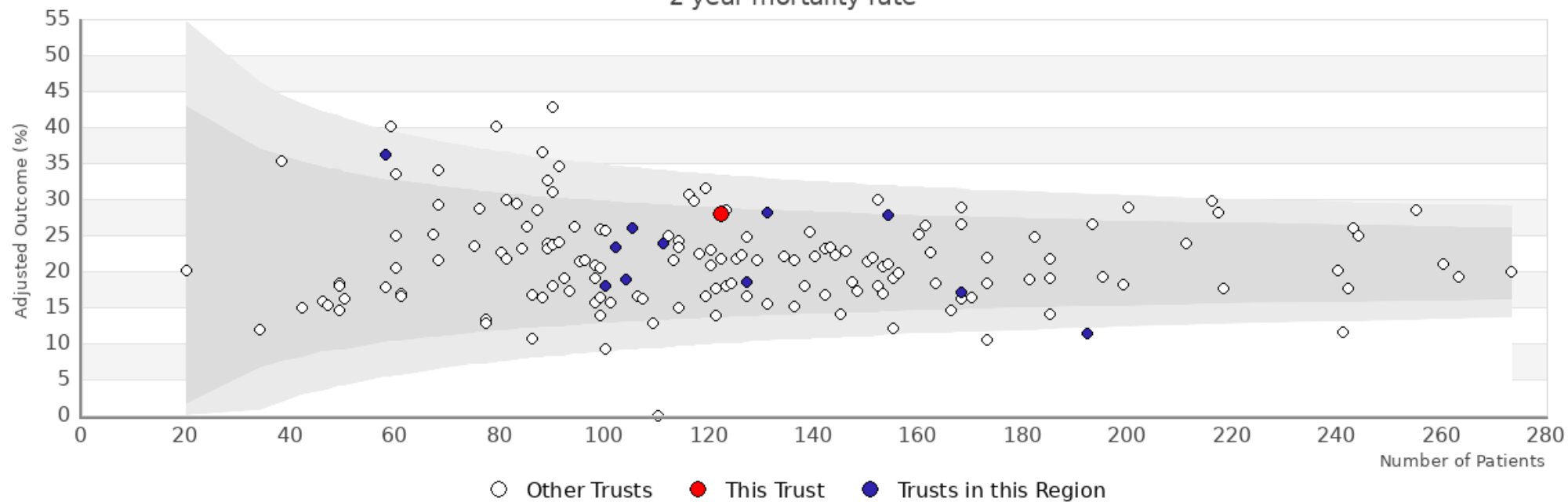


Trust	Number	Adjusted	Observed
Brighton and Sussex University Hospitals NHS Trust	55	5%	3.6%
Other trusts within the region: SOUTH EAST COAST			
Ashford and St Peter's Hospitals NHS Foundation Trust	110	2.8%	2.7%
Dartford and Gravesham NHS Trust	99	4.9%	6.1%



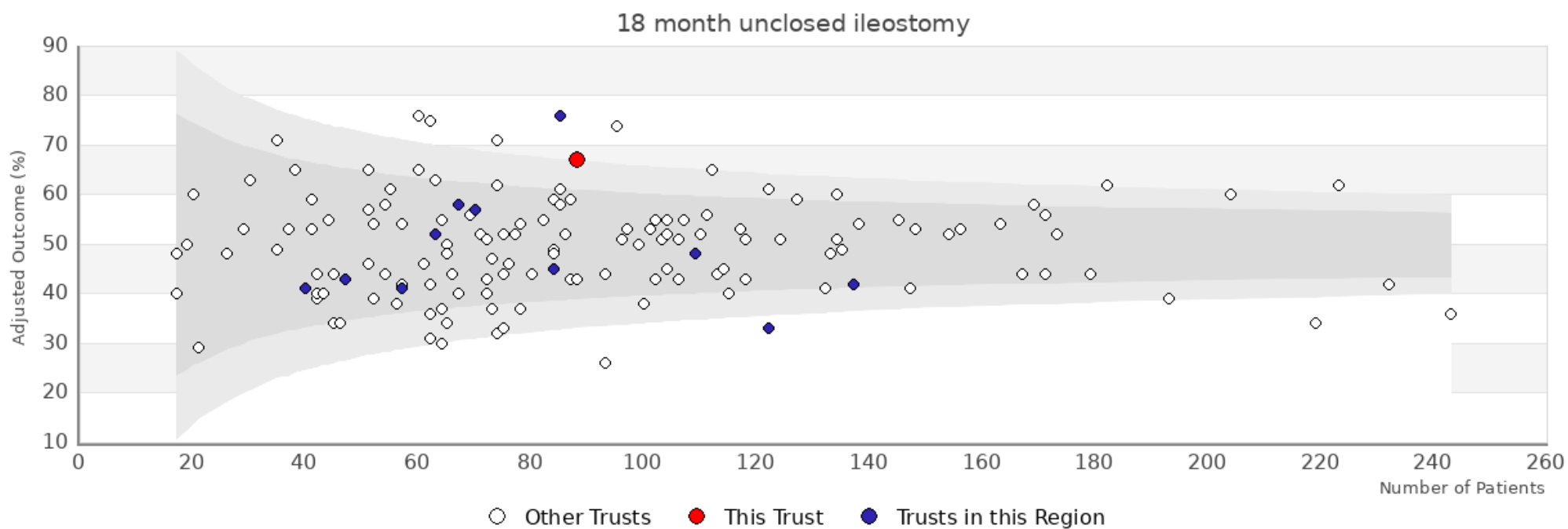
Trust	Number	Adjusted	Observed
East Kent Hospitals University NHS Foundation Trust	239	3.5%	3.3%
East Sussex Healthcare NHS Trust	136	1%	0.7%
Frimley Health NHS Foundation Trust - Frimley Park Hospital	106	2.3%	1.9%
Maidstone and Tunbridge Wells NHS Trust	149	4.6%	4%
Medway NHS Foundation Trust	109	5.2%	4.6%
Royal Surrey County Hospital NHS Foundation Trust	77	4.9%	3.9%
Surrey and Sussex Healthcare NHS Trust	129	5.2%	4.7%
Western Sussex Hospitals NHS Foundation Trust- St. Richard's Hospital	135	4.3%	5.9%
Western Sussex Hospitals NHS Foundation Trust- Worthing Hospital	82	5.5%	6.1%

2 year mortality rate



Trust	Number	Adjusted	Observed
Brighton and Sussex University Hospitals NHS Trust	122	28%	22.6%
Other trusts within the region: SOUTH EAST COAST			
Ashford and St Peter's Hospitals NHS Foundation Trust	104	18.9%	19.5%
Dartford and Gravesham NHS Trust	58	36.2%	26.5%

Trust	Number	Adjusted	Observed
East Kent Hospitals University NHS Foundation Trust	127	18.5%	17.1%
East Sussex Healthcare NHS Trust	154	27.9%	23%
Frimley Health NHS Foundation Trust - Frimley Park Hospital	168	17.1%	17.2%
Maidstone and Tunbridge Wells NHS Trust	192	11.4%	10.5%
Medway NHS Foundation Trust	111	23.9%	22.1%
Royal Surrey County Hospital NHS Foundation Trust	100	17.9%	18.8%
Surrey and Sussex Healthcare NHS Trust	105	26.1%	19.2%
Western Sussex Hospitals NHS Foundation Trust- St. Richard's Hospital	131	28.1%	22.9%
Western Sussex Hospitals NHS Foundation Trust- Worthing Hospital	102	23.3%	18.5%



Trust	Number	Adjusted	Observed
Brighton and Sussex University Hospitals NHS Trust	88	67%	66%
Other trusts within the region: SOUTH EAST COAST			
Ashford and St Peter's Hospitals NHS Foundation Trust	47	43%	43%
Dartford and Gravesham NHS Trust	40	41%	40%

Trust	Number	Adjusted	Observed
East Kent Hospitals University NHS Foundation Trust	85	76%	76%
East Sussex Healthcare NHS Trust	109	48%	46%
Frimley Health NHS Foundation Trust - Frimley Park Hospital	122	33%	34%
Maidstone and Tunbridge Wells NHS Trust	137	42%	42%
Medway NHS Foundation Trust	70	57%	56%
Royal Surrey County Hospital NHS Foundation Trust	63	52%	48%
Surrey and Sussex Healthcare NHS Trust	57	41%	40%
Western Sussex Hospitals NHS Foundation Trust- St. Richard's Hospital	84	45%	45%
Western Sussex Hospitals NHS Foundation Trust- Worthing Hospital	67	58%	58%