TARN

THE TRAUMA AUDIT & RESEARCH NETWORK

Sussex Trauma Network

CLINICAL REPORT ISSUE 1 - MARCH 2019

I: CORE MEASURES FOR ALL PATIENTS

II: THORACIC & ABDOMINAL INJURIES

3+ RIB FRACTURES

PATIENTS IN SHOCK

Created on 28/03/2019

EXECUTIVE SUMMARY

01 April 2018 to 30 November 2018 core measures

Improvements are shown in GREEN, no change in AMBER and deteriorations in RED. These are the areas you may want to review.

Data quality and rate of survival	Meets target	Compared to previous year
Case Ascertainment is 86.5 - 93.6% (average 90%), this is ***above*** the target of 80%. This represents ***an increase of 11%*** compared to previous year.		
Data Accreditation is 94.4%, this is ***within 1% of*** the target of 95%. This represents ***no change*** compared to previous year.		

The excess rate of survival is better than expected
Ws is 1.50. 95% confidence intervals are **0.69 to 2.32**

The survivor /death ratio is 1.42
The data in this report should be viewed with **caution** (see data reliability index)

CORE section	Compared to TARN average	Compared to previous year
6% of ISS > 15 patients were seen by a Consultant within 5 minutes of arrival, this is ***below*** the TARN average of 42.5% and has ***remained at the same level*** compared to previous year.		
33% of NICE criteria patients had a **CT within 60 minutes**, this is ***below*** the TARN average of 81% and has ***decreased by 26%*** compared to previous year. *100% of the patients that had a CT within 60 minutes arrived between the hours of 08:00 - 20:00.*		
7 days median length of stay for ISS > 15 patients, this is ***within 1 day of*** the TARN average of 8 days. This represents ***a decrease of 2 days*** compared to previous year.		
Rehabilitation prescription was completed for **50%** of patients with ISS >8, this is ***below*** the TARN average of 66%. This has ***remained at the same level*** compared to previous year.		
THEMED section: Patients with 3+ rib fractures that were given pain relief*		
185 minutes median time to pain relief, this is below the TARN average of 215 minutes. This represents a decrease of 25 minutes compared to previous year.		
27% of patients were given pain relief pre hospital, this is below the TARN average of 28%. This representsan increase of 10% compared to previous year.		
67% of patients were given pain relief in ED, this is above the TARN average of 62%. This represents an increase of 8% compared to previous year.		

*** Pain relief includes the following analgesia types:**
Local anaesthetic patches, Local anaesthetic blockade (non epidural/paravertebral), Epidural block, Paravertebral block, Other

BEST PRACTICE SPOTLIGHT

A Pan Network Survery Practice

Eager MM, FY2 Defence Deanery, Wright KD, Clinical Director SWL&S Trauma Network, Razavi L, Manager SWL&S Trauma Network

Introduction: In 2014 the South West London & Surrey Network published a 5-year strategy to focus care on key areas, one of which was the non-operative management of rib fractures. The aim was to identify patient groups and target processes to improve care in these groups. Network review identified that whilst critical rib fracture patients (i.e. those with polytrauma or obvious serious chest injuries) are triaged to the major trauma centre using a prehospital triage tool, the patients who remain in the trauma units are frequently elderly and have 2 or more fractures.

Method: Questionnaires sent to MTC trauma leads and all TUs across the trauma network.
Mortality data for this period was also collected using TARN.
Results:

- Median length of stay has decreased across the network with significant variation between centres.
- Mortality has decreased in the under 65s and the over 85s, but increased in those aged 65 to 75.
- Time to CT has remained largely static with the network median rising from 120 to 134 hours.
- Large amount of variation in practice regarding availability of pain teams and preponderance of various forms of analgesia.

Conclusions:

Length of Stay can be reduced by an effective Rib fracture management strategy.

- Early and continued use of Physiotherapy including incentive spirometry is beneficial
- A pain service with a wide degree of presence and early use of Blocks is beneficial
- Reliance on Lidocaine patches is not a substitute for opiates/blocks

Significant progress has been made with only partially implemented/present guidelines and without significant change in time to definitive diagnosis (CT), emphasising the role of post-diagnosis care and importance of effective anaesthesia

Contents

This Report contains the following sections:

1. **CORE** - includes ALL injured patients admitted in the time frames indicated.
2. **Thoracic, Abdominal & Shocked** - includes patients with thoracic injuries, abdominal injuries and those shocked.

Highlighted sections include only patient data submitted from Trauma Units, so that the information provided is not overshadowed by data from the MTC.

Some sections may not appear if there is insufficient data

Glossary

Explanation of acronyms, abbreviations and other key terms used in this report.

AIS	Abbreviated Injury Scale score. A value between 1 (minor) and 6 (very severe) can be assigned to each injury. TARN currently uses the AIS 2005 system, the most recent available.
BOAST 4	British Orthopaedic Association Standard 4, setting out key markers for care of patients with high energy open lower limb fractures.
Confidence interval	Indicates the precision and possible range of a result. A wide confidence interval indicates the potential for large variation from the measured value because of small sample size. The larger the sample, the smaller the confidence intervals. The smaller the confidence intervals, the more precise the measured value.
Direct admissions	Describes care in the first treating hospital.
ED	Emergency Department.
GCS	Glasgow Coma Scale. A measure of consciousness ranging from 3, indicating complete unconsciousness, to 15, indicating a state of normal alertness. GCS is composed of eye, verbal and motor scores.
HES / HIPE / PEDW	Hospital Episode Statistics / Hospital In-Patient Enquiry Scheme / Patient Episode Database Wales. Data collected in hospitals on all admissions. This data is used by TARN to produce an expected number of TARN eligible patients.
Interquartile range	Range of values within a selection of data excluding the top 25% and bottom 25%. This filters out unusually high and unusually low values and shows where the most significant values in the data range are concentrated.
Intubation	The insertion of a flexible plastic tube into the trachea to support a patient's airway.
ISS	Injury Severity Score. A score ranging from 1, indicating minor injuries to 75, indicating very severe injuries that are very likely to result in death. An ISS between 9 and 15 is considered moderate. An ISS of 16 or more is considered severe. ISS is calculated using the Abbreviated Injury Scale (AIS).
Median	The middle value in a range. Less easily distorted by very high or very low values than other aggregation methods, such as the mean.
NICE	National Institute for Health and Care Excellence. This organisation sets standards for patient care including for severe head injury, defined here as patients with any head injury and a Glasgow Coma Score (GCS) of less than 13.
Paediatric	Patients under 16 years of age at time of admission.
RTC	Road traffic collision.
STR	Specialist Trainee.
TARN fraction	The proportion of TARN patients in each PS band. Used as a weight to standardise hospital outcome performance according to case mix.
Thoracotomy	A surgical incision made into the pleural space of the chest.
W	Variable showing hospital outcome performance. W represents excess deaths or survivors per 100 patients. This is calculated using observed and expected survivors and the total number of patients in the hospital's rate of survival dataset. See rate of survival breakdown section of report for full formula.
Ws	Excess deaths or survivors (W) standardised according to hospital case mix using the TARN fraction. A hospital with the same case mix as the overall TARN population will have identical W and Ws values. A hospital whose case mix differs from the overall TARN population will have different W and Ws values.

THE TRAUMA AUDIT & RESEARCH NETWORK

Sussex Trauma Network

SECTION 1

CORE MEASURES FOR ALL PATIENTS

Case Ascertainment & Accreditation

If case ascertainment is low then the analysis in the rest of the report may not be reflective of true practice.

Trust / Hospital	01 April 2018 to 30 November 2018				01 April 2017 to 31 March 2018			
	N	E	C (%)	A (%)	N	E	C (%)	A (%)
Brighton and Sussex University Hospitals NHS Trust	**738**	**874 - 962**	**76.7 - 84.4**	**96.5**	**935**	**1236 - 1354**	**69.1 - 75.6**	**94.1**
Princess Royal Haywards Heath	73	140	52.3	95	99	221	44.9	94.6
Royal Sussex County Hospital	665	607	100+	97	836	849	98.5	94.0
East Sussex Healthcare NHS Trust	**433**	**332 - 394**	**100+**	**95.7**	**502**	**439 - 522**	**96.2 - 100+**	**95.4**
Conquest Hospital	297	252 - 299	99.3 - 100+	96	370	324 - 385	96.1 - 100+	95.7
Eastbourne District General Hospital	136	80 - 95	100+	96	132	115 - 137	96.4 - 100+	94.6
Western Sussex Hospitals NHS Trust	**351**	**420 - 492**	**71.3 - 83.6**	**88.2**	**457**	**626 - 734**	**62.3 - 73**	**88.6**
St. Richards Hospital	152	202 - 240	63.3 - 75.2	88	225	297 - 353	63.7 - 75.7	89.6
Worthing Hospital	199	218 - 252	79 - 91.3	88	232	329 - 381	60.9 - 70.6	87.6

N The number of approved submissions for the period
E The expected number of submissions for the period (from HES / HIPE / PEDW)
C The case ascertainment % for the period
A The accreditation % for the period

HES / HIPE / PEDW

Hospital Episode Statistics / Hospital In-Patient Enquiry Scheme / Patient Episode Database Wales is the data collected in hospitals on all admissions. The TARN inclusion criteria is applied to this data to derive the expected number of cases for each site. Work with TARN participating sites has shown there is some over-estimation of cases in the results due to the variation in ICD10 coding.

The HES data used for the case ascertainment calculation is the same as the previous report. A notice will be added to the TARN website when the new HES data has been received.

Case ascertainment

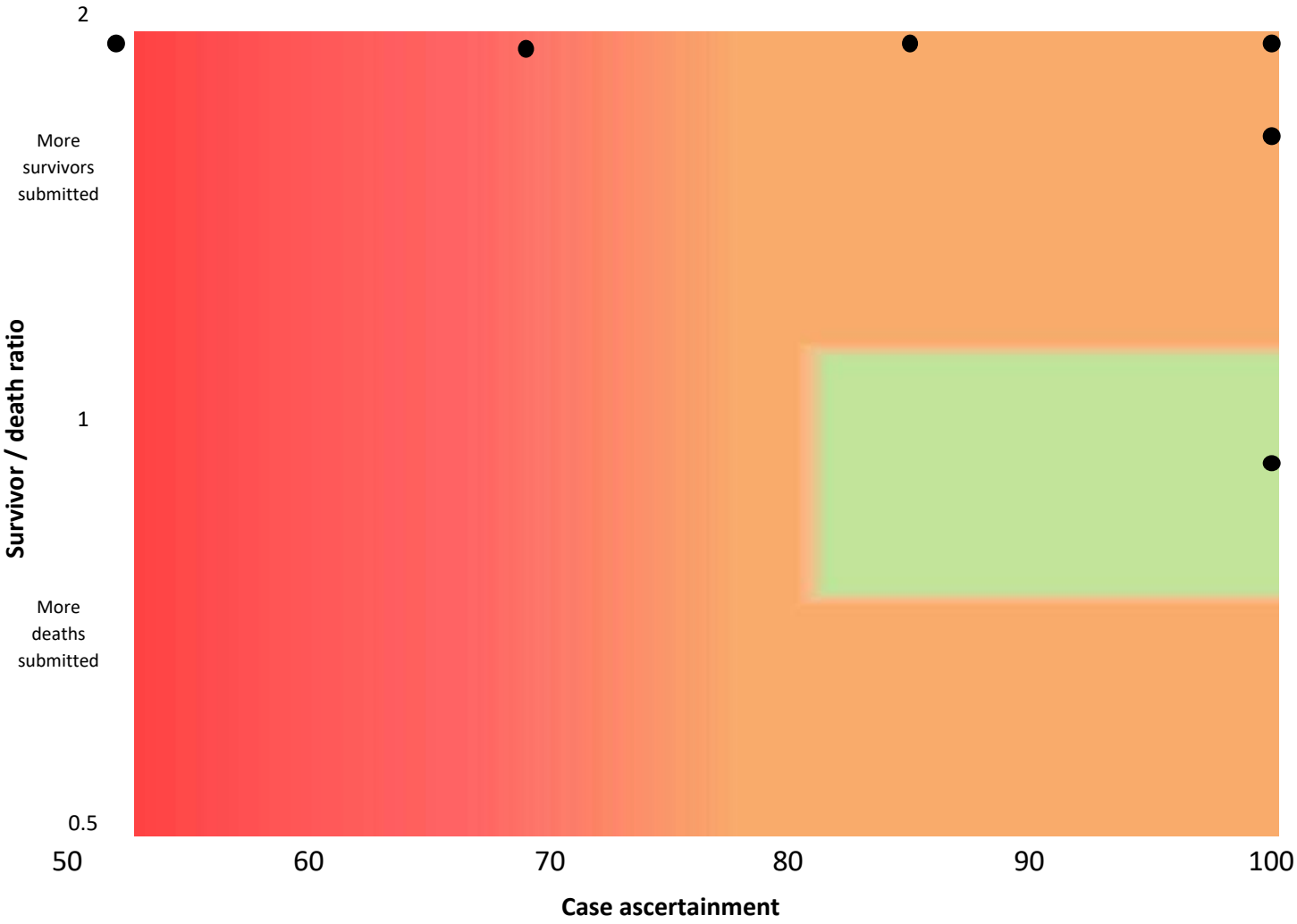
This is displayed as a percentage range and represents the number of patients submitted to TARN compared to the number of patients expected based on the HES dataset. The range represents the variance seen in the accuracy of the HES data. A single value is shown for hospitals that have provided feedback to TARN about their denominator.

Accreditation

This is the proportion of key fields used in this report that are filled in for each patient submitted to TARN.

Sussex Trauma Network

Data reliability index - 01 April 2018 to 30 November 2018



Sussex Trauma Network

Case ascertainment: **63.3 - 75.2 (average 69)**

Survivor / death ratio: **1.99**

The data in this report should be viewed with **extreme caution**.

The black dots indicate the individual sites within the network, the white dot indicates the network as a whole.

Data reliability

Data reliability is measured using case ascertainment (if this is a range, the average of the two figures is used) and the survivor / death ratio for the report period. Survivor / death ratio is calculated as follows:

survivors submitted ÷ expected number of survivors (HES)

deaths submitted ÷ expected number of deaths (HES)

This ratio should be as close to 1 as possible. If it is above 1 it means proportionally more survivors are being submitted than deaths and if it is below 1 then proportionally more deaths are being submitted than survivors.

Data confidence levels

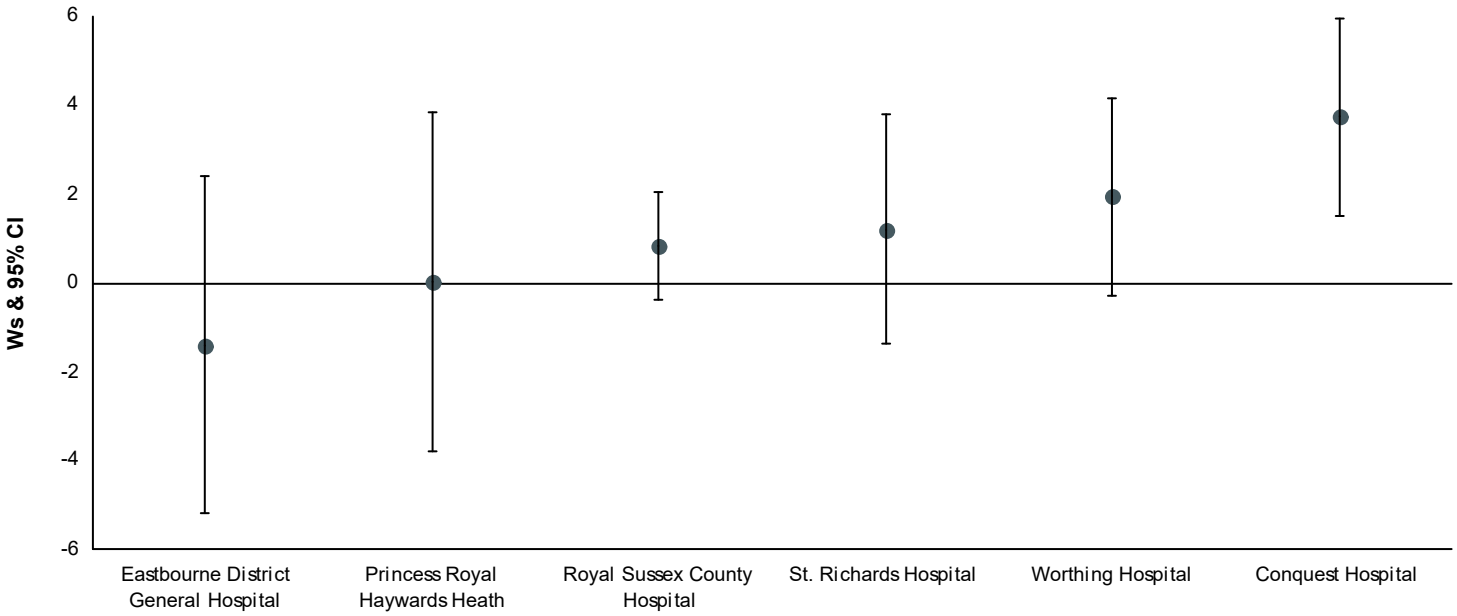
Confidence: Case ascertainment **80+** and; survivor / death ratio between **0.8** and **1.2**

Caution: Case ascertainment **80+** and; survivor / death ratio **< 0.8** or **> 1.2**

Sussex Trauma Network

Case mix standardised excess rate of survival - Ws
01 April 2017 to 30 November 2018

Site	n	WS	95% Confidence interval
Conquest Hospital	618	3.75	1.53 to 5.96
Eastbourne District General Hospital	147	-1.40	-5.19 to 2.39
Princess Royal Haywards Heath	92	0.05	-3.77 to 3.86
Royal Sussex County Hospital	1255	0.85	-0.36 to 2.06
St. Richards Hospital	354	1.21	-1.37 to 3.79
Worthing Hospital	397	1.94	-0.28 to 4.15



Sussex Trauma Network

Case mix standardised excess rate of survival (Ws) & Ws Breakdown (Ps17)
01 April 2017 to 30 November 2018

Patients who died at or were discharged from this hospital are eligible for Ws calculations. Patients who were transferred out from this hospital and not re-admitted are excluded.

See the appendix for a detailed explanation of the Ps17 model.

Outcome at 30 days or discharge

PS Band	Number in band	Observed Survivors	Expected Survivors	Difference*	TARN fraction	Ws	95% confidence interval
95 - 100	1754	1727	1724.80	0.13	0.67	0.08	
90 - 95	589	563	547.42	2.65	0.16	0.41	
80 - 90	302	273	259.24	4.55	0.08	0.38	
65 - 80	118	94	86.93	5.99	0.04	0.23	
45 - 65	59	35	33.76	2.11	0.02	0.05	
25 - 45	24	11	8.25	11.46	0.02	0.18	
0 - 25	17	4	1.89	12.43	0.01	0.17	
Total	*2863*	*2707*	*2662.29*			**1.50**	**0.69 to 2.32**

Outcome at 30 days via ONS data linkage

PS Band	Number in band*	Observed Survivors	Expected Survivors	Difference*	TARN fraction	Ws	95% confidence interval
95 - 100	1681	1657	1651.38	0.33	0.65	0.22	
90 - 95	552	529	511.99	3.08	0.15	0.45	
80 - 90	364	335	314.93	5.51	0.10	0.56	
65 - 80	160	131	119.23	7.36	0.05	0.35	
45 - 65	64	40	36.34	5.72	0.02	0.14	
25 - 45	25	12	8.74	13.03	0.02	0.22	
0 - 25	17	3	2.09	5.34	0.01	0.07	
Total	*2863*	*2707*	*2644.70*			**2.01**	**1.16 to 2.86**

*The number of cases may be reduced due to missing NHS numbers preventing ONS linkage

$$\text{* Difference (W)} = \frac{\text{Observed - Expected}}{\text{Number of patients}} \times 100$$

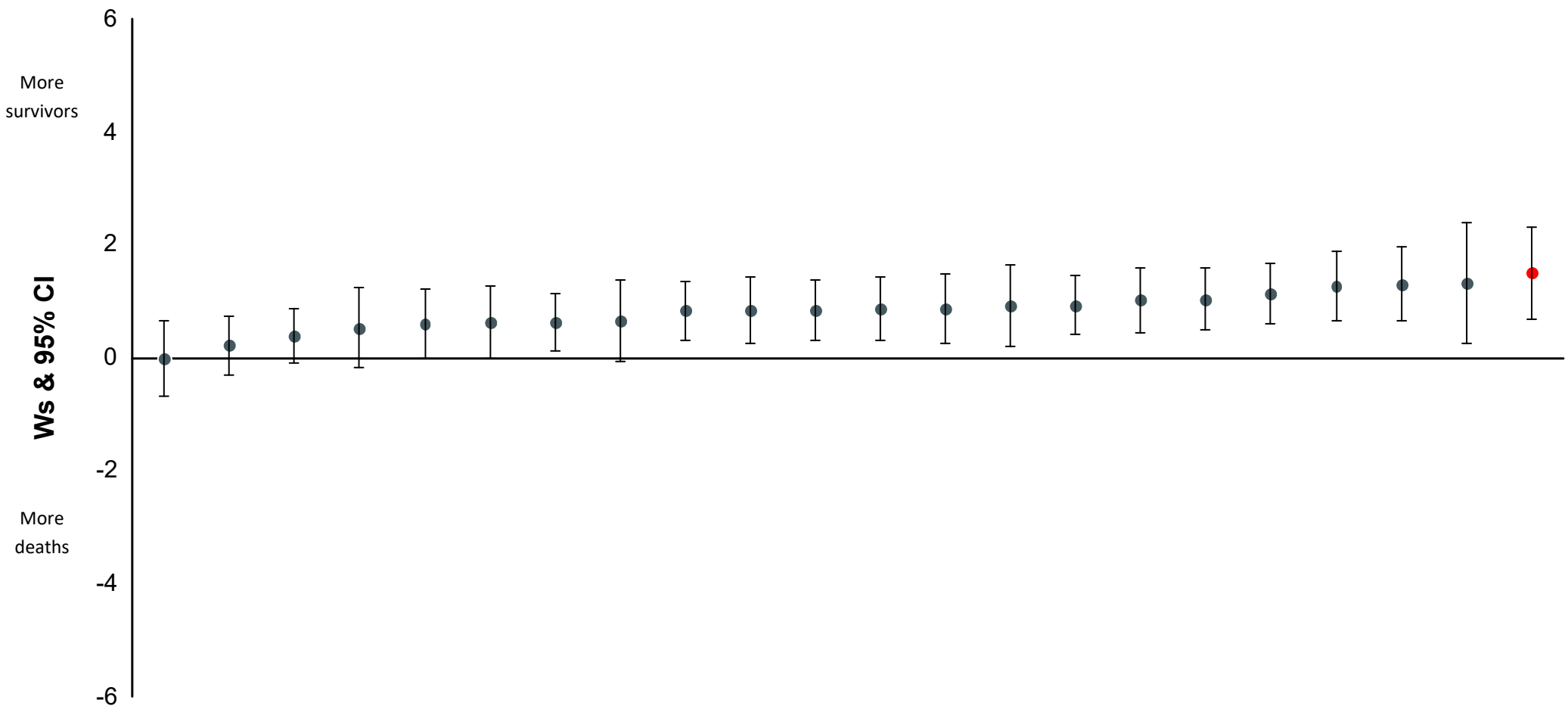
See glossary for further details of the variables included in the PS model.

Sussex Trauma Network

Trauma Network Comparative Outcome Analysis - 01 April 2017 to 30 November 2018

Outcome at 30 days or discharge

Sussex Trauma Network is highlighted

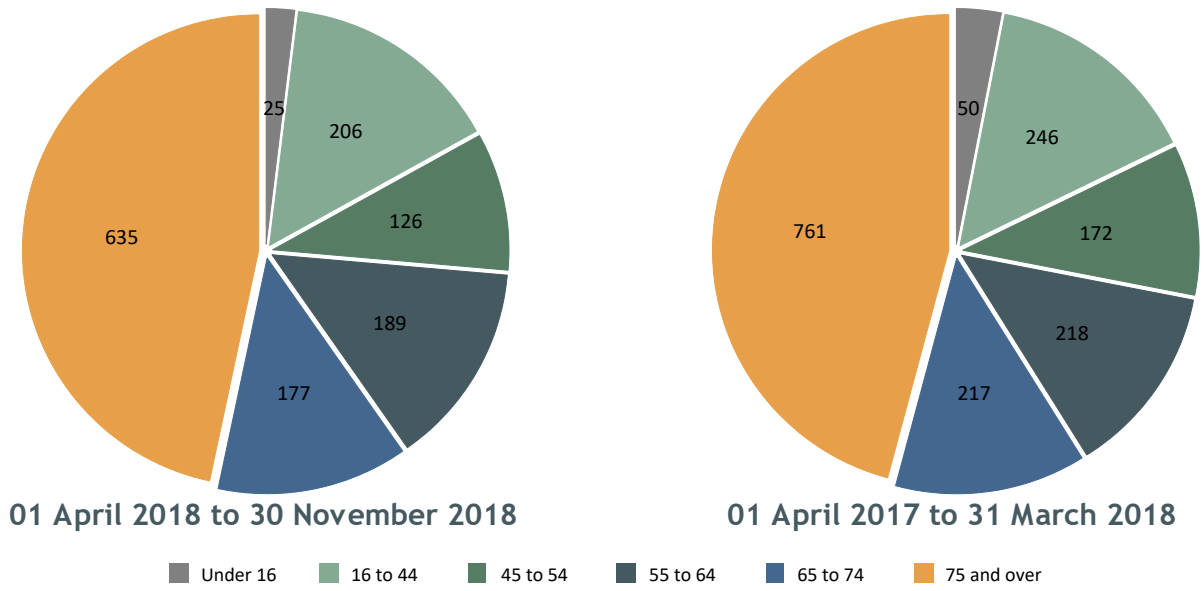


Sussex Trauma Network

Age & Injury Mechanism

(row percentages)

Mechanism	Under 16	16 to 44	45 to 54	55 to 64	65 to 74	75 and over	*Total*
01 April 2018 to 30 November 2018							
RTC	7 (3.0%)	99 (42.7%)	38 (16.4%)	28 (12.1%)	24 (10.3%)	36 (15.5%)	232
Fall < 2m	12 (1.3%)	35 (3.8%)	56 (6.1%)	127 (13.9%)	128 (14.0%)	554 (60.7%)	912
Fall > 2m	2 (1.4%)	34 (23.6%)	19 (13.2%)	27 (18.8%)	22 (15.3%)	40 (27.8%)	144
Shooting / Stabbing	0 (0.0%)	7 (63.6%)	2 (18.2%)	0 (0.0%)	1 (9.1%)	1 (9.1%)	11
Other	4 (6.8%)	31 (52.5%)	11 (18.6%)	7 (11.9%)	2 (3.4%)	4 (6.8%)	59
Total	**25 (1.8%)**	**206 (15.2%)**	**126 (9.3%)**	**189 (13.9%)**	**177 (13.0%)**	**635 (46.8%)**	**1358**
TARN average	**4.8%**	**25.6%**	**9.2%**	**11.9%**	**10.8%**	**37.7%**	
01 April 2017 to 31 March 2018							
RTC	12 (3.9%)	115 (37.3%)	60 (19.5%)	46 (14.9%)	35 (11.4%)	40 (13.0%)	308
Fall < 2m	25 (2.3%)	38 (3.6%)	63 (5.9%)	126 (11.8%)	141 (13.2%)	677 (63.3%)	1070
Fall > 2m	8 (4.2%)	45 (23.6%)	27 (14.1%)	32 (16.8%)	37 (19.4%)	42 (22.0%)	191
Shooting / Stabbing	0 (0.0%)	20 (74.1%)	4 (14.8%)	2 (7.4%)	1 (3.7%)	0 (0.0%)	27
Other	5 (7.4%)	28 (41.2%)	18 (26.5%)	12 (17.6%)	3 (4.4%)	2 (2.9%)	68
Total	**50 (3.0%)**	**246 (14.8%)**	**172 (10.3%)**	**218 (13.1%)**	**217 (13.0%)**	**761 (45.7%)**	**1664**
TARN average	**4.5%**	**24.4%**	**9.3%**	**11.1%**	**11%**	**39.6%**	

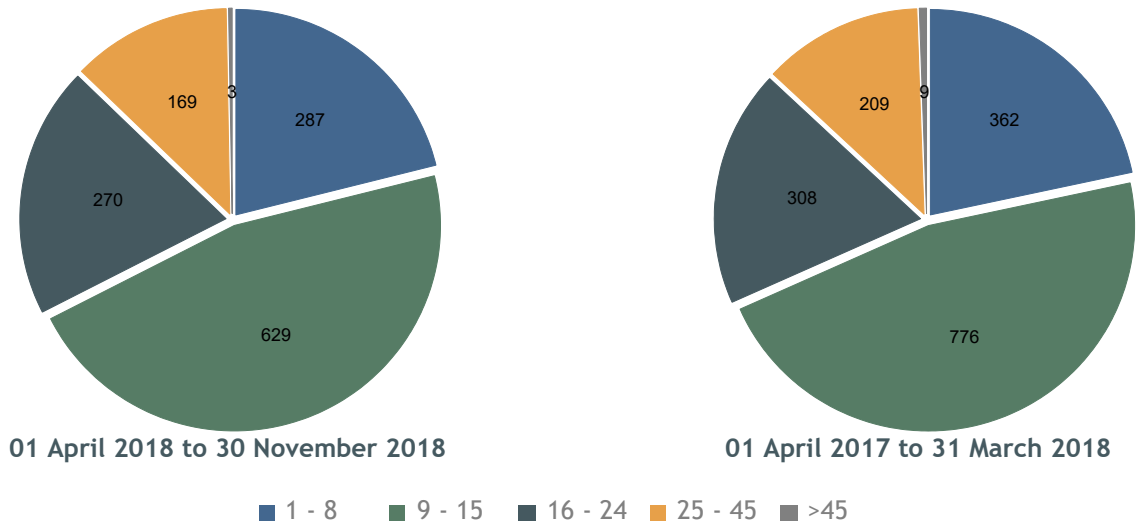


Sussex Trauma Network

ISS & Injury Mechanism

(row percentages)

Mechanism	1 - 8	9 - 15	16 - 24	25 - 45	>45	*Total*	>15
01 April 2018 to 30 November 2018							
RTC	34 (14.7%)	105 (45.3%)	50 (21.6%)	41 (17.7%)	2 (0.9%)	232	93 (40.1%)
Fall < 2m	215 (23.6%)	448 (49.1%)	166 (18.2%)	83 (9.1%)	0 (0.0%)	912	249 (27.3%)
Fall > 2m	32 (22.2%)	45 (31.3%)	36 (25.0%)	30 (20.8%)	1 (0.7%)	144	67 (46.5%)
Shooting / Stabbing	0 (0.0%)	6 (54.5%)	3 (27.3%)	2 (18.2%)	0 (0.0%)	11	5 (45.5%)
Other	6 (10.2%)	25 (42.4%)	15 (25.4%)	13 (22.0%)	0 (0.0%)	59	28 (47.5%)
Total	**287 (21.1%)**	**629 (46.3%)**	**270 (19.9%)**	**169 (12.4%)**	**3 (0.2%)**	**1358**	**442 (32.5%)**
TARN average	**15.7%**	**43.2%**	**19.3%**	**21.1%**	**0.7%**		**41.1%**
01 April 2017 to 31 March 2018							
RTC	60 (19.5%)	121 (39.3%)	64 (20.8%)	56 (18.2%)	7 (2.3%)	308	127 (41.2%)
Fall < 2m	244 (22.8%)	554 (51.8%)	175 (16.4%)	97 (9.1%)	0 (0.0%)	1070	272 (25.4%)
Fall > 2m	46 (24.1%)	63 (33.0%)	44 (23.0%)	36 (18.8%)	2 (1.0%)	191	82 (42.9%)
Shooting / Stabbing	5 (18.5%)	14 (51.9%)	5 (18.5%)	3 (11.1%)	0 (0.0%)	27	8 (29.6%)
Other	7 (10.3%)	24 (35.3%)	20 (29.4%)	17 (25.0%)	0 (0.0%)	68	37 (54.4%)
Total	**362 (21.8%)**	**776 (46.6%)**	**308 (18.5%)**	**209 (12.6%)**	**9 (0.5%)**	**1664**	**526 (31.6%)**
TARN average	**16.7%**	**45.8%**	**17.4%**	**19.5%**	**0.7%**		**37.5%**



Sussex Trauma Network

Distribution of patients by transfer status

01 April 2018 to 30 November 2018

Hospital	All patients				ISS > 15 patients			
	n	No transfer	Transfer In	Transfer Out	n	No transfer	Transfer In	Transfer Out
Conquest Hospital	297	211 (71.0%)	56 (18.9%)	30 (10.1%)	76	42 (55.3%)	19 (25.0%)	15 (19.7%)
Eastbourne District General Hospital	136	70 (51.5%)	11 (8.1%)	55 (40.4%)	53	26 (49.1%)	8 (15.1%)	19 (35.8%)
Princess Royal Haywards Heath	73	21 (28.8%)	12 (16.4%)	40 (54.8%)	18	5 (27.8%)	2 (11.1%)	11 (61.1%)
Royal Sussex County Hospital	665	478 (71.9%)	124 (18.6%)	63 (9.5%)	275	193 (70.2%)	50 (18.2%)	32 (11.6%)
St. Richards Hospital	152	139 (91.4%)	9 (5.9%)	4 (2.6%)	43	35 (81.4%)	6 (14.0%)	2 (4.7%)
Worthing Hospital	199	176 (88.4%)	12 (6.0%)	11 (5.5%)	39	31 (79.5%)	4 (10.3%)	4 (10.3%)
Total	**1522**	**1095 (71.9%)**	**224 (14.7%)**	**203 (13.3%)**	**504**	**332 (65.9%)**	**89 (17.7%)**	**83 (16.5%)**

01 April 2017 to 31 March 2018

Hospital	All patients				ISS > 15 patients			
	n	No transfer	Transfer In	Transfer Out	n	No transfer	Transfer In	Transfer Out
Conquest Hospital	370	248 (67.0%)	82 (22.2%)	40 (10.8%)	96	48 (50.0%)	32 (33.3%)	16 (16.7%)
Eastbourne District General Hospital	132	54 (40.9%)	4 (3.0%)	74 (56.1%)	45	18 (40.0%)	1 (2.2%)	26 (57.8%)
Princess Royal Haywards Heath	99	24 (24.2%)	28 (28.3%)	47 (47.5%)	21	4 (19.0%)	2 (9.5%)	15 (71.4%)
Royal Sussex County Hospital	836	583 (69.7%)	155 (18.5%)	98 (11.7%)	321	236 (73.5%)	43 (13.4%)	42 (13.1%)
St. Richards Hospital	225	210 (93.3%)	4 (1.8%)	11 (4.9%)	64	53 (82.8%)	4 (6.3%)	7 (10.9%)
Worthing Hospital	232	212 (91.4%)	8 (3.4%)	12 (5.2%)	57	49 (86.0%)	6 (10.5%)	2 (3.5%)
Total	**1894**	**1331 (70.3%)**	**281 (14.8%)**	**282 (14.9%)**	**604**	**408 (67.5%)**	**88 (14.6%)**	**108 (17.9%)**

Sussex Trauma Network

Distribution of patients by ISS

01 April 2018 to 30 November 2018

Hospital	1 - 8	9 - 15	16 - 24	25 - 45	>45	*Total*	>15
Conquest Hospital	53 (17.8%)	168 (56.6%)	47 (15.8%)	28 (9.4%)	1 (0.3%)	297	76 (25.6%)
Eastbourne District General Hospital	33 (24.3%)	50 (36.8%)	38 (27.9%)	15 (11.0%)	0 (0.0%)	136	53 (39.0%)
Princess Royal Haywards Heath	11 (15.1%)	44 (60.3%)	11 (15.1%)	7 (9.6%)	0 (0.0%)	73	18 (24.7%)
Royal Sussex County Hospital	111 (16.7%)	279 (42.0%)	150 (22.6%)	122 (18.3%)	3 (0.5%)	665	275 (41.4%)
St. Richards Hospital	39 (25.7%)	70 (46.1%)	28 (18.4%)	15 (9.9%)	0 (0.0%)	152	43 (28.3%)
Worthing Hospital	54 (27.1%)	106 (53.3%)	26 (13.1%)	13 (6.5%)	0 (0.0%)	199	39 (19.6%)
Total	**301 (19.8%)**	**717 (47.1%)**	**300 (19.7%)**	**200 (13.1%)**	**4 (0.3%)**	**1522**	**504 (33.1%)**

01 April 2017 to 31 March 2018

Hospital	1 - 8	9 - 15	16 - 24	25 - 45	>45	*Total*	>15
Conquest Hospital	70 (18.9%)	204 (55.1%)	64 (17.3%)	31 (8.4%)	1 (0.3%)	370	96 (25.9%)
Eastbourne District General Hospital	33 (25.0%)	54 (40.9%)	29 (22.0%)	16 (12.1%)	0 (0.0%)	132	45 (34.1%)
Princess Royal Haywards Heath	22 (22.2%)	56 (56.6%)	13 (13.1%)	8 (8.1%)	0 (0.0%)	99	21 (21.2%)
Royal Sussex County Hospital	172 (20.6%)	343 (41.0%)	165 (19.7%)	147 (17.6%)	9 (1.1%)	836	321 (38.4%)
St. Richards Hospital	53 (23.6%)	108 (48.0%)	45 (20.0%)	19 (8.4%)	0 (0.0%)	225	64 (28.4%)
Worthing Hospital	55 (23.7%)	120 (51.7%)	35 (15.1%)	20 (8.6%)	2 (0.9%)	232	57 (24.6%)
Total	**405 (21.4%)**	**885 (46.7%)**	**351 (18.5%)**	**241 (12.7%)**	**12 (0.6%)**	**1894**	**604 (31.9%)**

Sussex Trauma Network

Patients with head injuries

Defined as patients with an AIS3+ head injury.

01 April 2018 to 30 November 2018

		Direct admissions from scene of incident			
Hospital	n	No transfer	Died within 12 hours of arrival	Transferred out	Transferred in
Conquest Hospital	67	34	0	14	19
Eastbourne District General Hospital	57	30	0	21	6
Princess Royal Haywards Heath	19	9	0	8	2
Royal Sussex County Hospital	194	136	3	19	39
St. Richards Hospital	31	29	0	1	1
Worthing Hospital	43	38	0	3	2

01 April 2017 to 31 March 2018

		Direct admissions from scene of incident			
Hospital	n	No transfer	Died within 12 hours of arrival	Transferred out	Transferred in
Conquest Hospital	69	38	0	11	20
Eastbourne District General Hospital	43	22	0	21	0
Princess Royal Haywards Heath	16	5	0	9	2
Royal Sussex County Hospital	222	174	3	18	30
St. Richards Hospital	49	45	0	4	0
Worthing Hospital	51	44	0	2	5

Sussex Trauma Network

Patients with severe head injuries

Defined as patients with an AIS3+ head injury and a GCS < 9 or a recording of intubation.

01 April 2018 to 30 November 2018

		Direct admissions from scene of incident			
Hospital	n	No transfer	Died within 12 hours of arrival	Transferred out	Transferred in
Conquest Hospital	7	1	0	4	2
Royal Sussex County Hospital	36	27	3	3	6
St. Richards Hospital	1	1	0	0	0
Worthing Hospital	2	1	0	1	0

01 April 2017 to 31 March 2018

		Direct admissions from scene of incident			
Hospital	n	No transfer	Died within 12 hours of arrival	Transferred out	Transferred in
Conquest Hospital	1	1	0	0	0
Eastbourne District General Hospital	2	2	0	0	0
Princess Royal Haywards Heath	1	0	0	0	1
Royal Sussex County Hospital	48	40	3	7	1
St. Richards Hospital	2	1	0	1	0
Worthing Hospital	5	3	0	0	2

Sussex Trauma Network

Pre-hospital care

Figures in blue represent the TARN average

Trauma Unit data only

Direct admissions, 01 April 2018 to 30 November 2018

Number of patients: 757

Number of patients with pre-hospital data: 532

Level of personnel on scene

Doctor	Paramedic	Not recorded
0 (0.0%)	529 (99.4%)	3 (0.6%)
4.0%	93.6%	2.3%

Mode of transport to hospital

Ambulance	Helicopter	Self-presented	Not recorded*
622 (82.2%)	0 (0.0%)	135 (17.8%)	0 (0.0%)
79.2%	3.0%	17.9%	0.0%

Direct admissions, 01 April 2017 to 31 March 2018

Number of patients: 932

Number of patients with pre-hospital data: 683

Level of personnel on scene

Doctor	Paramedic	Not recorded
1 (0.1%)	676 (99.0%)	6 (0.9%)
4.1%	92.5%	3.5%

Mode of transport to hospital

Ambulance	Helicopter	Self-presented	Not recorded*
771 (82.7%)	3 (0.3%)	158 (17.0%)	0 (0.0%)
80.1%	2.5%	17.4%	0.0%

*Mode of transport not recorded may include patients that self-presented.

Patients with GCS < 9 pre-hospital or in the ED and definitive airway management pre-hospital or in the ED

Trauma Unit data only

n	Definitive airway management	Pre-hospital	ED	Date & time recorded	Recorded within 30 mins of incident	Median time from incident (hours)
Direct admissions, 01 April 2018 to 30 November 2018						
7	2 (28.6%)	2 (28.6%)	0 (0.0%)	1 (50.0%)	0 (0.0%)	
	61.7%	18.0%	43.7%	76.4%	0.3%	1.43
Direct admissions, 01 April 2017 to 31 March 2018						
9	0 (0.0%)	0 (0.0%)	0 (0.0%)		0 (0.0%)	
	64.8%	18.9%	46.0%	74.5%	0.5%	1.40

Definitive airway management is defined as the management of an airway using intubation, tracheostomy or cricothyroidotomy.

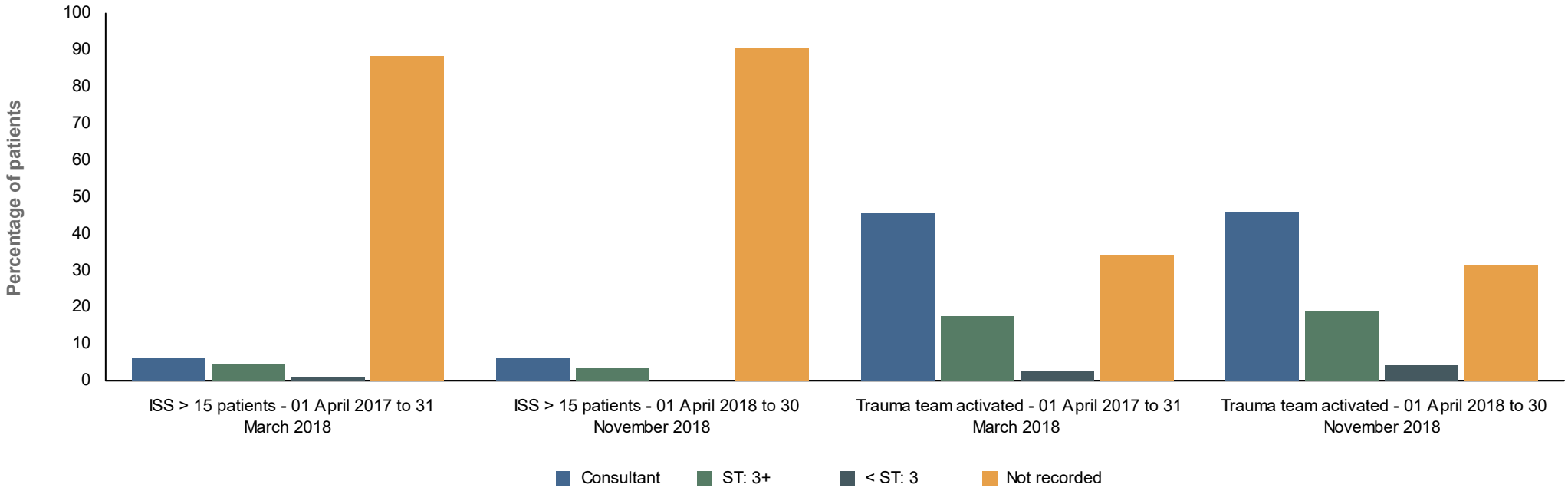
Sussex Trauma Network

Most senior doctor seeing patients within 5 minutes of arrival

All patients directly admitted, all specialities

Trauma Unit data only

Category	Total	Consultant	TARN average consultant	ST: 3+	< ST: 3	Not recorded
01 April 2018 to 30 November 2018						
All patients	757	29 (3.8%)	**27.9%**	18 (2.4%)	7 (0.9%)	703 (92.9%)
ISS > 15 patients	190	12 (6.3%)	**42.5%**	6 (3.2%)	0 (0.0%)	172 (90.5%)
Trauma team activated	48	22 (45.8%)	**78.1%**	9 (18.8%)	2 (4.2%)	15 (31.3%)
Trauma team not activated	709	7 (1.0%)	**8.3%**	9 (1.3%)	5 (0.7%)	688 (97.0%)
01 April 2017 to 31 March 2018						
All patients	932	49 (5.3%)	**25.4%**	37 (4.0%)	13 (1.4%)	833 (89.4%)
ISS > 15 patients	238	15 (6.3%)	**40.1%**	11 (4.6%)	2 (0.8%)	210 (88.2%)
Trauma team activated	79	36 (45.6%)	**75.6%**	14 (17.7%)	2 (2.5%)	27 (34.2%)
Trauma team not activated	853	13 (1.5%)	**7.9%**	23 (2.7%)	11 (1.3%)	806 (94.5%)



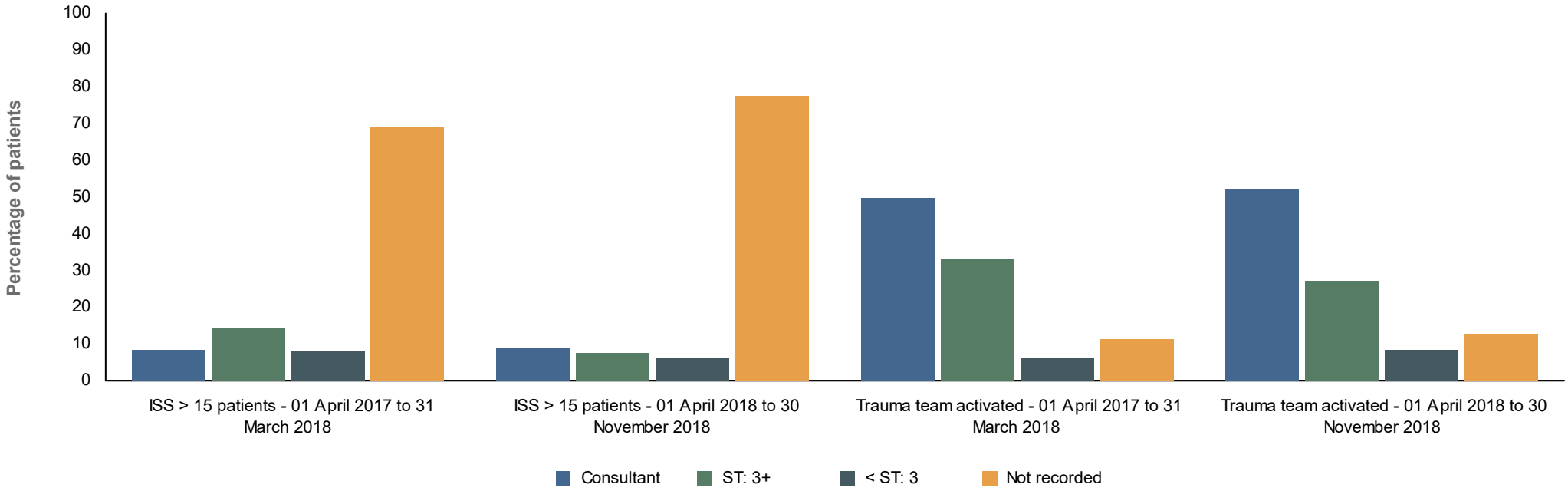
Sussex Trauma Network

Most senior doctor seeing patients within 30 minutes of arrival

All patients directly admitted, all specialities

Trauma Unit data only

Category	Total	Consultant	TARN average consultant	ST: 3+	< ST: 3	Not recorded
01 April 2018 to 30 November 2018						
All patients	757	52 (6.9%)	**32.4%**	67 (8.9%)	49 (6.5%)	589 (77.8%)
ISS > 15 patients	190	17 (8.9%)	**46.5%**	14 (7.4%)	12 (6.3%)	147 (77.4%)
Trauma team activated	48	25 (52.1%)	**81%**	13 (27.1%)	4 (8.3%)	6 (12.5%)
Trauma team not activated	709	27 (3.8%)	**13.5%**	54 (7.6%)	45 (6.3%)	583 (82.2%)
01 April 2017 to 31 March 2018						
All patients	932	75 (8.0%)	**29.9%**	101 (10.8%)	51 (5.5%)	705 (75.6%)
ISS > 15 patients	238	20 (8.4%)	**44.2%**	34 (14.3%)	19 (8.0%)	165 (69.3%)
Trauma team activated	79	39 (49.4%)	**78.9%**	26 (32.9%)	5 (6.3%)	9 (11.4%)
Trauma team not activated	853	36 (4.2%)	**12.8%**	75 (8.8%)	46 (5.4%)	696 (81.6%)



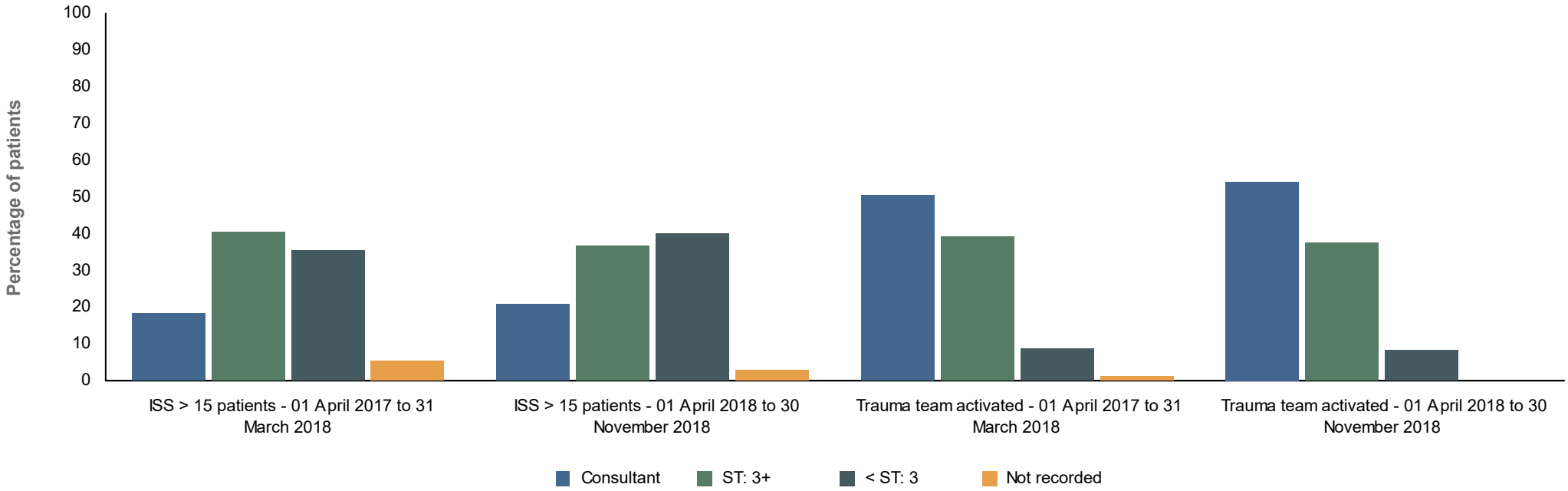
Sussex Trauma Network

Most senior doctor seeing patients in the Emergency Department

All patients directly admitted to the ED, all specialities

Trauma Unit data only

Category	Total	Consultant	TARN average consultant	ST: 3+	< ST: 3	Not recorded
01 April 2018 to 30 November 2018						
All patients	741	129 (17.4%)	48.6%	289 (39.0%)	309 (41.7%)	14 (1.9%)
ISS > 15 patients	181	38 (21.0%)	61.5%	66 (36.5%)	72 (39.8%)	5 (2.8%)
Trauma team activated	48	26 (54.2%)	88.2%	18 (37.5%)	4 (8.3%)	0 (0.0%)
Trauma team not activated	693	103 (14.9%)	32.8%	271 (39.1%)	305 (44.0%)	14 (2.0%)
01 April 2017 to 31 March 2018						
All patients	909	172 (18.9%)	46.6%	351 (38.6%)	317 (34.9%)	69 (7.6%)
ISS > 15 patients	233	43 (18.5%)	59.9%	94 (40.3%)	83 (35.6%)	13 (5.6%)
Trauma team activated	79	40 (50.6%)	86.8%	31 (39.2%)	7 (8.9%)	1 (1.3%)
Trauma team not activated	830	132 (15.9%)	32.3%	320 (38.6%)	310 (37.3%)	68 (8.2%)



Sussex Trauma Network

Most senior doctor seeing patients within 5 minutes of arrival

All patients directly admitted, all specialities

Site	Total	Consultant	ST: 3+	< ST: 3	Not recorded
01 April 2018 to 30 November 2018					
Conquest Hospital	241	23 (9.5%)	11 (4.6%)	4 (1.7%)	203 (84.2%)
Eastbourne District General Hospital	125	1 (0.8%)	0 (0.0%)	0 (0.0%)	124 (99.2%)
Princess Royal Haywards Heath	61	1 (1.6%)	2 (3.3%)	0 (0.0%)	58 (95.1%)
Royal Sussex County Hospital	541	369 (68.2%)	14 (2.6%)	5 (0.9%)	153 (28.3%)
St. Richards Hospital	143	4 (2.8%)	0 (0.0%)	2 (1.4%)	137 (95.8%)
Worthing Hospital	187	0 (0.0%)	5 (2.7%)	1 (0.5%)	181 (96.8%)
01 April 2017 to 31 March 2018					
Conquest Hospital	288	36 (12.5%)	11 (3.8%)	5 (1.7%)	236 (81.9%)
Eastbourne District General Hospital	128	0 (0.0%)	2 (1.6%)	1 (0.8%)	125 (97.7%)
Princess Royal Haywards Heath	71	1 (1.4%)	5 (7.0%)	3 (4.2%)	62 (87.3%)
Royal Sussex County Hospital	681	434 (63.7%)	13 (1.9%)	10 (1.5%)	224 (32.9%)
St. Richards Hospital	221	8 (3.6%)	12 (5.4%)	3 (1.4%)	198 (89.6%)
Worthing Hospital	224	4 (1.8%)	7 (3.1%)	1 (0.4%)	212 (94.6%)

Sussex Trauma Network

Most senior doctor seeing patients within 30 minutes of arrival

All patients directly admitted, all specialities

Site	Total	Consultant	ST: 3+	< ST: 3	Not recorded
01 April 2018 to 30 November 2018					
Conquest Hospital	241	32 (13.3%)	35 (14.5%)	14 (5.8%)	160 (66.4%)
Eastbourne District General Hospital	125	4 (3.2%)	3 (2.4%)	2 (1.6%)	116 (92.8%)
Princess Royal Haywards Heath	61	1 (1.6%)	8 (13.1%)	11 (18.0%)	41 (67.2%)
Royal Sussex County Hospital	541	387 (71.5%)	34 (6.3%)	18 (3.3%)	102 (18.9%)
St. Richards Hospital	143	10 (7.0%)	6 (4.2%)	17 (11.9%)	110 (76.9%)
Worthing Hospital	187	5 (2.7%)	15 (8.0%)	5 (2.7%)	162 (86.6%)
01 April 2017 to 31 March 2018					
Conquest Hospital	288	46 (16.0%)	20 (6.9%)	24 (8.3%)	198 (68.8%)
Eastbourne District General Hospital	128	1 (0.8%)	3 (2.3%)	7 (5.5%)	117 (91.4%)
Princess Royal Haywards Heath	71	4 (5.6%)	9 (12.7%)	6 (8.5%)	52 (73.2%)
Royal Sussex County Hospital	681	471 (69.2%)	40 (5.9%)	33 (4.8%)	137 (20.1%)
St. Richards Hospital	221	13 (5.9%)	39 (17.6%)	8 (3.6%)	161 (72.9%)
Worthing Hospital	224	11 (4.9%)	30 (13.4%)	6 (2.7%)	177 (79.0%)

Sussex Trauma Network

Most senior doctor seeing patients in the Emergency Department

All patients directly admitted, all specialities

Site	Total	Consultant	ST: 3+	< ST: 3	Not recorded
01 April 2018 to 30 November 2018					
Conquest Hospital	237	57 (24.1%)	86 (36.3%)	93 (39.2%)	1 (0.4%)
Eastbourne District General Hospital	121	18 (14.9%)	41 (33.9%)	59 (48.8%)	3 (2.5%)
Princess Royal Haywards Heath	60	4 (6.7%)	21 (35.0%)	31 (51.7%)	4 (6.7%)
Royal Sussex County Hospital	537	407 (75.8%)	61 (11.4%)	60 (11.2%)	9 (1.7%)
St. Richards Hospital	142	23 (16.2%)	40 (28.2%)	76 (53.5%)	3 (2.1%)
Worthing Hospital	181	27 (14.9%)	101 (55.8%)	50 (27.6%)	3 (1.7%)
01 April 2017 to 31 March 2018					
Conquest Hospital	280	77 (27.5%)	44 (15.7%)	125 (44.6%)	34 (12.1%)
Eastbourne District General Hospital	123	24 (19.5%)	14 (11.4%)	63 (51.2%)	22 (17.9%)
Princess Royal Haywards Heath	70	10 (14.3%)	16 (22.9%)	41 (58.6%)	3 (4.3%)
Royal Sussex County Hospital	672	504 (75.0%)	64 (9.5%)	100 (14.9%)	4 (0.6%)
St. Richards Hospital	215	26 (12.1%)	131 (60.9%)	54 (25.1%)	4 (1.9%)
Worthing Hospital	221	35 (15.8%)	146 (66.1%)	34 (15.4%)	6 (2.7%)

Sussex Trauma Network

Time to CT scan

Direct Admissions

(excluding patients with a time difference greater than 24 hours or taken directly to theatre)

Trauma Unit data only

Patient category	n (CT with date and time rec)	Median minutes to*			TARN median minutes to	
		CT	Provisional report	Final report	CT	Final report
01 April 2018 to 30 November 2018						
All Patients	432	171 (87 - 261)	59 (41 - 93)	779 (423 - 946)	**87 (33 - 206)**	**211 (71 - 732)**
AIS 3+ Head Injury	177	149 (85 - 227)	53 (41 - 81)	666 (376 - 874)	**70 (30 - 158)**	**210 (69 - 709)**
NICE head injury criteria	9	287 (131 - 327)	N/A	N/A	**30 (20 - 50)**	**247 (84 - 675)**
01 April 2017 to 31 March 2018						
All Patients	509	171 (86 - 308)	53 (34 - 78)	709 (277 - 960)	**93 (35 - 217)**	**235 (76 - 758)**
AIS 3+ Head Injury	188	146 (78 - 235)	50 (32 - 75)	721 (548 - 902)	**72 (31 - 165)**	**243 (74 - 752)**
NICE head injury criteria	17	58 (50 - 133)	46 (41 - 66)	801 (801 - 826)	**31 (20 - 52)**	**279 (91 - 743)**

Median time to CT
Time from hospital arrival to first CT scan

Median time to provisional report
Time from first CT scan to the provisional report being produced

Median time to final report
Time from first CT scan to the review of the provisional report by a consultant

*** N/A means there are not enough cases to calculate the median and interquartile range**

Sussex Trauma Network

Time to CT scan - All Patients

Direct admissions (excluding patients taken directly to theatre)

01 April 2018 to 30 November 2018

Hospital	n	n (CT with date and time rec)	Median time to (mins)*		
			CT	Provisional report	Final report
Conquest Hospital	136	136	148 (58 - 254)	50 (35 - 79)	698 (433 - 942)
Eastbourne District General Hospital	85	85	195 (131 - 298)	62 (47 - 76)	878 (469 - 1020)
Princess Royal Haywards Heath	36	36	152 (116 - 233)	73 (52 - 114)	666 (464 - 960)
Royal Sussex County Hospital	475	475	34 (17 - 117)	81 (57 - 120)	579 (220 - 774)
St. Richards Hospital	79	79	183 (92 - 311)	52 (40 - 93)	N/A
Worthing Hospital	96	96	170 (103 - 237)	64 (46 - 99)	N/A

01 April 2017 to 31 March 2018

Hospital	n	n (CT with date and time rec)	Median time to (mins)*		
			CT	Provisional report	Final report
Conquest Hospital	142	142	115 (50 - 252)	42 (22 - 63)	845 (269 - 1059)
Eastbourne District General Hospital	78	78	202 (116 - 345)	36 (25 - 62)	795 (618 - 1020)
Princess Royal Haywards Heath	34	34	185 (147 - 241)	91 (61 - 134)	503 (300 - 746)
Royal Sussex County Hospital	559	557	35 (17 - 138)	83 (54 - 121)	491 (165 - 790)
St. Richards Hospital	124	124	176 (90 - 319)	52 (36 - 70)	544 (202 - 697)
Worthing Hospital	131	131	202 (109 - 333)	72 (41 - 119)	N/A

*** N/A means there are not enough cases to calculate the median and interquartile range**

Sussex Trauma Network

Time to CT scan - AIS 3+ Head Injury

Direct admissions (excluding patients taken directly to theatre)

01 April 2018 to 30 November 2018

Hospital	n	n (CT with date and time rec)	Median time to (mins)*		
			CT	Provisional report	Final report
Conquest Hospital	45	45	142 (54 - 192)	46 (32 - 83)	698 (626 - 788)
Eastbourne District General Hospital	48	48	186 (109 - 298)	62 (43 - 78)	838 (438 - 887)
Princess Royal Haywards Heath	17	17	138 (116 - 235)	55 (49 - 96)	287 (111 - 666)
Royal Sussex County Hospital	153	153	32 (15 - 73)	76 (57 - 115)	544 (222 - 753)
St. Richards Hospital	28	28	128 (80 - 199)	47 (34 - 79)	N/A
Worthing Hospital	39	39	148 (110 - 184)	60 (47 - 80)	N/A

01 April 2017 to 31 March 2018

Hospital	n	n (CT with date and time rec)	Median time to (mins)*		
			CT	Provisional report	Final report
Conquest Hospital	46	46	108 (59 - 227)	52 (8 - 75)	1001 (902 - 1261)
Eastbourne District General Hospital	40	40	159 (86 - 262)	36 (34 - 62)	801 (619 - 1021)
Princess Royal Haywards Heath	13	13	163 (149 - 223)	91 (61 - 120)	492 (300 - 725)
Royal Sussex County Hospital	185	185	39 (18 - 145)	80 (49 - 117)	493 (212 - 780)
St. Richards Hospital	45	45	124 (85 - 208)	48 (36 - 66)	550 (539 - 697)
Worthing Hospital	44	44	176 (94 - 249)	43 (24 - 93)	N/A

*** N/A means there are not enough cases to calculate the median and interquartile range**

Sussex Trauma Network

Time to CT scan - NICE head injury criteria

Direct admissions (excluding patients taken directly to theatre)

01 April 2018 to 30 November 2018

Hospital	n	n (CT with date and time rec)	Median time to (mins)*		
			CT	Provisional report	Final report
Conquest Hospital	3	3	N/A	N/A	N/A
Eastbourne District General Hospital	3	3	N/A	N/A	N/A
Royal Sussex County Hospital	41	41	21 (13 - 32)	78 (58 - 111)	555 (350 - 752)
St. Richards Hospital	1	1	N/A	N/A	N/A
Worthing Hospital	2	2	N/A	N/A	N/A

01 April 2017 to 31 March 2018

Hospital	n	n (CT with date and time rec)	Median time to (mins)*		
			CT	Provisional report	Final report
Conquest Hospital	5	5	58 (58 - 59)	N/A	N/A
Eastbourne District General Hospital	5	5	50 (50 - 165)	N/A	N/A
Royal Sussex County Hospital	51	51	17 (11 - 29)	85 (53 - 124)	412 (132 - 720)
St. Richards Hospital	4	4	N/A	N/A	N/A
Worthing Hospital	3	3	N/A	N/A	N/A

*** N/A means there are not enough cases to calculate the median and interquartile range**

Sussex Trauma Network

Time to first operation (emergency operations only)

Direct Admissions (excluding patients with a time difference greater than 24 hours)

Trauma Unit data only

Patient category	n	Median minutes to operation*	TARN median minutes to operation
01 April 2018 to 30 November 2018			
All Patients	12	968 (939 - 1148)	**498 (187 - 997)**
Spinal operations	1	N/A	**841 (469 - 1112)**
Abdominal operations	1	N/A	**155 (89 - 299)**
Limb operations	4	N/A	**955 (502 - 1227)**
Skin operations	6	979 (949 - 1264)	**787 (350 - 1050)**
01 April 2017 to 31 March 2018			
All Patients	11	1010 (775 - 1283)	**491 (181 - 1016)**
Chest operations	1	N/A	**245 (92 - 663)**
Abdominal operations	2	N/A	**165 (86 - 348)**
Limb operations	7	1160 (1041 - 1335)	**956 (481 - 1223)**
BOAST4 operations	1	N/A	**676 (300 - 1033)**

A list of the procedures defined as emergency operations is available from TARN on request.

*** N/A means there are not enough cases to calculate the median and interquartile range**

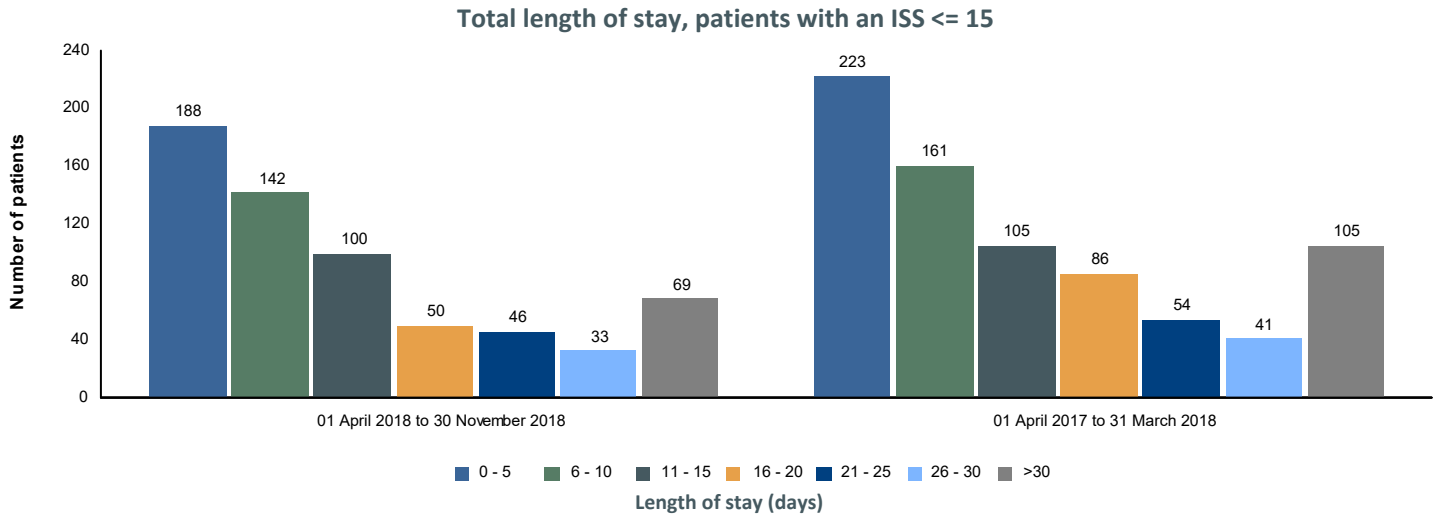
Sussex Trauma Network

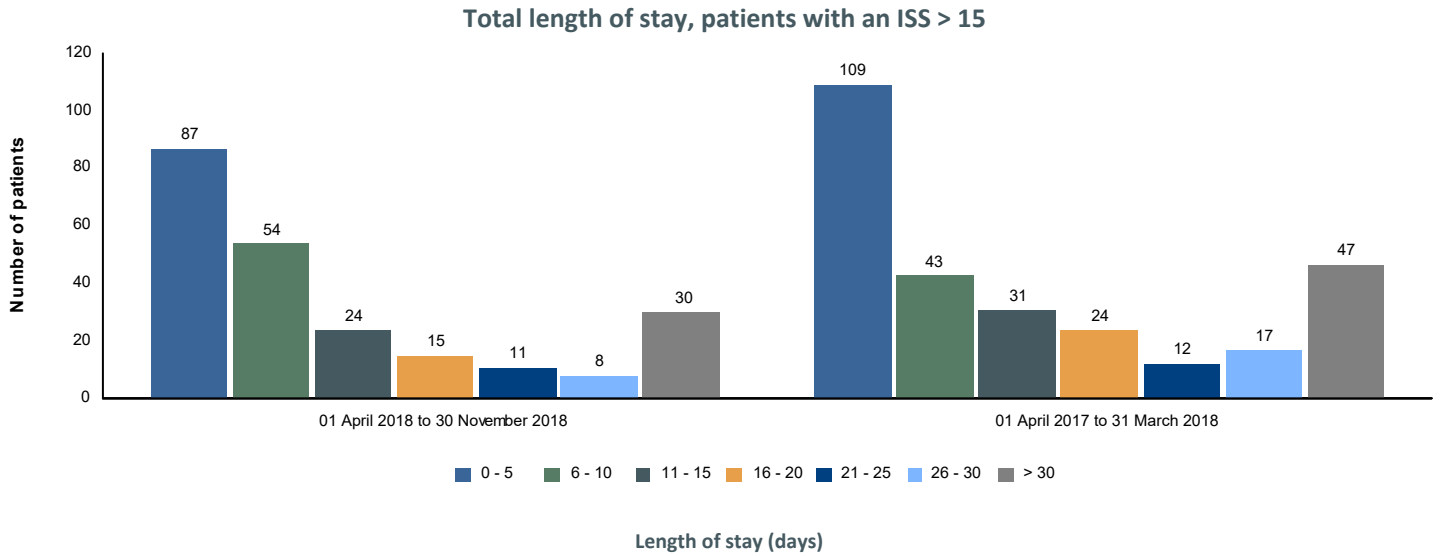
Length of stay (LOS) in hospital

Trauma Unit data only

Date range	All patients			ISS <= 15			ISS > 15		
	n	Median LOS	Total days	n	Median LOS	Total days	n	Median LOS	Total days
01 April 2018 to 30 November 2018	857	9 (4 - 19)	12304	628	10 (5 - 19)	9093	229	7 (4 - 18)	3211
TARN average		8 (4 - 16)			8 (4 - 15)			8 (4 - 17)	
01 April 2017 to 31 March 2018	1058	10 (4 - 21)	17577	775	11 (5 - 21)	12600	283	9 (4 - 23)	4977
TARN average		8 (4 - 17)			8 (5 - 16)			9 (4 - 18)	

All values are median number of days (interquartile range)





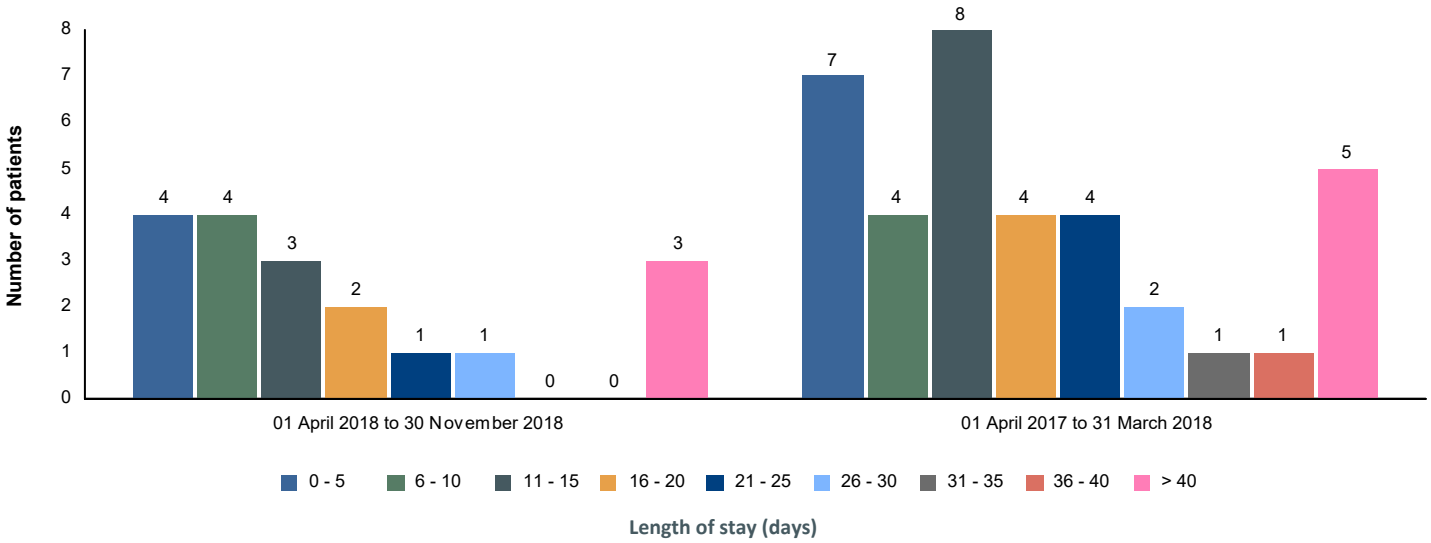
Sussex Trauma Network

Critical Care Information

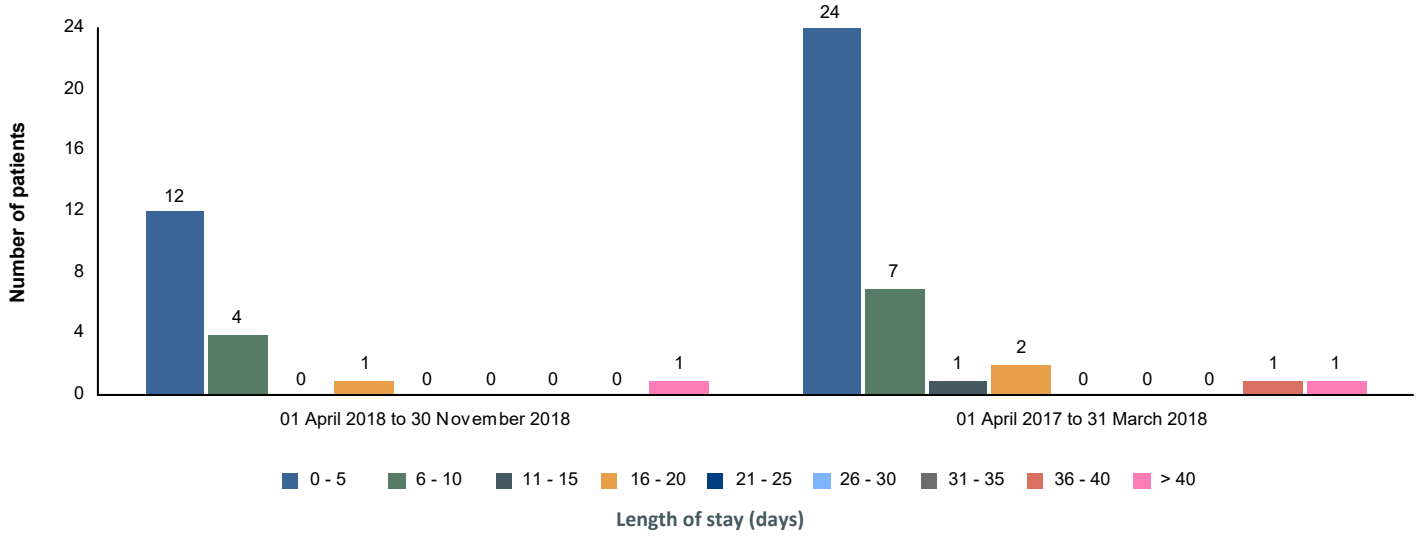
Trauma Unit data only

Date range	Patients that went to critical care	Median total LOS for critical care patients (days)	Median LOS in critical care (days)	Readmissions to critical care	Readmissions to critical care with dates recorded	Readmissions to critical care within 48 hours
01 April 2018 to 30 November 2018	18	11 (7 - 22)	3 (2 - 6)	1 (5.6%)	0 (0.0%)	N/A
TARN average		12 (6 - 24)	3 (1 - 7)	6.4%	3.8%	0.2%
01 April 2017 to 31 March 2018	36	14 (10 - 25)	3 (1 - 8)	1 (2.8%)	0 (0.0%)	N/A
TARN average		12 (6 - 24)	3 (1 - 7)	6.6%	3.9%	0.3%

Total hospital length of stay for patients that went to critical care



Total length of stay in critical care



Sussex Trauma Network

Critical Care Information

Site	n	Median total length of stay (days)	Median length of stay in critical care (days)	Readmissions to critical care	Readmissions to critical care with dates recorded	Readmissions to critical care within 48 hours
01 April 2018 to 30 November 2018						
Conquest Hospital	8	15 (11 - 22)	2 (2 - 6)	1 (12.5%)	0 (0.0%)	N/A
Eastbourne District General Hospital	3	7	2	0 (0.0%)	N/A	N/A
Princess Royal Haywards Heath	1	84	45	0 (0.0%)	N/A	N/A
Royal Sussex County Hospital	142	12 (7 - 24)	4 (2 - 8)	1 (0.7%)	0 (0.0%)	N/A
St. Richards Hospital	4	9	4	0 (0.0%)	N/A	N/A
Worthing Hospital	2	25	6	0 (0.0%)	N/A	N/A
01 April 2017 to 31 March 2018						
Conquest Hospital	10	13 (12 - 28)	3 (2 - 7)	0 (0.0%)	N/A	N/A
Eastbourne District General Hospital	1	23	5	0 (0.0%)	N/A	N/A
Princess Royal Haywards Heath	6	11 (10 - 16)	3 (2 - 9)	0 (0.0%)	N/A	N/A
Royal Sussex County Hospital	192	14 (6 - 26)	4 (2 - 9)	5 (2.6%)	0 (0.0%)	N/A
St. Richards Hospital	12	15 (11 - 25)	1 (1 - 5)	0 (0.0%)	N/A	N/A
Worthing Hospital	7	21 (18 - 52)	8 (5 - 20)	1 (14.3%)	0 (0.0%)	N/A

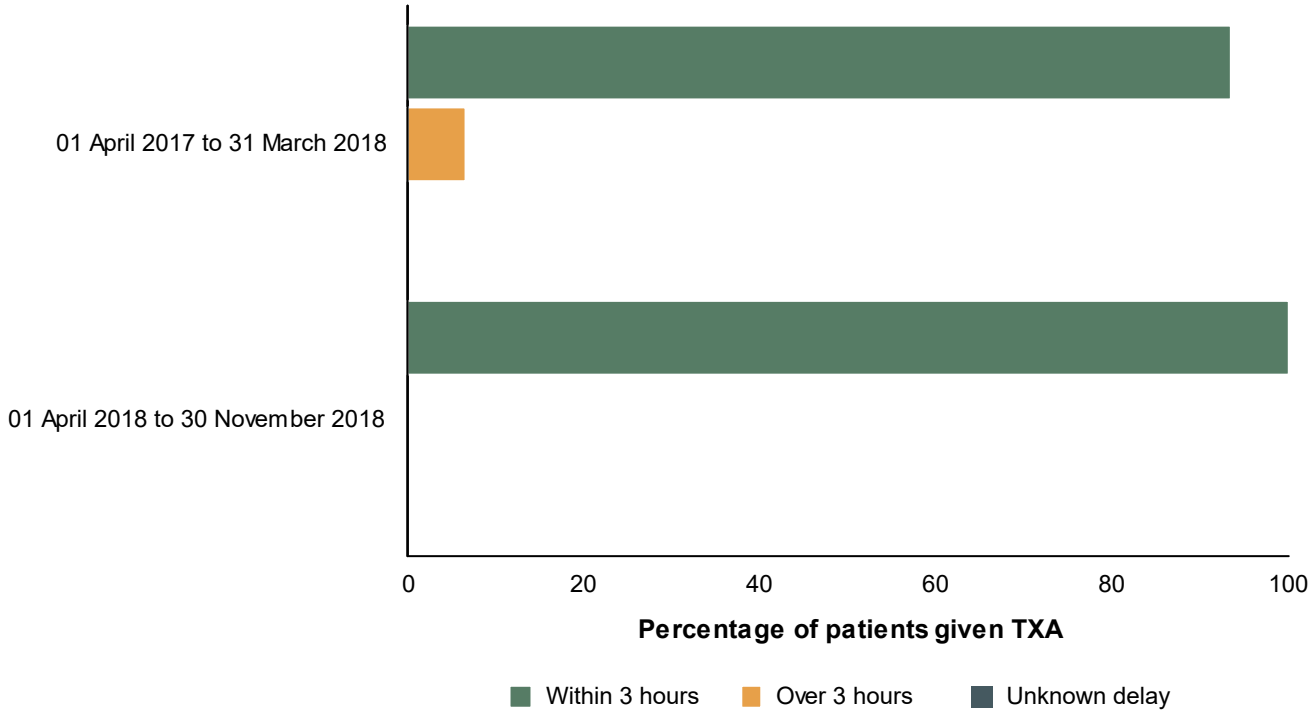
Sussex Trauma Network

Patients receiving Tranexamic Acid

All patients who receive blood products within 6 hours of the incident.

Trauma Unit data only

Date Range	n	Received TXA	TXA within 3 hours of incident	TXA over 3 hours from incident	TXA, unknown delay
01 April 2017 to 31 March 2018	16	15	14 (93.3%)	1 (6.7%)	0 (0.0%)
TARN average			87.6%	7.5%	4.9%
01 April 2018 to 30 November 2018	14	11	11 (100.0%)	0 (.0%)	0 (0.0%)
TARN average			86.9%	7.2%	5.9%



THE TRAUMA AUDIT & RESEARCH NETWORK

Section II

Patients with Thoracic Injuries

Patients with Abdominal Injuries

Patients with 3+ Rib Fractures

Patients in Shock

Sussex Trauma Network

Thoracic Injuries - Summary Information

Trauma Unit data only

	Children (0 - 15)		Adults		Total
	Blunt	Penetrating	Blunt	Penetrating	
01 April 2018 to 30 November 2018					
Thoracic Injuries - All Severities					
Direct Admissions	0	0	140	0	140
Transfers In	0	0	20	0	20
Thoracic Injuries - AIS 3+					
Direct Admissions	0	0	90	0	90
Transfers In	0	0	13	0	13
01 April 2017 to 31 March 2018					
Thoracic Injuries - All Severities					
Direct Admissions	1	0	180	3	184
Transfers In	0	0	26	0	26
Thoracic Injuries - AIS 3+					
Direct Admissions	1	0	137	3	141
Transfers In	0	0	24	0	24

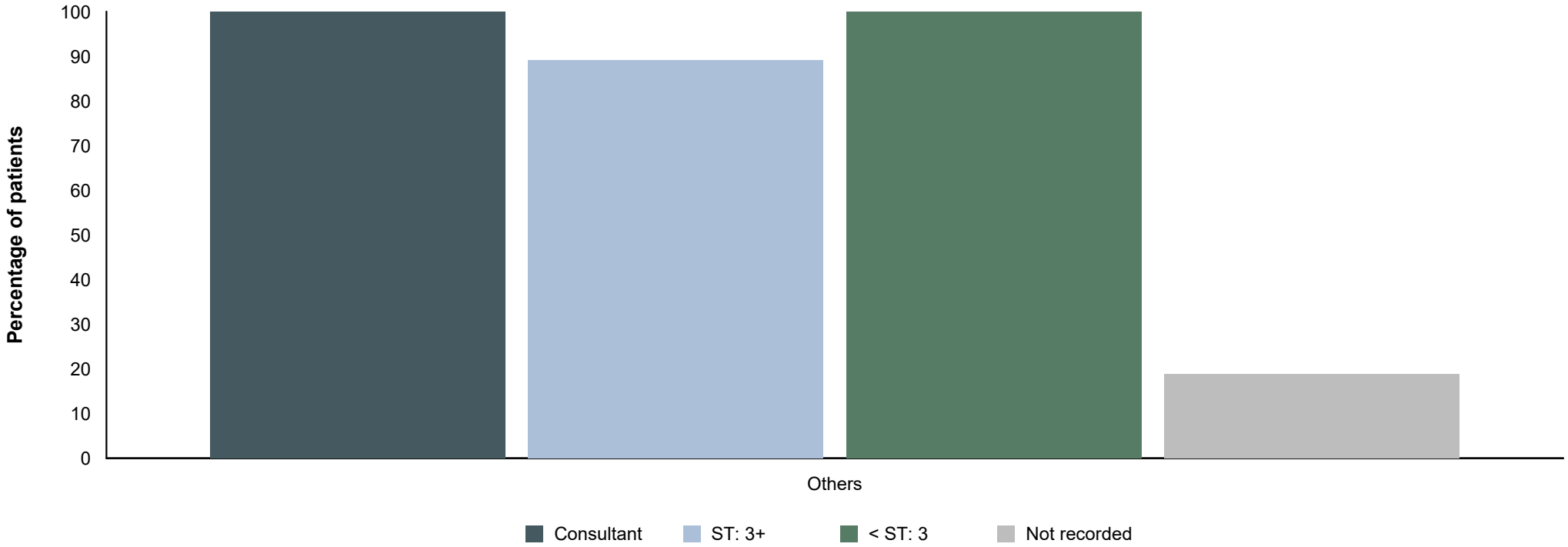
Sussex Trauma Network

Most senior doctor seeing patients with AIS 3+ thoracic injuries in the Emergency Department

Patients directly admitted, all specialities

Trauma Unit data only

Category	Total	Consultant	TARN average consultant	ST: 3+	< ST: 3	Not recorded
01 April 2018 to 30 November 2018						
Isolated Thoracic Injuries	75	15 (20.0%)	55.1%	18 (24.0%)	40 (53.3%)	2 (2.7%)
Non-Isolated Thoracic Injuries	15	5 (33.3%)	83.5%	6 (40.0%)	3 (20.0%)	0 (0.0%)
01 April 2017 to 31 March 2018						
Isolated Thoracic Injuries	120	29 (24.2%)	52.9%	13 (10.8%)	66 (55.0%)	8 (6.7%)
Non-Isolated Thoracic Injuries	21	8 (38.1%)	81.9%	3 (14.3%)	8 (38.1%)	2 (9.5%)



Sussex Trauma Network

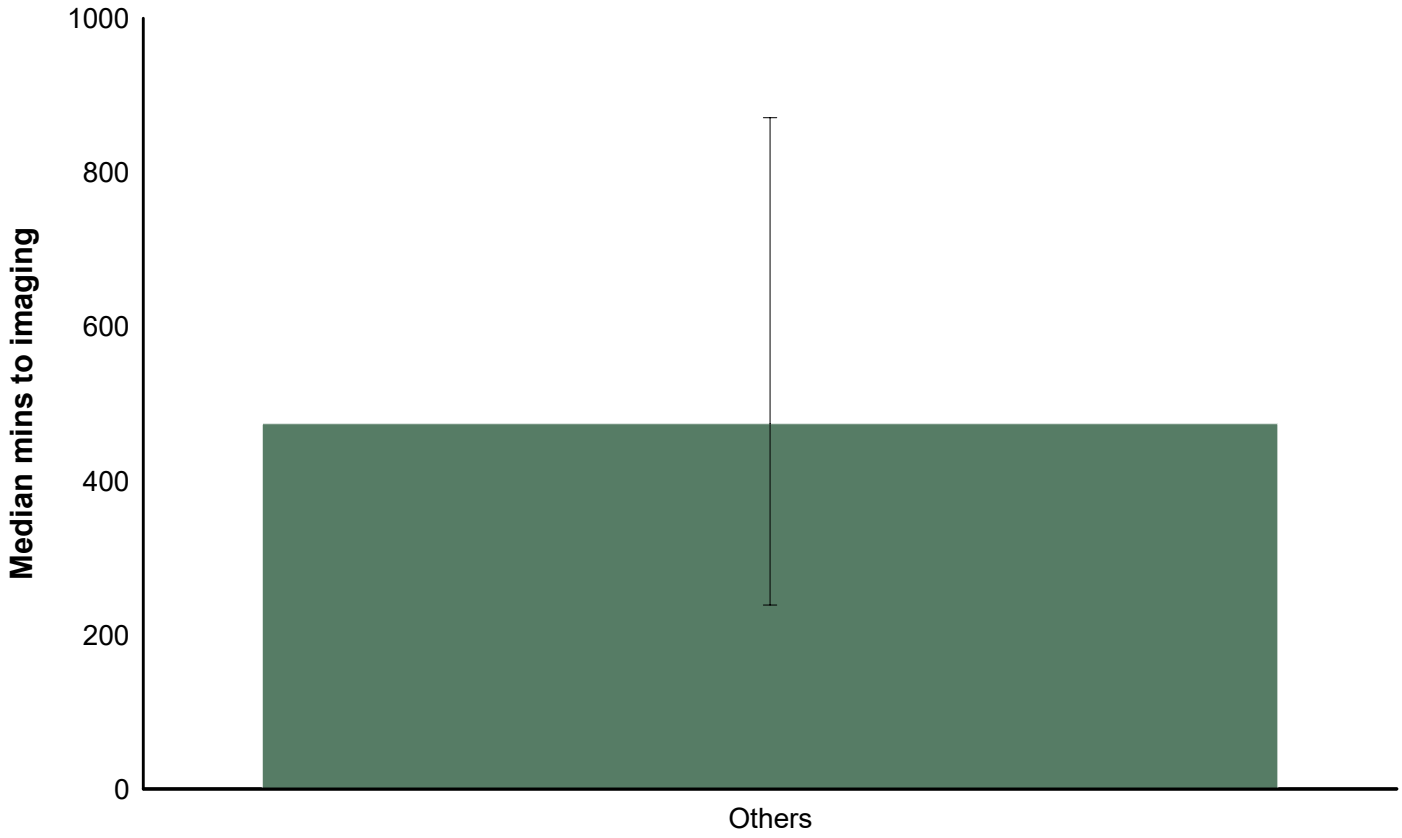
Time to CT or MRI scan, patients with AIS3+ thoracic injuries

Direct Admissions

(excluding patients with a time difference greater than 24 hours or taken directly to theatre)

Trauma Unit data only

Category	n	Imaging recorded	Imaging with date & time	Mins to imaging* Median (IQR)	TARN mins to imaging Median (IQR)
01 April 2018 to 30 November 2018					
Isolated Thoracic Injuries	52	52	52	164 (87 - 243)	91 (33 - 209)
Non-Isolated Thoracic Injuries	15	15	15	65 (38 - 195)	31 (20 - 56)
01 April 2017 to 31 March 2018					
Isolated Thoracic Injuries	90	90	90	172 (56 - 293)	98 (36 - 219)
Non-Isolated Thoracic Injuries	18	18	18	73 (58 - 140)	31 (20 - 60)



*** N/A means there are not enough cases to calculate the median / IQR**

Sussex Trauma Network

Abdominal Injuries - Summary Information

Trauma Unit data only

	Children		Adults		Total
	Blunt	Penetrating	Blunt	Penetrating	
01 April 2018 to 30 November 2018					
Abdominal Injuries - All Severities					
Direct Admissions	0	0	11	1	12
Transfers In	0	0	5	0	5
Abdominal Injuries - AIS 3+					
Direct Admissions	0	0	4	1	5
Transfers In	0	0	3	0	3
01 April 2017 to 31 March 2018					
Abdominal Injuries - All Severities					
Direct Admissions	3	0	13	1	17
Transfers In	0	0	7	1	8
Abdominal Injuries - AIS 3+					
Direct Admissions	3	0	10	0	13
Transfers In	0	0	6	1	7

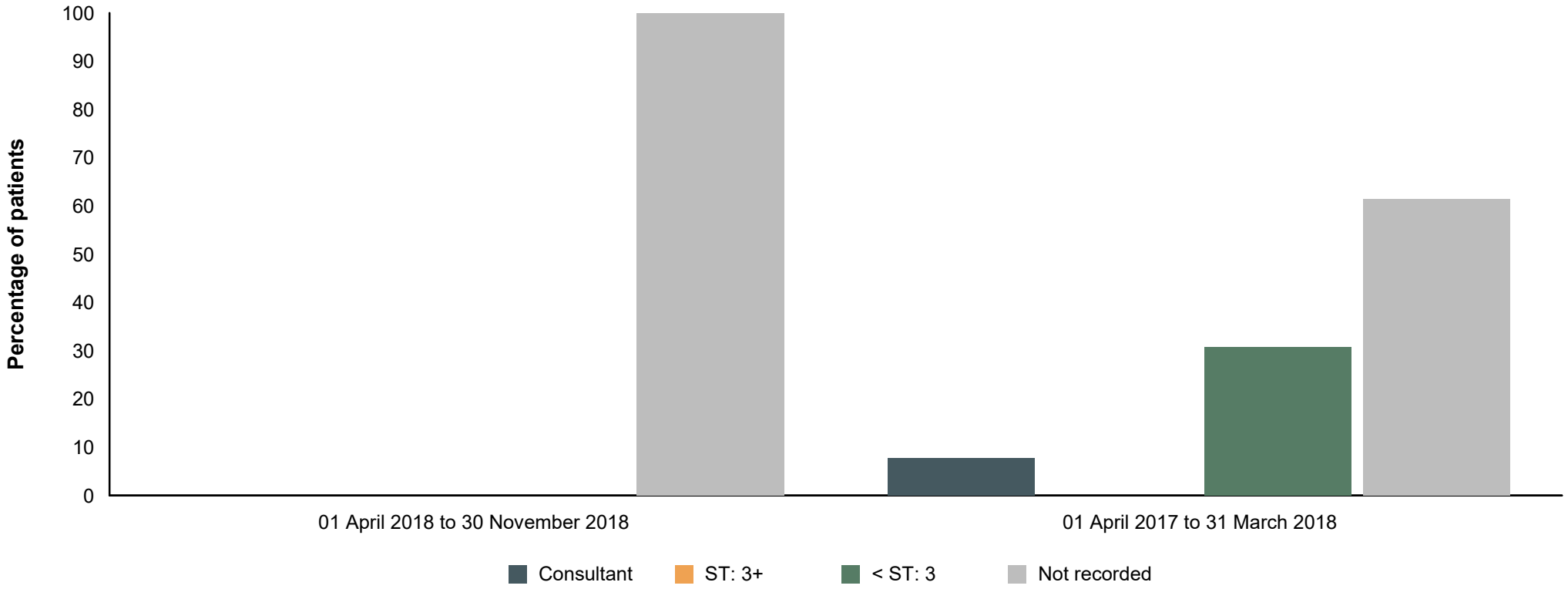
Sussex Trauma Network

Presence and grade of general surgeon in the ED for patients with AIS 3+ abdominal injuries

Direct Admissions

Trauma Unit data only

Total	Consultant	TARN average consultant	ST: 3+	< ST: 3	Not recorded
01 April 2018 to 30 November 2018					
5	0 (0.0%)	6.1%	0 (0.0%)	0 (0.0%)	5 (100.0%)
01 April 2017 to 31 March 2018					
13	1 (7.7%)	9.1%	0 (0.0%)	4 (30.8%)	8 (61.5%)



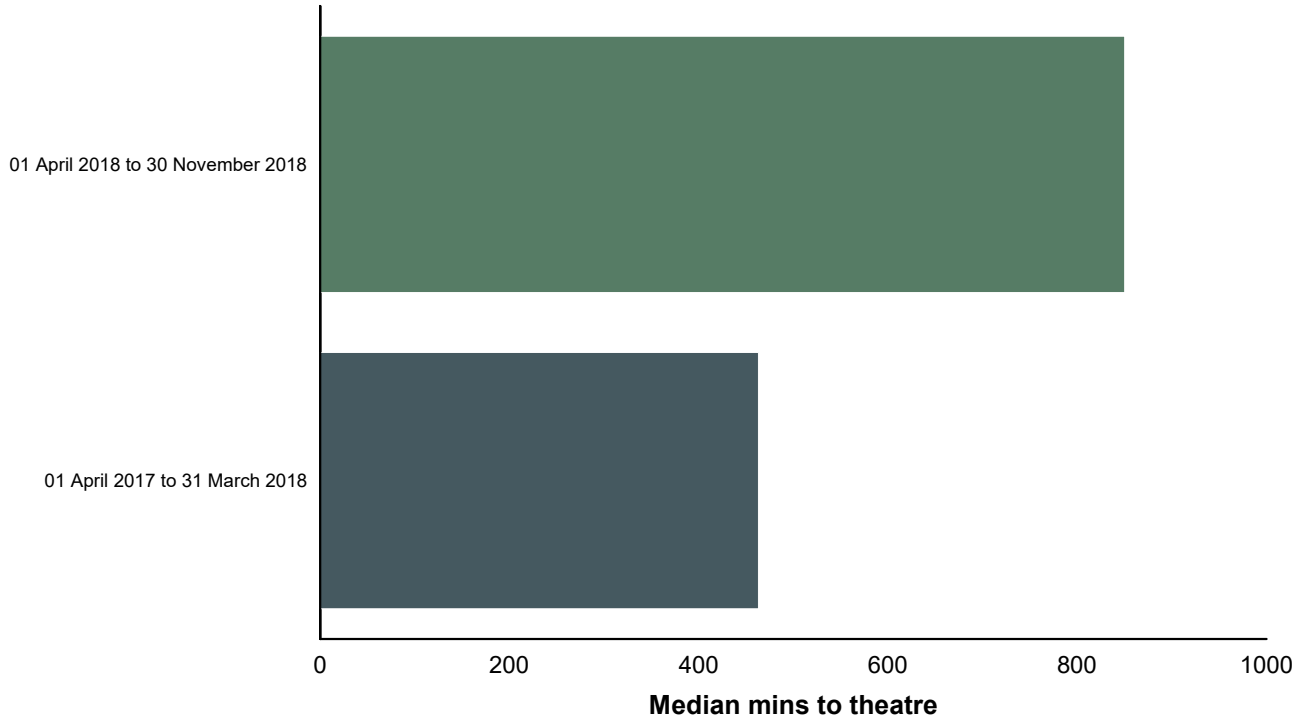
Sussex Trauma Network

Time to theatre (emergency operations), patients with AIS3+ abdominal injuries

Direct Admissions (excluding patients with a time difference greater than 24 hours)

Trauma Unit data only

Date Range	n	Operation recorded	Mins to theatre* Median (IQR)	TARN mins to theatre Median (IQR)
01 April 2018 to 30 November 2018	5	1	850 (N/A)	147 (86 - 289)
01 April 2017 to 31 March 2018	13	1	463 (N/A)	151 (78 - 326)



A list of the procedures defined as emergency operations is available from TARN on request.

*** N/A means there are not enough cases to calculate the median and interquartile range**

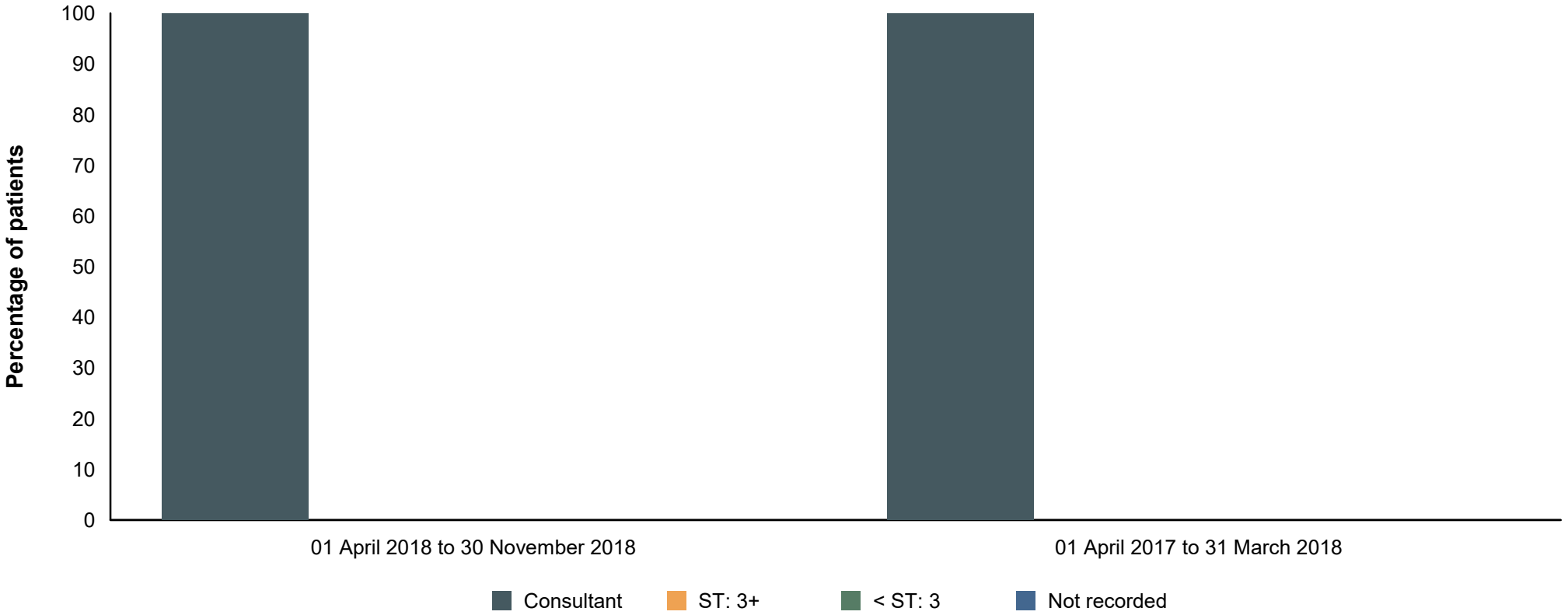
Sussex Trauma Network

Grade of Surgeon during the initial operation for patients with AIS 3+ abdominal injuries

Direct Admissions

Trauma Unit data only

	Total	Consultant	TARN average consultant	ST: 3+	< ST: 3	Not recorded
01 April 2018 to 30 November 2018	1	1 (100.0%)	89.5%	0 (0.0%)	0 (0.0%)	0 (0.0%)
01 April 2017 to 31 March 2018	1	1 (100.0%)	91.6%	0 (0.0%)	0 (0.0%)	0 (0.0%)



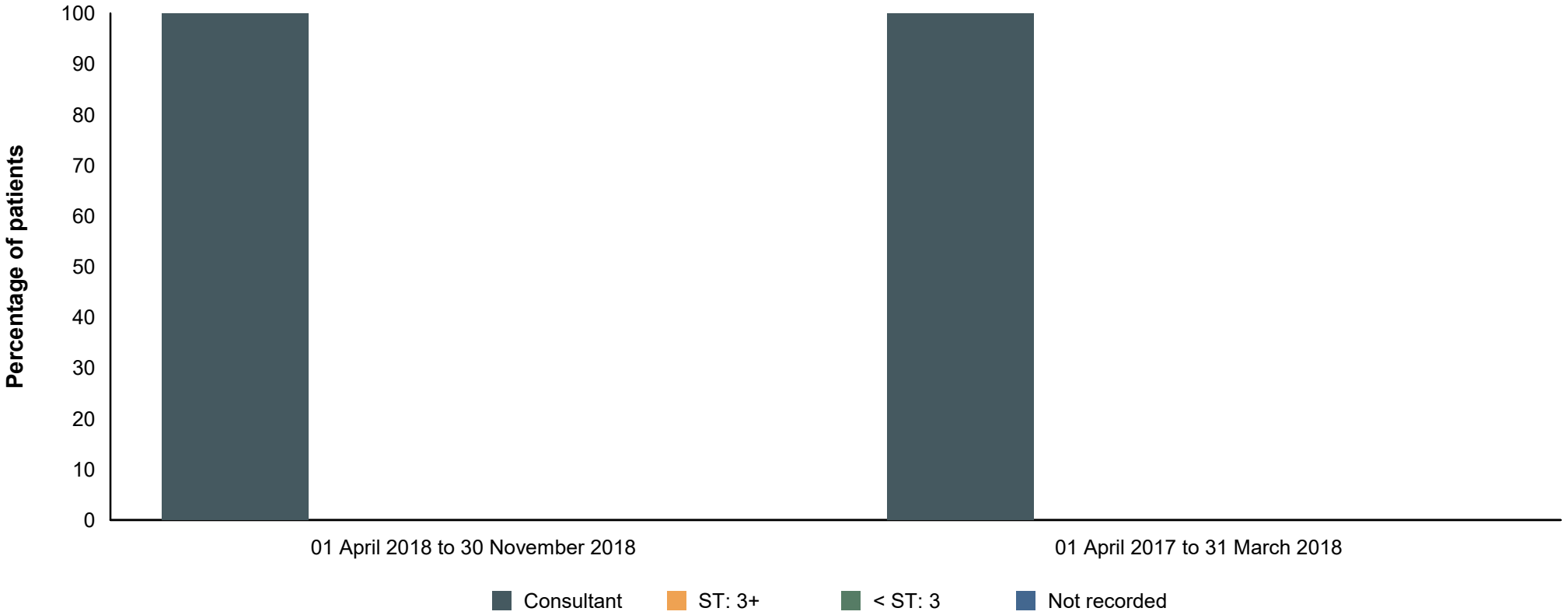
Sussex Trauma Network

Grade of Anaesthetist during the initial operation for patients with AIS 3+ abdominal injuries

Direct Admissions

Trauma Unit data only

	Total	Consultant	TARN average consultant	ST: 3+	< ST: 3	Not recorded
01 April 2018 to 30 November 2018	1	1 (100.0%)	80.8%	0 (0.0%)	0 (0.0%)	0 (0.0%)
01 April 2017 to 31 March 2018	1	1 (100.0%)	76.9%	0 (0.0%)	0 (0.0%)	0 (0.0%)



Sussex Trauma Network

Management of chest wall injuries

Patients with 3+ rib fractures

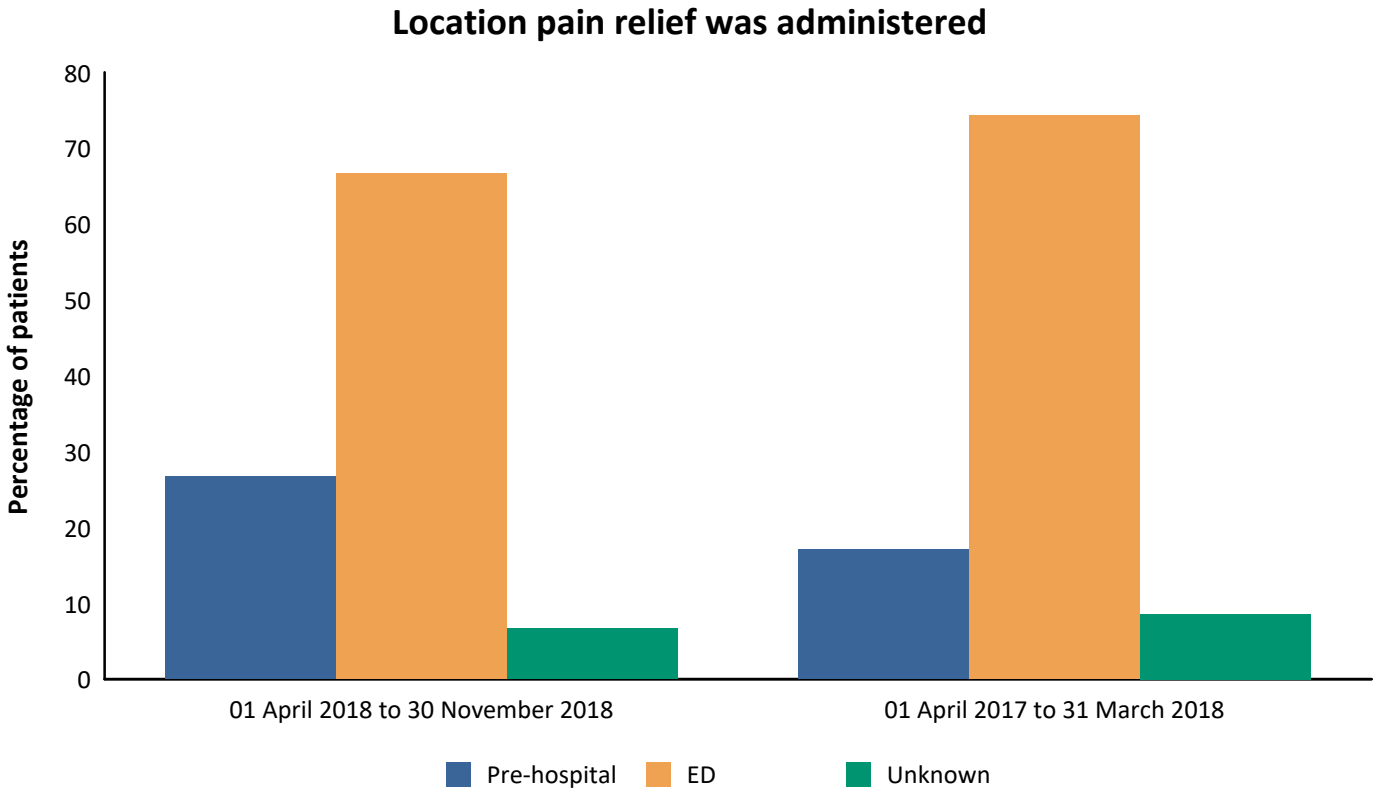
Trauma Unit data only

Date range	Total	Transfers in	Rib fixation	Aged under 65	Aged 65 and over	Given pain relief*	Median LOS (IQR)	Median LOS CC (IQR)
01 April 2018 to 30 November 2018	67	8 (11.9%)	0 (0%)	19 (28.4%)	48 (71.6%)	15 (22.4%)	7 (3 - 16)	6 (6 - 20)
TARN average		15.8%	3.5%	50%	50%	27.3%	8 (5 - 16)	4 (2 - 9)
01 April 2017 to 31 March 2018	124	19 (15.3%)	0 (0%)	45 (36.3%)	79 (63.7%)	35 (28.2%)	7 (4 - 17)	5 (3 - 9)
TARN average		15.8%	3.4%	48.9%	51.1%	26.1%	9 (5 - 17)	4 (2 - 9)

Patients with 3+ rib fractures given pain relief

Trauma Unit data only

Date range	Total	Pain relief location			Minutes to pain relief Median (IQR)**
		Pre-hospital	ED	Unknown	
01 April 2018 to 30 November 2018	15	4 (26.7%)	10 (66.7%)	1 (6.7%)	185 (98 - 273)
TARN average		28.4%	62.4%	9.3%	215 (84 - 367)
01 April 2017 to 31 March 2018	35	6 (17.1%)	26 (74.3%)	3 (8.6%)	210 (103 - 375)
TARN average		28%	62.5%	9.5%	206 (85 - 371)



*** Pain relief includes the following analgesia types:**

Local anaesthetic patches, Local anaesthetic blockade (non epidural/paravertebral), Epidural block, Paravertebral block, Other

**** Excluding patients with a time difference greater than 24 hours**

Sussex Trauma Network

Management of shocked* patients

*Adults with SBP < 110 pre-hospital or in the ED & a blunt injury mechanism

Trauma Unit data only

Date Range	Transfer Type	n	Died
01 April 2018 to 30 November 2018	Direct Admissions	103	7 (6.8%)
01 April 2017 to 31 March 2018	Direct Admissions	134	9 (6.7%)

Direct Admissions

01 April 2018 to 30 November 2018

Grade of most senior doctor performing the inital operation on shocked patients

Category	Consultant	ST: 3+	< ST: 3+	Not recorded
Grade of Surgeon	24 (70.6%)	5 (14.7%)	0 (0.0%)	5 (14.7%)
Grade of Anaesthetist	27 (79.4%)	1 (2.9%)	1 (2.9%)	5 (14.7%)

69 of the 103 patients directly admitted had no operation recorded.

01 April 2017 to 31 March 2018

Grade of most senior doctor performing the inital operation on shocked patients

Category	Consultant	ST: 3+	< ST: 3+	Not recorded
Grade of Surgeon	25 (65.8%)	3 (7.9%)	5 (13.2%)	5 (13.2%)
Grade of Anaesthetist	28 (73.7%)	2 (5.3%)	4 (10.5%)	4 (10.5%)

96 of the 134 patients directly admitted had no operation recorded.