Scottish Trauma Audit Group

Audit of Trauma Management in Scotland

Monthly Quality Indicators Feedback Report (Update Nov 2015)

This Hospital

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Reporting on data received by STAG Central Office by: 10-Aug-2016

Report issued by STAG Central Office: 16-Nov-2016

Background

The Scottish Trauma Audit Group (STAG) is a national audit within the Scottish Healthcare Audits programme at the Public Health and Intelligence division of NHS National Services Scotland. STAG recommenced an audit of trauma in 2011 with the aim of improving the quality of care, overall experience and long term outcome of patients with significant injuries through measuring compliance against standards of care to support local quality improvement.

Quality Indicators

In order to improve the standards of trauma care in Scotland, the STAG Steering Group developed a set of Quality Indicators (QIs) using guidance/evidence of best practice collated from literature and learned organisations. These QIs should be used as part of a quality improvement process.

Each QI suggests a process or an intervention that may be beneficial at that particular point in the patient journey. If the QI has not been achieved then the case should be reviewed locally where there is a comprehensive understanding of how trauma services are configured and individual patient information is available.

The aggregation of QI data at hospital level (available in this report) should be reviewed to look for patterns of performance. If performance is lower than desired then a review should take place that includes agreeing on the problem(s), finding the cause of the problem and taking action to remove or minimise the cause of the problem. See http://www.stag.scot.nhs.uk/Presentations2015/Using-clinical-audit-data-to-support-local-improvement-2015-STAG-conference.pdf for more advice/information or contact angela.khan@nhs.net

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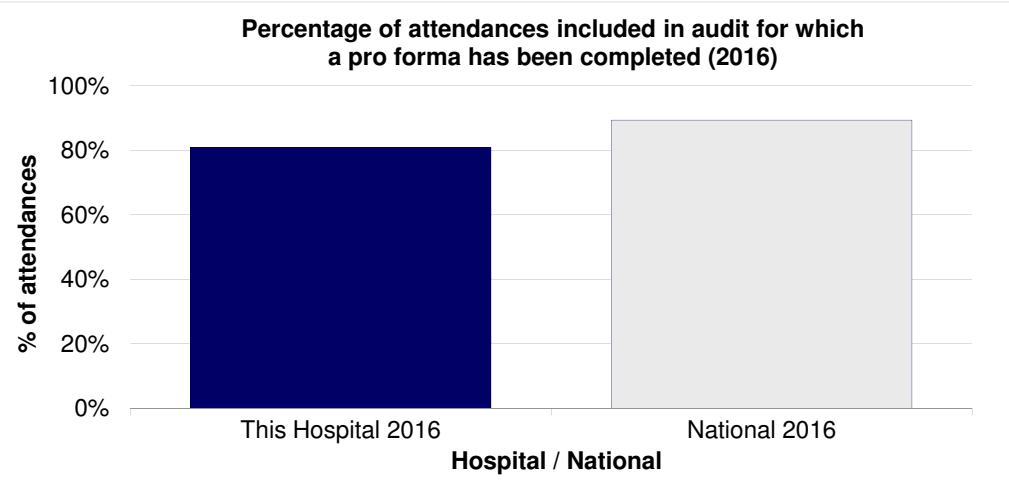
Summary 1: Patient Inclusion



Summary 1

Emergency Department (ED) records are checked daily for patients who present following trauma. Any patient who meets the inclusion criteria is entered into the STAG Trauma Audit and tracked for 30 days or until death/discharge.

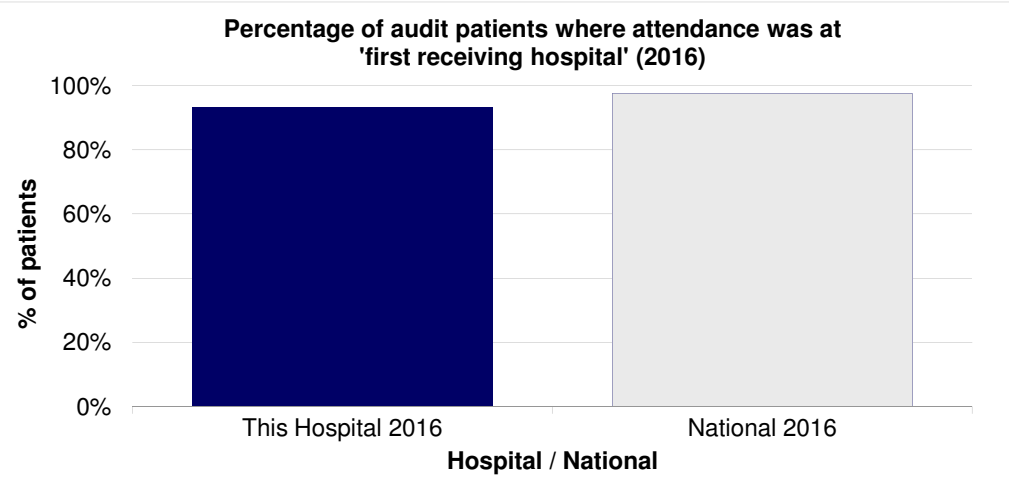
Note that some audit patients are transferred between hospitals. Patients who attended two STAG EDs during a single episode of care have only been counted once in the 'National' totals.

For the remainder of this report 'patients' refer to patient attendances for which a pro forma has been completed.

Please contact your Local Audit Coordinator for further details of the audit's inclusion / exclusion criteria.

Year/month of attendance	ED attendance	Attendances included in audit		Pro forma completed	
	N°.	N°.	% of ED attendance	N°.	% of audit patients
2016-Jan	2,826	15	0.5%	15	100%
2016-Feb	2,689	13	0.5%	13	100%
2016-Mar	2,968	20	0.7%	15	75%
2016-Apr	2,788	21	0.8%	20	95%
2016-May	3,154	9	0.3%	8	89%
2016-Jun	2,953	19	0.6%	15	79%
2016-Jul	3,107	12	0.4%	2	17%
2016-Aug	-	-	-	0	-
2016-Sep	-	-	-	0	-
2016-Oct	-	-	-	0	-
2016-Nov	-	-	-	0	-
2016-Dec	-	-	-	0	-
This Hospital 2016	20,485	109	0.5%	88	81%
This Hospital 2015	**33,833**	**185**	**0.5%**	**185**	**100%**
National 2016	**595,470**	**2,070**	**0.3%**	**1,848**	**89%**
National 2015	**1,049,045**	**3,289**	**0.3%**	**3,289**	**100%**

Summary 2: First Receiving Hospital

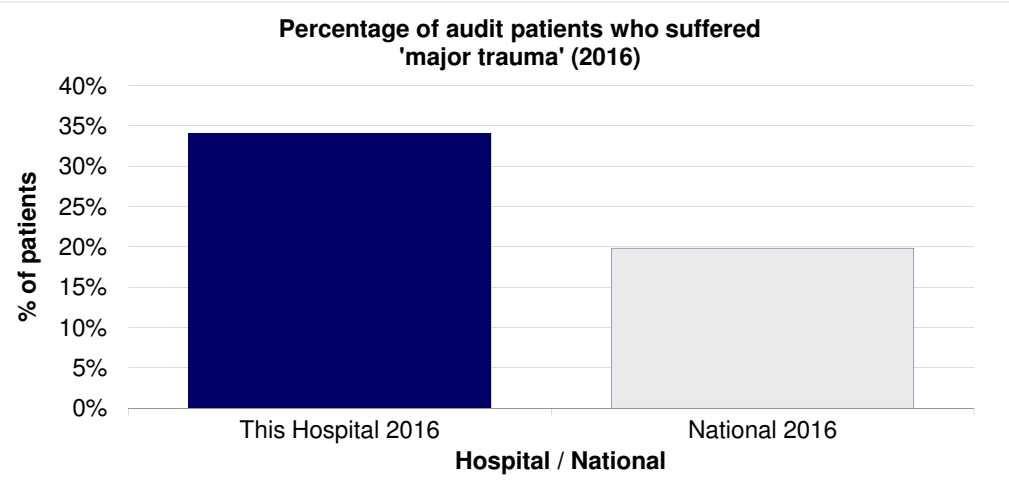


Summary 2

In most cases this Emergency Department (ED) is the first hospital that the patient will have attended with his/her injuries; however, occasionally the patient will have been transferred to this ED from a non-STAG hospital or from another STAG ED. Where the patient did not attend another hospital prior to this ED attendance, the attendance is said to have been at a 'first receiving hospital'.

Year/month of attendance	First Receiving Hospital?							
	No		Yes		To be confirmed		Total	
2016-Jan	0	0%	15	100%	0	0%	15	100%
2016-Feb	0	0%	13	100%	0	0%	13	100%
2016-Mar	3	20%	12	80%	0	0%	15	100%
2016-Apr	0	0%	20	100%	0	0%	20	100%
2016-May	1	13%	7	88%	0	0%	8	100%
2016-Jun	2	13%	13	87%	0	0%	15	100%
2016-Jul	0	0%	2	100%	0	0%	2	100%
2016-Aug	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-
This Hospital 2016	6	7%	82	93%	0	0%	88	100%
This Hospital 2015	**10**	**5%**	**175**	**95%**	**0**	**0%**	**185**	**100%**
National 2016	**46**	**2%**	**1,802**	**98%**	**0**	**0%**	**1,848**	**100%**
National 2015	**92**	**3%**	**3,197**	**97%**	**0**	**0%**	**3,289**	**100%**

Summary 3: Severity of Trauma



Summary 3

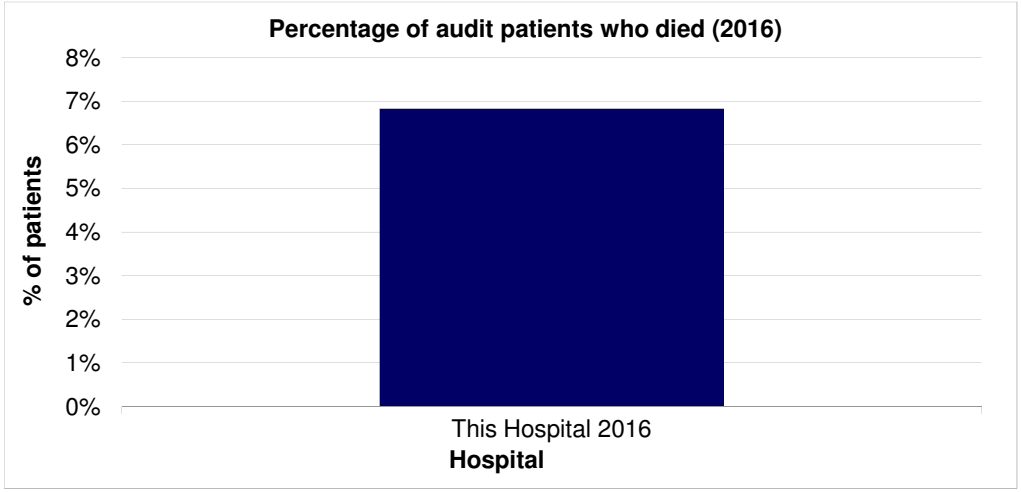
The Injury Severity Score (ISS) measures anatomical damage and provides an overall severity score for injuries sustained by a patient. A patient's score may range between 1 and 75; the higher the score the greater the severity. Patients with an ISS > 15 are said to have suffered 'major trauma'.

In the STAG Trauma Audit each injury is coded, scored and allocated to one of six body regions using the 2005 Abbreviated Injury Scale (AIS) (Update 2008). To calculate the ISS, the highest score in each of the three highest scoring body regions is squared; these values are then summed.

For further details of the methodology used to measure anatomical damage please contact the STAG Clinical Coordinator.

Year/month of attendance	Severity of Trauma									
	Minor (ISS < 9)		Moderate (ISS 9 - 15)		Major (ISS > 15)		To be confirmed		Total	
2016-Jan	1	7%	9	60%	5	33%	0	0%	15	100%
2016-Feb	4	31%	4	31%	5	38%	0	0%	13	100%
2016-Mar	1	7%	9	60%	5	33%	0	0%	15	100%
2016-Apr	3	15%	9	45%	8	40%	0	0%	20	100%
2016-May	2	25%	2	25%	4	50%	0	0%	8	100%
2016-Jun	3	20%	9	60%	3	20%	0	0%	15	100%
2016-Jul	1	50%	1	50%	0	0%	0	0%	2	100%
2016-Aug	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	15	17%	43	49%	30	34%	0	0%	88	100%
This Hospital 2015	**54**	**29%**	**87**	**47%**	**44**	**24%**	**0**	**0%**	**185**	**100%**
National 2016	**456**	**25%**	**1,020**	**55%**	**367**	**20%**	**5**	**0%**	**1,848**	**100%**
National 2015	**790**	**24%**	**1,751**	**53%**	**748**	**23%**	**0**	**0%**	**3,289**	**100%**

Summary 4: Patient Outcome



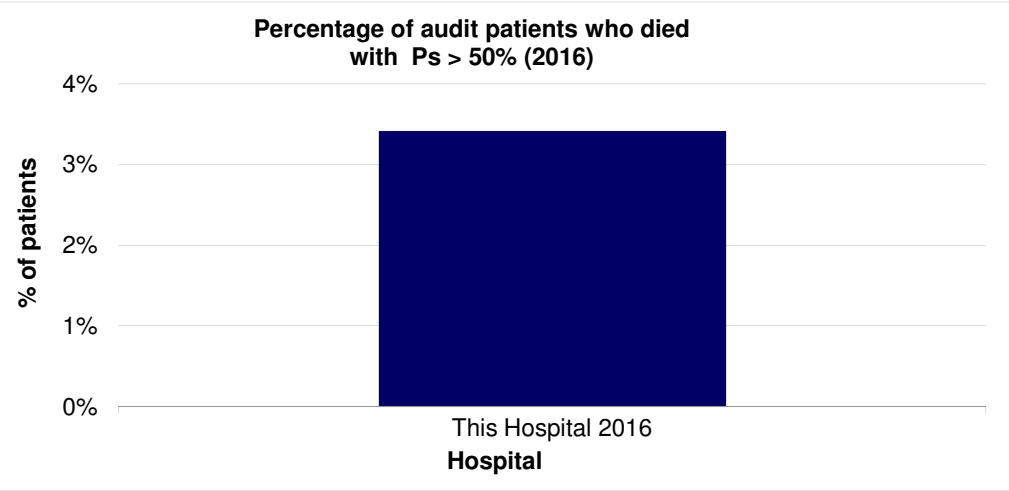
Summary 4

In general it takes longer to complete pro forma for patients who die. The Local Audit Coordinator may have to wait several months to obtain full details of a patient's injuries, particularly if a post-mortem has been requested.

Note that the percentage of deaths is likely to rise once pro forma have been completed for all audit patients (see Summary 1 for details of pro forma completion).

Year/month of attendance	Patient Outcome							
	Dead		Alive		To be confirmed		Total	
2016-Jan	5	33%	10	67%	0	0%	15	100%
2016-Feb	0	0%	13	100%	0	0%	13	100%
2016-Mar	0	0%	15	100%	0	0%	15	100%
2016-Apr	1	5%	19	95%	0	0%	20	100%
2016-May	0	0%	8	100%	0	0%	8	100%
2016-Jun	0	0%	15	100%	0	0%	15	100%
2016-Jul	0	0%	2	100%	0	0%	2	100%
2016-Aug	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-
This Hospital 2016	6	7%	82	93%	0	0%	88	100%
This Hospital 2015	**14**	**8%**	**171**	**92%**	**0**	**0%**	**185**	**100%**

Summary 5: Outcome and the Probability Score (Ps 12)



Summary 5

The STAG Trauma Audit uses TARN Outcome Prediction Model. Age, Gender, Glasgow Coma Score and Injury Severity Score (ISS) are used, in combination with specified coefficients, to calculate the probability of survival (Ps 12) for each patient.

Outcome as expected is reported when either the Ps ≤ 50% and the patient died or where Ps > 50% and the patient survived.

STAG recommend that all patients who die are reviewed and are reviewing the reporting of this information at present.

For further information on TARN methodology please contact the STAG Information Analyst or visit https://www.tarn.ac.uk/Content.aspx?ca=4&c=38

Year/month of attendance	Patient Outcome									
	Outcome as expected		Died with Ps > 50%		Survived with Ps ≤ 50%		To be confirmed		Total	
2016-Jan	12	80%	3	20%	0	0%	0	0%	15	100%
2016-Feb	13	100%	0	0%	0	0%	0	0%	13	100%
2016-Mar	15	100%	0	0%	0	0%	0	0%	15	100%
2016-Apr	20	100%	0	0%	0	0%	0	0%	20	100%
2016-May	8	100%	0	0%	0	0%	0	0%	8	100%
2016-Jun	15	100%	0	0%	0	0%	0	0%	15	100%
2016-Jul	2	100%	0	0%	0	0%	0	0%	2	100%
2016-Aug	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	85	97%	3	3%	0	0%	0	0%	88	100%
This Hospital 2015	**175**	**95%**	**10**	**5%**	**0**	**0%**	**0**	**0%**	**185**	**100%**

STAG Quality Indicators Summary 2016

The table below summarises your hospital's performance in 2016 against each STAG Quality Indicator. For full information about each indicator and case selection criteria, a monthly breakdown of performance or details of national performance please see the remaining pages of this report. All cases where one or more Indicator was not achieved, or where performance against an Indicator was unknown, are flagged for local hospital review. Cases where the patient's outcome was not as expected (see Summary 5 on the previous page) are also flagged for review.

Indicator	Cases Selected	Achieved		Not achieved (to be reviewed)		Unknown / TBC (to be reviewed)	
1.1: Where patient has major trauma a pre-alert call should be made by the Scottish Ambulance Service.	24	24	100%	0	0%	0	0%
1.2: Patients with major trauma should be managed in the resuscitation room.	28	24	86%	4	14%	0	0%
1.3: Patients with major trauma should be attended by an Emergency Medicine Consultant within hour.	28	18	64%	10	36%	0	0%
1.4: Patients with major trauma should have blood gases measured in ED.	28	15	54%	13	46%	0	0%
2.1: Patients with abdominal injury AIS ≥ 3 should be attended by Consultant surgeon within hour.	7	0	0%	7	100%	0	0%
2.2: Patients with signs of shock and abdominal injury AIS ≥ 3 should have CT scan within hour.	1	1	100%	0	0%	0	0%
2.3: Patients who have a laparotomy should have the laparotomy commenced within one hour of arrival.	5	0	0%	5	100%	0	0%
3.1: Patients with thoracic injury AIS ≥ 2 should have chest x-ray within 30 mins.	26	15	58%	11	42%	0	0%
3.2: Patients with thoracic injury AIS ≥ 2 should have CT scan within hour.	26	15	58%	11	42%	0	0%
4.1: Patients with reduced conscious level and/or base of or depressed skull fracture should have CT scan within hour.	5	4	80%	1	20%	0	0%
4.2: Patients with severe head injury should be transferred (if no onsite availability) to setting with 24-hour on-site access to Neuro ICU, regardless of whether surgical intervention is required.	9	2	22%	7	78%	0	0%
5: The management of patients with spinal injuries AIS ≥ 3 should be discussed with Spinal Injuries Unit.	7	3	43%	4	57%	0	0%
6.1: Patients with open limb fractures should receive IV antibiotics within three hours.	16	14	88%	1	6%	1	6%
6.2: Patients with open limb fractures should be surgically managed by a consultant orthopaedic and/ or plastic surgeon within 24 hours.	16	14	88%	2	13%	0	0%
7: Patients with unstable pelvic fractures should have a pelvic binder applied within 30 mins.	6	0	0%	3	50%	3	50%

Total number of 2016 attendances to be reviewed by your hospital:	**39** (Details supplied in Report Appendix)

Indictor Information Format

The remainder of this report is based on the audit's Quality Indicators and is intended to be read in conjunction with these indicators. The figure below explains the summary information presented for each indicator.

Indicator number

Graph showing key cumulative information for 2015 and 2016 for this hospital (e.g. Jun 2016 figure includes all cases from Jan to Jun 2016)

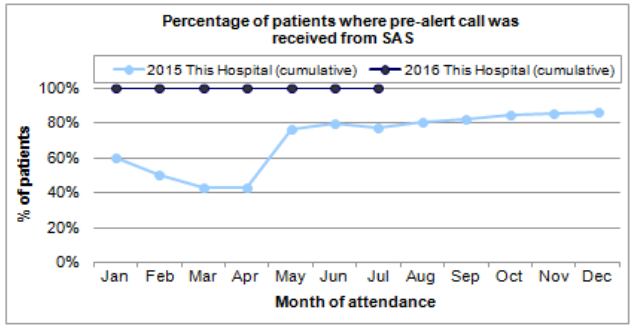
2016 monthly breakdown of information for this hospital

2015 and 2016 cumulative totals for this hospital and for all hospitals participating in the audit (National)

Number of attendances that met the case selection criteria for this Indicator at this hospital in 2016

Explanation and case selection criteria for this Indicator

STAG Indicator 1.1



STAG Indicator 1.1 — **Cases selected (2016) = 24**

Indicator: Where a patient has major trauma (ISS 16-75) a pre alert call should be made by the Scottish Ambulance Service (SAS) to the first receiving hospital.

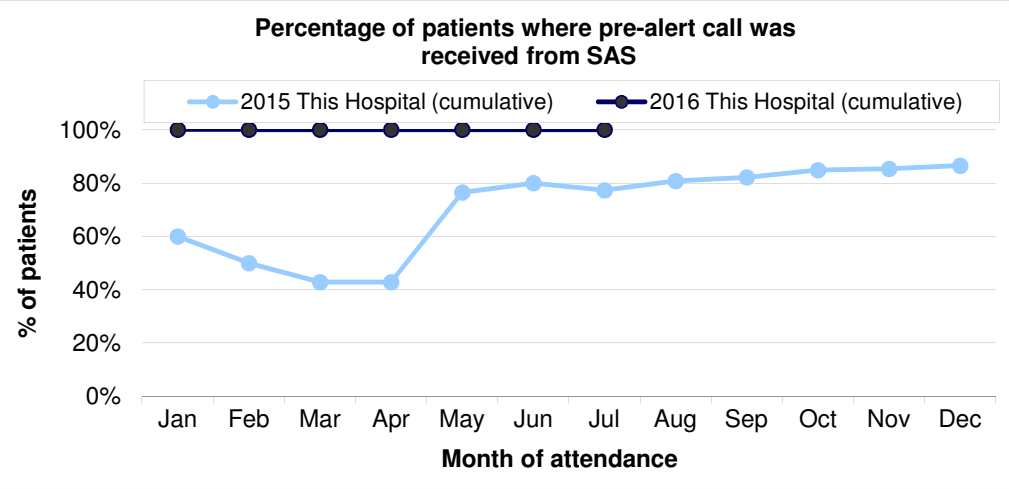
Case selection: All patients with an ISS between 16-75, arriving by SAS ambulance or air at first receiving hospital.

Note: A pre alert call may also be described as a standby call.

Year/month of attendance	Pre alert call received from SAS?							
	No		Yes		Unknown		Total	
2016-Jan	0	0%	5	100%	0	0%	5	100%
2016-Feb	0	0%	4	100%	0	0%	4	100%
2016-Mar	0	0%	2	100%	0	0%	2	100%
2016-Apr	0	0%	8	100%	0	0%	8	100%
2016-May	0	0%	3	100%	0	0%	3	100%
2016-Jun	0	0%	2	100%	0	0%	2	100%
2016-Jul	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-
This Hospital 201	0	0%	24	100%	0	0%	24	100%
This Hospital 201	**1**	**3%**	**32**	**86%**	**4**	**11%**	**37**	**100%**
National 2016	**79**	**25%**	**228**	**72%**	**8**	**3%**	**315**	**100%**
National 2015	**165**	**25%**	**463**	**71%**	**21**	**3%**	**649**	**100%**

1. Major Trauma Patients

STAG Indicator 1.1



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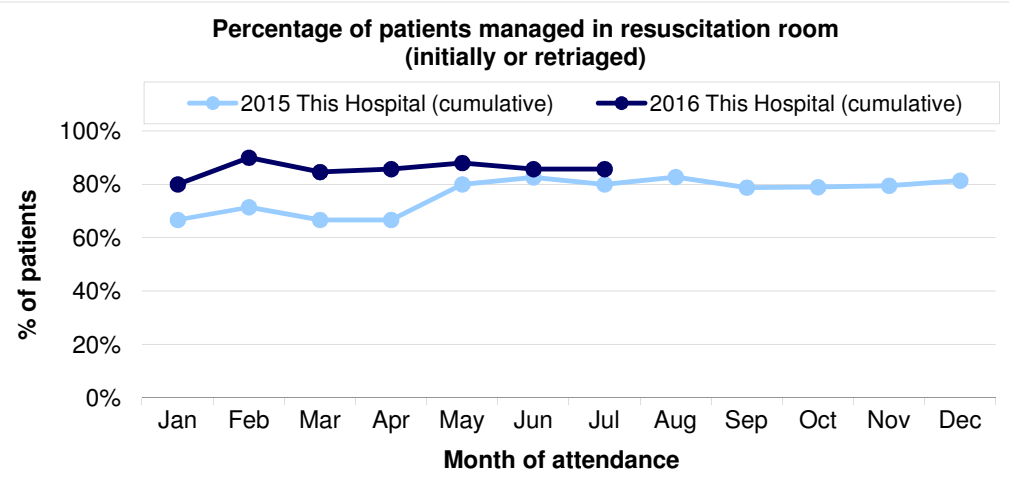
Case selection: All patients with an ISS between 16-75, arriving by SAS ambulance or air at first receiving hospital.

Note: A pre alert call may also be described as a standby call.

Year/month of attendance	Pre alert call received from SAS?							
	No		Yes		Unknown		Total	
2016-Jan	0	0%	5	100%	0	0%	5	100%
2016-Feb	0	0%	4	100%	0	0%	4	100%
2016-Mar	0	0%	2	100%	0	0%	2	100%
2016-Apr	0	0%	8	100%	0	0%	8	100%
2016-May	0	0%	3	100%	0	0%	3	100%
2016-Jun	0	0%	2	100%	0	0%	2	100%
2016-Jul	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-
This Hospital 2016	0	0%	24	100%	0	0%	24	100%
This Hospital 2015	**1**	**3%**	**32**	**86%**	**4**	**11%**	**37**	**100%**
National 2016	**79**	**25%**	**228**	**72%**	**8**	**3%**	**315**	**100%**
National 2015	**165**	**25%**	**463**	**71%**	**21**	**3%**	**649**	**100%**

STAG Indicator 1.2



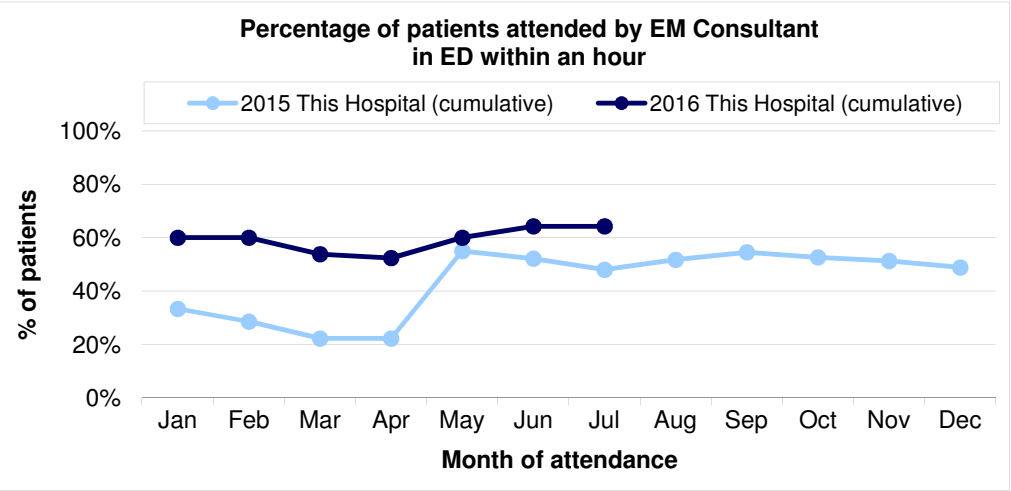
STAG Indicator 1.2 — **Cases selected (2016) = 28**

Indicator: Patients with major trauma (ISS 16-75) should be managed in the resuscitation room.

Case selection: All patients with an ISS between 16-75 arriving at first receiving hospital.

Year/month of attendance	Patient managed in resuscitation room?									
	Not managed in resus		Initially managed in resus		Retriaged to resus		Unknown		Total	
2016-Jan	1	20%	4	80%	0	0%	0	0%	5	100%
2016-Feb	0	0%	5	100%	0	0%	0	0%	5	100%
2016-Mar	1	33%	2	67%	0	0%	0	0%	3	100%
2016-Apr	1	13%	6	75%	1	13%	0	0%	8	100%
2016-May	0	0%	4	100%	0	0%	0	0%	4	100%
2016-Jun	1	33%	2	67%	0	0%	0	0%	3	100%
2016-Jul	0	-	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	4	14%	23	82%	1	4%	0	0%	28	100%
This Hospital 2015	**8**	**19%**	**32**	**74%**	**3**	**7%**	**0**	**0%**	**43**	**100%**
National 2016	**79**	**22%**	**259**	**72%**	**20**	**6%**	**0**	**0%**	**358**	**100%**
National 2015	**149**	**20%**	**523**	**72%**	**53**	**7%**	**4**	**1%**	**729**	**100%**

STAG Indicator 1.3



STAG Indicator 1.3 — **Cases selected (2016) = 28**

Indicator: Patients with major trauma (ISS 16-75) should be attended by an Emergency Medicine (EM) Consultant within one hour of attendance at the first receiving hospital.

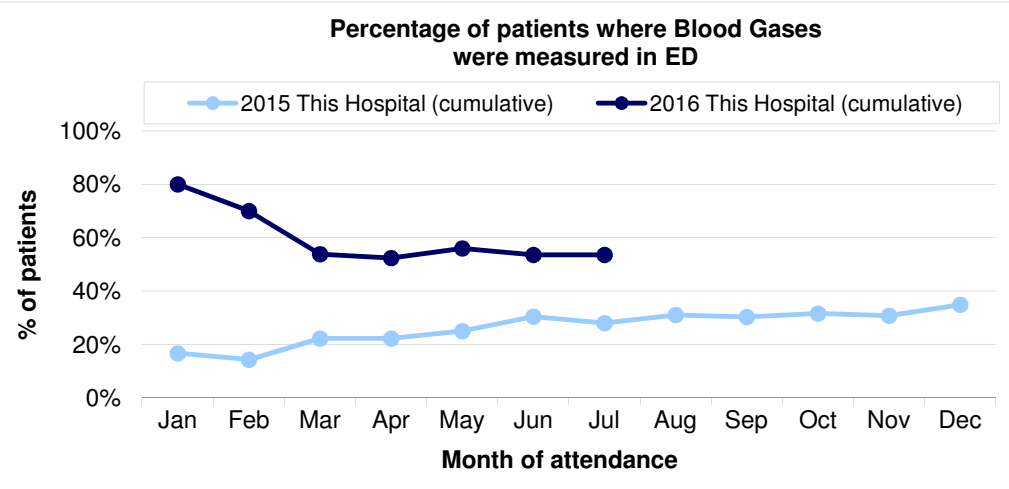
Case selection: All patients with an ISS between 16-75 arriving at first receiving hospital.

Note 1: Indicator only reports on Consultant attendances that occurred within the ED.

Note 2: Where patient was attended by more than one Consultant, attendance is reported in the following order of precedence:
EM Consultant attended within hour
EM Consultant attended, but timing unknown
Non-EM Consultant attended within hour
Non-EM Consultant attended, but timing unknown
EM Consultant attended, but not within hour
Non-EM Consultant attended, but not within hour

Year/month of attendance	Consultant attended patient in ED?															
	No Consultant attended		EM Consultant attended, but not within hour		Non-EM Consultant attended, but not within hour		EM Consultant attended within hour		Non-EM Consultant attended within hour		EM Consultant attended, but timing unknown		Non-EM Consultant attended, but timing unknown		Total	
2016-Jan	2	40%	0	0%	0	0%	3	60%	0	0%	0	0%	0	0%	5	100%
2016-Feb	0	0%	0	0%	1	20%	3	60%	0	0%	0	0%	1	20%	5	100%
2016-Mar	1	33%	0	0%	0	0%	1	33%	0	0%	0	0%	1	33%	3	100%
2016-Apr	1	13%	1	13%	0	0%	4	50%	0	0%	0	0%	2	25%	8	100%
2016-May	0	0%	0	0%	0	0%	4	100%	0	0%	0	0%	0	0%	4	100%
2016-Jun	0	0%	0	0%	0	0%	3	100%	0	0%	0	0%	0	0%	3	100%
2016-Jul	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	4	14%	1	4%	1	4%	18	64%	0	0%	0	0%	4	14%	28	100%
This Hospital 2015	**12**	**28%**	**2**	**5%**	**1**	**2%**	**21**	**49%**	**0**	**0%**	**1**	**2%**	**6**	**14%**	**43**	**100%**
National 2016	**90**	**25%**	**19**	**5%**	**2**	**1%**	**210**	**59%**	**6**	**2%**	**22**	**6%**	**9**	**3%**	**358**	**100%**
National 2015	**144**	**20%**	**44**	**6%**	**12**	**2%**	**485**	**67%**	**11**	**2%**	**24**	**3%**	**9**	**1%**	**729**	**100%**

STAG Indicator 1.4



STAG Indicator 1.4 — **Cases selected (2016) = 28**

Indicator: Patients with major trauma (ISS 16-75) should be monitored using a number of methods at the first receiving hospital. These methods should include measurement of Blood Gases.

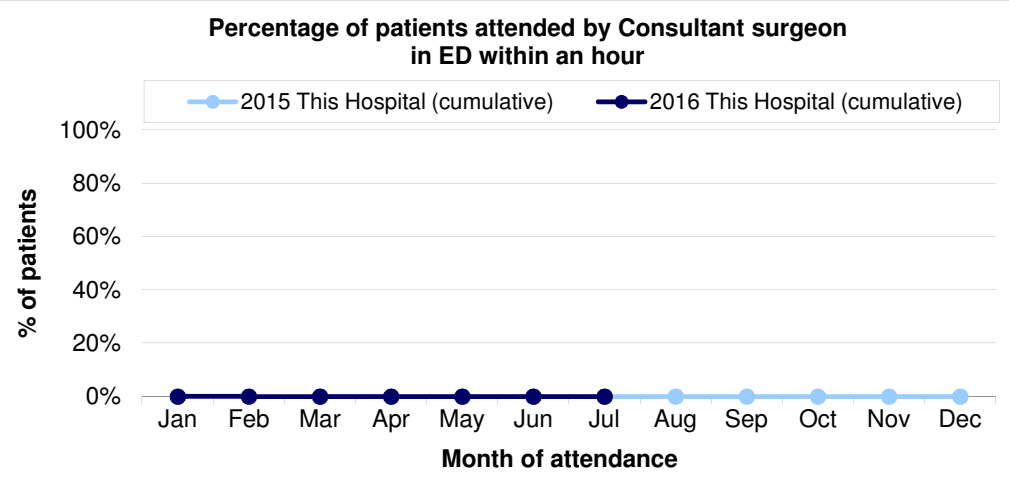
Case selection: All patients with an ISS between 16-75 arriving at first receiving hospital.

Note 1: Indicator only reports on whether the patient's Blood Gases were measured whilst he/she was under the care of the ED.

Year/month of attendance	Blood gases measured while patient under the care of ED?							
	Blood Gases not measured		Blood Gases measured		Unknown if Blood Gases measured		Total	
2016-Jan	1	20%	4	80%	0	0%	5	100%
2016-Feb	2	40%	3	60%	0	0%	5	100%
2016-Mar	3	100%	0	0%	0	0%	3	100%
2016-Apr	4	50%	4	50%	0	0%	8	100%
2016-May	1	25%	3	75%	0	0%	4	100%
2016-Jun	2	67%	1	33%	0	0%	3	100%
2016-Jul	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-
This Hospital 2016	**13**	**46%**	**15**	**54%**	**0**	**0%**	**28**	**100%**
This Hospital 2015	**28**	**65%**	**15**	**35%**	**0**	**0%**	**43**	**100%**
National 2016	**171**	**48%**	**187**	**52%**	**0**	**0%**	**358**	**100%**
National 2015	**338**	**46%**	**386**	**53%**	**5**	**1%**	**729**	**100%**

2. Abdominal Injury

STAG Indicator 2.1



STAG Indicator 2.1 — **Cases selected (2016) = 7**

Indicator: Patients with an abdominal injury AIS ≥ 3 should be attended by a Consultant surgeon within one hour of attendance at the first receiving hospital.

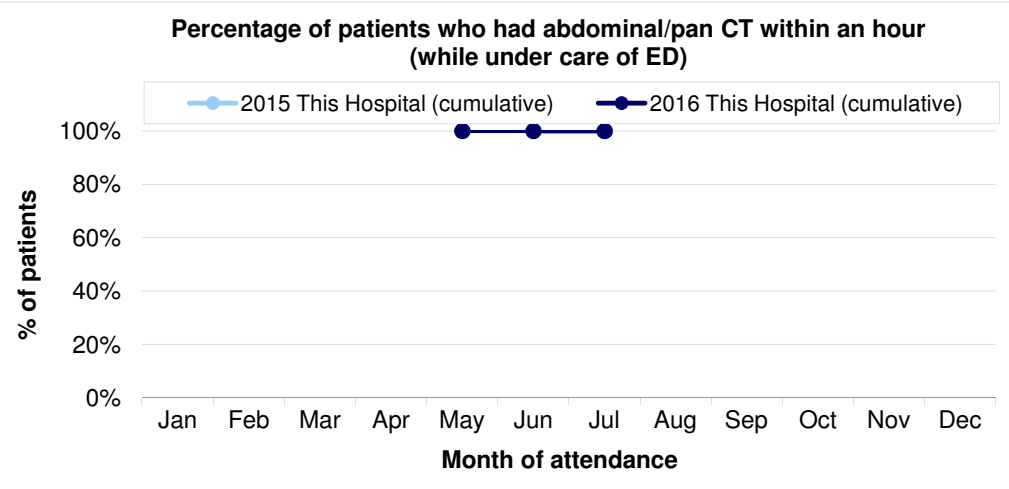
Case selection: All patients with an abdominal injury of AIS ≥ 3 arriving at first receiving hospital.

Note 1: Indicator only reports on Consultant surgeon attendances that occurred within the ED.

Note 2: Where patient was attended by more than one Consultant surgeon, attendance is reported in the following order of precedence:
Consultant surgeon attended within hour
Consultant surgeon attended, but timing unknown
Consultant surgeon attended, but not within hour

Year/month of attendance	Consultant surgeon attended patient in ED?									
	No Consultant surgeon attended		Consultant surgeon attended, but not within hour		Consultant surgeon attended within hour		Consultant surgeon attended, but timing unknown		Total	
2016-Jan	1	100%	0	0%	0	0%	0	0%	1	100%
2016-Feb	1	100%	0	0%	0	0%	0	0%	1	100%
2016-Mar	0	-	0	-	0	-	0	-	0	-
2016-Apr	2	100%	0	0%	0	0%	0	0%	2	100%
2016-May	2	100%	0	0%	0	0%	0	0%	2	100%
2016-Jun	1	100%	0	0%	0	0%	0	0%	1	100%
2016-Jul	0	-	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	**7**	**100%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**7**	**100%**
This Hospital 2015	**3**	**60%**	**0**	**0%**	**0**	**0%**	**2**	**40%**	**5**	**100%**
National 2016	**50**	**82%**	**5**	**8%**	**1**	**2%**	**5**	**8%**	**61**	**100%**
National 2015	**83**	**80%**	**8**	**8%**	**5**	**5%**	**8**	**8%**	**104**	**100%**

STAG Indicator 2.2



STAG Indicator 2.2 — **Cases selected (2016) = 1**

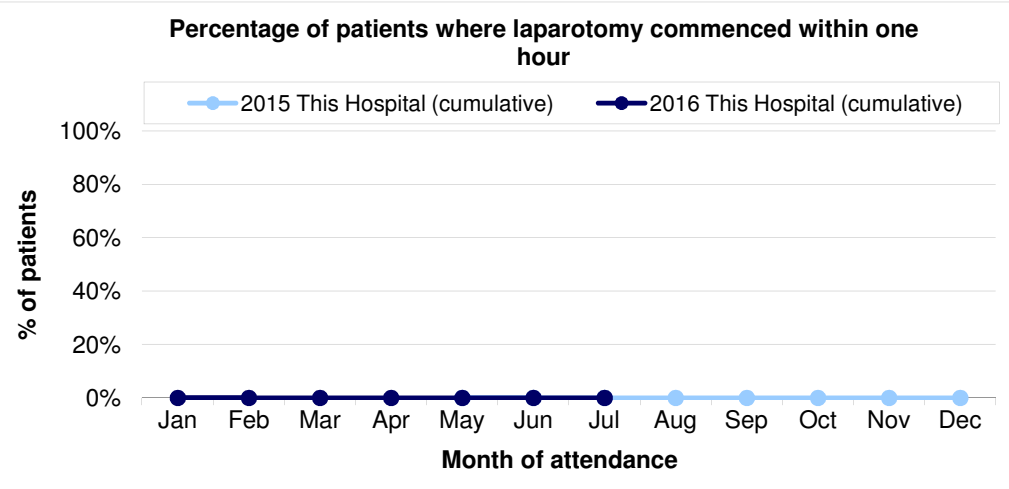
Indicator: Patients with signs of shock (SBP < 90mm Hg) and an abdominal injury AIS ≥ 3 should have an abdominal/pan CT scan within one hour of attendance at the first receiving hospital.

Case selection: All patients with an abdominal injury of AIS ≥ 3 who have SBP < 90mm Hg recorded within first hour of attendance at the first receiving hospital.

Note 1: Indicator only reports on CT scans that occurred while the patient was under the care of the ED. Scans that took place after the patient left ED are not reported.

Year/month of attendance	Abdominal / pan CT performed while patient under the care of ED?											
	No abdo/pan CT		Abdo/pan CT, but not within hour		Abdo/pan CT within hour		Abdo/pan CT, but timing unknown		Unknown if abdo/pan CT performed		Total	
2016-Jan	0	-	0	-	0	-	0	-	0	-	0	-
2016-Feb	0	-	0	-	0	-	0	-	0	-	0	-
2016-Mar	0	-	0	-	0	-	0	-	0	-	0	-
2016-Apr	0	-	0	-	0	-	0	-	0	-	0	-
2016-May	0	0%	0	0%	1	100%	0	0%	0	0%	1	100%
2016-Jun	0	-	0	-	0	-	0	-	0	-	0	-
2016-Jul	0	-	0	-	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	0	0%	0	0%	1	100%	0	0%	0	0%	1	100%
This Hospital 2015	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**
National 2016	**1**	**13%**	**2**	**25%**	**5**	**63%**	**0**	**0%**	**0**	**0%**	**8**	**100%**
National 2015	**4**	**44%**	**3**	**33%**	**2**	**22%**	**0**	**0%**	**0**	**0%**	**9**	**100%**

STAG Indicator 2.3



STAG Indicator 2.3 — **Cases selected (2016) = 5**

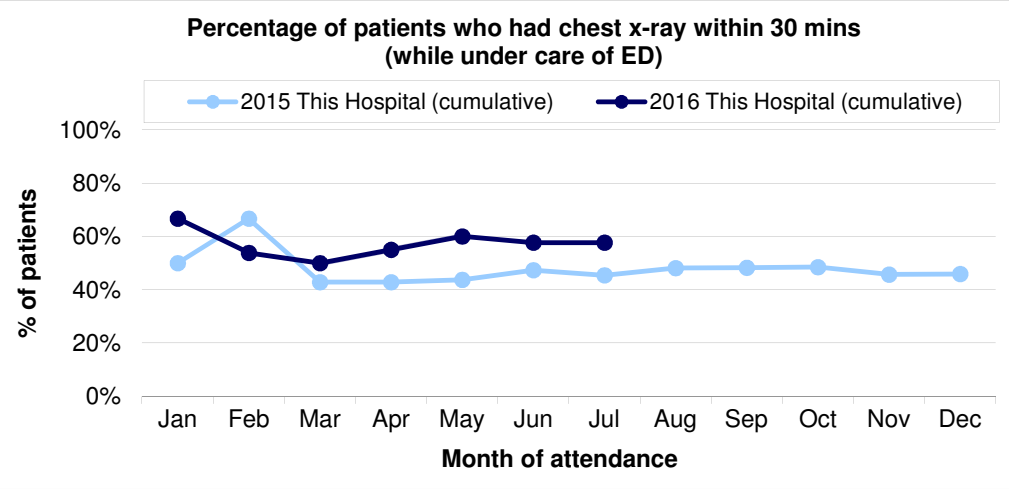
Indicator: Patients who have a laparotomy should have the laparotomy commenced within one hour of arrival at the first receiving hospital.

Case selection: All patients with a laparotomy arriving at first receiving hospital.

Year/month of attendance	Laparotomy performed?											
	Laparotomy, but not within 2 hours		Laparotomy within 1 hour		Laparotomy after 1 hour and before 2 hours		Laparotomy, but timing uknown		Unknown if laparotomy performed		Total	
2016-Jan	1	100%	0	0%	0	0%	0	0%	0	0%	1	100%
2016-Feb	1	100%	0	0%	0	0%	0	0%	0	0%	1	100%
2016-Mar	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
2016-Apr	2	100%	0	0%	0	0%	0	0%	0	0%	2	100%
2016-May	0	0%	0	0%	1	100%	0	0%	0	0%	1	100%
2016-Jun	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
2016-Jul	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
2016-Aug	0	-	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	4	80%	0	0%	1	20%	0	0%	0	0%	5	100%
This Hospital 2015	**1**	**100%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**1**	**100%**
National 2016	**38**	**79%**	**0**	**0%**	**9**	**19%**	**0**	**0%**	**1**	**2%**	**48**	**0%**
National 2015	**61**	**85%**	**3**	**4%**	**8**	**11%**	**0**	**0%**	**0**	**0%**	**72**	**100%**

3. Thoracic Injury

STAG Indicator 3.1



STAG Indicator 3.1 — **Cases selected (2016) = 26**

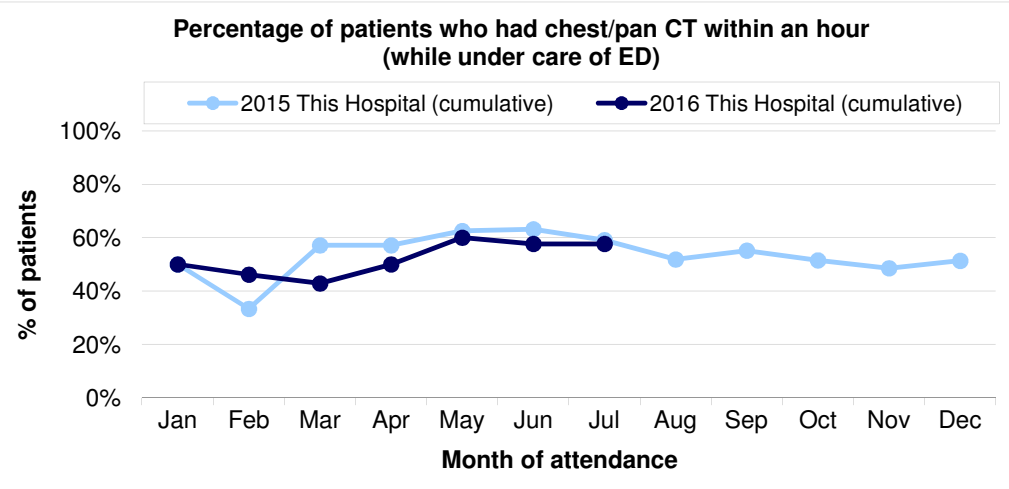
Indicator: Patients with a thoracic injury of AIS ≥ 2 should have a chest x-ray within 30 minutes of attendance at the first receiving hospital.

Case selection: All patients with a thoracic injury of AIS ≥ 2 arriving at first receiving hospital.

Note 1: Indicator only reports on chest x-rays that occurred while the patient was under the care the ED. X-rays that took place after the patient left ED are not reported.

Year/month of attendance	Chest x-ray performed while patient under the care of ED?											
	No chest x-ray		Chest x-ray, but not within 30 mins		Chest x-ray within 30 mins		Chest x-ray, but timing unknown		Unknown if chest x-ray performed		Total	
2016-Jan	1	17%	1	17%	4	67%	0	0%	0	0%	6	100%
2016-Feb	1	14%	3	43%	3	43%	0	0%	0	0%	7	100%
2016-Mar	0	0%	1	100%	0	0%	0	0%	0	0%	1	100%
2016-Apr	1	17%	1	17%	4	67%	0	0%	0	0%	6	100%
2016-May	0	0%	1	20%	4	80%	0	0%	0	0%	5	100%
2016-Jun	0	0%	1	100%	0	0%	0	0%	0	0%	1	100%
2016-Jul	0	-	0	-	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	**3**	**12%**	**8**	**31%**	**15**	**58%**	**0**	**0%**	**0**	**0%**	**26**	**100%**
This Hospital 2015	**10**	**27%**	**10**	**27%**	**17**	**46%**	**0**	**0%**	**0**	**0%**	**37**	**100%**
National 2016	**79**	**19%**	**182**	**43%**	**166**	**39%**	**0**	**0%**	**0**	**0%**	**427**	**100%**
National 2015	**127**	**15%**	**358**	**43%**	**341**	**41%**	**1**	**0%**	**0**	**0%**	**827**	**100%**

STAG Indicator 3.2



STAG Indicator 3.2 — **Cases selected (2016) = 26**

Indicator: Patients with a thoracic injury of AIS ≥ 2 should have a chest/pan CT scan within one hour of attendance at the first receiving hospital.

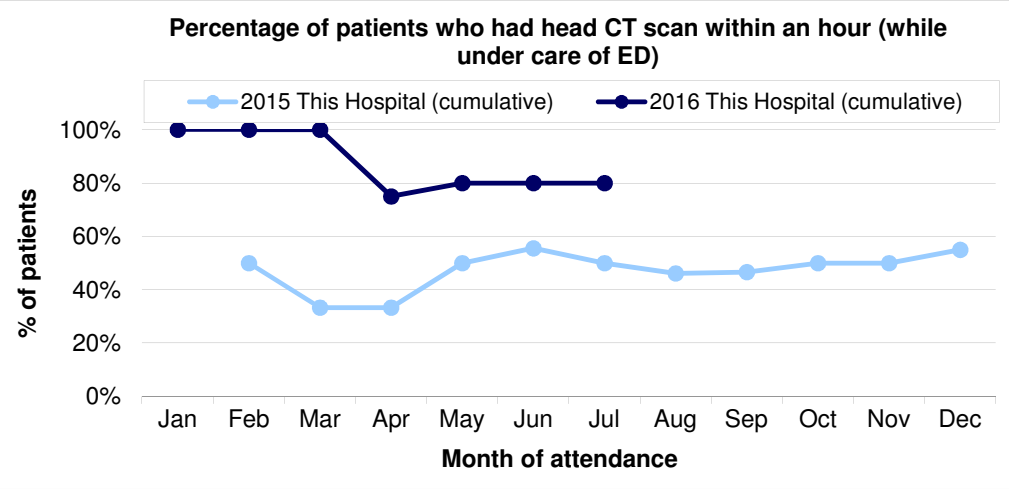
Case selection: All patients with a thoracic injury of AIS ≥ 2 arriving at first receiving hospital.

Note 1: Indicator only reports on CT scans that occurred while the patient was under the care of the ED. Scans that took place after the patient left ED are not reported.

Year/month of attendance	Chest / pan CT performed while patient under the care of ED?											
	No chest/pan CT		Chest/pan CT, but not within hour		Chest/pan CT within hour		Chest/pan CT, but timing unknown		Unknown if chest/pan CT performed		Total	
2016-Jan	1	17%	2	33%	3	50%	0	0%	0	0%	6	100%
2016-Feb	1	14%	3	43%	3	43%	0	0%	0	0%	7	100%
2016-Mar	0	0%	1	100%	0	0%	0	0%	0	0%	1	100%
2016-Apr	2	33%	0	0%	4	67%	0	0%	0	0%	6	100%
2016-May	0	0%	0	0%	5	100%	0	0%	0	0%	5	100%
2016-Jun	0	0%	1	100%	0	0%	0	0%	0	0%	1	100%
2016-Jul	0	-	0	-	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	4	15%	7	27%	15	58%	0	0%	0	0%	26	100%
This Hospital 2015	**9**	**24%**	**9**	**24%**	**19**	**51%**	**0**	**0%**	**0**	**0%**	**37**	**100%**
National 2016	**147**	**35%**	**142**	**33%**	**137**	**32%**	**0**	**0%**	**0**	**0%**	**426**	**100%**
National 2015	**348**	**42%**	**258**	**31%**	**216**	**26%**	**1**	**0%**	**0**	**0%**	**823**	**100%**

4. Head Injury

STAG Indicator 4.1



STAG Indicator 4.1 — **Cases selected (2016) = 5**

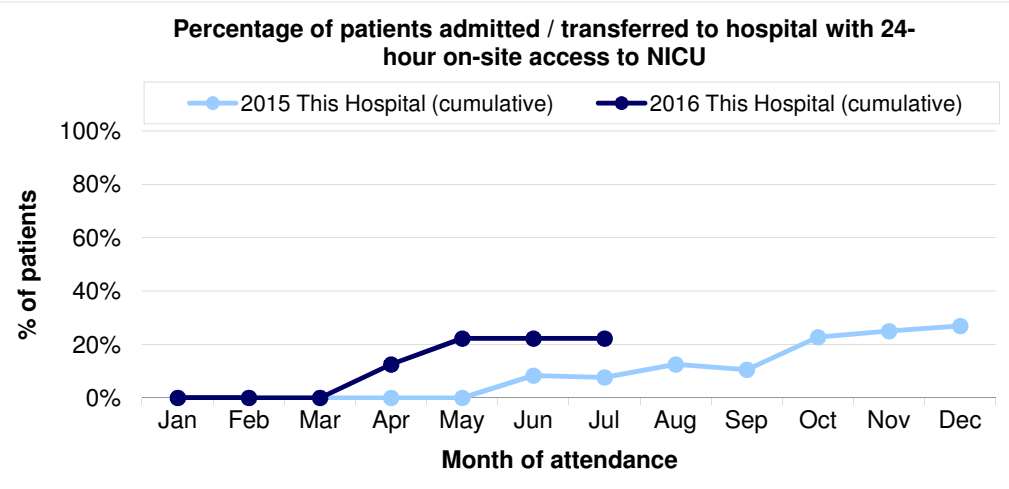
Indicator: Patients with a reduced conscious level (GCS ≤ 12) and/or a base of or depressed skull fracture should have a head CT scan within one hour of attendance at first receiving hospital.

Case selection: All patients with a base of or depressed skull fracture and/or who have GCS ≤ 12 recorded within first hour of attendance at the first receiving hospital.

Note 1: Indicator only reports on CT scans that occurred while the patient was under the care of the ED. Scans that took place after the patient left ED are not reported.

Year/month of attendance	Head CT scan performed while patient under the care of ED?											
	No head CT		Head CT, but not within hour		Head CT within hour		Head CT, but timing unknown		Unknown if head CT performed		Total	
2016-Jan	0	0%	0	0%	2	100%	0	0%	0	0%	2	100%
2016-Feb	0	-	0	-	0	-	0	-	0	-	0	-
2016-Mar	0	-	0	-	0	-	0	-	0	-	0	-
2016-Apr	0	0%	1	50%	1	50%	0	0%	0	0%	2	100%
2016-May	0	0%	0	0%	1	100%	0	0%	0	0%	1	100%
2016-Jun	0	-	0	-	0	-	0	-	0	-	0	-
2016-Jul	0	-	0	-	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	**0**	**0%**	**1**	**20%**	**4**	**80%**	**0**	**0%**	**0**	**0%**	**5**	**100%**
This Hospital 2015	**0**	**0%**	**8**	**40%**	**11**	**55%**	**1**	**5%**	**0**	**0%**	**20**	**100%**
National 2016	**20**	**11%**	**71**	**38%**	**94**	**51%**	**0**	**0%**	**0**	**0%**	**185**	**100%**
National 2015	**48**	**11%**	**196**	**46%**	**185**	**43%**	**1**	**0%**	**0**	**0%**	**430**	**100%**

STAG Indicator 4.2



STAG Indicator 4.2 — **Cases selected (2016) = 9**

Indicator: Patients with a severe head injury (AIS ≥ 3) should be transferred (if no onsite availability) to a setting with 24-hour on-site access to a Neuro Intensive Care Unit (NICU), regardless of whether surgical intervention is required.

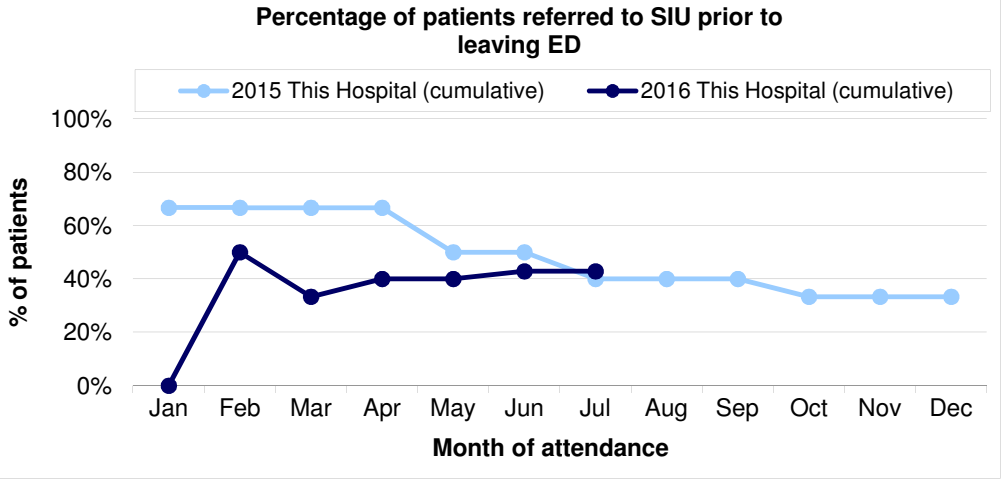
Case selection: All patients with a head injury of AIS ≥ 3.

Note 1: Any patient who is admitted / transferred to Aberdeen Royal Infirmary, Ninewells Hospital, Queen Elizabeth University Hospital or Western General Hospital is in a setting with 24-hour access to NICU. Patients who are admitted / transferred to these hospitals are assumed to have on-site access to NICU, regardless of the area they are admitted / transferred to.

Year/month of attendance	Patient admitted / transferred to a site with 24-hour onsite access to Neuro ICU?									
	No		No, but discussed with neuro before leaving ED		Yes		To be confirmed		Total	
2016-Jan	0	0%	2	100%	0	0%	0	0%	2	100%
2016-Feb	0	-	0	-	0	-	0	-	0	-
2016-Mar	0	0%	2	100%	0	0%	0	0%	2	100%
2016-Apr	0	0%	3	75%	1	25%	0	0%	4	100%
2016-May	0	0%	0	0%	1	100%	0	0%	1	100%
2016-Jun	0	-	0	-	0	-	0	-	0	-
2016-Jul	0	-	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	0	0%	7	78%	2	22%	0	0%	9	100%
This Hospital 2015	**4**	**15%**	**15**	**58%**	**7**	**27%**	**0**	**0%**	**26**	**100%**
National 2016	**32**	**12%**	**70**	**26%**	**169**	**62%**	**0**	**0%**	**271**	**100%**
National 2015	**91**	**16%**	**198**	**34%**	**296**	**51%**	**0**	**0%**	**585**	**100%**

5. Spinal Injury

STAG Indicator 5



STAG Indicator 5 — **Cases selected (2016) = 7**

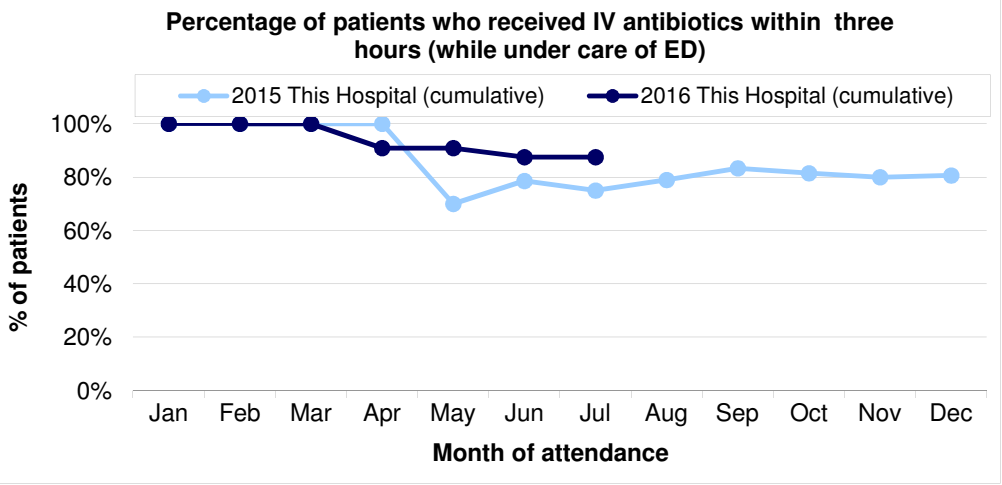
Indicator: The management of patients with spinal injuries AIS ≥ 3 should be discussed with the Spinal Injuries Unit (SIU) at the Queen Elizabeth University Hospital before leaving the first receiving STAG ED.

Case selection: All patients with a spinal cord/cauda equina injury of AIS ≥ 3.

Year/month of attendance	Patient referred to Spinal Injuries Unit prior to leaving ED?							
	Not referred		Referred		Unknown		Total	
2016-Jan	1	100%	0	0%	0	0%	1	100%
2016-Feb	0	0%	1	100%	0	0%	1	100%
2016-Mar	1	100%	0	0%	0	0%	1	100%
2016-Apr	1	50%	1	50%	0	0%	2	100%
2016-May	0	-	0	-	0	-	0	-
2016-Jun	1	50%	1	50%	0	0%	2	100%
2016-Jul	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-
This Hospital 2016	4	57%	3	43%	0	0%	7	100%
This Hospital 2015	**4**	**67%**	**2**	**33%**	**0**	**0%**	**6**	**100%**
National 2016	**27**	**54%**	**22**	**44%**	**1**	**2%**	**50**	**100%**
National 2015	**53**	**62%**	**32**	**38%**	**0**	**0%**	**85**	**100%**

6. Limb Fractures

STAG Indicator 6.1



STAG Indicator 6.1 — **Cases selected (2016) = 16**

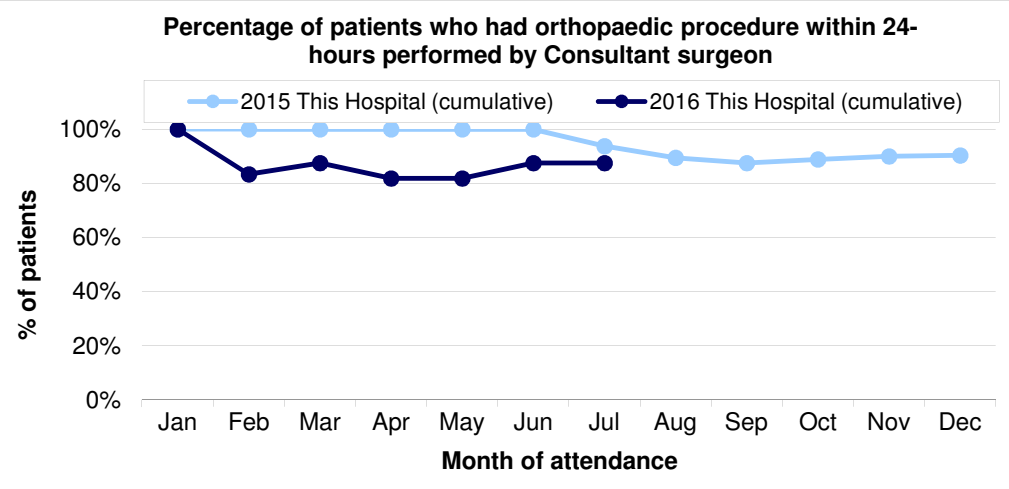
Indicator: Patients with open limb fractures (upper/lower not including hands and feet) should receive IV antibiotics within three hours of attendance at the first receiving hospital.

Case selection: All patients with an open limb fracture (not including hands or feet) arriving at first receiving hospital.

Note 1: Indicator only reports on IV antibiotics that were given while the patient was under the care of the ED. IV antibiotics given after the patient left ED are not reported.

Year/month of attendance	IV antibiotics given while patient under the care of ED?											
	No IV antibiotics in ED		IV antibiotics in ED, but not within three hours		IV antibiotics in ED within three hours		IV antibiotics in ED, but timing unknown		Unknown if IV antibiotics given		Total	
2016-Jan	0	0%	0	0%	2	100%	0	0%	0	0%	2	100%
2016-Feb	0	0%	0	0%	4	100%	0	0%	0	0%	4	100%
2016-Mar	0	0%	0	0%	2	100%	0	0%	0	0%	2	100%
2016-Apr	1	33%	0	0%	2	67%	0	0%	0	0%	3	100%
2016-May	0	-	0	-	0	-	0	-	0	-	0	-
2016-Jun	0	0%	0	0%	4	80%	1	20%	0	0%	5	100%
2016-Jul	0	-	0	-	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	1	6%	0	0%	14	88%	1	6%	0	0%	16	100%
This Hospital 2015	**2**	**6%**	**1**	**3%**	**25**	**81%**	**3**	**10%**	**0**	**0%**	**31**	**100%**
National 2016	**10**	**6%**	**7**	**4%**	**144**	**84%**	**10**	**6%**	**0**	**0%**	**171**	**100%**
National 2015	**12**	**4%**	**20**	**6%**	**276**	**86%**	**12**	**4%**	**0**	**0%**	**320**	**100%**

STAG Indicator 6.2



STAG Indicator 6.2 — **Cases selected (2016) = 16**

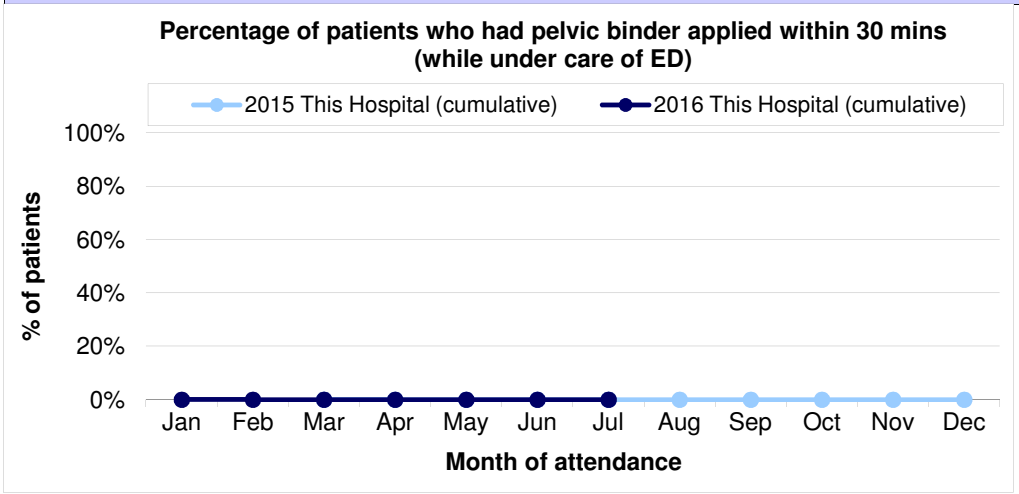
Indicator: Patients with open limb fractures (upper/lower not including hands and feet) should be surgically managed by a consultant orthopaedic and/or plastic surgeon within 24 hours of attendance at the first receiving hospital.

Case selection: All patients with an open limb fracture (not including hands or feet) arriving at first receiving hospital.

Year/month of attendance	Orthopaedic procedure performed?															
	No ortho procedure		Ortho procedure, but not within 24 hours		Ortho procedure within 24 hours - consultant		Ortho procedure within 24 hours - not consultant		Ortho procedure within 24 hours - grade unknown		Ortho procedure, but timing unknown		Unknown if ortho procedure performed		Total	
2016-Jan	0	0%	0	0%	2	100%	0	0%	0	0%	0	0%	0	0%	2	100%
2016-Feb	0	0%	0	0%	3	75%	1	25%	0	0%	0	0%	0	0%	4	100%
2016-Mar	0	0%	0	0%	2	100%	0	0%	0	0%	0	0%	0	0%	2	100%
2016-Apr	0	0%	0	0%	2	67%	1	33%	0	0%	0	0%	0	0%	3	100%
2016-May	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Jun	0	0%	0	0%	5	100%	0	0%	0	0%	0	0%	0	0%	5	100%
2016-Jul	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	0	0%	0	0%	14	88%	2	13%	0	0%	0	0%	0	0%	16	100%
This Hospital 2015	**1**	**3%**	**2**	**6%**	**28**	**90%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**31**	**100%**
National 2016	**3**	**2%**	**9**	**5%**	**147**	**86%**	**10**	**6%**	**1**	**1%**	**0**	**0%**	**0**	**0%**	**170**	**100%**
National 2015	**17**	**5%**	**30**	**9%**	**251**	**78%**	**22**	**7%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**320**	**100%**

7. Pelvic Fractures

STAG Indicator 7



STAG Indicator 7 — **Cases selected (2016) = 6**

Indicator: Patients with unstable pelvic fractures should have a pelvic binder applied within 30 minutes of attendance at the first receiving hospital.

Case selection: All patients with AIS Codes 85616x.x and 85617x.x arriving at first receiving hospital.

Note 1: Indicator only reports on pelvic binders that were applied by SAS or while the patient was under the care of the ED. Pelvic binders applied after the patient left ED are not reported.

Year/month of attendance	Pelvic binder applied while patient under the care of the ED?													
	No pelvic binder		Pelvic binder prior to arrival at ED		Pelvic binder in ED within 30 mins		Pelvic binder prior to leaving the ED		Pelvic binder, but timing unknown		Unknown if pelvic binder applied		Total	
2016-Jan	1	100%	0	0%	0	0%	0	0%	0	0%	0	0%	1	100%
2016-Feb	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Mar	0	0%	0	0%	0	0%	0	0%	2	100%	0	0%	2	100%
2016-Apr	2	100%	0	0%	0	0%	0	0%	0	0%	0	0%	2	100%
2016-May	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Jun	0	0%	0	0%	0	0%	0	0%	1	100%	0	0%	1	100%
2016-Jul	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Aug	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Sep	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Oct	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Nov	0	-	0	-	0	-	0	-	0	-	0	-	0	-
2016-Dec	0	-	0	-	0	-	0	-	0	-	0	-	0	-
This Hospital 2016	3	50%	0	0%	0	0%	0	0%	3	50%	0	0%	6	100%
This Hospital 2015	**0**	**0%**	**0**	**0%**	**0**	**0%**	**0**	**0%**	**3**	**100%**	**0**	**0%**	**3**	**100%**
National 2016	**8**	**25%**	**10**	**31%**	**2**	**6%**	**3**	**9%**	**9**	**28%**	**0**	**0%**	**32**	**100%**
National 2015	**7**	**17%**	**7**	**17%**	**3**	**7%**	**9**	**22%**	**15**	**37%**	**0**	**0%**	**41**	**100%**