RCEM National Quality Improvement Project 2020/2021
Fractured Neck of Femur
Information Pack

Welcome!

This information pack tells you everything you need to know about participating in the 2020/21 RCEM national quality improvement program (QIP) on Fractured Neck of Femur.

Quick guide to running a great QIP

Data collection period
Data should be collected on patients attending **from 5 October 2020 – 2 April 2021**.

Data entry portal
Log into the data entry site at www.rcem.ac.uk/audits

Standards
Jump straight to the **Standards.**

Questions
Jump straight to the **Data to be collected.**

Inclusion criteria
- Adult patients presenting to the ED with a fractured neck of femur on plain x-ray
- Patients who are diagnosed with a confirmed fractured neck of femur in the ED
- Presenting to your ED between 5 October 2020 and 2 April 2021.

Exclusion criteria
- Patients aged 17 or under
- Patients who have multiple injuries or have other conditions which need immediate resuscitation
- Patients with suspected occult neck of femur fractures requiring further imaging
- Patients with a suspected but not diagnosed fractured neck of femur.

Sample size
Please collect data on 5 eligible cases per week.

Data entry frequency
Recommended: enter cases each week.
Alternative: enter data fortnightly or monthly instead.

Contents

Introduction

66,313 patients a year (National Hip Fracture Database 2019 Annual Report) across England, Wales, Northern Ireland and 7146 in Scotland (The Scottish Hip Fracture Audit (SHFA) Hip Fracture Care Pathway Report 2019) suffer a fractured neck of femur, the majority presenting via the Emergency Department (ED). Our focus should be on high quality care including pain relief including nerve blocks and making the correct diagnosis through the use of MRI and CT scans where necessary.

Key findings from the 2017/2018 FNOF QIP:

- Only 51% of EDs have a nominated lead for hip fracture management.
- Only 35% of EDs provide information leaflets for patients, carers or relatives.
- 93% of EDs had the necessary equipment and staff to perform a nerve block

Patient data findings:

- 93% of patients with #NOF arrive by ambulance yet only 66% have documented evidence of having received analgesia before arrival.
- There was wide variability of pre-hospital analgesia between EDs, ranging from 0-98% of patients.
- EDs are recording pain scores better and this has consistently improved since 2003.
- Our results show that if a pain score is recorded patients will receive analgesia sooner, especially if the pain score is high.

Re-evaluation of pain is important but not done well (only in 40%) and not done in a timely manner.

The purpose of the QIP is to improve patient care by reducing pain and suffering, in a timely and effective manner through sufficient measurement to track change but with a rigorous focus on action to improve. RCEM will identify current performance in EDs against nationally agreed clinical standards and show the results in comparison with other departments.

The RCEM online data collection tool should be used to collect and review the management of adult patients with fractured neck of femur presenting to your ED.

National results of the QIP will be published as part of the Royal College of Emergency Medicine's work on clinical quality. Participating EDs will also receive a personalised report with their data. This QIP is listed in the Quality Accounts for 2020/21, which require providers in England to report on their participation in identified national QIPs. This topic has been run seven times previously.

The College is committed to assessing health inequalities relating to patient ethnicity in supporting departments to provide high quality care to all. We will be collecting ethnicity data and monitoring for systemic inequalities and reporting where relevant.

Objectives

National objectives	How we're supporting you
To improve the care provided to adult patients in the ED who have a diagnosis of fractured neck of femur by:	
1. identifying current performance in EDs against clinical standards	• Expert teams of clinicians and QIP specialists have reviewed current national standards and evidence to set the top priority standards for this national QIP • RCEM have built a bespoke platform to collect and analyse performance data against the standards for each ED
2. Showing EDs their performance in comparison with performance nationally and in the ED's country in order to facilitate quality improvement	• RCEM have built a bespoke platform to collect and analyse performance data against the standards for each ED • EDs have the flexibility to select the most appropriate comparator to their data, whether this is national or only EDs in their country
3. Empowering and encourage EDs to run quality improvement (QI) initiatives based on the data collected and assess the impact of the QI initiative on their weekly performance data	• The RCEM platform includes a dashboard with charts showing your ED's performance, as soon as you've entered the data • The dashboard charts are SPC charts (where applicable) with built in automatic trend recognition, so you are able to easily spot statistically significant patterns in your data • The portal has built in tools to support local QI initiatives, such as an online PDSA template • When you've completed a PDSA template with your team, this is overlaid onto your dashboard charts so you can easily see the impact of your PDSA • RCEM have also published a QI guide to introduce you to other excellent QI methodologies and enhance your QI knowledge and skills
Local objectives	
1. To improve pain assessment at patient presentation.	
2. To improve provision of analgesia within 30 minutes for patients in moderate or severe pain.	
3. To improve timeliness of X-ray.	
4. To improve re-evaluation of pain and appropriate action within 30 minutes.	

Methodology

Inclusion criteria

- Adult patients aged 18 and over
- Presenting to your ED between 5 October 2020 – 2 April 2021
- Patients who are diagnosed with a confirmed fractured neck of femur in the ED
- Presenting to the ED with a fractured neck of femur on plain x-ray

Exclusion criteria

- Patients aged 17 or under
- Patients who have multiple injuries or have other conditions which need immediate resuscitation
- Patients with suspected occult neck of femur fractures requiring further imaging
- Patients with a suspected but not diagnosed fractured neck of femur

Forming your QIP team

RCEM recommends forming a multidisciplinary QI team; including consultants, trainees, frailty specialists, ACP, nursing, pharmacy, SAS, triage, patient reps and others as needed for the topic and to suit your local set up.

A team of about 6 will likely be sufficient to manage but consider the skill mix and how you will share the workload for data collection, education and training, guideline development, action planning, stake holder engagement and importantly team leadership. The person most motivated to improve these standards may be best placed to try and lead and drive this project. Establishing a clear channel of communication early (e.g. Email thread, Whatsapp group, monthly telephone call/meeting) to action plan and create PDSA cycles over the 6 months is essential to keeping momentum to raise standards.

For the Fractured NOF QIP you may want to include the pain team who may have experience in improving other pathways on this metric. Triage will be particularly important to engage to improve the timely nature of care provision and fast-tracking diagnosis to trigger more advanced interventions like Fascia Iliaca Block. Training additional clinicians to deliver FIB to increase capacity will also need to be considered when forming this team.

Data entry information

Data entry portal

You can find the link to log into the data entry site at www.rcem.ac.uk/audits (registered users only).

Sample size

Please collect 5 randomised cases per week that meet the eligibility criteria.

The RCEM national QIPs provide you with a range of features and quality improvement tools. These include a live data dashboard, tracking how your data changes weekly on run charts, and the ability to have your own PDSA (*Plan, Do, Study, Act*) cycles added to your charts.

Data entry frequency

Recommended: To maximise the benefit of the run charts and features RCEM recommends entering **cases each week**. This will allow you to see your ED's performance on key measures changing week by week. PDSA cycles should be regularly conducted to assess the impact of changes on the week to week performance.

Alternative: If your ED will find weekly data entry too difficult to manage, you may enter data monthly or fortnightly instead. The system will ask you for each patient's arrival date and automatically split your data into weekly arrivals, so you can get the benefit of seeing weekly variation if you spread the cases across the month. You must ensure that data is collected the below number of patients weekly, even if that data is retrospectively entered at the end of the month. You can then consider monthly cycles of PDSA with specific interventions and evaluate their impact by reviewing the trend over that month.

Data collection period

Data should be collected on patients attending **from 5 October 2020 – 2 April 2021**.

Please note that these dates are different to the usual dates for RCEM QIPs to allow for staff adjustments to new departments during the August changeover period and to relieve pressures on services during the pandemic which have undergo several redesigns.

Data submission period

Data can be submitted online from **3 November 2020 – 9 April 2021**. It is recommended to enter data as close to the date of patient attendance as possible, and to review progress regularly. This will help your QI team spot the impact of intervention more promptly for refinement or disposal depending on the changes observed.

Data Sources

ED patient records including nursing notes (paper, electronic or both).

Flow of data searches to identify cases

Using codes in the appendix first identify all patients attending your ED between the relevant dates, then by age at time of attendance, then through the other relevant criteria.

ECDS codes will be available to support the full QIP.

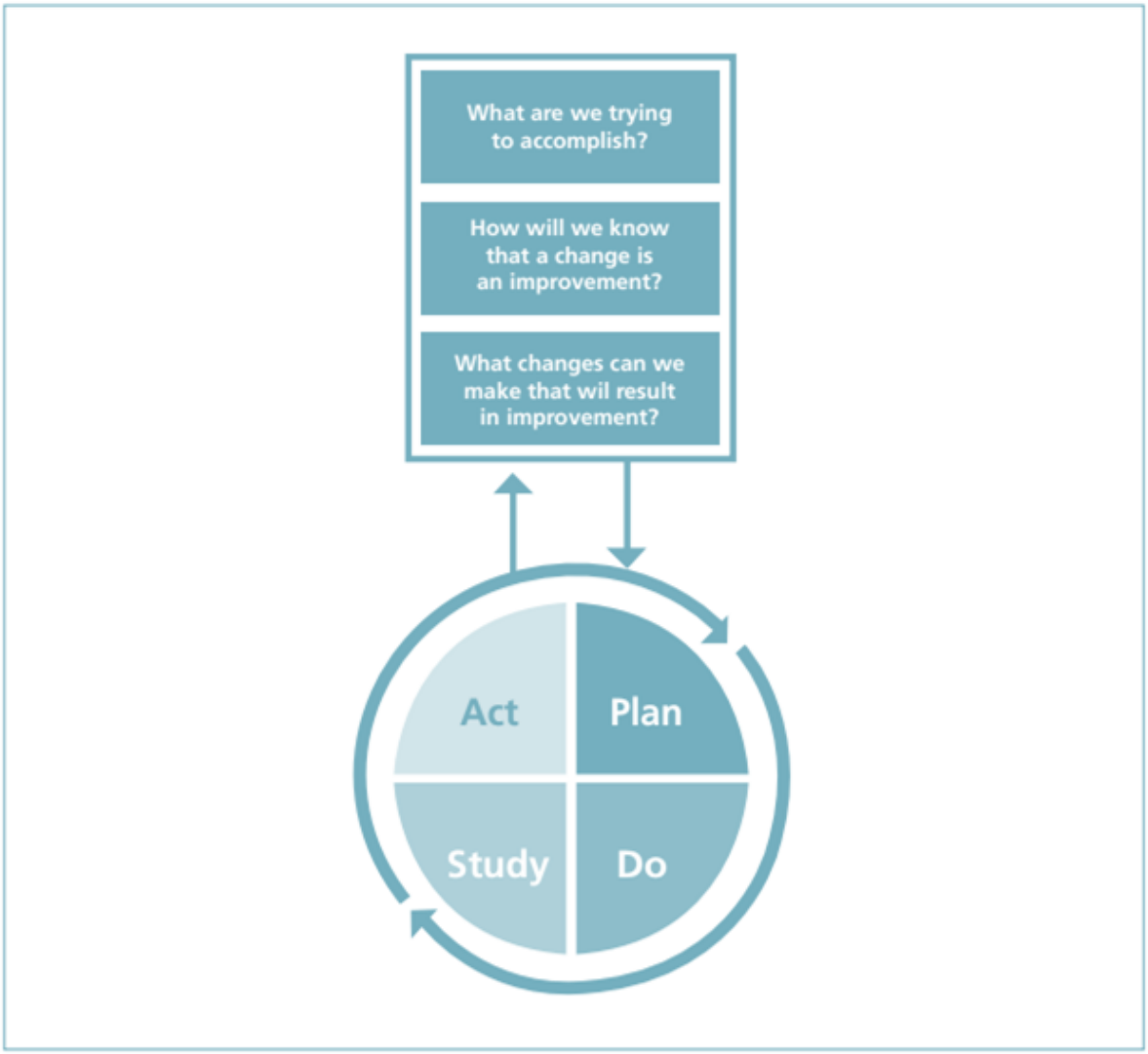
Quality improvement information

The purpose of this national QIP is to continually quality assure and quality improve your service where it is not meeting standards to improve the patient journey and care. The RCEM system allows your team to record details of local quality improvement initiatives and see on your dashboard how each initiative affects your data on key measures.

We encourage you to use this feature to try out QI initiatives in your department. If you are new to QIPs, we recommend you follow the Plan Do Study Act (PDSA) methodology. The Institute for Healthcare Improvement (IHI) provides a useful worksheet which will help you to think about the changes you want to make and how to implement them.

Further information on ED quality improvement, including the RCEM Quality Improvement Guide, can be found on the RCEM website.

The model for improvement, IHI



Standards

Standards	Grade
1. Pain is assessed immediately upon presentation at hospital	F
2. Patients in moderate or severe pain (e.g. pain score 4 to 10) should receive appropriate analgesia within 30 minutes (or in accordance with local guidelines) unless there is a documented reason not to	F
3. Patients should have an X-ray at the earliest opportunity	D
4. Patients with severe or moderate pain should have documented evidence of re-evaluation and action within 30 minutes of receiving the first dose of analgesic.	D

Standards definitions

Standard	Term	Definition
Standard 1	Pain is Immediately assessed upon presentation at hospital	Within 15 minutes of arrival or triage, whichever is earlier
Standard 2	Moderate or severe pain	Pain score of 4 to 10, or locally used equivalent
Standard 3	Earliest opportunity	This is expected to be within 90 minutes, but within this QIP we would like to see improvement in your timeliness of x-ray.
Standard 4	Pain is re-assessed 30 minutes after receiving the initial dose of analgesia	If patient receives analgesia in ED then documented evidence of re-assessment is done within 30 minutes

Grade definition

F - Fundamental: This is the top priority for your ED to get right. It needs to be applied by all those who work and serve in the healthcare system. Behaviour at all levels and service provision need to be in accordance with at least these fundamental standards. No provider should provide any service that does not comply with these fundamental standards, in relation to which there should be zero tolerance of breaches.

D - Developmental: This is the second priority for your ED. It is a requirement over and above the fundamental standard.

A - Aspirational: This is the third priority for your ED. Setting longer term goals.

Data to be collected

Patient details

Q1.1	Reference (do not enter patient identifiable data)	
Q1.2	Date and time of arrival or triage – whichever is earlier	dd/mm/yyyy HH:MM
Q1.3	Ethnic group	• White British • White Irish • Any other White background • White and Black Caribbean • White and Black African • White and Asian • Any other mixed background • Indian • Pakistani • Bangladeshi • Any other Asian background • Caribbean • African • Any other Black background • Chinese • Any other ethnic group • Not stated e.g. unwilling to state
Q1.4	Age band	

Pain and analgesia

		Yes (select option where applicable)	*Time (leave blank if unknown)*	*Date (if different to date of admission)*	*No (select option where applicable)*
Q2.1	Was pain assessed on arrival (within 15 mins?)	• No pain • Mild (1-3) • Moderate (4-6) • Severe (7-10)	HH:MM	dd/mm/yyyy	• Not recorded • Not able to assess pain
Q2.2	Was a validated pain assessment tool used? If yes, please specify what tool was used.	• Yes			• No
Q2.3	Was analgesia **administered** in the ED?	• Paracetamol • Opiate (oral) • Opiate (IM or IV) • Fascia Illicia Block • Other: (please specify)	HH:MM	dd/mm/yyyy	• No pain/mild pain • No – was administered pre-hospital • Not accepted • No – the analgesia was contraindicated • No – another reason was recorded • Not recorded

Q2.4	Was pain re-assessed in the ED?	• No pain • Mild (1-3) • Moderate (4-6) • Severe (7-10)	HH:MM	dd/mm/yyyy	• Not recorded • Not able to re-assess pain
Q2.5	Was a second dose of analgesia administered in the ED?	• Yes	HH:MM	dd/mm/yyyy	• Not offered • Not accepted • No – but the reason was recorded • Not recorded
Q2.6	Was analgesia in accordance with local guidelines? **(Please consult your local guideline when doing the data collection)**			• Yes, fully as per pain assessment & analgesic ladder • Yes, partially • No, it was not • No local guidelines exist	

Diagnosis

		Yes (select option where applicable)	*Time*	*Date (for use if different to date of admission)*	*No (select option where applicable)*
Q3.1	Was an X-ray completed whilst patient was in the ED?	• Yes	HH:MM	dd/mm/yyyy	• No • Done before arrival

Notes
This section is for local use and will not be analysed by RCEM. Ensure you do not enter any identifiable data here.

Organisational data

Please only complete this final section **once** per ED.

Q1	Is there a lead for hip fracture management in the ED?	• Yes • No • Unknown
Q2	Is there a written protocol/ pathway for hip fracture management in the ED?	• Yes • No (please skip to Q4) • Unknown (please skip to Q4)
Q2a	Does this include information on when to perform an MRI or CT scan if the X-ray appears normal?	• Yes • No • Unknown
Q2b	Does this include a fast track service for x-ray?	• Yes • No • Unknown
Q2c	Do you use a pain tool appropriate for a patient with impaired cognition e.g. Abbey Pain scoring	• Yes • No • Unknown
Q3	Is written information about hip fracture available for patients and/or their relatives or carers?	• Yes • No • Unknown
Q4	Is there the necessary equipment/trained staff to perform a nerve block in the ED?	• Yes • No • Unknown
Q5	Is there a guideline for use of nerve block including monitoring post procedure	• Yes • No • Unknown
Q6	Is there a training programme for insertion of nerve blocks?	• Yes • No • Unknown
Q7	Is there a protocol for reversing anticoagulation?	• Yes • No • Unknown

Question and answer definitions

Term	Definition
Not able to assess pain	If a pain assessment is not possible due to the patient's level of consciousness, dementia, delirium or similar, please select 'not able to take pain score'.
X-ray	If the X-ray was completed outside the ED, but whilst the patient was still an ED patient, tick yes.
Opiate (IM or IV)	You do not need to specify whether the opiate was IM or IV

Evidence base for standards

These standards have been checked for alignment with NICE Quality Standard QS16 (last updated May 2017) and NICE Hip Fracture Management Clinical Guideline CG124 (last updated May 2017).

Standard	Evidence
1. Pain is assessed immediately upon presentation at hospital	NICE CG124 1.3.1 Assess the patient's pain immediately upon presentation at hospital
2. Patients in moderate or severe pain (e.g. pain score 4 to 10) should receive appropriate analgesia within 30 minutes (or in accordance with local guidelines) unless there is a documented reason not to	NICE CG124 1.3.2 Offer immediate analgesia to patients presenting at hospital with suspected hip fracture, including people with cognitive impairment.
3. Patients should have an X-ray at the earliest opportunity	NICE CG124 1.1.1 Offer magnetic resonance imaging (MRI) if hip fracture is suspected despite negative X-rays of the hip of an adequate standard. If MRI is not available within 24 hours or is contraindicated, consider computed tomography (CT).
4. Patients with severe or moderate pain should have documented evidence of re-evaluation and action within 30 minutes of receiving the first dose of analgesic.	NICE CG124 1.3.1Assess the patient's pain within 30 minutes of administering initial analgesia

References

1. NICE. Quality Standard QS16 2017
2. NICE. Hip Fracture Management Clinical Guideline CG124 2017
3. RCEM. Clinical Audit 2017-18 Fractured Neck of Femur 2018
4. Scottish Government. Scottish standards for care of hip fracture 2018
5. BOAST. The care of the older or frail orthopaedic trauma patient 2019

Appendix 1: ECDS codes to support case identification

Search Terms

The codes below can be used to help initially identify potential cases. This is not an exhaustive list; other search terms can be used but all potential patients should then be reviewed to check they meet the definitions & selection criteria before inclusion in the QIP.

The ECDS codes below relate to CDS V6-2-2 Type 011 - Emergency Care Data Set (ECDS) Enhanced Technical Output Specification v3.0.

QIP question	ECDS data item name	ECDS national code	National code definition	Notes
Date and time of arrival or triage – whichever is earlier	EMERGENCY CARE ARRIVAL DATE EMERGENCY CARE ARRIVAL TIME	an10 CCYY-MM-DD an8 HH:MM:SS	Date Time	
Ethnic group	ETHNIC CATEGORY	A B C D E F G H J K L M N P R S	White British White Irish Any other White background White and Black Caribbean White and Black African White and Asian Any other mixed background Indian Pakistani Bangladeshi Any other Asian background Caribbean African Any other Black background Chinese Any other ethnic group	

		Z 99	Not stated e.g. unwilling to state Not known e.g. unconscious	
Age band	AGE AT CDS ACTIVITY DATE	N/A	N/A	
Was pain assessed on arrival (within 15 mins)?	Does not directly map to an ECDS code			
Was a validated pain assessment tool used?	Does not directly map to an ECDS code			
Was analgesia administered in the ED?	1135110000 1135210000 1135410000 1135610000	Analgesia Analgesia Analgesia Analgesia	Anaesthesia: local anaesthetic Anaesthesia: entonox Anaesthesia: regional block Anaesthesia: sedation monitored	Treatments field: Medication including date time stamp is in ECDS, so could get date/time for first medication
Was pain re-assessed in the ED?	Does not directly map to an ECDS code			
Was a second dose of analgesia administered in the ED?	1135110000 1135210000 1135410000 1135610000	Analgesia Analgesia Analgesia Analgesia	Anaesthesia: local anaesthetic Anaesthesia: entonox Anaesthesia: regional block Anaesthesia: sedation monitored	Treatments field: Medication including date time stamp is in ECDS, so could get date/time for first medication
Was analgesia in accordance with local guidelines?	Does not directly map to an ECDS code			
Was an X-ray completed whilst patient was in the ED?	X-ray plain film	1171110000		Investigations field: X-ray plain film and date/time are in ECDS so could get date/time of x-ray

Appendix 2: Analysis plan for standards

This section explains how the RCEM team will be analysing your data. You are welcome to use this analysis plan to conduct local analysis if you wish. Analysis sample tells you which records will be included or excluded from the analysis. The analysis plan tells you how the RCEM team plan to graph the data and which records will meet or fail the standards.

Standard	Relevant questions	Analysis sample	Analysis plan – conditions for the standard to be met
1. Pain is assessed immediately upon presentation at hospital	Q1.2 Date and time of arrival or triage, whichever is earlier Q2.1 Was pain assessed on arrival (within 15 mins?)	Exclude: • Q2.1='not able to assess pain'	**Chart type**: SPC chart **Title**: Standard 1: Pain is assessed immediately upon presentation at hospital **Analysis**: time Q2.1 – Q1.2 Met: </= 15 minutes Not met: >15 minutes OR 'not recorded' **Additional charts:** **Chart type:** Pie chart of Q2.1 **Title**: Pain score as assessed on arrival **Analysis**: Frequency of Q2.1 answers **Chart type:** SPC chart of Q2.2 **Title**: Validated pain assessment tool was used **Analysis**: Q2.2 = yes
2. Patients in moderate or severe pain (e.g. pain score 4 to 10) should receive appropriate analgesia within 30 minutes (or in accordance with local guidelines) unless there is a documented reason not to	Q2.1 Was pain assessed on arrival? Q2.3 Was analgesia administered in the ED? Q2.6 Was	Include: • Q2.1 = moderate OR • Q2.1 = severe Exclude: • No – was administered pre-hospital • Not accepted	**Chart type**: SPC chart **Title**: Standard 2: Patients in moderate or severe pain should receive appropriate analgesia within 30 minutes (or in accordance with local guidelines) unless there is a documented reason not to **Analysis**: time 2.3 – 2.1 Met: </= 30 minutes OR Met: Q2.6 - Yes, fully as per pain assessment & analgesic ladder Not met: > 30 minutes

	analgesia in accordance with local guidelines?	• No – the analgesia was contraindicated • No – another reason was recorded	**Additional charts:** **Chart type:** Histogram of Q2.3 answers **Title**: Initial analgesia was administered in the ED **Analysis**: Frequency of Q2.3 answers • Paracetamol • Opiate (oral) • Opiate (IM or IV) • Fascia Illicia Block • Other **Chart type:** Histogram of Q2.3 answers **Title**: Why initial analgesia was not administered in the ED **Analysis**: Frequency of Q2.3 answers • No pain/mild pain • No – was administered pre-hospital • Not accepted • No – the analgesia was contraindicated • No – another reason was recorded • Not recorded **Chart type**: SPC chart **Title**: Was analgesia in accordance with local guidelines? **Analysis**: Q2.6 • Met: Yes, fully as per pain assessment & analgesic ladder OR • Met: Q2.6 = Yes, partially • Not met: Q2.6 = Not, it was not OR • Not met: No local guidelines exist
3. Patients should have an X-ray at the earliest opportunity	Q3.1 Was an X-ray completed whilst patient was in the ED?	All patients	**Chart type**: SPC chart **Title**: Standard 3: Patients should have an X-ray at the earliest opportunity **Analysis**: Met: Q3.1 = yes OR Met: Done before arrival

			Not met: Q3.1 = no **Additional charts:** **Chart type**: time chart **Title**: Time from arrival to x-ray **Analysis**: time Q3.1 – Q2.1 (in minutes) **Exclusions:** exclude all patients with a time over 24 hours. **Chart type**: time chart **Title**: time from x-ray to Fascia Illicia Block **Analysis**: time from X-ray (Q3.1) to Fascia Illicia Block (Q2.3) **Inclusion criteria**: Q2.3 = Fascia Illicia Block **Exclusions :** exclude all patients with a time over 24 hours.
4. Patients with severe or moderate pain should have documented evidence of re-evaluation and action within 30 minutes of receiving the first dose of analgesic.	Q2.1 Was pain assessed on arrival (within 15 mins?) Q2.4. Was pain re-assessed in the ED? Q2.5 Was a second dose of analgesia administered in the ED?	Include: • Q2.1 = moderate OR • Q2.1 = severe Exclude: • Q2.4 = not able to re-assess pain • Q2.5 = not accepted • Q2.5 = no, but the reason was recorded	**Chart type**: SPC chart **Title**: Standard 4: Patients with severe or moderate pain should have documented evidence of re-evaluation and action within 30 minutes of receiving the first dose of analgesic **Analysis**: Met: Q2.5 – Q2.3 </= 30 minutes Not met: Q2.4 = not recorded **Chart type:** Pie chart of Q2.4 **Title**: Pain score as assessed on arrival **Analysis**: Frequency of Q2.4 answers