CLINICAL AUDIT 2017/2018
Fractured Neck of Femur
Clinical Audit Information

INTRODUCTION AND BACKGROUND

65,000 patients a year suffer a fractured neck of femur, the majority presenting via the Emergency Department (ED). Our focus should be on pain relief including nerve blocks and making the correct diagnosis through the use of MRI and CT scans where necessary. The audit standards have therefore changed slightly and we have included some questions looking at organisation.

The purpose of the audit is to identify current performance in EDs against Royal College of Emergency Medicine (RCEM) clinical standards and show the results in comparison with other departments. This audit is being conducted by RCEM for the seventh time. The audit will enable individual hospitals to compare their current performance with results from previous audits.

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

Full results of the audit will be published as part of the Royal College of Emergency Medicine's work on clinical quality. This audit is listed in the Quality Accounts for 2017/18, which require providers in England to report on their participation in identified national clinical audits.

Once data is submitted, the Royal College of Emergency Medicine will become custodian of that data. The College will be sharing data from the 2017/18 audits with the CQC, the healthcare regulator for England, and reserves the right to share with other organisations if approved by the College Council. Named ED level data will be made public to enable and encourage quality improvement projects.

Aims and objectives

The audit will be conducted for the seventh time to continue the work of the six previous data collections. It will identify current performance in EDs against RCEM clinical standards, show the results in comparison with other departments and also across time if there was previous participation.

There is great scope for improvement in the care provided to patients with fractured neck of femur. Results from the 2012/13 audit[1] show that only 43% of patients in moderate pain were given analgesia within 60 minutes. Analgesia was provided slightly more quickly for patients judged to be in severe pain where 56% received analgesia within 60 minutes. Less than half of patients (44%) received an x-ray within 60 minutes. 86% of patients were admitted within 4 hours.

Trends in the recognition and management of patients with fractured neck of femur can be examined further, and improvement objectives can be set if needed. It will be useful to see if there has been further improvement or whether performance has plateaued.

The purpose of the audit is:

1. To benchmark current performance in EDs against the standards
2. To allow comparison nationally and between peers
3. To identify areas in need of improvement
4. To compare against previous performance

METHODOLOGY

Inclusion criteria

- Adult patients past their 18th birthday
- Patients presenting to the ED with a fractured neck of femur

Exclusion criteria

- Patients aged 17 or under
- Patients who have multiple injuries or have other conditions which need immediate resuscitation

Search terms

This is not an exhaustive list and 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 audit.

ECDS codes to support case identification

DATA GROUP	DATA ITEM NAME	Data set and code									
		ICD10	SNOMED	DM&D	UDDA version 3	ECDS	CDS	CDS_sub1	CDS_area	CDS_Side	NOTES
EMERGENCY CARE ATTENDANCE ACTIVITY CHARACTERISTICS	EMERGENCY CARE ARRIVAL DATE	-	-	As per CDS 6.2 Type 010	-	-	010	-	-	-	Exclude all BEFORE 01/01/2017
EMERGENCY CARE ATTENDANCE ACTIVITY CHARACTERISTICS	EMERGENCY CARE ARRIVAL DATE	-	-	As per CDS 6.2 Type 010	-	-	010	-	-	-	Exclude all AFTER 31/01/2017
PATIENT IDENTITY - UNVERIFIED IDENTITY STRUCTURE	PERSON BIRTH DATE	-	-	As per CDS 6.2 Type 010	-	-	010	-	-	-	Exclude all BIRTH dates AFTER 31/12/1999
DIAGNOSIS	Closed fracture: hip	S7200 S7210 S7220	359817006	-	020122	1211171000	05	3	28	Y	Confirmed and suspected
DIAGNOSIS	Open fracture: hip	S7201 S7211 S7221	361118003	-	020221	1212169000	05	2	38	Y	Confirmed and suspected

Related audit Q	DATA GROUP	DATA ITEM NAME	ICD10	SNOMED	D&MD	UDDA version 3	ECDS	CDS_Code mapping used for HRG Grouping	PbR_Category
Q3	ARRIVAL MODE	Patient arranged own transport/ walk-in	-	2018110000	-	-	1048071000000103	-	-
		Public transport / taxi	-	2018210000	-	-	1048061000000105	-	-
		Emergency road ambulance	-	2018310000	-	-	1048031000000100	-	-
		Emergency road ambulance with medical escort	-	2018350000	-	-	1048041000000109	-	-
		Non-emergency road ambulance	-	2018370000	-	-	1048021000000102	-	-
		Helicopter	-	2018510000	-	-	1048051000000107	-	-
		Fixed wing / medical repatriation by air	-	2018550000	-	-	1048081000000101	-	-
		Custodial services : prison / detention	-	2018810000	-	-	1047991000000102	-	-

Related audit Q	DATA GROUP	DATA ITEM NAME	ICD10	SNOMED	D&MD	UDDA version 3	ECDS	CDS_Code mapping used for HRG Grouping	PbR_Category
		centre transport							
		Police transport	-	2018910000	-	-	1048001000000106	-	-
Q7	PROCEDURE	PROCEDURE DATE	-	-	an10 CCYY-MM-DD	-	-	-	
		PROCEDURE TIME	-	-	an8 HH:MM:SS	-	-	-	
		Anaesthesia : local anaesthetic	-	386761002	-	-	1135110000	232	1-2
		Anaesthesia : entonox	-	427035008	-	-	1135210000	234	1-2
		Anaesthesia : regional block	-	27372005	-	-	1135410000	233	1-2
		Administration of medication	-	386761002	-	-	1141110000	511	1-2
Q10	INVESTIGATION	Radiology: X-ray plain film	-	168537006	-	-	1171110000	01	2
Q11	INVESTIGATION	Radiology: MRI	-	113091000		-	1171510000	11	3
		Radiology: CT	-	77477000	-	-	1171410000	12	3

Flow of data searches to identify audit cases

Using codes listed above, first identify all patients attending ED between dates, then by age at time of attendance, then through treatment criteria.

Date and time of attendance

Age (exclude < 18 years)

Diagnostic criteria (confirmed and suspected)

Sample size
RCEM recommends auditing a different number of cases depending on the number you expect to see within the data collection period. If this is an area of concern in your ED, you can submit data for more cases for an in depth look at your ED's performance.

Basing the audit sample size on the number of cases in this way increases the reliability and usefulness of your ED's audit results.

Audited cases should be consecutive during the data collection period (1 January 2017 to 31 December 2017).

Expected number of cases	Recommended audit sample
< 50	All eligible cases
50-250	50 consecutive cases
>250	100 consecutive cases

Data collection period
From 1 January 2017 to 31 December 2017.
Note: You can start the audit at any point during the data collection period, as long as you submit the data by 31 January 2018.

Data submission period
Data can be submitted online at the link below between 1 August 2017 to 31 January 2018. You can find the link to log into the data entry site at www.rcem.ac.uk/audits

Data Sources
ED patient records (paper, electronic or both).

STANDARDS

STANDARD	GRADE
1. Pain score is assessed within 15 minutes of arrival	F
2. Patients in severe pain (pain score 7 to 10) should receive appropriate analgesia in accordance with local guidelines (unless documented reason not to)	
a. 50% within 20 mins of arrival or triage whichever is the earliest.	A
b. 75% within 30 mins of arrival or triage whichever is the earliest.	D
c. 100% within 60 mins of arrival or triage whichever is the earliest.	F
3. Patients with moderate pain (pain score 4 to 6) should receive appropriate analgesia in accordance with local guidelines (unless documented reason not to)	
a. 75% within 30 mins of arrival or triage whichever is the earliest.	A
b. 100% within 60 mins of arrival or triage whichever is the earliest.	D
4. 75% of patients should have an X-ray within 120 minutes of arrival or triage, whichever is the earliest.	D
5. 90% of 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
6. 95% of patients should be admitted within 4 hours of arrival.	D

Grade definition

F - Fundamental: need 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: set requirements over and above the fundamental standards.

A - Aspirational: setting longer term goals.

Standards definitions

Standard	Term	Definition
Standard 1	Severe pain	Pain score 7 to 10
Standard 1	Moderate pain	Pain score 4 to 6
Standard 4	Admission	Admission to a ward (CDU or Observation ward, Orthopaedic ward, General ward are all acceptable)

AUDIT QUESTIONS

Patient details

Q1	Reference (do not enter patient identifiable data)	
Q2	Date and time of arrival or triage – whichever is earlier	dd/mm/yyyy HH:MM

Pre-hospital

Q3	Did the patient arrive by ambulance?	• Yes • No
Q3a	If yes, is a copy of the ambulance service notes filed with the ED notes (or available electronically)?	• Yes • No • N/A
Q4	Was analgesia administered pre-hospital?	• Yes • No • Not recorded

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)*
Q5	Was a pain score taken on arrival?	• No pain • Mild (1-3) • Moderate (4-6) • Severe (7-10)	HH:MM	dd/mm/yyyy	• Not recorded • Not able to take pain score
Q6	Was analgesia **offered** in the ED?	• Yes	HH:MM	dd/mm/yyyy	• No pain/mild pain • Pre-hospital admin • No – but the reason was recorded • Not recorded
Q7	Was analgesia **administered** in the ED?	• Yes	HH:MM	dd/mm/yyyy	• Not offered • Not accepted • No – but the reason was recorded • Not recorded
Q8a	Was pain score re-evaluated in the ED?	• No pain • Mild (1-3) • Moderate (4-6) • Severe (7-10)	HH:MM	dd/mm/yyyy	• Not recorded • Not able to take pain score
Q8b	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
Q9	Was analgesia in accordance with local guidelines?			• Yes, fully • Yes, partially • No, it was not • No local guidelines exist	

Treatment

		Yes (select option where applicable)	*Time (leave blank if unknown)*	*Date (for use if different to date of admission)*	*No (select option where applicable)*
Q10	Was an X-ray completed whilst patient was in the ED?	• Yes	HH:MM	dd/mm/yyyy	• No • Done before arrival
Q11	Was the fracture diagnosed by MRI or CT scan?			• Yes – MRI • Yes – CT scan • No	
Q12	Was the patient:	• Admitted • Discharged	HH:MM	dd/mm/yyyy	• Not recorded
Q13	Date of (first) operation (if this information is readily available)			dd/mm/yyyy	• Not applicable • Unknown

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)
Q3	If so, does this include information on when to perform an MRI or CT scan if the X-ray appears normal?	• Yes • No • Unknown
Q4	Is written information about hip fracture available for patients and/or their relatives or carers?	• Yes • No • Unknown
Q5	Is there the necessary equipment/trained staff to perform a nerve block in the ED?	• Yes • No • Unknown

Notes

Question and answer definitions

Term	Definition
Not able to take pain score	If a pain score is not possible due to the patient's level of consciousness, dementia, delirium or similar, please select 'not able to take pain score'.
Pre-hospital analgesia	If the patient took their own analgesia pre-hospital, please tick yes.
X-ray	If the X-ray was completed outside the ED, but whilst the patient was still an ED patient, tick yes.
Admitted	Please record the time that the patient leaves the ED, whether this is to theatre, a ward, or transfer to another hospital.

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 score is assessed within 15 minutes of arrival	NICE CG124 1.3.1 Assess the patient's pain immediately upon presentation at hospital
2. Patients in severe pain (pain score 7 to 10) should receive appropriate analgesia in accordance with local guidelines (unless documented reason not to)	
a. 50% within 20 mins of arrival or triage whichever is the earliest.	NICE CG124 1.3.2 Offer immediate analgesia to patients presenting at hospital with suspected hip fracture, including people with cognitive impairment. RCEM 2011 Pain standard Patients in severe pain (pain score 7 to 10) or moderate pain (pain score 4 to 6) receive appropriate analgesia, according to local guidelines or CEM pain guidelines, a. 75% within 30min of arrival b. 100% within 60min of arrival
b. 75% within 30 mins of arrival or triage whichever is the earliest.	
c. 100% within 60 mins of arrival or triage whichever is the earliest.	
3. Patients with moderate pain (pain score 4 to 6) should receive appropriate analgesia in accordance with local guidelines (unless documented reason not to)	
a. 75% within 30 mins of arrival or triage whichever is the earliest.	NICE CG124 1.3.2 Offer immediate analgesia to patients presenting at hospital with suspected hip fracture, including people with cognitive impairment. RCEM 2011 Pain standard Patients in severe pain (pain score 7 to 10) or moderate pain (pain score 4 to 6) receive appropriate analgesia, according to local guidelines or CEM pain guidelines, a. 75% within 30min of arrival b. 100% within 60min of arrival
b. 100% within 60 mins of arrival or triage whichever is the earliest.	
4. 75% of patients should have an X-ray within 120 minutes of arrival or triage, whichever is the earliest.	
5. 90% of 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 RCEM 2011 Pain standard Patients with severe pain or moderate pain – 90% should have documented evidence of re-evaluation and action within 120 minutes of the first dose of analgesic
6. 95% of patients should be admitted within 4 hours of arrival.	National 4-hour standard

REFERENCES

1. RCEM. CEM Clinical Audits 2012-13 Fractured Neck of Femur 2013
2. NICE. Quality Standard QS16 2017
3. NICE. Hip Fracture Management Clinical Guideline CG124 2017
4. RCEM. Pain standard 2011