The Royal College of
Emergency Medicine

ECDS
Emergency Care Data Set

April 2017

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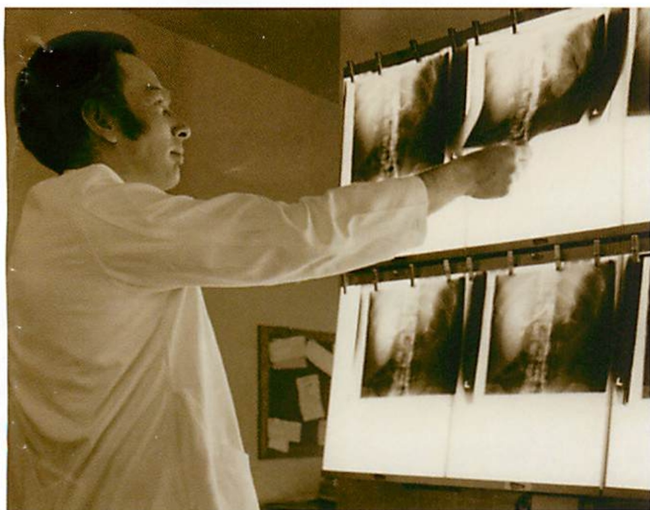
What is ECDS?

The Emergency Care Data Set (ECDS) is the new national data set for urgent and emergency care.

ECDS will be implemented in consultant-led 24hr (Type 1) Emergency Departments and specialist (Type 2) Emergency Departments by **October 2017**.

ECDS will be implemented in Minor Injury Units/ Urgent Care Centres and Walk-in Centres (Types 3 & 4 respectively) Emergency Departments by **October 2018**.

There is interest in adapting the ECDS template for use in Ambulatory Emergency Care and Ambulance services.



Why do we need ECDS?

The current Accident and Emergency data set was developed in the late 1970s.

At that time the work of the 'Casualty Department' was largely minor injuries and occasional major trauma.

There has been a rapid and sustained increase in the volume, scope and complexity of emergency care. The data we have been collecting has not kept pace with the changes, so the reasons emergency care fails are not clear.

The need for change

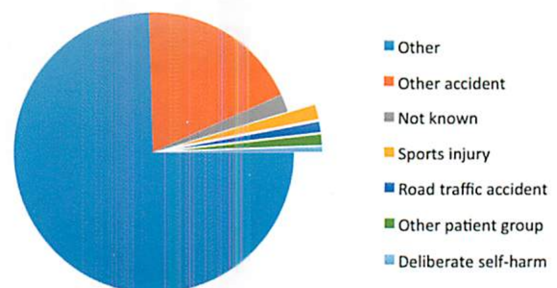
In 2013 the Health Select Committee looked at the reasons for the repeated failures in Emergency Care and reported:

'The system cannot accurately analyse the cause of the problem, still less resolve it, if it continues to 'fly blind'. *More accurate information about the causes of rising service pressures is not simply a management convenience; it is fundamental to the delivery of high quality care.'*

Key components of ECDS

Reason for attendance

Currently only about 5% of ED patients have a meaningful reason recorded for their attendance. This data vacuum allows unhelpful myths to develop.



Chief Complaint

In ECDS every patient will have their 'chief complaint' (and 'acuity') recorded by a clinician at initial assessment.

The list of 138 items is based on a well-validated Canadian list of presenting complaints, and has been used successfully in several centres in the UK.

This will enable optimised pathways based on these presenting complaints.

Acuity

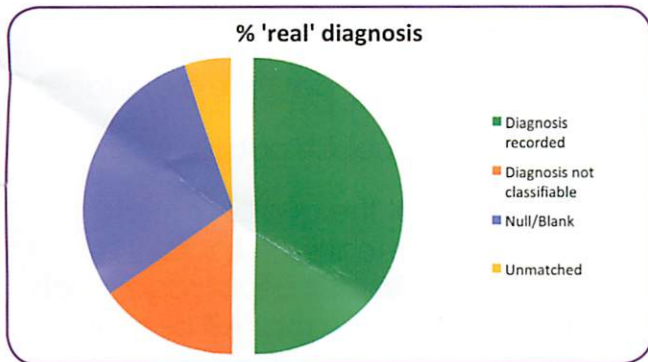
Currently there is no national measure of acuity, and Emergency Departments use many different measures e.g. triage, NEWS.

ECDS specifies that acuity must be measured on a five point scale.

If acuity is not formally assessed, it will be inferred from the intended physical destination of the patient i.e. minors / majors / resuscitation.

Diagnosis

Currently only about half of emergency care patients have a 'diagnosis' entered:



But most of these 'diagnoses' are not diagnoses at all.

The data from the pilot sites (below) showed that prior to ECDS implementation:

74% of the top ten diagnoses by volume were vague / symptoms (see table)

41 of the top 100 diagnoses by volume were vague / symptoms.

Even then, the data is of questionable quality e.g. nearly 2% of all pregnancy related problems occur in males, if current data are to be believed.

ECDS overcomes these issues by having a limited list of approximately 750 diagnoses. The diagnosis term is combined with a 'qualifier': '***confirmed diagnosis***' or '***suspected diagnosis***'.

Meaningless diagnoses

The SNOMED CT system currently used in many Emergency Departments was designed to be used by expert coders who are not time-pressured and offers an almost unlimited range of options. This does not work well when presented to untrained time-poor ED trainee doctors.

Items submitted as a 'diagnosis' include

Boxing ring
House fire
Faeces quantity
Mushroom
Condom
Dutch Shepherd dog breed
Tropical medicine department
Brassica napus
Coughed sputum specimen

In total, these non-diagnosis codes account for 16% of all codes submitted by these centres.

ECDS limits the choice to 'real' diagnosis codes to ensure that time is not wasted searching through hundreds of codes to find the right one.

The ECDS diagnosis list is derived from the RCEM work that has been succesfully used to code millions of patient episodes with high accuracy and data quality.

ECDS Diagnosis data quality

Data from the ECDS pilot sites : the top ten codes by volume – Pre ECDS vs Post ECDS
Prior to ECDS, 74% of all 'diagnoses' were invalid (in red) - Post ECDS all diagnoses are valid.

Pre ECDS - SNOMED (2013-15)		Post ECDS – ECDS SNOMED Subset (2 months)	
Description	Volume	Description	Volume
Disease (disorder)	41,343	Concussion with no LOC (disorder)	3,891
Chest pain (finding)	22,224	No abnormality detected (finding)	3,743
Minor head injury (disorder)	21,977	Lower respiratory tract infection (disorder)	3,344
Abdominal pain (finding)	14,110	Urinary tract infectious disease (disorder)	2,313
Soft tissue injury (disorder)	9,968	Upper respiratory infection (disorder)	2,285
Urinary tract infectious disease (disorder)	9,480	Sprain of ankle (disorder)	1,881
Abdominal pain - cause unknown (finding)	7,851	Infectious gastroenteritis (disorder)	1,721
Sprain of ankle (disorder)	7,816	Acute coronary syndrome (disorder)	1,482
Headache (finding)	7,285	Cellulitis	1,339
Falls (finding)	6,661	Sprain of knee (disorder)	1,175
Total	148,715	Total	23,174

Benefits of ECDS

Communication with GPs and patients

General Practitioners have long complained about the quality of information from Emergency Departments.

ECDS data will populate a standard letter template, developed in parallel with ECDS.

All patients should receive a copy of the GP letter on discharge as this minimises miscommunication and complaints.

Communication with commissioners

Many misunderstandings occur because commissioners have poor quality data from Emergency Care, and this may lead to misguided commissioning decisions.

Consistent, high quality data allows commissioners to compare data 'apples with apples'.

Better data will ensure that the services commissioned are ones that patients will use, and that provide definitive cost-effective care that is safe and of good quality.

Understanding vulnerable patients

When data is ***not*** collected on patients, it tends to be the patients in whom data is difficult to collect e.g.

people who do not speak English
homeless people
people with mental illness
people with dementia
people who leave without being seen

This creates bias when data regarding Emergency Care is analysed. Only by collecting meaningful clinical data on **all** patients will this be avoided.

Safeguarding information collection is integrated into ECDS and will allow staff to communicate concerns to the GP.

Workforce, training and revalidation

There will be a clear record of which clinicians have provided treatment and reviewed the treatment plan, and this will be very useful in workforce planning.

Healthcare analysis

Many healthcare analysts use ED data. When that data is absent or of poor quality, the advice they provide to commissioners at all levels (including governmental) will be correspondingly poor - the old adage:

rubbish in = rubbish out

ECDS ensures that the quality of information available will be meaningful and comprehensive. This will encourage much better policy decisions that will benefit patients, staff and the NHS.

Research and audit

Research and audit in Emergency Medicine are hampered by incomplete / meaningless data, and the difficulty of monitoring / co-ordinating trials across multiple centres. ECDS introduces a specific research field to record participation.

Better tariffs for Emergency Care

Emergency Medicine is the only hospital specialty where the tariffs (the money earned for the hospital) is not linked to diagnosis. This has been because the diagnosis data was so poor, but with ECDS this will no longer be the case.

While the ECDS will in no way guarantee an increase in tariffs for emergency care, it will allow the budget to be divided in a fair and transparent manner that recognises the value that Emergency Medicine brings to the NHS.

RCEM is already working with NHS Digital on ways of using ECDS to create tariffs that better reward emergency care that adds value e.g. keeping patients out of hospital.

Public Health

Injury is the largest preventable cause of years of life lost. While there is good data on the most serious injuries, there is very little data available about the vast majority of injuries that cause significant morbidity and financial loss to the community. ECDS incorporates injury data collection performed by clerical staff.

Royal College of Emergency Medicine. All data / figures from NHS Digital. SNOMED CT (Systematic Nomenclature Of MEDicine Clinical Terms)
For more information: http://www.content.digital.nhs.uk/ECDS. To contact the ECDS team please email : ecds@nhs.net