

**The Royal College of Emergency Medicine**

**Best Practice Guideline**

**Reducing redundant  
activity in the acute  
setting**



**December 2015**

## Summary of recommendations

1. Emergency Departments should have processes which identify and reduce activity which does not obviously benefit patients.
2. The patient journey through the acute service should be reviewed, and redundant activity reduced in order to improve flow and reduce cost.
3. Resources released by this process should be used to enhance the care of patients, rather than simply be a cost improvement.

## Scope

This guidance is written with the aim of identifying common redundant activity in the acute setting (principally Emergency Departments), and methods of reducing this redundant activity.

Redundant activity is defined, as clinical activity which does not directly benefit the patient or improve delivery of care; for example, tests done “just in case”, unproven treatments, or repetition of tasks such as serial assessments by staff with no added value.

## Reason for development

“Too much medicine” such as ineffective treatments and over-investigation can in some cases cause harm to patients. It costs the NHS money and has implications for flow and efficiency.

## Introduction

Redundant activity may grow up with an Emergency Department for many reasons:

- Historical and cultural reasons “We've always done it this way.”
- Front loading investigations leading to “just in case” blood tests being taken.
- Defensive practice.
- Rigid protocols e.g. every patient with a fracture being seen ASAP in fracture clinic.
- Repetition of work due to poor handover.
- Failure to implement evidence e.g. abdominal XR being a poor test in patients with abdominal pain.

## Examples of redundant activity in the acute care setting

### Unnecessary administration

<b>Redundant activity</b>	<b>Evidence base</b>	<b>Alternative processes (suggested)</b>	<b>Implementation (suggested)</b>	<b>Benefits (potential)</b>
Repetition of administrative activity e.g. Dual recording of clinical data on paper and electronic system.	Audit	Single system of data recording (preferably electronic).	Linking electronic devices to electronic patient record (e.g. vital signs, ECG machines).	Increase in staff time for face to face clinical activity.
Searching for clinical information (e.g. old notes, ECGs).	Audit, local clinical governance evidence.	Electronic recording or scanning.		Safer care through greater access to information. Reduced administrative time.

### Unnecessary activity

<b>Redundant activity</b>	<b>Evidence base</b>	<b>Alternative processes (suggested)</b>	<b>Implementation (suggested)</b>	<b>Benefits (potential)</b>
Repeated assessment by junior staff.	Observation of activity/performance of staff.	One assessment by non-decision maker per patient, followed by review by decision maker.	Uniform, single assessment of patients using proforma / electronic template.	Increased clinical availability, better governance.
'Just in case' activity, such as Group and Save in patients without clear clinical need.	Observation of activity/performance of staff.	Clinical review prior to investigations.	Protocolled management.	Reduced costs.

## Unnecessary investigation

Redundant activity	Evidence base	Alternative processes (suggested)	Implementation (suggested)	Benefits (potential)
Excessive clotting tests (i.e. patient not on warfarin or clotting abnormality unlikely). <sup>(1)</sup>	Audit	Reduce access to request/protocolled requests.	Reduce access to request/protocolled requests.	Reduced cost. Possibly reduced ED LOS.
Restrict access to such tests as Bone profile, CRP, Phenytoin level, Magnesium, Uric acid, Alcohol, Lipids, Gamma G, Tryptase.	Audit	These tests could be consultant request only.	Reduce access to request/protocolled requests.	Reduced costs, increased lab time available.
Disallow tests such as cortisol, HBA1c, Thyroid Function tests, Beta HCG, protein electrophoresis as these come back after the patient has left the ED	Audit	These tests should only be requested by inpatient teams that will deal with the result.	Reduce access to request/protocolled requests.	Reduced cost in ED but potential for repeat phlebotomy to be taken on the same patient.
CT requests outside guidelines e.g. in GCS 15 known epileptic patient post fit, repeated CTKUB in renal colic episodes <sup>(2, 3)</sup>	National audit, Royal College of Radiology advice.	Protocolled management, senior decision making for CT requests.	Protocolled management, senior decision making for CT requests.	Reduce cost. Reduced radiation exposure.
Repeat laboratory testing of bloods available as near patient testing. <sup>(4, 5, 6, 7)</sup>	RCT evidence	Protocolled investigation.	Increase NPT availability.	Reduced cost. Reduced ED LOS <sup>(1)</sup> .
Blood cultures, unless febrile or sepsis. <sup>(8)</sup>	Audit, peer reviewed published papers.	Protocolled investigation.	Protocolled investigation.	Reduced costs.
MSU in asymptomatic patients (including elderly and IDUC).	Audit	Protocolled investigation.	Protocolled investigation.	Reduced costs.
CRP for diagnosis of sepsis. <sup>(9)</sup>	Observation study evidence, audit.	Protocolled investigation.	Protocolled investigation.	Reduced costs.
D-Dimer without pre-test probability assessment (and clinical protocol).	Observation study evidence, audit.	Protocolled investigation.	Protocolled investigation.	Reduced costs.

## Unnecessary treatment

Redundant activity	Evidence base	Alternative processes (suggested)	Implementation (suggested)	Benefits (potential)
POP for torus fracture. <sup>(10)</sup>	RCT evidence.	Splintage, soft removal casts.	New pathway.	Reduced costs and follow up requirement.
Repeated tetanus immunisation. <sup>(11)</sup>	National guidance.	Follow national guidance.	Audit.	Reduced costs and patient treatments
IV fluids for intoxicated patients.	No evidence of benefit.	Give oral fluids when alert.	Audit / Rapid cycle.	Reduced clinical time and treatments.

## Unnecessary follow up

Redundant activity	Evidence base	Alternative processes (suggested)	Implementation (suggested)	Benefits (potential)
Immediate follow up for all limb fractures	Local audit	1. Delayed follow up in fracture clinic, follow up by physiotherapy for rehabilitation. 2. Virtual fracture clinic, where patient history and XRs are reviewed by orthopaedic team, patient contacted by phone and then a plan made for discharge / specialist fracture clinic / hand therapy. <sup>(12)</sup>	Implementation of new protocols for post fracture care, increased use of splints instead of POP so patients do not have to come back for POP removal	Reduced requirement for face to face clinic review
Fracture clinic follow up for many uncomplicated fractures, such as 'fat pad positive' elbow, uncomplicated radial head and paediatric clavicle, torus fracture, 5 <sup>th</sup> MC and MT fractures etc <sup>(12)</sup>	Clinical trial evidence	Treat and discharge giving high quality safety net advice (verbal and written)	Implementation of guidance and pathways	Reduced fracture clinic attendance with little utility for patients

## Reducing redundant activity

Both quality-improvement and cost-improvement methodologies can be used to reduce redundant activity.

- Redundant activity needs to be first identified, measured, change planned and implemented, and then repeated measurements and formal review are necessary.
- A useful scoping tool is to observe the whole patient journey, identifying all activity and the effect of this activity on the patient and their path through the system.
- New nursing and medical staff will often identify differences between departments, and some of these may represent redundancy (or good practice). Both formal supervision of new staff and good working relationships can pick up these observations.
- Useful tools for change are rapid cycle audit (measuring one simple thing repeatedly and reporting back often) or quality improvement processes such as Plan, Do, Study, Act (PDSA) cycles (usually more than one cycle is required).
- Cost savings and improvements in flow should be reported back to staff on a regular basis.

Not all activity that seems redundant may be redundant; ancillary benefits can accrue (such as data collection for community harm reduction). There are also coherent arguments from a clinical governance perspective for duplication of some activity (for example serial ECGs increase sensitivity). Lastly, some redundancy results in delayed benefits for the system (e.g. work placed based assessments and feedback may have some redundancy 'built in').

Some activity is proven to be redundant after the completion of the episode of care (commonly negative test results such as delayed troponin); however this activity may well have been deemed appropriate at the time of performance. Therefore, redundant activity for this guideline is only that which is identified as unnecessary *a priori*. This is often activity (usually investigations) which is commonly performed but not clinically indicated. This may be due to a failure to follow accepted guidance (for example excess use AXR in patients with abdominal pain), or current evidence (plaster and follow up for torus fractures).

There are also often inefficiencies within an institutions processes and procedures (for example redundant computer activity), however these will be specific to institutions, and therefore not covered within this guideline.

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## **Review**

Usually within three years (December 2018) or sooner if important information becomes available.

## **Conflicts of Interest**

None declared.

## **Disclaimers**

The College recognises that patients, their situations, Emergency Departments and staff all vary. This guideline cannot cover all possible scenarios. The ultimate responsibility for the interpretation and application of this guideline, the use of current information and a patient's overall care and wellbeing resides with the treating clinician.

## **Research Recommendations**

Research into the extent of redundant activity, the effects of reducing activity identified as redundant, and methods of identifying activity early in the clinical journey.

## **Audit standards**

Audit of redundant activity (as defined in appendix.

## **Key words for search**

Redundant activity, efficiency

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