Summary

There is great variation in the experience of patients presenting to Hospital as Medical Emergencies. The Royal College of Physicians and the Society of Acute Medicine (SAM) have defined standards of care for admissions to Acute Medicine. Compliance is not known. This audit aims to review adherence to some of these standards of care in Acute Medical Units (AMUs) across the UK and serve as a reference point for future audits and service improvement initiatives.

Background to SAMBA

AMUs work 24/7, 365 days a year. They are the single largest port of entry for acute hospital admissions and most patients are sickest within the first 24 hours of admission¹. To date there is little data available that describe the workload of AMUs.

Several dimensions of the unit and patients define workload and quality of the work received by patients:

1. The Number of admissions: each patients regardless of their pathology generates the need for administrative and clinical workload;
2. The Number of diagnostic procedures: Computer tomography, Magnetic Resonance Imaging, Ultrasonography, Echocardiography, Oesophagastroduodenoscopy, etc. These are often administered by members of the team who are not part of the admitting team with problems in managing capacity and synchronizing workflow in the AMU and the diagnostic departments.
3. Accurate description of medical and nursing deployment on the day: Nursing bodies have been much more successful than medical bodies in quantifying the dose of nursing that patients receive
4. Efficiency of logistics: patients can generate different workloads for administrative, nursing or medical staff depending on the set-up of the unit;
5. Severity of illness: which can be measured by a range of scores including a Track & Trigger score, the Simple Clinical Score² or the Medical Admissions Risk System³;
6. Functional dependency forms an important part of mechanism for hospital admission: measures of activity of daily living such as the Barthel⁴ or Katz index⁵ or the Clinical Frailty Scale⁶ are able to describe the degree of autonomy of a patient and their need for nursing support.
7. Emotional stability is an area that obviously impacts on health related outcomes and the timing of hospital admission. It is difficult to capture and there is no scarcity of validated tools\(^7\). It is the aim of this audit to turn quality and performance indicators that have been recommended by national bodies into a data collection format that is feasible for the majority of AMUs in order to explore some of the dimensions of Acute Care listed above. This was initially piloted in an audit by 30 UK units on the 20\(^{th}\) of June 2012. The results have been published in the Journal of the Society for Acute Medicine.

**Methods**

**Considerations:**
While Acute Medicine is strategically crucial for planning of the NHS no dedicated funding is available for this audit. The audit is therefore a pragmatic attempt to collect data for a number of recognized quality and performance parameters by clinicians in a time efficient way.

In order to allow the maximum number of units to audit their care against the national standard and the standard set by peers a modular approach is taken: All units will fill in online questionnaires describing their capacity and staffing levels. By limiting the data items requested to those defined for audit in national guidelines, the need for ethics approval will be waived. The North-West Wales Ethics Committee approved this approach in 2012.

**Setting:**
Hospitals participating in acute unselected take of patients to Internal Medicine, including district general hospitals, teaching hospitals and University hospitals. Community hospitals or hospitals without resident physician are excluded.

**Patients:**
Inclusion: Patients aged 16 or above who are seen for admission or assessment as part of the General Medical Take.
Exclusion: Elective patients or day-case patients for technical procedures such as endoscopies or biopsies. In some hospitals the AMU is a virtual space in the Emergency Department (ED) with the Acute Team operating side-by-side with the Emergency Physicians. We suggest auditing care in all patients who are referred to Medicine for an inpatient opinion (as opposed to a rapid out-patient appointment). Centres who operate from the ED are encouraged to contact the audit leads to discuss data collection.

**Data collection:**
Data is collected as early as possible (preferably within 12 hours of admission) from clinical records. Follow-up and discharge data will be extracted from local patient administration systems. The data collector should have no other clinical
duties for the time period which is audited to allow wherever possible real time data collection for timing of consultant review.

**Main themes of the audit**
The main themes of the audit are the compliance with three areas of performance:

1. Standards about service delivery set out at the Acute RCPE UK Consensus Statement on Acute Medicine, November 2008 including safety data. These have been in parts superseded by the Clinical Quality Indicators for Acute Medical Units (SAM 2011).
2. NICE CG 50: Severity of illness assessments
3. Standards set out in national guidelines for specific conditions

**Detailed description of audit standards**

1. **Quality Indicators (Consensus Statement)**
The following quality indictors are selected from the UK Consensus Statement:

   1. All patients admitted to the AMU should have an early warning score measured upon arrival on the AMU.
      Data items: Date and time of arrival, physiological parameters required to calculate a NICE CG 50\(^{8}\) compliant early warning score.

   2. All patients should be seen by a competent clinical decision maker within 4 hours of arrival on the AMU.
      Data items: Date and time of medical review.

   3. Patients to be seen and management plan reviewed within 14 hours, but preferably sooner, by the admitting consultant physician.
      Data items: Date of time of consultant review.

   4. Regular monitoring of key performance indicators in acute care
      Data items: Hospital mortality, readmission rates within 7 and 28 days.

   5. The initial assessment, investigation and treatment of all patients presenting in an unscheduled manner should be consistent with the 'four hour standard' regardless of their place of treatment (ED, AMU or joint early care unit)
      Data items: key investigations performed in more than 90% of all acute medical admissions are full blood count, urea and electrolytes, electro-cardio-gram and an X-ray of the chest. In order to assess the ‘four hour
standard’, the presence and timing of these tests are recorded in a sample of patients.

II Performance Indicators (consensus statement)
The following performance indicators are selected from the UK Consensus Statement:

1. Mortality rates within 48 hours of admission
   Data items: Date and time of admission, death within 72 hours and date of death.

2. Direct discharge rates monitored within 24 or 48 hours of admission
   Data items: Date of discharge.

3. Re-admission rates
   Data items: Patient re-admitted within 28 days (yes/no).

III Royal College of Physicians Acute Care Toolkit

1. Principle No 13 of High-Quality care\(^9\) states that ‘The input of specialty medicine teams should be integral to the care of patients on the AMU to allow stabilisation and transfer to specialty wards according to patient need’.
   Data items: Patient referred to speciality (yes/no); date and time of referral, specify speciality (cardiology/thoracic medicine/gastro-enterology/nephrology/endocrinology/oncology/other); time of specialty review

IV NICE CG 50 measures

1. A full set of observations is taking on admission including blood pressure, heart rate, temperature, oxygen saturations, respiratory rate, level of consciousness.
   Data items: presence of the above observations

2. There is evidence of activation of a member of the medical team or a critical care outreach team for any patient triggering the local “high” level.
   Data items: score above trigger score (yes/no), evidence of team activation (yes/no)

V Disease specific standards

1. Patients with suspected stroke: CT head performed within 12 hours of admission
Data items: Stoke suspected (yes/no) CT head performed on admission (yes/no), date of CT head

2. Patients with suspected pulmonary embolism (PE): CT-pulmonary angiogram (CTPA) or Ventilation-Perfusion (VQ) or perfusion (Q) scan performed within 24 hours of admission
   Data items: PE suspected (yes/no), CTPA or VQ scan or Q scan performed during admission (yes/no), date of CTPA/ VQ / Q scan

3. Patients with acute upper gastro-intestinal bleed: gastroscopy performed within 24 hours of admission
   Data items: Upper GI bleed (yes/no), gastroscopy performed on admission (yes/no), date of gastroscopy

V Nursing activity

1. Dependency of patients as measured by the Clinical Frailty Scale (CFS)\textsuperscript{6}. 
   Data item: value of the CFS as estimated by the data collectors from the clinical team.

VI Patient feedback

1. Measurement of patient satisfaction is recommended by the Report of the Acute Medicine Task Force October 2007\textsuperscript{10}. It recommended that “there should be clear lines of clinical accountability and responsibility and the implementation of community care plans should be rigorously evaluated and monitored to ensure patient safety and satisfaction.”
   Data item: NHS Friends and Family Question\textsuperscript{11} collected anonymously according to standards outlined elsewhere\textsuperscript{12}. NHS England has not prescribed specific modes for the collection of the data, allowing flexibility on exactly how the feedback is collected.
Organisation of the National Audit
The Society of Acute Medicine coordinates the audit. The audit will be promoted in an e-mail to SAM members.

Organisation of the Local Audit
Participating units register with the Society of Acute Medicine by submitting their hospital profile online (surveymonkey) and get sent documentation for the audit. Each centre identifies a responsible consultant and data collectors (which might be the consultant or could be a members of the Acute Medicine team).

The proposed date for the Audit is Thursday the 25th of June. The audit will run from 00:00 to 24:00.
Data entry is locally onto standardised questionnaires or into an anonymised Excel spread-sheet. This will keep cost centrally low and reduce data entry errors. Anonymised data will be submitted via an online questionnaire or a secure NHS e-mail address (Christian.Subbe@Wales.NHS.uk).
First results will be provided at the International Meeting of the Society for Acute Medicine in Manchester on the 10th and 11th of October 2015.
A publication will be submitted to a peer reviewed journal and participating units will be sent a summary of the results.

Bangor the 6th of May 2015

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References


9 Acute Care Toolkit No 2: High Quality Acute Care, Royal College of Physicians, London 2011

