

Acute medical care – back to basics?

D Bell

Professor of Acute Medicine, Imperial College London, Chelsea and Westminster NHS Foundation Hospital, London, UK

Published online March 2009

KEYWORDS Access, acute medicine, clinical outcomes, competencies

DECLARATION OF INTERESTS No conflict of interests declared.

Correspondence to D Bell,
Imperial College London,
Chelsea and Westminster NHS
Foundation Hospital,
London SW10 9NH, UK

tel. +44 (0)20 8746 8144
e-mail d.bell@imperial.ac.uk

A recent consensus conference co-ordinated by this College¹ defined acute medicine as 'that part of hospital medicine concerned with the immediate and early specialist management of adult patients suffering from a wide range of medical conditions requiring urgent or emergency care'. This definition has been developed in the UK but has relevance for other healthcare systems and, indeed, is being actively discussed and developed in Australia, New Zealand and within Europe. Why is this happening and is it applicable to all healthcare systems?

Acute medical emergencies account for most hospital admissions throughout the world. However, the presenting problems may vary from one country, or region, to another, largely related to socio-economic status and endemic infectious diseases.² This is reflected in the mortality rates for all countries. In low-income countries, the main causes of death are infections, but stroke, chronic obstructive pulmonary disease and ischaemic heart disease are now also in the top ten. In high-income countries, these conditions remain in the top ten, but coronary heart disease tops the list, with common cancers also featuring.

These facts confirm that medical conditions remain the most common causes of hospital admission and mortality. Hence, physicians and politicians must ensure that systems are safe and provide high-quality care for acute presentations of common conditions. Currently, even when corrected for patient demographics and co-morbidity, patients admitted as an emergency at weekends have poorer outcomes, while mortality rates for common conditions vary between hospitals.³ These issues, and the knowledge that the variation in outcomes within or between countries does not appear to relate to patient factors, suggest other factors must play a part.

Hippocrates described those factors which he felt were necessary to provide high-quality care, emphasising competency, particularly in relation to common diseases, and the need for a good process of care:

For my part, I approve of paying attention to everything relating to the art, and that those things which can be done well or properly should all be done properly; such as can be quickly done should be done quickly; such as can be neatly done should be done neatly; such operations as can be performed without pain should be done with the least possible pain; and that all other things of the like kind should be done better than they could be managed by the attendants. But I would more especially commend the physician who, in acute diseases, by which the bulk of mankind are cut off, conducts the treatment better than others.

(*On Regimen in Acute Diseases, Part 2*)

These factors are largely determined by healthcare professionals and the socio-economic context in which they provide care. In current times we can add to this list the role of providing 'optimal' facilities and support for a given healthcare system.⁴ Can we apply these principles of competency and process to acute care, irrespective of the setting?

HEALTHCARE PROFESSIONALS

Hippocrates highlighted the importance of clinical skills and recognised that better outcomes would be achieved by those with greater competencies in the required treatments. He also highlights the need to ensure those skills and competencies relate to common conditions. Thus, physicians must have the knowledge and skills to treat conditions that present frequently. In general those working in low-income countries will require greater expertise in infectious diseases, while those in high-income countries will require greater knowledge of chronic diseases and their acute exacerbations. However, all need a breadth of knowledge to ensure safe practice.

There is increasing evidence to suggest that providing 'basic' care well and promptly, irrespective of the setting, can improve outcomes and reduce variation. One current

example of this is to use a 'care bundle' approach, promoted by the Institute for Healthcare Improvement and adopted by a number of health improvement programmes worldwide. A care bundle is a collection of interventions (usually three to five) that may be applied to the management of a particular condition. The elements in a bundle are best practices based on evidence, and all clinicians should know them. Through performing these simple tasks with high competency for every patient, evidence of improved healthcare outcomes is emerging. Similarly, there is an increasing emphasis on training courses such as IMPACT, which have been designed to ensure medical staff understand and can treat common acute illnesses competently.

PROCESS OF CARE

Good clinical skills are important, but we also know that much of the variation in care relates to the system of healthcare.⁵ Health systems are often complex, with unnecessary steps in the patient pathway. Acutely unwell medical patients deserve prompt assessment, diagnosis and treatment. To deliver this, systems must be efficient and focus on minimising waits and delays. For example, prompt thrombolysis or coronary intervention is essential to improve outcomes for patients with myocardial infarction. However, other common causes of acute medical illness such as pneumonia and upper gastrointestinal bleeding have similar mortality rates, but delays in treatment are often considered less important. One of the principles underpinning the development of acute medicine is to ensure prompt treatment for all with equity of access.⁴

Acute medicine is directly involved in the drive to ensure that routine physiological parameters are measured and recorded from the point of entry to care, and incorporated into a single early warning scoring system. By adopting this approach there will be more consistency in the routine assessment of patients, which in turn can be linked directly to support for early intervention – including the need for critical care.^{6,7} This simple approach that is applicable in all acute care and emergency settings, irrespective of

environment, will support the delivery of higher quality care and is a further example of the need to implement basic skills and treatment promptly.

FACILITIES

Increasingly, to improve outcomes we require good facilities and support for patients. In an ideal world all patients would have access to the best facilities, but, whatever the context, we must strive for equity. In the UK, for example, access to certain investigations varies between hospitals and differs at weekends from mid-week. This is a consequence of working practice as well as the availability of services, such as computed tomography scans at weekends for patients with pulmonary embolism. Similarly, in low-income countries is there equity of access to intravenous fluid and supplemental oxygen, known life-saving treatments? In short, we must design systems to provide best care in whatever environment we find ourselves.

Another important aspect of delivering high-quality acute care is the routine collection of data to monitor progress and clinical outcomes accurately. At present these data are often lacking or incomplete. Knowledge of the data allows regular feedback to staff and informs areas that may require further improvement. A summary of the published data from acute medical units demonstrating improved outcomes for patients admitted as an acute medical emergency is detailed in the RCPE's consensus conference report.¹

Hippocrates succinctly outlined the essentials for delivering high-quality acute care. In essence, we must do the simple things promptly and to a high standard and provide services that reflect the needs of the local population. It is only by combining technological advances with high-quality routine care that we will ensure best practice. As we develop acute care we would do well to remember Hippocrates and combine this with an accurate knowledge of patient outcomes.

REFERENCES

- 1 Royal College of Physicians of Edinburgh. UK Consensus Conference on Acute Medicine. *Br J Hosp Med* 2009; 70:S1–51. See also p.27 for the Consensus Statement.
- 2 World Health Organization. *The top 10 causes of death*. Available from: <http://www.who.int/mediacentre/factsheets/fs310/en/print.html>
- 3 Bell CM, Redelmeier DA. Mortality among patients admitted to hospitals on weekends as compared with weekdays. *N Engl J Med* 2001; 345:663–8.
- 4 Royal College of Physicians of London. *Acute medical care: the right person, in the right setting – first time*. London: RCPL; 2007.
- 5 Berwick DM. A primer on leading the improvement of systems. *BMJ* 1996; 312:619–22.
- 6 Paterson R, MacLeod DC, Thetford D et al. Prediction of in-hospital mortality and length of stay using an early warning scoring system: clinical audit. *Clin Med* 2006; 6:281–4.
- 7 Kellett J, Deane B. The Simple Clinical Score predicts mortality for 30 days after admission to an acute medical unit. *Q J Med* 2006; 99:771–81.