The International Federation for Emergency Medicine framework for quality and safety in the emergency department

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On behalf of the IFEM Quality Symposium Working Group

ABSTRACT
All emergency departments (EDs) have an obligation to deliver care that is demonstrably safe and of the highest possible quality. Emergency medicine is a unique and rapidly developing specialty, which forms the hub of the emergency care system and strives to provide a consistent and effective service 24 h a day, 7 days a week. The International Federation of Emergency Medicine, representing more than 70 countries, has prepared a document to define a framework for quality and safety in the ED. Following a consensus conference and with subsequent development, a series of quality indicators have been proposed. These are tabulated in the form of measures designed to answer nine quality questions presented according to the domains of structure, process and outcome. There is an urgent need to improve the evidence base to determine which quality indicators have the potential to successfully improve clinical outcomes, staff and patient experience in a cost-efficient manner—with lessons for implementation.

INTRODUCTION
The ‘emergency department (ED) hub’ model of emergency care, involving the specialisation of physicians in emergency medicine (EM), is increasingly recognised in developed and developing nations. This is demonstrated by the increased representation within the International Federation of Emergency Medicine (IFEM) in over 70 countries in 2012. The ED is being increasingly used by patients, who often regard it as providing accessible, timely and high-quality healthcare. The rise in the use of EDs exceeds population growth and changes in population morbidity and presents particular system challenges of crowding, assessment and treatment delays and a reduction in both the quality and the safety of care, if capacity cannot grow to match demand.3 4

Many IFEM members have done extensive work within their own healthcare systems to identify quality in EDs,4 applying various measures and promoting these measurements as important to the public and funding bodies. In some countries, there has been national implementation of mandatory quality standards and external review by government and other bodies.6 At the same time, in countries where EM is developing there may be immense pressures on the emergency care system (ECS) combined with limited resources to support that system. Under such circumstances measures of quality may yet need to be implemented, but there are important lessons to be learned from better resourced countries and there is potential for universal standards to be developed and applied.

The aim of this IFEM initiative was to create, develop and agree a framework to promote quality and safety in the ED. In so doing, we hope to support the development of EM internationally and also assist in ensuring that our patients receive the best possible care within the finite resources available. This article summarises the framework document: the full text is freely available at http://www.ifem.cc/Resources/News/Framework_for_Quality_and_Safety_in_the_ED_2012.aspx.

METHODS
The framework was developed from the sessions and discussions that took place at the IFEM Symposium for Quality and Safety in Emergency Care hosted by the College of Emergency Medicine (CEM) in the UK. The symposium took place on 15/16 November 2011 at the British Museum, London. A proceedings document has been published previously. This document was presented and further refined at the 14th International Conference on Emergency Medicine held in Dublin in June 2012 and approved by the IFEM in October 2012.

RESULTS AND DISCUSSION
From the outset, we agreed that because quality is a multifaceted concept a single indicator, such as a universal time-based standard, is undesirable and potentially dangerous because it ignores other aspects of quality such as clinical effectiveness and the service experience. The result can be a distortion of ED activity to achieve this single measure at the expense of other aspects of quality.

What patients should expect from an ED
The IFEM terminology Delphi project defines an ED as “The area of a medical facility devoted to provision of an organized system of emergency medical care that is staffed by Emergency Medicine Specialist Physicians and/or Emergency Physicians and has the basic resources to resuscitate, diagnose and treat patients with medical emergencies.”

The ED is an unique location at which patients are guaranteed access to emergency care 24 h a day, 7 days a week. It is able to deal with all types of medical emergencies (illness, injury and mental health) in all age groups.

Within all countries, patients in an ED should expect the following:
Table 1  Suggested quality indicators for EDs grouped by the domains of structure, process and outcome

<table>
<thead>
<tr>
<th>Quality question</th>
<th>Structure measure</th>
<th>Process measure</th>
<th>Outcome measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities adequate?</td>
<td>Capacity indices, such as the number of resuscitation/major cubicles for the patient case mix (in relation to local guidelines)</td>
<td>Maintenance logs for equipment</td>
<td>Patient experience</td>
</tr>
<tr>
<td>Numbers and skill mix of staff adequate?</td>
<td>Total number of staff and skill mix (in relation to local guidelines)</td>
<td>Times to be seen by decision maker</td>
<td>Incidence of hospital-acquired infection</td>
</tr>
<tr>
<td>Is there a culture of quality?</td>
<td>Is the leadership committed to quality and accountability?</td>
<td>Hospital leadership visible in clinical areas</td>
<td>Recorded incidents of assault/injury on staff members</td>
</tr>
<tr>
<td>Data support adequate?</td>
<td>Is there a system in place to facilitate monitoring of the process and outcome measures described in this table?</td>
<td>System generates reports that support departmental quality management</td>
<td>Complaints and critical incidents</td>
</tr>
<tr>
<td>Key process measures in place?</td>
<td>Time from arrival to cube</td>
<td>Time of admission from decision to admit</td>
<td>Patient experience</td>
</tr>
<tr>
<td>Access block present?</td>
<td>Proportion of time that patients are on trolleys in corridor</td>
<td>Time to admission from decision to admit</td>
<td>Patient empowerment/ability to participate in own care</td>
</tr>
<tr>
<td>Evidence-based practice resulting in appropriate care and optimal results?</td>
<td>Presence of clinical pathways to support best evidence-based practice</td>
<td>Pathway compliance</td>
<td>Medication errors</td>
</tr>
<tr>
<td>Patient experience measured and acted upon?</td>
<td>Use of patient feedback tools</td>
<td>Changes implemented on the basis of patient feedback</td>
<td>Patient experience</td>
</tr>
<tr>
<td>ED staff experience measured and acted upon?</td>
<td>Feedback at ED staff appraisals</td>
<td>ED staff empowered and supported by management/leadership team</td>
<td>Progressive improvements in patient feedback</td>
</tr>
</tbody>
</table>

ED, emergency department; ICT, information and communication technologies; MI, myocardial infarction.
The right personnel: healthcare staff who are appropriately trained and qualified to deliver emergency care, with the early involvement of senior doctors with specific expertise in EM where life-threatening/changing illness (physical or mental) or injury is suspected.

The right environment: a dedicated ED, which is properly equipped (eg, with monitoring equipment and supplies) and where appropriate compliance with hygiene and infection control measures reduces the incidence of hospital-acquired infection for the anticipated number of patients and all commonly presenting conditions, as well as less common but predictable emergencies. There should be adequate space to provide the necessary patient care in an environment that is secure and promotes patient privacy and dignity.

The right decision making: at all levels of ED function, from managerial/administrative levels to the front line, the importance of critical thinking in decision making should be recognised and emphasised.

The right processes: to ensure early recognition of those patients requiring immediate attention and prompt time critical interventions and the timely assessment, investigation and management of those with emergency conditions.

The right results: optimal outcomes from treatment within the ED for all patients presenting with emergency healthcare needs.

The right approach: patient-centred care with an emphasis on relieving suffering, good communication and the overall experience of patients and those accompanying and/or caring for them.

The right system that enables the patient to access timely and appropriate emergency care and that continues to support them after they have left the ED. There should be strong links to the community, including education and prevention, alongside the promotion of public health.

The right support: from community-based and hospital-based healthcare teams and from the funders and managers of the ED, who should ensure that the above arrangements are sustainable. There should be established and agreed mechanisms to monitor standards and compliance, with action taken if an ED falls short.

In countries where EM is well developed patients can also expect the following, in addition to the eight fundamental priorities outlined above:

- Appropriate access to, and use of, diagnostic support services (eg, plain radiography, ultrasound, CT scanning and laboratory services) by EM doctors when needed for the immediate diagnosis of life-threatening conditions.

- Expertise in critical care in collaboration with colleagues from anaesthesia and intensive care.

- Early access to specialist inpatient and outpatient services to assure appropriate ongoing evaluation and treatment of patients with emergency care needs.

- Appropriate duration of stay in the ED to maximise patient care and comfort and to optimise clinical outcomes.

- Development of additional services alongside core ED activity to enhance the quality and safety of emergency care. Such services may include short-stay/observation facilities, alternative patient pathways, social and psychiatric health services or associated outpatient activity and will vary according to local practice and circumstances. However, an important component of excellent ED care is the constant development of innovative and enhanced services to support the delivery of quality and safety.

ED staff can expect to be treated with respect by colleagues and patients and to work in a system and facilities that are safe and not detrimental to their own health. ED staff can also expect to work in an environment that provides the resources and training they need to meet the above expectations, with an emphasis on the development of evidence-based care and innovation.

While this document focuses on the ED, it is essential to employ a systems approach. The most important consideration is that the ED cannot function in isolation and commonly exists as the hub of an ECS where the patient journey will start in the community and return there either directly from the ED or after an inpatient stay. It is also essential to recognise that the ECS must interface with the planned elements of a healthcare system—particularly the demand for hospital beds and the availability of specialists—and with public health.

**Suggested indicators**

A series of quality questions and their associated measures are shown in table 1, according to the domains of structure, process and outcome. The questions posed cover a range of issues that are fundamental to the delivery of high-quality care in any ED, but the exact measures used will depend on local factors, the availability of data and overarching elements of the healthcare system in any particular setting.

**Research questions**

Despite the acknowledged importance of quality and safety in ED care and the fact that grant-awarding bodies often see these as priorities for study, there is very little robust research evidence in this field. There is an urgent need to agree upon widely applicable outcome measures that can be used to assess the impact of specific interventions and other changes in the configuration and delivery of ED services and to develop measures of comparability between departments and between health systems. This will help to reduce variation, and also determine cost-effective care, by directly relating cost to meaningful clinical outcomes, particularly those that occur after the patient has left the ED, and which therefore reflect the whole episode of care.

It is also necessary to develop research projects that cross national and international boundaries, so that different systems in different countries can be compared objectively to allow the development and promotion of best practice across the specialty globally.

**CONCLUSION**

The IEFM hopes that this framework will provide a common consensus to underpin the pursuit of quality and safety in all EDs, thereby improving the outcome and experience of emergency patients and our staff worldwide. In order to achieve these goals, emergency care must be an absolute priority for healthcare planners at local, regional and national levels.

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**Collaborators**

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**Contributors**

On behalf of the IEFM Quality Symposium Working Group the five named authors drafted and revised the framework and this summary article. All authors reviewed and approved the final version.
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REFERENCES


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