

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

Fiona Lecky,¹ Jonathan Benger,² Suzanne Mason,³ Peter Cameron,^{4,5} Chris Walsh,⁶
On behalf of the IFEM Quality Symposium Working Group

¹University of Sheffield/
University of Manchester/
Salford Royal Hospital NHS
Foundation Trust, Emergency
Medicine Research in Sheffield
(EMRIS), School of Health and
Related Research (SchARR),
Sheffield, UK

²Department of Emergency
Care, Emergency Department,
Bristol Royal Infirmary, Bristol,
UK

³School of Health and Related
Research, University of
Sheffield, Sheffield, UK

⁴Department of Emergency
Medicine, Hamad Medical
Corporation, Doha, Qatar

⁵Monash University,
Melbourne, Australia

⁶College of Emergency
Medicine, London, UK

Correspondence to

Professor Jonathan Benger,
Department of Emergency
Care, Emergency Department,
Bristol Royal Infirmary, Bristol
BS2 8HW, UK; Jonathan.
Benger@UHBristol.nhs.uk

This document arises from the sessions and discussions that took place at the International Federation for Emergency Medicine (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.¹ This document was presented and further refined at the 14th International Conference on Emergency Medicine held in Dublin in June 2012.

Received 5 July 2013
Accepted 9 July 2013
Published Online First
1 August 2013



CrossMark

To cite: Lecky F, Benger J, Mason S, et al. *Emerg Med J* 2014;**31**:926–929.

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 morbidity² 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,⁵ 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

Quality question	Structure measure	Process measure	Outcome measure
Facilities adequate?	<ul style="list-style-type: none"> ▶ Capacity indices, such as the number of resuscitations/majors cubicles for the patient case mix (in relation to local guidelines) ▶ Specific areas for vulnerable groups (eg, children, mentally ill and confused elderly) ▶ Presence or absence of functional equipment to ensure patient safety ▶ Adequate security ▶ Disaster/major incident plan 	<ul style="list-style-type: none"> ▶ Maintenance logs for equipment ▶ Regular cleaning records and inspections ▶ Regular stock inventory ▶ Regular testing/rehearsal of disaster plan 	<ul style="list-style-type: none"> ▶ Patient experience ▶ Incidence of hospital-acquired infection ▶ Recorded incidents of assault/injury on staff members
Numbers and skill mix of staff adequate?	<ul style="list-style-type: none"> ▶ Total number of staff and skill mix (in relation to local guidelines) ▶ Staff turnover and sickness levels ▶ Number of new patients per staff member (with reference to staff seniority) in unit time ▶ Number of patients waiting to be seen (by triage category) 	<ul style="list-style-type: none"> ▶ Times to be seen by decision maker ▶ Times from arrival to discharge from ED ▶ Proportion leaving without being seen 	<ul style="list-style-type: none"> ▶ Complaints and critical incidents
Is there a culture of quality?	<ul style="list-style-type: none"> ▶ Is the leadership committed to quality and accountability? ▶ Is the leadership 'satisfied' or constantly improving? ▶ Does the ED have clinical autonomy and an ability to develop its own evidence-based practice? ▶ Quality or safety committee is seen as part of the essential administrative structure? ▶ Is ED quality seen as a holistic health service issue? 	<ul style="list-style-type: none"> ▶ Hospital leadership visible in clinical areas ▶ Hospital-wide quality initiatives (eg, care transitions and hand washing) ▶ ED-led quality initiatives and guidelines ▶ Effective dashboard of quality and safety that is locally available and acted upon ▶ Quality of ED decision making monitored and acted upon (eg, through errors and adverse events) ▶ Adequate communication with primary care and other community services 	<ul style="list-style-type: none"> ▶ Patient experience ▶ Patient empowerment/ability to participate in own care ▶ Medication errors
Data support adequate?	<ul style="list-style-type: none"> ▶ Is there a system in place to facilitate monitoring of the process and outcome measures described in this table? 	<ul style="list-style-type: none"> ▶ System generates reports that support departmental quality management ▶ ICT regularly maintained and developed appropriate to evolving emergency care needs 	<ul style="list-style-type: none"> ▶ Patient experience ▶ Objective measures show continuous quality improvement ▶ Contributions to public health in the local community (child protection, police liaison, etc)
Key process measures in place?		<ul style="list-style-type: none"> ▶ Time from arrival to cubicle ▶ Time to decision maker ▶ Time to analgesia ▶ Audit against other EDs and national guidelines ▶ Left without being seen rate ▶ Bed turnovers 	<ul style="list-style-type: none"> ▶ Patient experience ▶ Survival/functional status for time sensitive conditions (eg, stroke, MI, sepsis) ▶ Time intervals in journey ▶ Diagnostic errors ▶ Avoidable patient returns to the ED
Access block present?	<ul style="list-style-type: none"> ▶ Proportion of time that patients are on trolleys in corridor ▶ Frequency with which meal rounds and drug rounds are required in the ED 	<ul style="list-style-type: none"> ▶ Time to offload patients from ambulances ▶ Trolley waits above a locally agreed threshold ▶ Time to admission from decision to admit ▶ Median length of stay for all patients ▶ Left without being seen rate 	<ul style="list-style-type: none"> ▶ Case mix survival measures for high mortality conditions ▶ Length of stay and complication rates for hospitalised patients ▶ Proportion returning to ED within 7 days ▶ Incidence of hospital-acquired infection (depending on length of stay in ED)
Evidence-based practice resulting in appropriate care and optimal results?	<ul style="list-style-type: none"> ▶ Presence of clinical pathways to support best evidence-based practice ▶ Appreciation of cost-effectiveness 	<ul style="list-style-type: none"> ▶ Pathway compliance ▶ Times to critical interventions such as reperfusion or antibiotics ▶ Regular audits of use of key investigations/treatments of high-risk/high-volume conditions 	<ul style="list-style-type: none"> ▶ Patient mortality (general or specified conditions) ▶ Risk-adjusted outcomes (eg, from registry data) ▶ Other clinical outcome data ▶ Proportion returning to ED within 7 days
Patient experience measured and acted upon?	<ul style="list-style-type: none"> ▶ Use of patient feedback tools ▶ Inclusion of patients on hospital boards 	<ul style="list-style-type: none"> ▶ Changes implemented on the basis of patient feedback 	<ul style="list-style-type: none"> ▶ Progressive improvements in patient feedback ▶ Equitable access for different races/gender and minority groups
ED staff experience measured and acted upon?	<ul style="list-style-type: none"> ▶ Feedback at ED staff appraisals ▶ Use of staff feedback tools, including other specialities ▶ Training and education programmes for ED staff 	<ul style="list-style-type: none"> ▶ ED staff empowered and supported by management/leadership team ▶ Changes implemented on the basis of staff feedback 	<ul style="list-style-type: none"> ▶ Progressive improvements in staff feedback ▶ Improving trainee and student feedback in training departments

ED, emergency department; ICT, information and communication technologies; MI, myocardial infarction.

Consensus statement

- ▶ 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 IFEM 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.

Acknowledgements We gratefully acknowledge the input and expertise of all those who attended the IFEM Symposium for Quality and Safety in Emergency Care in November 2011 and who contributed subsequently to the development and refinement of this framework.

Collaborators (List of Presenters and contributors): Professor Jonathan Benger, Dr Gautam Bodiwala, Mr Simon Burns, Dr Mike Clancy, Professor Peter Cameron, Dr Carmel Crock, Professor Pat Croskerry, Dr James Ducharme, Dr Gregory Henry, Dr John Heyworth, Dr Brian Holroyd, Dr Ian Higginson, Dr Peter Jones, Dr Arthur Kellerman, Professor Fiona Lecky, Dr Geraldine McMahon, Professor Suzanne Mason, Professor Elisabeth Molyneux, Professor Patrick Nee, Dr Ian Sammy, Dr Sandra Schneider, Dr Michael Schull, Dr Suzanne Shale, Professor Ian Stiell, Professor Ellen Weber.

Contributors On behalf of the IFEM 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.

Competing interests None.

Provenance and peer review Not commissioned; internally peer reviewed.

REFERENCES

- 1 Lecky F, Cameron P, Bengler J, *et al*. CEM/IFEM symposium: quality and safety in emergency care. The British Museum, London, 15 & 16 November 2011: narrative of presentations & abstracts. *Emerg Med J* 2012;29(Suppl 1):A1–16.
- 2 Lowithan JA, Curtis AJ, Jokkey DJ, *et al*. Demand at the emergency department front door: 10-year trends in presentations. *Med J Aust* 2012;196:128–32.
- 3 Richardson DB, Mountain D. Myths versus facts in emergency department overcrowding and hospital access block. *Med J Aust* 2009;190:369–74.
- 4 Pines JM, Hilton JA, Weber EJ, *et al*. International perspectives on emergency department crowding. *Acad Emerg Med* 2011;18:1358–70.
- 5 Cameron PA, Schull MJ, Cooke MW. A framework for measuring quality in the emergency department. *Emerg Med J* 2011;28:735–40.
- 6 Newell R, Slesinger T, Cheung D, *et al*. Emergency Medicine Quality Measures. <http://www.acepnews.com/news/news-from-the-college/single-article/emergency-medicine-quality-measures/129931a40b5badc20e0f90f79b2.html> (accessed 25 Nov 2012).



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

Fiona Lecky, Jonathan Bengler, Suzanne Mason, Peter Cameron and Chris Walsh

Emerg Med J 2014 31: 926-929 originally published online August 1, 2013

doi: 10.1136/emered-2013-203000

Updated information and services can be found at:
<http://emj.bmj.com/content/31/11/926>

References

These include:

This article cites 5 articles, 2 of which you can access for free at:
<http://emj.bmj.com/content/31/11/926#BIBL>

Email alerting service

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
<http://group.bmj.com/group/rights-licensing/permissions>

To order reprints go to:
<http://journals.bmj.com/cgi/reprintform>

To subscribe to BMJ go to:
<http://group.bmj.com/subscribe/>