



**A Quality Framework and Suite of Quality Measures for the Emergency Department Phase of Acute Patient Care in New Zealand**

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## Foreword

The Shorter Stays in the Emergency Department health target has been a significant driver of improved acute health care in New Zealand. Its success has been largely due to careful implementation by our DHBs, with an emphasis on quality and not blind compliance. However, since the target's inception it has been appreciated that an emergency department length of stay target should be wrapped in a quality framework so that it continues to drive the right things. This document brings us to that stage of our evolution.

We must examine the quality of the services we provide with a view to, at least, correct deficiencies identified. Furthermore, such examination should be considered a core component of the provision of the service.

This document is the product of the National Emergency Departments Advisory Group, which gives guidance to myself, the National Clinical Director of Emergency Department Services, and which is comprised of a number nurses and doctors involved in acute care. Iterations of this document have been informed by many individuals and groups listed in this document. It is a clinically lead piece of work. A full list of the Emergency Department Advisory Group members is included at Appendix three.

The measures in this document are for the 'emergency department phase of acute care'. As such, they do not cover all aspects of acute care and consequently not the full range of quality required to achieve the Shorter Stays in the Emergency Departments health target. It is a start and it is expected that all other phases of the acute journey will be subjected to quality scrutiny and improvement similarly.

Throughout its development, this document has navigated a path between high aspirations and pragmatism, and this final version seems to be both aspirational and achievable. The framework and list of quality measures might seem a daunting expectation on first reading, but only a subset of the measures are mandatory, most are measured infrequently and the expectation is that DHBs will stage implementation over the 2014/15 year. The details of these expectations are given at the end of the document.

Many of the measures do not have nationally standardised definitions, measurement tools, nor agreed performance standards. It is expected that these will develop over time, as we work together and share processes and progress. However, proceeding prior to these is deliberate, for two reasons. First, it would be a much greater burden for many DHBs if they were required to measure in a way not compatible with their systems. Second, it would cause undue delay if we were to wait for such definitions.

It is explicit in the document that the principal purpose is for DHBs to understand and improve the quality of the care they provide. It is not intended that these measures will be reported for accountability purposes, as the nature of measurement and the use of the measures is distorted when the principal purpose is external scrutiny rather than internal quality improvement. However, DHBs should be aware that there will be interest in how they are performing from time to time and information in relation to these measures might be requested.

It is essential that we take this seriously and implement the quality framework with the genuine quality improvement intentions outlined in the document. We all know that the key to achieving the 'triple aim' of good health outcomes, good patient experience and responsible use of resources, is not to do it quickly, nor slowly, nor at great cost, nor frugally, but to do it well.

Professor Mike Ardagh  
National Clinical Director of Emergency Department Services and  
Chair of the National Emergency Departments Advisory Group

## Introduction

In July 2009 New Zealand (NZ) adopted the 'Shorter Stays in the Emergency Departments' health target (the health target) as one of six health priorities. The health target is defined as '95% of patients presenting to Emergency Departments will be admitted, discharged or transferred within six hours of presentation.'

It was considered that a high level measure (a health target) was required to influence change and that an Emergency Department (ED) length of stay (LOS) measure best reflected the performance of the entire acute care system (both in and beyond the ED). However, it is accepted that this measure, on its own, doesn't guarantee quality. In particular whilst length of stay is important to patients the patient's experience and outcomes might still be poor despite a short length of stay. Consequently the intention of this process is to define measures that are closer and more meaningful to patients.

EDs and district health boards (DHBs) will need to address patient experience and outcomes in line with the New Zealand Public Health and Disability Act 2000, which requires DHBs to have a population health focus, with the overall objective of improving the health of those living in their district. Part One of the Act outlines how this legislation should be used to recognise and respect the principles of the Treaty of Waitangi with an aim of improving health outcomes for Māori, and allows Māori to contribute to decision-making, and participation in the delivery of services at all levels of the health and disability sector.

While EDs and DHBs are monitoring a range of measures, none other than the Shorter Stays Target are mandatory and there isn't a common suite of measures being used.

In 2010 it was agreed with the Minister of Health that the 95% in 6 hours target would continue, that it should be supported by a suite of quality measures more directly associated with good patient care, that scrutinising all or a portion of the suite would be mandatory for DHBs, but that scrutiny by the Ministry would be only as required and not routine.

The document has been developed by the National Clinical Director (NCD) of Emergency Department Services and Chair of the National Emergency Departments Advisory Group (the Advisory Group), Professor Mike Ardagh, with guidance from the Advisory Group. The use of the pronouns 'we' and 'our' will refer to the NCD and the Advisory Group.

### **Aim**

This document has been developed to define the suite of quality measures, and the quality framework within which they should contribute to quality improvement. It has been influenced by the Australasian College for Emergency Medicine (ACEM) policy (P28): Policy on a Quality Framework for Emergency Departments and the International Federation for Emergency Medicine (IFEM) draft consensus document: *Framework for Quality and Safety in Emergency Departments 2012*.

In the New Zealand context it is important to reduce disparities between population groups and this is reflected throughout the document.

Implementation is expected to result, primarily, in improved quality of care, with secondary outcomes of increased efficiency, greater clinician engagement in change and consequent improved relationships in our DHBs. However, implementation is unlikely to encourage these outcomes if:

1. The document is given to the ED to 'implement' without the appropriate resources, including time and expertise.
2. It is considered an isolated ED project without good linkages to a DHB quality structure.
3. It is forgotten that much of the quality occurring in an ED is determined by people, processes and resources outside the ED's jurisdiction.
4. There is not a commitment to act, on deficiencies identified by the quality measures.

### ***Selecting quality measures for the ED phase of acute care in New Zealand***

We gathered a list of measures currently used internationally, or proposed for use, to develop our list (particularly from NHS England, Canada and those proposed by ACEM). As an initial step a significant sample of the New Zealand ED community at the New Zealand EDs meeting in Taupō in September 2012, was asked to consider the list and the proposed direction towards a quality framework for New Zealand.

The list was taken back to the ED Advisory Group for further consideration. In addition, clinical directors of EDs were surveyed as to which measures on the list they already or could measure, and a separate research project evaluated a number of the measures using an evaluation tool. A draft of this quality measures and framework document was distributed for feedback to DHBs, colleges and other parties, and re-presented to the delegates at the New Zealand EDs meeting in Taupō in October 2013.

Beyond the 'clinical' measures used overseas, the ACEM quality framework profiles were used to consider other things that should be 'measured' (or at least recorded and scrutinised) as part of a complete quality picture of a department. This includes measures that identify the population profile of ED service users.

### **A comprehensive consideration of quality**

It is common to consider quality in health using the Donabedian<sup>1</sup> categorisation, of:

- structure
- process
- outcome.

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<sup>1</sup> Named after the public health pioneer, Avedis Donabedian, who created The Donabedian Model of care and discussed the critical relationship between these three categories in his 1966 article; 'Evaluating the quality of medical care', *The Milbank Memorial Fund Quarterly*, Vol. 44, No. 3, Pt. 2:166–203.

'Structure' refers to what is there to do the job (people and plant). 'Process' refers to how the job is done. 'Outcome' refers to what results from the job being done.

The IFEM document recommends the use of these categories. The IFEM also promotes the Institute of Medicine Domains of Quality:

Domain	Description
Safe	Avoiding harm to patients
Effective	Providing services based on scientific knowledge to all who could benefit, and refraining from providing services/care to those not likely to benefit
Patient-centred	Providing care that is respectful of and responsive to individual patient preferences, needs, and values
Timely	Reducing waits and sometimes harmful delays
Efficient	Avoiding waste (personnel, resources, finance)
Equitable	Providing care that does not vary in quality because of personal characteristics

*Table One: The six quality domains described by the Institute of Medicine*

The three Donabedian categories and the six Institute of Medicine domains define a comprehensive overview of quality which could be applied to acute care. While there is a desire to be comprehensive there is a need to be pragmatic. The list of measures promoted in this document leans towards the former in an attempt to cover all the Donabedian categories and Institute of Medicine Domains. However, within the total list of measures less than one half are considered mandatory (20/59) and only a few are necessarily collected continuously (two for all DHBs and another one if the ED has an observation unit).

Even within the mandatory list there are choices in relation to audit topics. It is hoped that DHBs will take a comprehensive view of quality, using the framework proposed and considering the full list of measures. As a minimum it is expected that DHBs will measure and use all the mandatory measures and select from the non-mandatory to attempt to get good coverage of Donabedian categories and Institute of Medicine Domains. Choices, in this regard, will be in the context of good clinical leadership in a well supported quality structure, using a comprehensive framework. Quality improvement as a consequence of this activity requires a commitment to resource the activity and to rectify, as best is possible, any deficiencies unearthed.

Ultimately work will be required to define the measures with greater precision, apply expected standards to the measures, where appropriate, and provide standardised data collection tools, where appropriate. However, from 1 July 2014 it is intended that DHBs will begin to examine and respond to the measures, in whatever way is considered most appropriate within the DHB, as part of an internal quality improvement process. Beginning this process prior to the development of complete data definitions, standards and tools is deliberate, so that the process can begin soon and without undue burden for DHBs to comply.

## **The context of a suite of quality measures in a quality framework**

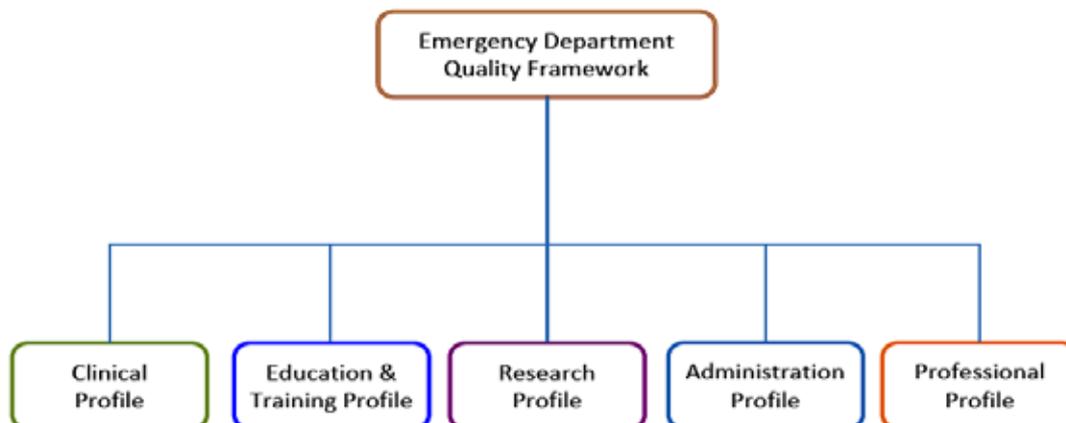
The measurement and reporting of quality measures, and the response to them in the ED/hospital/DHB, occurs in the context of a quality framework. It is unlikely measurements will result in sustained improvement in quality if there is no conducive administrative and professional context.

ACEM published a document *Policy on a Quality Framework for Emergency Departments*,<sup>2</sup> which recommends that all EDs have a documented quality framework and a designated quality team with defined roles, responsibilities and reporting lines, and the team should include medical and nursing staff and may include clerical and allied health professionals. We agree that New Zealand EDs should have a documented quality framework, and a designated quality team, although we accept that the specific structure responsible for quality might be integrated into a hospital or DHB structure, rather than be a stand-alone ED team.

Furthermore, we are concerned that the demands of a quality framework might simply be added to the workloads of already fully committed ED staff. We agree that a quality framework of this sort needs both adequate resourcing and skills to be useful. Consequently, we recommended that all New Zealand DHBs should have a documented quality framework for the ED phase of acute care, as well as an explicit quality structure as part of an overarching DHB/hospital quality structure, with defined roles, responsibilities and reporting lines, supported by appropriately resourced and skilled personnel.

## **A suggested quality framework**

ACEM recommends a framework consisting of five 'quality profiles'.



We recommend that the quality measurements required for the ED phase of acute care in New Zealand are in the context of a quality framework with a recommended structure according to the five profiles described above.

<sup>2</sup> ACEM. 2011. *Policy on a Quality Framework for Emergency Departments*. Melbourne: Australasian College for Emergency Medicine. URL: [www.acem.org.au/getattachment/348b3135-5a51-4a72-8ec4-e51dfa6b2abc/Policy-on-a-Quality-Framework-for-Emergency-Depart.aspx](http://www.acem.org.au/getattachment/348b3135-5a51-4a72-8ec4-e51dfa6b2abc/Policy-on-a-Quality-Framework-for-Emergency-Depart.aspx) (accessed 10 March 2014).

## ***The context of an ED quality framework in an acute care system***

The ED phase of a patient's care is usually one part of a journey from the community and back again. The full journey includes input from multiple departments and providers other than the ED.

It is essential to appreciate that performance of an ED is dependent on these other departments and providers. Consequently performance against any of the measures in this quality framework might have implications for quality both within and outside the ED.

The title of this framework reflects the fact that it is about the ED phase of acute care rather than the ED as an isolated provider of care. There are two important implications of this. First, efforts to improve performance against these measures will often need to focus on parts of the patient journey outside the ED. Second, this framework does not specifically scrutinise quality outside the ED phase of care. Attempting to cover all phases of acute care in one document would be unwieldy. However, it is expected that other phases of acute care would be subject to at least the same degree of scrutiny of quality as implied by this framework.

## Quality measures

### ***Recommended quality measures for the ED phase of acute care in New Zealand***

The details of the five ACEM quality profiles are presented below, with quality measures listed against each.

Some measures should be recorded only occasionally, others should be measured regularly and some continuously (measures listed in bold are mandatory). To this end, each of the measures is categorised as:

- **C** – should be measured continuously – as often as possible but at least monthly (for example, performance against the ‘Shorter stays in emergency departments’ health target)
- **R** – should be measured regularly – at least 12 monthly. If a department is able to measure some of these continuously, that is preferable (e.g. many of the clinical audits).
- **O** – should be measured occasionally – approximately two to five yearly. Many of the slowly changing measures, such as size of department, staffing levels, etc. should be measured as required, for the purposes of benchmarking with published standards or precedents.

For many elements of the framework, particularly under the education and training and research profiles, there will be greater relevance for some departments than for others. However, they are part of a department’s framework and are worth recording if present, albeit only occasionally. If an element is absent (for example, some of the elements listed in the research profile), then it is up to the DHB/ED to determine if they consider that a deficiency which needs to be rectified, or is appropriate for their department.

While some measures might have less relevance for some DHBs, those elements expected of all DHBs are listed in bold. The mandatory quality measures are summarised in table form in Appendix one.

## ***Clinical profile***

The clinical profile lists the bulk of quality measures expected to be measured continuously or regularly.

We expect DHBs to measure and monitor data by ethnicity, observe trends and make improvements where required based on the needs of population groups.

### **Patient journey time-stamps**

1. **ED LOS (C).**  
**Percentage left within six hours, according to the 'Shorter stays in emergency departments' health target definition.**
2. Ambulance offload time (R).  
Delays to ambulance offload are not considered to be a significant problem in NZ but need to be monitored to ensure delays to offloading are not used to 'game' the health target. Definition of this time might be the time referred to by St John Ambulance Activity and Related Performance Indicators as the 'Handover and readiness' time, from crew arrival at treatment facility (T9 of the St John Ambulance time stamps) to crew clear and available for work (T10) or equivalent time stamps used by Wellington Free Ambulance. However, other ways of measuring this time (for example time of arrival to time of triage) might be used if considered more appropriate for a particular DHB.
3. **Waiting time from triage to time seen by a decision making clinician (C).**  
For the purpose of this measure a decision making clinician is defined as someone who can make clinical decisions or begin a care pathway over and above triage. Traditionally the Australasian Triage Scale (ATS), with its associated performance thresholds as published by ACEM, has been used for this purpose. Many EDs are evolving towards a two tiered prioritisation system (triage 1 and 2 to be seen now, the others to be seen in order of arrival) or a three tiered system (triage 1, triage 2 and the others). The reasons for this include streaming of patients within and beyond the ED, including to fast tracks, and greater nursing assessment and treatment of patients as part of enhanced nursing practice or according to the delegated authority within agreed pathways.

The ATS evolved within a 'single queue for a doctor' paradigm, and there has been much debate about its ongoing utility in modern EDs. However, it is expected that ATS triaging will continue as it is a familiar and useful tool for prioritisation, and it gives a comparable picture of case mix.

Because of the evolution of the models of care in our EDs, comparison of an ED's performance against the performance thresholds published by ACEM for each of the triage categories has become a less accurate indicator of quality than it once was. However, it is recommended that such comparison is made, as part of internal quality improvement processes.

While a gap between an ED's performance and the ATS suggested performance might not represent a deficiency of care it should stimulate scrutiny to see if there are deficiencies and if improvements need to be made. Like all the indicators in this document, it is most valuable as part of well informed internal quality improvement processes rather than as isolated and ill informed critique.

4. Other journey time stamps, to include but not limited to:

- Time to ED completion (referral or discharge) (R).  
This, and subsequent measures, might be part of a 3:2:1 process (three hours for ED workup, two hours for inpatient team workup and then one hour to access a bed), although there is not universal agreement with the 3:2:1 time allocation. Furthermore, it is difficult to time-stamp parts of the patient journey which do not involve the patient moving. However, understanding the parts of the journey contributing most to delays is important. This and the next four measures are included for this reason, although they are not mandatory measures.
- Time from referral to specialist team assessment (R).
- Time to specialist team completion (start of assessment to completion) (R).
- Time from bed request to bed allocation (R).
- Time from bed allocation to departure from ED to the bed (R).

5. Access block ACEM definition (percentage of admitted patients still in ED at eight hours) (R).

While there are other ways of measuring access block, or bed block, we considered this definition to be as good as any and it allows benchmarking across Australasia.

## ***ED overcrowding measures***

### **6. ED overcrowding measure to consist of one, or both, of the following (R):**

- Length of stay of patients in inappropriate spaces (total patient hours). An inappropriate space is one not intended for the provision of patient care. Corridors and waiting rooms, for example, are not intended for the provision of patient care. This measure is considered one that all EDs should scrutinise. While it might be difficult to do for some EDs, and therefore might be regular rather than continuous, it is a direct measure of what the Shorter Stays Target was attempting to address (ED overcrowding). However, if computer coding doesn't allow the capture of this information, then the following measure might be substituted.
- ED occupancy rate of over 100% (all patient care spaces/cubicles full). This measure gives an indication of ED occupancy which would impair patient flow and lead to placement of patients in corridors or other clinically inappropriate places. It should be relatively easy to measure using number of patients in the ED (including in the waiting room) at any time and the total number of treatment spaces. It is a measure that could be made in 'real time' or as a retrospective measure of the amount or proportion of time the department is 100% or more occupied.

## ***ED demographic measures***

7. ED patient attendance by 1000 of population (R).  
This measure gives an indication of ED utilisation by the population. While there isn't a 'right' utilisation, it is considered that less than 200 per 1000 is a low rate of utilisation, and over 300 is high. This measure, and the next three give a snapshot of utilisation. This measure should capture use by ethnicity.
8. ED patient attendance by ATS category (R).
9. Admission rate by ATS category (R).
10. Admission rate by 1000 of population. This measure should include admissions by population group (R).
11. **Unplanned representation rates within 48 hours of ED attendance (R).**  
This measure is promoted by most international jurisdictions. While 'unplanned' is hard to define, and unplanned returns might represent appropriate care on many occasions, it is considered an important measure to use for benchmarking with stated expectations, and to examine trends. The 48 hour time scale is commonly employed, although times from 24 hours to a week are used elsewhere.

## ***ED quality processes***

### **12. Mortality and morbidity review sessions (R).**

This measure is fulfilled if regular sessions occur (at least 12 monthly), relevant learnings are collated and appropriate changes are made as a consequence. In other words, it is not just the performance of these sessions, but the contribution of these sessions to quality improvement. Cases might lead to performance of a clinical quality audit (see below) or a sentinel review process, to elucidate the learnings and to define what changes need to be made.

### **13. Sentinel events review process (R).**

These reviews are a formal process for investigating significant clinical events that resulted, or might have resulted, in patient harm. While the expectation is that such reviews would take place regularly, they would be triggered by a sentinel event and wouldn't necessarily follow a minimum 12 monthly frequency.

### **14. Complaint review and response process (R).**

Like mortality and morbidity review sessions and sentinel event review processes, the expectation of this measure is that there will be a process of review and response to complaints that feeds into quality improvement by identifying and addressing any deficiencies of care. This may be integrated into a DHB process.

### **15. Staff experience evaluations (R).**

It is expected that all emergency departments listen to the views of their staff regarding the quality of the department (job satisfaction, and patient care). Mechanisms to address this measure could include staff forums, planning days, staff appraisals, exit interviews, etc.

## ***Patient experience measures***

### **16. Patient experience evaluations (R).**

It is expected that all DHBs listen to the views of their patients regarding the care they received. Mechanisms to address this measure could include general conversations with patients, written feedback and formal surveys. To assist with this process, the Health Quality and Safety Commission New Zealand are developing a set of patient experience indicators. The Commission is working closely with the Ministry of Health on the future implementation of the tool across the sector. DHBs will be able to add questions relevant to them and able to undertake more frequent local surveys.

[www.hqsc.govt.nz/our-programmes/health-quality-evaluation/news-and-events/news/1085](http://www.hqsc.govt.nz/our-programmes/health-quality-evaluation/news-and-events/news/1085)

### **17. Patient/consumer participation in quality improvement processes (R).**

Consumer involvement might be in addition to patient satisfaction surveys. This might include 'health literacy' contribution to the development of patient information.

### **18. Proportion left before seeing doctor or other decision making clinician (R).**

Patients who are triaged but then do not wait for the doctor, or other decision making clinician to see them, might do so for a variety of reasons. However, among those reasons are long waits to see a doctor or other decision making clinician. The proportion of patients who do not wait should be measured for two reasons. First, a large number (more than a few percent) might represent a problem accessing care which the DHB should address. Secondly, this group are excluded from counting towards the health target. A decision making clinician is defined as someone who can make clinical decisions leading to definitive care or begin a care pathway over and above triage, and explicitly excludes a clinician who only undertakes triage (placing a patient in a queue and/or a place to await a doctor or decision making clinician). Under some circumstances a clinician might provide triage and then go on to deliver assessments and interventions which are consistent with being a decision making clinician. Hence, it is permissible to consider a triage nurse a decision making clinician if such interventions, over and above triage, have occurred.

### **19. Proportion left before care was completed (R).**

Left before completion – before the clinician had discharged them – might be measured in addition to left before doctor/clinician.

## ***Clinical quality audits***

Note: the measures numbered 20 to 25 are mandatory and regular (expected to be done at least 12 monthly). However, the bullet point examples are indicative. It is not expected that DHBs will do all of these. Rather, they will do at least one audit under each of the headings, every 12 months, based on these examples or informed by morbidity and mortality reviews, sentinel event reviews, complaints, and so on.

**20. Mortality rates for specific conditions benchmarked against expected rates (R).**

These are likely to be done in conjunction with other departments and might be occurring continuously as part of a registry or trauma system. For example:

- fractured neck of femur
- STEMI
- major trauma.

**21. Time to thrombolysis (or PCI) for appropriate STEMI/ACS (R).**

**22. Time to adequate analgesia (R).**

This is a common quality measure in EDs. Ideally time to adequate analgesia should include time to performance of a pain score, administration of an appropriate analgesic, and re-assessment of the pain score. In this respect, this activity is about the timely performance of quality care and not simply a time stamp.

**23. Time to antibiotics in sepsis (R).**

For example:

- sepsis
- pneumonia
- immunocompromised fever (especially neutropenia).

**24. Procedural and other audits (R).**

For example, audits into the numbers, appropriateness, success and complications of:

- procedural sedation
- endotracheal intubation
- central lines
- audit of appropriateness of imaging
- audit of appropriateness of pathology testing.

**25. Other clinical audits (R).**

The expectation is that a clinical audit will be performed at least every 12 months, rotating randomly or according to a local focus – possibly identified in a mortality and morbidity review or sentinel event review process. Some examples are listed below, (including countries where they are recommended), however, the choice of topic to audit should be dictated by local need:

- paediatric fever (0 to 28 days) with septic workup percent (Canada 2010)
- paediatric fever (0 to 28 days) who get antibiotics percent (Canada 2010)
- paediatric croup (3 months to 3 years) who get steroids percent (Canada 2010)
- time to treatment for asthma
- asthma patients (moderate and severe) who are discharged from the ED who get a discharge prescription for steroids percent (Canada 2010)
- time to antibiotics in meningitis percent (Canada 2010)
- cellulitis that ends in admission percent (NHS England 2012)
- DVT that ends in admission percent (NHS England 2012)
- audit of high risk or high volume conditions (ACEM 2012)
- audit of clinical guidelines compliance (ACEM 2012)
- audit of medication errors (ACEM 2012)
- patient falls
- missed fractures on X-rays percent
- screening for non-accidental injury and neglect in children
- screening for domestic violence and partner abuse
- public health/preventative audits, such as alcohol or substance misuse
- appropriate discharge of vulnerable people from the ED (to include discharge of older people at night).

## ***Documentation and communication audits***

### **26. Documentation and communication audits (R).**

These should be done regularly and might consist of all or an alternating selection of the following:

- Quality of notes audit – documentation standards. Such audits will examine documentation standards under locally selected criteria but would normally include attention to recording of doctors' and nurses' names, times of clinical encounters, good clinical information, appropriate details of discharge condition of the patient and discharge instructions.
- Quality of discharge instructions audit. This measure is considered of particular importance. It might be achieved by specific attention to this issue in a notes audit or a focus on the proportion of patients who get written discharge advice or those with specific conditions (for example, sutures or a minor head injury), who get appropriate written discharge instructions.
- Quality of communication with GP for discharged patients audit. Handover of care to the patient's GP, (and provision of appropriate follow up arrangements), is important. This might be a focused part of a general notes audit, or it might be a count and quality appraisal of written or electronic notes to the patients' GPs.
- Quality of internal communication within the hospital related to handover of care between the ED and other services.

## **Performance of observation/short stay units (if the ED has one)**

(Note, ED observation units or short stay units refer to units run by ED staff for management of patients by the ED team). Inpatient assessment units are not the focus of this group of performance measures. While such units should also have expected performance measures they fall outside the scope of this document. Details of how it is expected these units should be used can be found in the document produced by the ED advisory group called '*Streaming and the Use of Emergency Department Observation Units and Inpatient Assessment Units*'.<sup>3</sup>

27. Length of stay of the observation/short stay unit, (the time from physical admission to the unit until physical departure (discharge or transfer to a ward) – percent under expected LOS (more than 80 percent expected) **(R)**.  
The expected length of stay of these units should be defined and monitored. Generally the expected length of stay would be 8 to 12 hours, although some might accept up to 24 hours. Whatever the model adopted it should be policed to ensure the majority (80% or more) are discharged within this time. This, and the next two measures, help ensure that the unit is used for appropriate observation patients, and not as a 'work around' for barriers to accessing inpatient care.
28. **Admission from unit to inpatient team percent (less than 20% expected) **(C)****.  
ED observations units are for patients who should be able to be cared for by the ED, without inpatient team input. Inevitably some patients will need referral to inpatient teams, but a proportion over 20% needing this suggests the observation unit is accommodating patients who should have been admitted to an inpatient unit instead of the observation unit.
29. Utilisation of unit as a percentage of total ED presentations (expected to be less than 20%) **(C)**.  
A high proportion (over 20%) of total ED patients using the observation unit suggests the unit might be being used inappropriately.

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<sup>3</sup> Ministry of Health. 2012. *Streaming and the Use of Emergency Department Observation Units and Inpatient Assessment Units*. Wellington: Ministry of Health. URL: [www.hiirc.org.nz](http://www.hiirc.org.nz) (accessed 10 March 2014).

## ***Education and training profile***

Emergency departments should be involved in education and training relevant to the needs of their staff and, where relevant, a record should be kept of the following:

**30. An appropriate orientation to the ED (R).**

In addition to confirming that an appropriate orientation is given, it is expected that its quality is evaluated through feedback or other means. This measure is fulfilled if there is a regular orientation programme and it is evaluated occasionally. It is important that the orientation training addresses cultural awareness, especially for overseas staff coming to New Zealand for the first time.

**31. Departmental educational programme (R).**

Such programmes might be multidisciplinary or discipline specific (possibly with some joint sessions). It is expected that there is periodic evaluation of the quality of the education programmes. This measure is fulfilled if there is a departmental education programme and it is evaluated occasionally. It is important that education includes health literacy and cultural awareness, and assessment of cultural competence.

**32. For EDs accredited for training with the Australasian College for Emergency Medicine, there should be the required components (O).** (see [www.acem.org.au](http://www.acem.org.au)).

**33. Instructors for accredited training courses should be recorded, if present, as an indicator of academic quality of the ED (O).**

Examples include:

- Advanced Paediatric Life Support (APLS)
- Advanced Trauma Life Support (ATLS)
- Advanced Complex Medical Emergencies (ACME)
- Emergency Life Support (ELS).

**34. Numbers of staff who have completed accredited training courses and credentialing in various activities, should be recorded as an indicator of the quality of training of the ED staff. In response to this record, encouragement should be provided for others to seek such training (O).**

Examples include:

- New Zealand Resuscitation Council (NZRC) level of certification
- Advanced Paediatric Life Support (APLS)
- Advanced Trauma Life Support (ATLS)
- Advanced Complex Medical Emergencies (ACME)
- Emergency Life Support (ELS)
- Advanced Life Support (NZRC)
- Credentialing in ultrasound.

35. Departmental educational roles should be recorded as an indicator of the academic quality of the ED (O).  
Examples include:
- Director of Emergency Medicine Training (DEMT) / medical educator
  - nursing educator
  - administration staff educator.
36. Academic emergency appointments should be recorded, (if present), as an indicator of the academic quality of the ED (O).  
Examples include:
- professor of emergency medicine
  - lecturer in emergency medicine
  - research fellow
  - postgraduate students.
37. Higher academic qualifications achieved by staff members while in the department should be recorded as an indicator of the academic quality of the ED (O).  
Examples include:
- Masters
  - PhD
  - MD.
38. The department's involvement in medical student, nursing student and other discipline undergraduate teaching and training should be recorded as an indicator of both the commitment to education and academic quality of the ED (O).
39. Participation by staff in scientific meetings, including hosting, attendance and contributing, should be recorded as an indication of the academic quality of the department. In response to this information, staff might be encouraged to participate further (O).
40. Teaching awards received by the department, or any of its staff, should be recorded as an indication of the educational quality of the ED (O).

## **Research profile**

Ideally, departments should be involved in research relevant to emergency medicine and nursing. Research should identify disparities and trends by ethnic group and should build an evidence base for best practice for Māori, Pacific and other population groups.

Where relevant, a record should be kept of the following:

41. Academic emergency appointments, where present, should be recorded as an indicator of the academic quality of the ED (O).  
Examples include:
  - professor of emergency medicine/nursing
  - lecturer in emergency medicine/nursing
  - research fellows
  - postgraduate students.
42. Research grants achieved by members of the department, if any, should be recorded as an indicator of the research quality of the ED (O), including:
  - number of grants
  - type of grants
  - funding received.
43. Research awards received by members of the department, if any, should be recorded as an indicator of the research quality of the ED (O).
44. Research projects underway in the department should be recorded as an indication of both the commitment to research and the quality of research in the ED (O).
45. Research presentations at scientific meetings should be recorded as an indication of both the commitment to research and the quality of research in the ED (O).
46. Publications by emergency department staff should be recorded as an indication of the quality of research in the ED (O).  
Examples should include:
  - book chapters
  - refereed journal articles
  - other publications.

## **Administration profile**

The administrative function of an ED should include the following quality components, which should be recorded in the quality profile. A consequence of recording this should be the identification of deficiencies the department needs to address:

- 47. A designated quality team presence within the ED according to the quality structure of the DHB (comprising staff with appropriate cultural competencies and representative of medical and nursing staff and ideally clerical and allied health professionals) (R).**
48. Department layout and size, including the numbers and types of treatment spaces (O).  
The appropriate layout and size of a department will be determined locally but will be significantly influenced by appropriate precedents, including benchmarking with similar departments and published standards. Design of departments should accommodate the needs and be easily accessible for families and whānau. A plan to rectify deficiencies identified in this process, and particularly if considered to compromise patient care, should result.
49. Equipment considerations, including the range of equipment available and maintenance and replacement (O).  
The appropriate equipment needs will be determined locally but will be significantly influenced by appropriate precedents, including benchmarking with similar departments and published standards. A plan to rectify deficiencies identified in this process, and particularly if considered to compromise patient care, should result.
50. Workforce considerations, including types, level of seniority and numbers, and cultural mix (O).  
These should be compared to appropriate precedents, such as benchmarking with other departments and published standards. Additional workforce considerations might include:
  - number of filled full-time equivalence (FTE)/total FTE – for FACEMs, trainees, nurses, and clerical
  - sick leave rates
  - turn over rates at each level and for each discipline
  - vacant positions and time to recruit
  - staff satisfaction
  - non clinical time
  - accumulation of professional development leave
  - occupational safety including nosocomial infections, and violent incidents
  - performance appraisal.

## ***Professional profile***

The professional profile of an ED should be recorded as part of the quality framework, as an indicator of both the department's commitment and its profile beyond the hospital.

Examples include, but are not limited to:

51. Staff participation in committees and faculties of professional bodies, such as ACEM, CENNZ, etc (O).
52. Participation in political bodies, such as Ministry of Health committees (O).
53. Representation of emergency medicine on appropriate national bodies, such as MCNZ and NZNO (O).
54. Participation in submissions on health policy (O).
55. Health advocacy roles (O).  
Examples include:
  - World Health Organization (WHO)
  - New Zealand Medical Association (NZMA)
  - Medical colleges
  - Roles that advocate for reducing inequalities in health outcomes for the population.
56. Participation in public health initiatives, particularly those that improve inequalities for populations with poorer health outcomes (O).
57. Participation in hospital committees (O).
58. Participation in ethics committees (O).
59. Awards, or other recognition of professional achievement, received by ED staff (O).

## Expectations

1. In preparation for the beginning of the 2014/2015 year, on 1 July 2014 all DHBs in their annual planning process will indicate a commitment to implementing a quality framework, in line with this document.

While we would like DHBs to implement a comprehensive quality framework as soon as possible, we appreciate some will be challenged by the logistics of doing this. Therefore, we recommend that as a minimum DHBs take a staged approach to implementing this framework, along the following lines in 2014/15:

- during Quarter 1 2014/2015 DHBs have in place an initial version of a quality framework for their ED, appropriately structured and developed according to guidance in this document and the need of the DHB in improving quality
  - during Quarter 1 DHBs are measuring the mandatory measures defined in this document
  - during Quarter 3 (if not before) DHBs are measuring and responding to the mandatory measures, and are adding whatever non-mandatory measures provide a more comprehensive approach to quality according to consideration of the Donabedian Categories and the Institute of Medicine quality domains (mentioned earlier in this document).
2. The quality framework and the measures are not required to be routinely reported, but must be available for scrutiny should there be a perceived need to do so.
  3. The quality framework should be supported by appropriately resourced and skilled personnel.
  4. The quality framework should be supported by information technology development which enables real-time and continuous measurement, and is consistent with the direction provided by the National IT Board and its ED IT subgroup.

## Appendix one: Summary of mandatory measures

### Key

- **C** – should be measured continuously – as often as possible but at least monthly (for example, performance against the ‘Shorter stays in emergency departments’ health target)
- **R** – should be measured regularly – at least 12 monthly. If a department is able to measure some of these continuously, that is preferable (e.g. many of the clinical audits).
- **O** – should be measured occasionally – approximately two to five yearly. Many of the slowly changing measures, such as size of department, staffing levels, etc. should be measured as required, for the purposes of benchmarking with published standards or precedents.

Category	Specific measure	Frequency
<b>Clinical profile</b>		
Patient journey time-stamps	<b>1. ED LOS. As per the definition for the ‘Shorter stays in emergency departments’ health target.</b>	<b>C</b>
	<b>3. Waiting time from triage to time seen by a decision making clinician.</b>	<b>C</b>
ED overcrowding measures	<b>6. ED overcrowding measure to consist of one, or both of the following:</b> <ul style="list-style-type: none"> <li>· Length of stay of patients in inappropriate spaces</li> <li>· ED occupancy rate of over 100%.</li> </ul>	<b>R</b>
ED demographic measures	<b>11. Unplanned representation rates within 48 hours of ED attendance.</b>	<b>R</b>
ED quality processes	<b>12. Mortality and morbidity review sessions.</b>	<b>R</b>
	<b>13. Sentinel events review process.</b>	<b>R</b>
	<b>14. Complaint review and response process.</b>	<b>R</b>
	<b>15. Staff experience evaluations.</b>	<b>R</b>
Patient experience measures	<b>16. Patient experience evaluations.</b>	<b>R</b>
	<b>18. Proportion left before seeing doctor or other decision making clinician.</b>	<b>R</b>
Clinical quality audits	<b>20. Mortality rates for specific conditions, benchmarked against expected rates.</b>	<b>R</b>
	<b>21. Time to thrombolysis (or PCI) for appropriate STEMI/ACS.</b>	<b>R</b>
	<b>22. Time to adequate analgesia.</b>	<b>R</b>
	<b>23. Time to antibiotics in sepsis.</b>	<b>R</b>

Category	Specific measure	Frequency
	<b>24. Procedural and other audits.</b>	R
	<b>25. Other clinical audits.</b>	R
Documentation and communication audits	<b>26. Documentation and communication audits.</b>	R
Performance of observation /short stay units (if the ED has one)	<b>28. Admission from unit to inpatient team percent (less than 20% percent expected).</b>	C
Education and training profile	<b>30. An appropriate orientation in to the ED.</b>	R
	<b>31. Departmental educational programme.</b>	R
Administration profile	<b>47. A designated quality team presence within the ED according to the quality structure of the DHB (comprising staff with appropriate cultural competencies and representative of medical and nursing staff and ideally clerical and allied health professionals).</b>	R

## Appendix two: Summary of all performance measures

### Key

- **C** – should be measured continuously – as often as possible but at least monthly (for example, performance against the ‘Shorter stays in emergency departments’ health target)
- **R** – should be measured regularly – at least 12 monthly. If a department is able to measure some of these continuously, that is preferable (e.g. many of the clinical audits).
- **O** – should be measured occasionally – approximately two to five yearly. Many of the slowly changing measures, such as size of department, staffing levels, etc. should be measured as required, for the purposes of benchmarking with published standards or precedents.

Category	Specific measure	Frequency
<b>Clinical profile</b>		
Patient journey time-stamps	<b>1. ED LOS. As per the definition for the ‘Shorter stays in emergency departments’ health target.</b>	<b>C</b>
	2. Ambulance offload time.	<b>R</b>
	<b>3. Waiting time from triage to time seen by a decision making clinician.</b>	<b>C</b>
	4. Other journey time-stamps to include but not limited to: <ul style="list-style-type: none"> <li>· Time to ED completion (referral or discharge)</li> <li>· Time from referral to specialist team assessment</li> <li>· Time to specialist team completion (start of assessment to completion)</li> <li>· Time from bed request to bed allocation</li> <li>· Time from bed allocation to departure from ED to the bed.</li> </ul>	<b>R</b>
	5. Access block ACEM definition (percentage of admitted patients still in ED at eight hours).	<b>R</b>
ED overcrowding measures	<b>6. ED overcrowding measure to consist of one, or both of the following:</b> <ul style="list-style-type: none"> <li>· <b>Length of stay of patients in inappropriate spaces</b></li> <li>· <b>ED occupancy rate of over 100%.</b></li> </ul>	<b>R</b>
ED demographic measures	7. ED patient attendance by 1000 of population.	<b>R</b>
	8. ED patient attendance by ATS category.	<b>R</b>
	9. Admission rate by ATS category.	<b>R</b>
	10. Admission rate by 1000 of population, and should include admissions by population group.	<b>R</b>

Category	Specific measure	Frequency
	<b>11. Unplanned representation rates within 48 hours of ED attendance.</b>	R
ED quality processes	<b>12. Mortality and morbidity review sessions.</b>	R
	<b>13. Sentinel events review process.</b>	R
	<b>14. Complaint review and response process.</b>	R
	<b>15. Staff experience evaluations.</b>	R
Patient experience measures	<b>16. Patient experience evaluations.</b>	R
	17. Patient/consumer participation in quality improvement processes.	R
	<b>18. Proportion left before seeing doctor or other decision making clinician.</b>	R
	19. Proportion left before care was completed.	R
Clinical quality audits	<b>20. Mortality rates for specific conditions benchmarked against expected rates.</b>	R
	<b>21. Time to thrombolysis (or PCI) for appropriate STEMI/ACS.</b>	R
	<b>22. Time to adequate analgesia.</b>	R
	<b>23. Time to antibiotics in sepsis.</b>	R
	<b>24. Procedural and other audits.</b>	R
	<b>25. Other clinical audits (see examples in main body of the document).</b>	R
Documentation and communication audits	<b>26. Documentation and communication audits.</b>	R
Performance of observation/ short stay units (if the ED has one)	27. Length of stay of the observation/short stay unit % under expected LOS (more than 80% expected).	R
	<b>28. Admission from unit to inpatient team percent (less than 20% expected).</b>	C
	29. Utilisation of unit as a percentage of total ED presentations (less than 20 %expected).	C
Education and training profile	<b>30. An appropriate orientation in to the ED.</b>	R
	<b>31. Departmental educational programme.</b>	R
	32. For EDs accredited for training with the Australasian College for Emergency Medicine, there should be the required components.	O

Category	Specific measure	Frequency
	33. Instructors for accredited training courses should be recorded, if present, as an indicator of academic quality of the ED.	○
	34. Numbers of staff who have completed accredited training courses and credentialing in various activities, should be recorded as an indicator of the quality of training of the ED staff. In response to this record encouragement should be provided for others to seek such training.	○
	35. Departmental educational roles should be recorded as an indicator of the academic quality of the ED.	○
	36. Academic emergency appointments should be recorded, (if present), as an indicator of the academic quality of the ED. Examples include: <ul style="list-style-type: none"> <li>· professor of emergency medicine</li> <li>· lecturer in emergency medicine</li> <li>· research fellow</li> <li>· postgraduate students.</li> </ul>	○
	37. Higher academic qualifications achieved by staff members while in the department should be recorded as an indicator of the academic quality of the ED. Examples include: <ul style="list-style-type: none"> <li>· Masters</li> <li>· PhD</li> <li>· MD.</li> </ul>	○
	38. The department's involvement in medical student, nursing student and other discipline undergraduate teaching and training should be recorded as an indicator of both the commitment to education and academic quality of the ED.	○
	39. Participation by staff in scientific meetings including hosting, attendance, and contributing, should be recorded as an indication of the academic quality of the department. In response to this information, staff might be encouraged to participate further.	○
	40. Teaching awards received by the department, or any of its staff, should be recorded as an indication of the educational quality of the ED.	○
<b>Research profile</b>	41. Academic emergency appointments, where present, should be recorded as an indicator of the academic quality of the ED. Examples include: <ul style="list-style-type: none"> <li>· professor of emergency medicine/nursing</li> <li>· lecturer in emergency medicine/nursing</li> <li>· research fellows</li> <li>· postgraduate students.</li> </ul>	○

Category	Specific measure	Frequency
	42. Research grants achieved by members of the department, if any, should be recorded as an indicator of the research quality of the ED: <ul style="list-style-type: none"> <li>· number of grants</li> <li>· type of grants</li> <li>· funding received.</li> </ul>	○
	43. Research awards received by members of the department, if any, should be recorded as an indicator of the research quality of the ED.	○
	44. Research projects underway in the department should be recorded as an indication of both the commitment to research and the quality of research in the ED.	○
	45. Research presentations at scientific meetings should be recorded as an indication of both the commitment to research and the quality of research in the ED.	○
	46. Publications by emergency department staff should be recorded as an indication of the quality of research in the ED. Examples should include: <ul style="list-style-type: none"> <li>· book chapters</li> <li>· refereed journal articles</li> <li>· other publications.</li> </ul>	○
<b>Administration profile</b>	<b>47. A designated quality team presence within the ED according to the quality structure of the DHB (comprising staff with appropriate cultural competencies and representative of medical and nursing staff and ideally clerical and allied health professionals).</b>	<b>R</b>
	48. Department layout and size, including the numbers and types of treatment spaces. The appropriate layout and size of a department will be determined locally but will be significantly influenced by appropriate precedents, including benchmarking with similar departments and published standards. Design of departments should accommodate the needs and be easily accessible for families and whanau. A plan to rectify deficiencies identified in this process, and particularly if considered to compromise patient care, should result.	○
	49. Equipment considerations, including the range of equipment available and maintenance and replacement. The appropriate equipment needs will be determined locally but will be significantly influenced by appropriate precedents, including benchmarking with similar departments and published standards. A plan to rectify deficiencies identified in this process, and particularly if considered to compromise patient care, should result.	○

Category	Specific measure	Frequency
	<p>50. Workforce considerations, including types, level of seniority and numbers, and cultural mix. These should be compared to appropriate precedents, such as benchmarking with other departments and published standards. (O) Additional workforce considerations might include:</p> <ul style="list-style-type: none"> <li>· number of filled full time equivalence (FTE)/total FTE – for FACEMs, trainees, nurses, and clerical</li> <li>· sick leave rates</li> <li>· turn over rates at each level and for each discipline</li> <li>· vacant positions and time to recruit</li> <li>· staff satisfaction</li> <li>· non clinical time</li> <li>· accumulation of professional development leave</li> <li>· occupational safety including nosocomial infections, and violent incidents</li> <li>· performance appraisal.</li> </ul>	○
<b>Professional profile</b>	51. Participation of staff in committees and faculties of professional bodies, such as ACEM, CENNZ, etc.	○
	52. Participation in political bodies, such as Ministry of Health committees.	○
	53. Representation of emergency medicine on appropriate national bodies, such as MCNZ and NZNO.	○
	54. Participation in submissions on health policy.	○
	<p>55. Health advocacy roles. Examples include:</p> <ul style="list-style-type: none"> <li>· World Health Organization (WHO)</li> <li>· New Zealand Medical Association (NZMA)</li> <li>· Medical colleges</li> <li>· roles that advocate for reducing inequalities in health outcomes for the population.</li> </ul>	○
	56. Participation in public health initiatives, particularly those that improve inequalities for populations with poorer health outcomes.	○
	57. Participation in hospital committees.	○
	58. Participation in ethics committees.	○
59. Awards, or other recognition of professional achievement, received by ED staff.	○	

## Appendix three: Members of the National Emergency Departments Advisory Group and acknowledgements

### *National Emergency Departments Advisory Group members*

Mike Ardagh	Chair, and National Clinical Director of Emergency Department Services, Ministry of Health
Lynette Drew	Senior Advisor – Emergency Departments and Acute Demand, Ministry of Health
Peter Freeman	ED Clinician (FACEM), Lakes DHB
Michael Geraghty	ED Nurse (CENNZ representative), Auckland DHB
Carolyn Gullery	DHB Planning and Funding Manager, Canterbury DHB
Craig Jenkin	ED Nurse (CENNZ representative), Capital & Coast DHB
Mike Hunter	Acute Care Networks (ECCT), Southern DHB
Chris Lowry	DHB Chief Operating Officer, Capital & Coast DHB
Tom Morton	ED Clinician (FACEM), Nelson Marlborough, DHB
Carrie Naylor-Williams	ED Nurse (CENNZ representative), MidCentral DHB
Mike Shepherd	ED Clinician (Fellow College), Auckland DHB
Jim Primrose	Chief Advisor, Primary Health Care – Sector Capability and Implementation, Ministry of Health

### *Former National Emergency Departments Advisory Group members*

Tim Parke, ED Clinician (FACEM), Auckland DHB  
 Geraint Martin, Chief Executive Officer, Counties Manukau DHB  
 Justin Moore, ED Nurse (CENNZ), Southern DHB  
 Gary Tonkin, Senior Project Manager, Shorter Stays in ED team, Ministry of Health  
 Claire Possenniskie, Senior Advisor, Shorter Stays in ED team, Ministry of Health

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Australasian College for Emergency Medicine New Zealand  
 College of Emergency Nurses New Zealand (CENNZ)  
 Royal Australasian College of Surgeons  
 St John  
 Auckland DHB  
 Bay of Plenty DHB  
 Canterbury DHB  
 Counties Manukau DHB  
 Hawke's Bay DHB  
 Hutt DHB

Lakes DHB  
MidCentral DHB  
Nelson Marlborough DHB  
Northland DHB  
Southern DHB  
Waikato DHB  
Waitemata DHB

Attendees of the New Zealand Emergency Departments Conference in Taupō on September 2012 and October 2013.

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Sector Capability and Implementation:

- System Integration team
- Māori Health Service Improvement team

Clinical Leadership, Protection and Regulation

National Health Board.