The Royal College of Emergency Medicine

Position Statement

6 March 2019

Improving Quality Indicators and System Metrics for Emergency Departments in England

Excellence in Emergency Care
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Executive Summary

1. **The Royal College of Emergency Medicine (RCEM) supports the continued use of the four-hour access standard as a high level metric to monitor emergency care system performance.**

2. **The four-hour access standard should be supported by a series of complementary metrics that help understanding of the causes of long waits and crowding in Emergency Departments.**

3. **System metrics based on an arbitrary 'decision to admit' time should be abandoned.**

4. **Quality indicators should aim to improve care for patients at the greatest risk of avoidable harm. These patients are best identified by a combination of high risk presentations and abnormal physiology. These patients are the most likely to benefit from an appropriately skilled emergency physician.**

5. **Quality indicators should not prioritise individual conditions at the expense of the undifferentiated patient unless clinical priority dictates.**

6. **Any changes to the current system metrics and quality indicators should be based upon an evidence base and robustly evaluated.**

Scope

This document is to provide expert clinical advice to NHS England / Improvement and other relevant stakeholders in the evolving review of Quality Indicators and System Metrics as part of the NHS Long Term Plan. Though this document is written primarily for England, there are common themes and principles that can usefully be applied across the devolved nations. In Scotland, the excellent review by Sir Harry Burns on targets and indicators health and social care in 2017 provide strong synergies with the work of NHS England.

Background

The way Emergency Care is monitored by policymakers and regulatory bodies has not changed in several years. The problems and care models in Emergency Departments have changed considerably over the last 10 years and it is our role to responsibly decide what standards we think usefully inform assurance and improvement efforts. We have reviewed and discussed a variety of time-based metrics, these should be seen as supporting and refocusing the efforts to monitor system flow in the best possible way on a consistent basis.

The Royal College of Emergency Medicine (RCEM) supports the four-hour standard as set out in: *Emergency Medicine briefing: Making The Case for the Four-Hour Standard*. The Four-Hour Standard was introduced to the NHS in England in 2004 as a measure to combat crowding and Exit Block in hospital Emergency Departments. Since its introduction it has reduced the total time that many patients have spent in Emergency Departments. Long waits in Emergency Departments are consistently associated with avoidable patient harms (including mortality), poor patient and staff experience.

RCEM acknowledges that some critics say that the four-hour standard has been a blunt tool, has perverse incentives and that there are important patient groups who are not benefited equitably from the standard. However, there are several clinical studies that have shown reduced mortality associated with introducing a time-based target. Also, one of its primary advantages is that it helps measure system flow. If the four-hour standard were to be replaced, the proponents of change need to explain why this would not mean a deterioration in care for patients, because politicians and managers have less incentive to prioritise the resources available to urgent and emergency care. In Scotland, Sir Harry Burn's 2017 review of targets in the public sector considered the A&E target and concluded 'This is an important standard and should remain since there is strong evidence of poorer outcome in patients who wait longer than 4 hours to be seen, treated or discharged.'

RCEM notes that the NHS has previously been able to achieve the standard and would caution against lowering expectations to meet what is currently achievable. This document is based on feedback from Council, the RCEM Quality in Emergency Care Committee and invited subject matter experts.

Fundamentally, our expert consensus view is that our patients are best served by a system which incentivises prompt ambulance offloads, rapid assessment of seriously ill and injured patients by skilled clinicians and quick admission to hospital for elderly, injured and ill patients.

Current position and recent history

In 2004, the English government introduced a rule that 98% of all patients would spend no longer than 4 hours in an Emergency Department, and other devolved nations in the UK followed shortly afterwards. Failing to comply with this rule attracted significant financial and administrative penalties. This rule was later amended to a 95% target in 2010, though Scotland persisted with a 98% standard. The cut-offs of 98% and 95% were not based on any evidence or even expert opinion. There were plans by Crouch and Cooke (2011), endorsed by the Department of Health, that this target should be removed and replaced with five key performance indicators, see table 1. though this was later dropped. The four-hour standard has become the dominant measure of success or failure when measuring emergency care system performance in the UK. This has led to concerns that it is possible to 'hit the target and miss the point'. Recent commentators have suggested the target should be rebalanced to focus mainly on the sickest patients. While this is superficially attractive, it is not really credible that seriously ill and injured patients are made to wait longer to assist hospitals in meeting performance targets. Emergency care systems have always been designed to prioritise or triage the sickest patients to be assessed and treated first.

Table 1: Key Performance Indicators (2011)
Left without being seen
Re-attendance rate
Time to initial assessment
Time to treatment
Total time in the ED

There are several facets of quality that can be assessed in Emergency Departments, though this varies throughout the United Kingdom. Different regulators will look at different measures. The table below is taken from the International Federation of Emergency Medicine's framework on Quality 2012 and it's imminent update(9). This consensus document describes the domains of quality and considers how

Emergency Department care can be measured within these, we have added the English position to each of these, see Table 2.

Table 2: International Measures of Quality in Emergency Care and English Position

Domain	Structure	Process	Outcome
Safe	Staff with right skill mix. Adequate assessment spaces. Adequate security.	Reporting systems for safety concerns (without fear of reprisal). Ability to share and learn from adverse incidents. Administration takes action on staff concerns.	Number of incident reports from a department (there should be many non-serious incidents and a few serious incidents). Incidence of hospital acquired infection, medication errors, violent incidents.
UK Position	An Emergency Department should be led by a Consultant who holds a CCT in Emergency Medicine. Please see the RCEM Workforce Guidance 2018	These processes exist in UK ED.	These outcomes are recorded in the UK and monitored. In addition, England now perform Structured Judgement Reviews (SJRs).

Domain	Structure	Process	Outcome
Effective	Adequate assessment spaces. Sufficient equipment. Adequate monitoring. Disaster/major incident plan.	Care standards or evidence based guidelines for common and important presentations available. Quality improvement activity being conducted.	Diagnostic and procedural errors Audit performance against international, national or local standards for common presentations, such as sepsis or multiple injuries. Hospitalised Standard Mortality Ratio. Morbidity / Mortality (general or specified conditions).
UK Position	We haven't stated how many spaces an ED needs.	These exist in the UK.	These exist in the UK and are well reported, compared to international comparators.
Patient-Centred	Structural environment allows for privacy and dignity. Dedicated areas for vulnerable groups (e.g. children, mentally ill, frail and/or older people).	Patient complaint system (with follow-up actions). Left without being seen data.	Patients' ability to participate in own care. Collection and use of patient reported outcomes. Time to analgesia audit.

Domain	Structure	Process	Outcome
UK Position	Variable. Most Emergency Departments have separate Paediatric areas and PLAN compliant rooms. We have stated in the RCEM 50 Care Standards about care for frail and elderly care. Increased focus on ambulatory emergency care in the Long Term Plan is supported.	Most UK hospitals have this.	We participate in the family and friends test (England only) and most EDs collect some form of patient survey. We periodically audit time to analgesia through our national clinical audits.
Timely	Ambulance notification system. Adequate clinicians to initially asses a patient promptly. Appropriate and timely support from other specialities.	Patients seen initially by a clinician trained in triage. Time to consultation by doctor. Time to be seen by decision maker. Patients needing admission are moved swiftly out of the ED.	Total length of stay in the ED (from arrival to departure). Percentage of patients who leave the ED without being seen (LWBS).
UK Position	Most Emergency Departments have effective communication with their local ambulance service. The other mentions are workforce recommendations and beyond the scope of the document.	These are recorded well in most Emergency Departments.	The total time in Emergency Departments is measured. We record the LWBS proportion and generally accept that less than 5% is an indicator of good performance.

Domain	Structure	Process	Outcome
Efficient	Emergency doctors available who can assess and provide initial treatment for all emergency presentations, regardless of age or pathology.	Patients investigated and treated according to evidence-based guidelines. Appropriate use of investigations.	Number of admissions from the ED. Avoidable patient representations to the ED. Good communication with other healthcare providers.
UK Position	This is generally met and overseen by the CQC through its regulatory mechanisms.	NICE and Professional Societies produce evidence-based guidelines.	We routinely monitor conversion rate and representation rate.
Equitable	ED available to all patients who need it, 24/7, regardless of age, disease or finances.	Patients seen in order of clinical priority.	Comparable access and clinical outcomes despite: gender, race, religion, other minorities, ability to pay.
UK Position	This is largely met, though there are disparities in access to care depending on geography and some patient groups.	This is met, though there is no nationally agreed Triage Scale.	This is met.

In addition, staff experience is recognised as providing useful narrative about the quality of a service, though this is not part of the IOM definition of quality. Staff experience is measured, partly, across the UK by the annual GMC survey of trainees. Staff experience is also measured by the NHS staff survey and the Family and Friends Test.

There are two overlapping domains that we need to consider:

1. Systems Metrics
2. Quality Indicators.

Systems metrics

The underlying principles of any metric we would support are:

1. It should use data which is already captured reliably.
2. It should promote quality care (safe, effective, equity, efficient, timely and patient-centred).
3. It should not prioritise any particular condition at the potential detriment of other patients.
4. It should promote care of those who need it most.
5. The measure should be robust to gaming.

In addition, we should support measures which assist diagnosis across the urgent and emergency care pathway. This should be thought of as indicating where there are problems with input, throughput or output. In addition, an approach entirely based on a single measure creates an artificial and unhelpful binary illusion of success or failure.

We generally support the System Wide Measures for Urgent and Emergency Care 2018, and our proposals are designed to complement these.

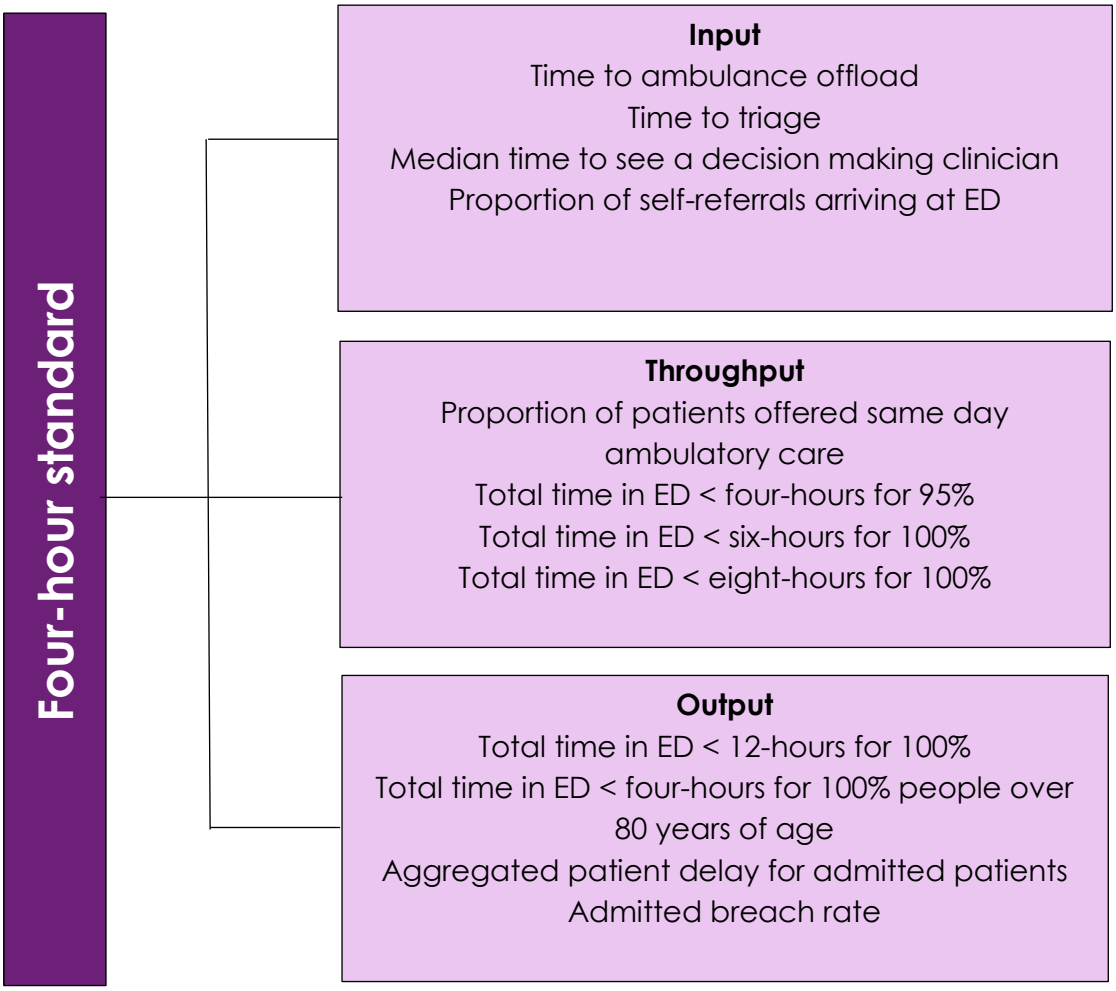
Proposed system metrics

The following proposals should be seen as supporting the four-hour standard. A series of metrics that provide information about where delays in the patient journey through the Emergency Department will assist improvement efforts.

Systems metrics

RCEM is clear that metrics based on decision to admit are meaningless, in particular, much managerial time and effort is wasted on deciding at what time a decision to admit is made. Metrics based on patient disposition, such as admission or discharge, are also too vulnerable to gaming. The increasing evidence of harms, such as delirium and pressure sores, to older patients who spend long times in Emergency Department mandates older people as a priority area. The figure on the next page shows the proposed system metrics.

Figure 1: Proposed metrics



Quality indicators

There are unique challenges in measuring quality in emergency medicine. We work in a system that is variably dependent on other services. Measuring outcomes and adjusting for potential confounders is significantly more complex and less valid than outcomes after surgery. To date, most quality indicators have relied on process measures, such as time to be seen.

We should use the following principles for any quality indicator that we wish to be assessed against.

1. It should prioritise the sickest patients in terms of time to be seen.
2. It should direct the most senior doctors to look after the sickest and complex patients.
3. It should not prioritise any single condition at the expense of the undifferentiated patient.
4. It should promote effective and patient centred care.
5. It should be relatively robust against undesirable gaming.

Proposed clinical standards

There is not currently enough high quality evidence to confidently propose fully defined clinical quality indicators in Emergency Departments, this should be an area of research and development. These proposed measures should be reviewed after robust evaluation, see table 3. We support the use of system wide outcome measures such as Summary Hospital Level Mortality Indicators and TARN. A senior decision maker is defined as an ST4 or above, or doctor in a non-training post with appropriate competencies equivalent to that of an ST4 or above trainee or a consultant emergency physician.

There are some significant difficulties in making recommendations. There is no national Triage Scale that is accepted and adopted across all UK Emergency Departments. This limits the ability to develop a recommendation based on triage category. The evidence behind the RCEM high risk conditions is based on the National Reporting and Learning System (NRLS). There is no national trauma triage tool, as different trauma networks have different requirements from a trauma triage tool.

There is insufficient evidence to propose a quality standard on a Paediatric Early Warning Score. There are a handful of promising scores, such as Manchews and POPS, that have been developed for use in Emergency Departments, but the uptake of these is insufficiently widespread to be able to propose these nationally.

Development and implementation of an effective paediatric early warning score should be prioritised as an important area for research.

Table 3: Proposed quality indicators for emergency medicine

	Pros	Cons
Proportion of patients with RCEM high risk conditions who are seen by a Consultant or senior decision maker. These are: • Chest Pain in people over the age of 30 • Abdominal pain in people age over the age of 70 years • Fever in children under six months of age • Unscheduled return visits within 72 hours	Directs senior doctors to patients at risk.	Proportion is undefined. Previous RCEM Audits have identified that this can be as low as 10% in some EDs.
Proportion of adult patients with severe illness, initial NEWS2 greater than 4, who are seen by a Consultant or senior decision maker.	Directs senior doctors to patients with serious illness.	Proportion is undefined.
Proportion of adult patients with severe illness, initial NEWS2 greater than 4, who see any decision making clinician within one hour.	Means that sick people are seen quickly.	Proportion is undefined.
Proportion, possibly 50%, of patients who attend more than 15 times in the preceding 12 months who have a Consultant developed management plan.	Would provide standardisation of care for high impact users.	Proportion is undefined.
Proportion of patients with multiple injuries, ISS greater than 15, where a consultant is involved with their care.	Directs senior doctors to patients with serious Injury.	In MTCs this is expected to be 100%, but even with 24/7 cover is frequently not achieved.

Recommendations for research

Developing this document has revealed that the evidence base has significant gaps and this limits the confidence with which we can make recommendations. We would counsel that existing system flow metrics are mission critical to the function of emergency care. Any proposed change or improvements in quality indicators should be robustly evaluated in diverse Emergency Departments; major urban, remote and rural, and major trauma centres. Feedback should be sought from a representative sample of patients and staff involved in delivering acute care, as well as robust data monitoring.

We would also advocate some specific research recommendations.

1. A consensus on the most effective Paediatric Early Warning Score.
2. Further define which patient presentations are at greatest risk and would benefit from early assessment by a senior decision maker.
3. Staffing strategies that link and evaluate increased safety to the increased depth and breadth of senior clinical care in the Emergency Dept.

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