Where *do* NEAT and patient safety meet?

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May 2013
At last, the debate is over...

“Access block and Emergency Department overcrowding are the single biggest threat to the provision of safe emergency care”

– Unnecessary deaths and increased LOS in hospital
– Delayed ambulance off loads
– Delays in treatment
– Risk of cross infection
– Adverse effects on workforce
THE POST- NEAT ERA ...
Is “safety” enough?

“The aforementioned issues have led to us routinely substituting quality care with merely safe care; while this is not acceptable to us, what is entirely unacceptable is the delivery of unsafe care; but this is now the prospect we find ourselves facing on too frequent a basis.”

Extract from a letter from West Midlands ED Directors to NHS executive leaked to The Independent
published MONDAY 20 MAY 2013
ED Attendances increasing in Australia

Total visits to Emergency Departments in Australia

65% increase in ED attendances since 2001/02

Source: AIHW Hospital Statistics, Total visits to EDs in Australia, 2001/02 – 2010/11
Lowthian J et al. *Demand at the ED front door: is the 4 hour target the answer?*
History

Post 4 hour rule introduction

• UK Reports ranged from improving patient care and driving positive whole-of-hospital reform, to negative outcomes: gaming of data, diversion of funding incentives, dysfunctional organizational behaviour and compromise in clinical patient outcomes.

• The main reason given for not reaching the target was “not enough inpatient beds”

April 2009: WA 4 hour rule introduced

July 2009: NZ Shorter stays in ED (6 hour rule)
BMA Survey Jan 2005

• **82% reported threats to pt safety** due to pressure to meet 4 hr target
  – Care of seriously ill / injured compromised
  – Pts D/C from A & E before adequate assessment or stabilisation
  – Pts moved to inappropriate areas / wards

• Sustainable improvements require
  – Management support for hospital-wide changes
Some lessons from the NHS 2006

NHS Institute for Innovation and Improvement

• have unified goals for cost reduction and quality improvement
• execute relentlessly
• invest in hearts and minds
  – frame the proposition
• make the Finance Leader a champion of quality
• seek to continuously improve
Report of national survey of emergency medicine (BMA Jan 2007)

• 505 / 1538 respondents of BAEM
• 56% thought EAT was achievable
• Not enough inpatient beds
• Use of locum staff to meet targets
• Data manipulation
• Pressure / overwork
• Lack of after- hrs GP services
Report of national survey of emergency medicine (BMA Jan 2007)

• Comments
  – “Target is not sole responsibility of emergency medicine, and other specialties have responsibility to see it being delivered. Similar targets should be set for medical teams re: length of stay of patients and minimum number of times patients should be seen on wards by a decision maker (middle grade). Also targets for community to supply placements and assessments for bed blockers. Patients entire journey needs to be looked at”
Emptying the Corridors of Shame: Organizational Lessons From England's 4-Hour Emergency Throughput Target


This was a qualitative study of EDs in England, purposively sampled for a range of size and performance on the target. Leadership of EDs at 9 Acute Trusts (hospitals) were interviewed between June and August 2008.
Respondents agreed on the following themes.

(1) Interdependency: Even with extensive ED process re-engineering, widespread Trust involvement was essential to meeting the target. Additionally, lack of recognition that it was a “Trust target” contributed to conflicts between staff, concerns for patient safety, and lost opportunity for organizational improvement.

(2) Contrasting change management strategies: ED leadership used collaborative strategies, whereas change in the rest of the hospital required a top-down approach.

(3) Burden and benefit for staff: Nursing perceived the greatest burden from the target but also acquired enhanced authority, skills, and roles.

(4) Costs: Although most EDs are now within range of the target, consistent performance while balancing patient safety remains tenuous.
UK CEM response to UK target changes
June 2010

CEM welcomes changes to the 4-hour target
“The College of Emergency Medicine (CEM) welcomes today's announcement by the Secretary of State that the 4-hour emergency access standard is to be lowered from 98% to 95%.

We believe that this now represents a level that will allow focus on an improved quality of care and clinical safety for our patients

while preserving all the positive benefits that an increased spotlight on emergency care, delivered in our Emergency Departments in recent years, has achieved.”
UK outcomes

The four hour target to reduce emergency department ‘waiting time’: A systematic review of clinical outcomes


“There is no clear evidence that the target to ED completion of 98% of patients in 4 h in itself has had any effect on the quality of care in ED in the UK.”
UK 2012

Figures for January 2012 show that the median wait for ambulance cases to be assessed by a health care professional (triage) was 3 minutes (95% seen in 47 minutes)

and the median time for all cases to be seen by a decision making clinician is 49 minutes (95% in 85 minutes)

This has only been collected nationally since April 2011 and so we cannot assess change over the last few years.

“I said that it should be patients – not numbers – which counted”

... primarily caused by a serious failure on the part of a provider Trust Board. It did not listen sufficiently to its patients and staff or ensure the correction of deficiencies brought to the Trust’s attention. Above all, it failed to tackle an insidious negative culture involving a tolerance of poor standards and a disengagement from managerial and leadership responsibilities. This failure was in part the consequence of allowing a focus on reaching national access targets, achieving financial balance and seeking foundation trust status to be at the cost of delivering acceptable standards of care.

A culture focused on doing the system’s business – not that of the patients
Clinical quality indicators being used to commission urgent & emergency care – by % of responses (England only)

- Total time spent in the ED: 87%
- Ambulatory care: 63%
- Unplanned re-attendance: 63%
- Time to initial assessment: 62%
- Time to treatment: 60%
- Left without being seen: 52%
- Patient service experience: 43%
- Consultant sign off: 34%

82 EDs in England responded to this question

CEM – The Drive for quality – System benchmarks for EDS in the UK – Report May 2013
How are EDs performing against the quality indicators for urgent & emergency care? (England only)

<table>
<thead>
<tr>
<th>QI performance averages (except patient experience and consultant sign-off)</th>
<th>All EDs</th>
<th>&gt;100,000 attendances</th>
<th>80,000–99,999 attendances</th>
<th>50,000–79,999 attendances</th>
<th>&lt;49,999 attendances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time in the ED – % less than 4hrs</td>
<td>95.57</td>
<td>95.31</td>
<td>95.29</td>
<td>95.47</td>
<td>95.74</td>
</tr>
<tr>
<td>Time to initial assessment for patients arriving by ambulance – % less than 15 minutes</td>
<td>74.19</td>
<td>71.03</td>
<td>69.57</td>
<td>80.28</td>
<td>65.02</td>
</tr>
<tr>
<td>Time for arrival to treatment by a decision maker – % within less than 60 minutes</td>
<td>52.10</td>
<td>49.21</td>
<td>48.80</td>
<td>53.88</td>
<td>53.98</td>
</tr>
<tr>
<td>% Left Without Being Seen</td>
<td>2.47</td>
<td>2.68</td>
<td>2.90</td>
<td>2.43</td>
<td>1.70</td>
</tr>
<tr>
<td>% Unplanned re-attendance to the ED within 7 days</td>
<td>4.23</td>
<td>5.00</td>
<td>4.91</td>
<td>3.62</td>
<td>3.75</td>
</tr>
<tr>
<td>% of patients where ED stay ED exceeding 6hrs</td>
<td>2.62</td>
<td>2.27</td>
<td>3.79</td>
<td>2.46</td>
<td>2.16</td>
</tr>
</tbody>
</table>

CEM – The Drive for quality – System benchmarks for EDS in the UK – Report
May 2013
Access block and the introduction of the Four Hour Rule Program in four Western Australian hospitals
## WA Four Hour Dashboard

<table>
<thead>
<tr>
<th>Quality and Clinical Outcome Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unplanned re-attendance to ED within 48 hours (%)</td>
</tr>
<tr>
<td>- Attendances (%)</td>
</tr>
<tr>
<td>- Patients (%)</td>
</tr>
<tr>
<td>In-hospital mortality for admissions from ED (%)</td>
</tr>
<tr>
<td>- Rate</td>
</tr>
<tr>
<td>- Standardised mortality ratio</td>
</tr>
<tr>
<td>No. of MRSA infections / 10,000 bed days</td>
</tr>
<tr>
<td>No. of Sentinel Events</td>
</tr>
<tr>
<td>No. of Complaints</td>
</tr>
</tbody>
</table>
Concerns from EDs

• Focus on target, not on patient: “hitting the target and missing the point”
• Loss of specialty skills: “Glorified triage”
• Critical incidents
• Promote dysfunctional culture and conflict
"The Four Hour Rule Program has clearly delivered remarkable improvements in quality and safety outcomes for the Western Australian community, and all of our staff have made it clear they do not want to return to the working environment prior to the program's implementation," Mr Snowball said.

"However, such a significant hospital-wide change is not without its difficulties. I am very pleased the review has been able to more closely examine the concerns raised by staff to ensure they could be validated and where validated, make clear recommendations."

Jan 25 2012 Four hour rule 'putting pressure on medical staff' WAtoday.com.au
WA results

• “no-one wants to go back”
• Stokes review


“The FHRP has seen significant improvement in patient flow across all Stage One Hospitals. The Reviewer consulted with over 315 health workers and no one indicated a desire to return to pre-FHRP processes. However, many areas are struggling with the changes it has brought, and this requires revisiting some key reform concepts.

Reform of this scale requires significant sustained executive support and accountability. It is vital the status and governance of the FHRP is part of every hospital executive committee’s core business for change to be achieved and sustained. The findings of the Review indicate that this is not the case consistently across all hospitals.” (executive summary page 3)
Stokes review

Better patient outcomes in a number of areas

- No evidence of increased mortality
- No evidence of adverse effects due to patients being transferred to a wards prematurely
- No evidence of increased ED or hospital readmission rates
- No evidence of infection control issues
The National Emergency Access Target (NEAT): can quality go with timeliness?


Results: The percentage of patients admitted, discharged or transferred within 4 hours of arrival at the ED increased from 87% in 2009 to 95% in 2011. Safety and quality measures, including the admission rate from the ED, unplanned reattendances at the ED within 48 hours of discharge, patient complaints and inpatient mortality, remained unchanged. The percentage of patients discharged from inpatient wards before 10 am increased from 18% in 2009 to 30% in 2011.

Conclusions: The introduction of a 4-hour-rule program has resulted in improved timeliness of care for patients throughout the hospital, both in the ED and inpatient wards, with no adverse impact on the quality and safety of clinical care.
CONCLUSION:

Introduction of the 4-hour rule in WA led to a reversal of overcrowding in three tertiary hospital EDs that coincided with a significant fall in the overall mortality rate in tertiary hospital data combined and in two of the three individual hospitals. No reduction in adjusted mortality rates was shown in three secondary hospitals where the improvement in overcrowding was minimal.

However, debate about methodology in correspondence = too early to tell.
Introduction of NEAT

Where it is *clinically appropriate* to do so, after implementation, “anyone presenting to a public hospital emergency department will be admitted, referred for treatment or discharged within four hours of presentation”

Expert Panel June 2011: Overarching principles

Recommendations broadly intended to:
• Drive whole of system reform
• Improve system capacity
• Promote engagement and leadership
• Minimise risks to patient safety and quality
• Clear and nationally consistent measurement
• Ongoing review
Expert Panel June 2011: Overarching principles

Recommendations broadly intended to:

- Drive whole of system reform
- Improve system capacity
- Promote engagement and leadership
- Minimise risks to patient safety and quality
- Clear and nationally consistent measurement
- Ongoing review
Expert Panel recommendations to COAG
August 2011

- **Principle 1** Targets and the changes required to meet them will require commitment right across the health and hospital system
- **Principle 2** Hospital executives will need to work in partnership with clinicians to achieve sustainable change
- **Principle 3** Clinical engagement and clinical leadership will be essential if the targets are to be met
- **Principle 4** Targets must drive clinical redesign with a whole-of-hospital approach
- **Principle 5** Clinical redesign must ensure patient safety and enhance quality of care
- **Principle 6** Clinical redesign will improve system capacity and delivery of care
- **Principle 7** Definitions need to be clear and consistent across all jurisdictions
- **Principle 8** The performance of jurisdictions is not comparable
- **Principle 9** Progress towards the targets needs to be linked with continual monitoring of safety and quality performance indicators and audit
- **Principle 10** The impact of targets on demand needs to be monitored and early strategies developed to ensure achievements are sustainable
- **Principle 11** Quality of training needs to be maintained
National Partnership Agreement on Improving Public Hospital Services

Parties agree that the following data, collected under the Performance and Accountability Framework, will be used to measure the impact of the implementation of both NEAT and NEST on the safety and quality of patient care:

- hospital standardised mortality ratio;
- in-hospital mortality rates for selected diagnostic categories;
- unplanned hospital re-admission rates for selected diagnostic categories;
- healthcare associated Staphylococcus aureus bacteraemia;
- healthcare associated Clostridium difficile infection; and
- measures of the patient experience with health services.
National Partnership Agreement: NEAT KPIs

C42. The percentage of ED patients, who either physically leave the ED for admission to hospital, are referred for treatment or are discharged, whose total time in the ED is within four hours, as per Clause C1.

C43. The number, source and percentage of ED attendances which are unplanned re-attendances within 48 hours of previous attendances.
NSW: PRE-NEAT
IIMS ED incidents 2010 Incident description by SAC
Key issues impacting on EDs

Major current challenges for EDs:

1. Access block
2. Lack of staff
3. Increasing demand for services

Source: NSW Emergency Care Institute Stakeholder Survey 2012
Implementation of NEAT
ECI Stakeholder survey 2012

- Patient focus: 27% (Medical) 43% (Nursing)
- Strong and visible leadership: 24% (Medical) 39% (Nursing)
- Quality improvement focus on care: 22% (Medical) 39% (Nursing)
- Standardised reporting of information accessible to the whole of the hospital: 22% (Medical) 39% (Nursing)
- Use of diagnostic and project management methodology: 23% (Medical) 27% (Nursing)
- Support structures for sites and executives: 14% (Medical) 18% (Nursing)

n=307
QUALITY AND SAFETY
Quality

• Access
• Safety
• Acceptability
• Effectiveness
• Efficiency
• Continuity
Quality

The care we would like our family to receive
A new quality focus

Selection and validation of quality indicators for the Shorter Stays in Emergency Departments National Research Project.

Improving timeliness while improving the quality of emergency department care
Lowthian and Cameron EMA 2012 June; 24(3)219–21

NHMRC funded multicentre project in Australia addressing outcomes of introduction of four hour target

International Federation for Emergency Medicine
Quality Framework 2012
“The NSQHS Standards focus on areas that are essential to improving patient safety and quality of care”
In September 2011, Health Ministers endorsed the NSQHS Standards and a national accreditation scheme.

“The new system will, for the first time, create a national safety and quality accreditation scheme for health service organisations.”

Minimum Requirements for 2013

- Incorporate consumer and carers’ feedback into health service publications for distribution to patients
- Training on patient-centred care and the engagement of individuals in their care
- Aseptic technique: training, audit, improvement
- Clinical handover: evaluation and monitoring
Emergency Department Quality Framework

- Clinical Profile
- Education & Training Profile
- Research Profile
- Administration Profile
- Professional Profile
Survey of ACEM accredited EDs 2012

The chart illustrates the percentage of ACEM accredited EDs in various regions across Australia and New Zealand in 2012. The regions are categorized based on their awareness and implementation status of a specific practice or protocol.

- **NSW**: 43% aware of it, 57% not aware of it, 100% implemented.
- **NT**: 33% aware of it, 67% not aware of it, 100% implemented.
- **QLD**: 13% aware of it, 87% not aware of it, 100% implemented.
- **SA**: 40% aware of it, 60% not aware of it, 100% implemented.
- **TAS**: 33% aware of it, 67% not aware of it, 100% implemented.
- **VIC**: 11% aware of it, 89% not aware of it, 100% implemented.
- **WA**: 50% aware of it, 50% not aware of it, 100% implemented.
- **Australia**: 38% aware of it, 62% not aware of it, 100% implemented.
- **NZ**: 14% aware of it, 86% not aware of it, 100% implemented.

The chart uses different colors to represent the awareness and implementation status:
- Blue: Not aware of it
- Maroon: Aware of it but has not been implemented in ED
- Green: Implemented

This data provides insights into the awareness and implementation levels across differently accredited EDs in various regions, highlighting areas that may need further focus and improvement.
## Survey of ACEM accredited EDs 2012

<table>
<thead>
<tr>
<th>Indicators monitored or reviewed in your ED</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No indicators are monitored (i.e. there is no QMS in my ED)</td>
<td>0%</td>
</tr>
<tr>
<td>Patient waiting times</td>
<td>97%</td>
</tr>
<tr>
<td>Incident monitoring</td>
<td>96%</td>
</tr>
<tr>
<td>All ED deaths</td>
<td>96%</td>
</tr>
<tr>
<td>Investigations ordered in ED</td>
<td>63%</td>
</tr>
<tr>
<td>Clinical practice guideline/protocol compliance</td>
<td>51%</td>
</tr>
<tr>
<td>Follow-up of all ED complaints</td>
<td>97%</td>
</tr>
<tr>
<td>ED patient satisfaction surveys</td>
<td>81%</td>
</tr>
<tr>
<td>ED staff satisfaction surveys</td>
<td>56%</td>
</tr>
<tr>
<td>Other</td>
<td>27%</td>
</tr>
</tbody>
</table>
## Survey of ACEM accredited EDs 2012

<table>
<thead>
<tr>
<th>Other indicators monitored within the ED</th>
<th>n</th>
<th>% of total responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Representations</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>Short stay outcomes</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>Time to analgesia</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>Time to antibiotics</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>ACEM framework being implemented</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>Audit Drug chart compliance</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>Overnight discharge review</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>Pathology/ radiology results review</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>Time to thrombolysis</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>Audit- Door to balloon times, D-Dimer use, ACS pathway use</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Audit- Femoral Nerve Block for suspected neck of femur fractures</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Audits highly represented Diagnosis Related Groups</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>DNW reviews</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Exam pass rates</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>FACEM performance reviews</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Follow-up of patients post discharge</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Hand hygiene review</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>length of stay- ED/ SSU</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Misdiagnosis/ medication errors</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Mortality/Morbidity review</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Patient safety ‘walk-arounds’</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Review paediatric charts</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Team building/ workplace attitudes</td>
<td>1</td>
<td>5%</td>
</tr>
</tbody>
</table>

| Total                                                                       | 20 |
| Total no. of comments                                                       | 36 |
POST NEAT ERA: A NEW MANAGEMENT ETHOS?
New management opportunities: eg Lean health care

- Specify the value in terms of medical value to be provided.
- Identify the value stream that is all those steps required to provide medical value for the patients, waste must be eliminated.
- Make the value creating steps flow.
- Let the patient pull the service, in stead of the patient being pushed through the service, often unwanted.
- Strive for perfection that means constantly considering what is being done and how it is being done and use the expertise and knowledge of all those involved in the processes to improve and change it.
Know your process

**Background:** As central diagnostic facilities, computer tomography (CT) scans appear to be bottlenecks in many patient-care processes. This study describes a case study concerning redesign of a CT scan department in the Academic Medical Center in Amsterdam, the Netherlands.

**Purposes:** The aim was to decrease access time for the CT-scan and simultaneously increase utilization level.

**Methodology/Approach:** An important cause of relatively low-capacity utilization is variability in the time needed for the scanning process. We performed a qualitative and quantitative analysis of current processes; identified bottlenecks and selected interventions with the greatest expected reduction of variability in flow time.

**Findings:** The most promising and most feasible opportunity appeared to be to reallocate the insertion of intravenous access lines to a preparation room. The time needed for this activity was very hard to predict and needed a lot of slack in the lead time for appointments. By removing it from the CT room, lead time could be reduced by 5 minutes. The intervention resulted in a decrease of access time from 21 days to less than 5 days, and an increase of the utilization rate from 44% to 51%. This contributed directly to patient service and indirectly to cost reduction.
## Strategies to enhance productivity

<table>
<thead>
<tr>
<th>“Rational” view</th>
<th>“Engagement” view</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standardise:</strong></td>
<td><strong>Create:</strong></td>
</tr>
<tr>
<td>• job roles</td>
<td>• high expectations</td>
</tr>
<tr>
<td>• clinical practice</td>
<td>• clarity of goals</td>
</tr>
<tr>
<td>• work processes</td>
<td>• common purpose</td>
</tr>
<tr>
<td><strong>Eradicate:</strong></td>
<td><strong>an enabling environment</strong></td>
</tr>
<tr>
<td>• waste</td>
<td>where people can do their best</td>
</tr>
<tr>
<td>• non-value adding activities</td>
<td></td>
</tr>
<tr>
<td>• unnecessary structures</td>
<td></td>
</tr>
<tr>
<td><strong>Focus on:</strong></td>
<td><strong>Focus on:</strong></td>
</tr>
<tr>
<td>• doing more with less</td>
<td>• building, maintaining, protecting trust</td>
</tr>
<tr>
<td>• doing it faster, better and cheaper</td>
<td>• making work meaningful and rewarding</td>
</tr>
<tr>
<td></td>
<td>• connecting great results with great values</td>
</tr>
</tbody>
</table>
High performance organisations

• Face reality
• Desire to learn from mistakes
• Personal accountability

Keys are leadership, process, strategy

Critical factors for safety

• Emergency department environment
• Emergency department staffing
• Emergency patients
• Organisational leadership and culture
Time based targets, safety and quality: Outcomes

• Direct impacts of reducing ED overcrowding
• Significant increase in quality focus
• Major positive changes in leadership and management activity to be successful
• Early positive benefits measured
• Await evaluation research
• Many lessons learned