An overview of emergency department management in Australia: Are current ED management systems effective?

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ED Management Conference
July 2012
ED management: Is there a problem?
The consumer perspective

Patient expectations: wait time to see a doctor most important; comfort in the waiting room next most important
Holden D, Smart D. Emerg Med (1999); 11, 3-8

Patient expectations: good communication; confidentiality at triage; comfortable waiting room
The consumer perspective

Patient complaints: **ED 1.9 / 1000 patients**; general wards 6.2 / 1000; ICU 5.9 / 1000; aged care departments 45.2 / 1000 patients


Complaints from ED patients largely result from treatment (33.4%) and communication (31.6%); **only 11.9% of patients complaints concerned delays in treatment.**

McD Taylor et al, Emerg Med(2002); 14, 43-49
ED Attendances are continually increasing in Australia

65% increase in ED attendances since 2001/02

Source: AIHW Hospital Statistics, Total visits to EDs in Australia, 2001/02 – 2010/11
ED Attendances are increasing in NSW and are predicted to continue increasing.

Long period of no real growth followed by a 24% increase from 2005.

* Projected to be a 26% increase by 2012.

Source = NSW Health Annual Report:: Total ED Attendances by Year 2000-01 to 2009-10 & *DPE Predictions: 2011/12
Ambulance presentations are increasing in NSW and are predicted to continue increasing.

Long period of no real growth followed by a 38% increase from 2004/05

* Projected to be a 41% increase by end of 2012

Source = IQ Reporting Server: ED Attendances arrivals by ambulance by Year 2000-01 to 2010/11 & *DPE Predictions: 2011/12
Lowthian J et al. Demand at the ED front door: is the 4 hour target the answer?
ED management: Is there a problem? looking at “performance”
Currently:

- 59% all patients leave the ED in 4 hours

Admitted patients:

- **24% leave ED within 4 hours**, 47% leave by 6 hours, 86% leave by 12 hours

Discharged patients:

- **71% leave within 4 hours**; 88% by 6 hours
Access block and the introduction of the Four Hour Rule Program in four Western Australian hospitals
UK 2008/09 data
Jan-June 2011 saw a 10.5% increase in presentations compared to Jan-June 2010

ED Length of Stay reduces by 44% in 2 years despite record presentations. June 2011 average LOS 3.6 hours, compared to June 2009, 6.4 hours.

AED Bed Request to Admission Time

A drop from 7 hours in 2009 to move a patient to the ward from the time of the ED bed request to just over 1 hour for the last four months to June 2011

ED management: Is there a problem?
What do stakeholders think
Who took part in the ECI survey?

- Medical: 33%
- Nursing: 52%
- Allied Health: 7%
- Administrative: 5%
- Other: 3%
Please rate in order of importance the listed challenges below as they apply to your ED. Please indicate by numbering from 1-5 (where 1 is the most important and 5 is the least important)

- Staff shortages: 2.29
- Access block and overcrowding: 2.39
- Inconsistent clinical expertise of staff: 2.78
- Difficulties in getting patients accepted for transfer: 3.25
- Lack of access to education or information for clinicians: 3.79
What respondents believed to be the biggest challenge facing emergency care in NSW at the moment

- Lack of staff
- Access block
- Lack of resources
- Lack of access to primary/community care
- Increasing demand for services
- Lack of education/professional development
- Patient & Public expectations
- KPIs
- Health bureaucracy
- Inefficient hospital systems/poor communication
- Ageing population
- Lack of senior clinicians
- Rural issues
- Mental Health
- Variations in care
- Violence and Aggression
- Transfer of patients
- Recruitment & Retention
- Waiting times
- Overcrowding
- eMR
- Support services only 9-5
- Poor data/information

Number of respondents
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
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.”
Middlemore Hospital NZ

Six hours can be ours

"We're fortunate to have a General Manager who has made it his priority to ensure success. He's had a steering group working to clear roadblocks on the operational side of things, and the results speak for themselves. We were given the freedom to change the way we work to make a positive difference for patients. It's really gratifying to know that you're making a difference. It used to be norm to have patients lined up on trolley beds in corridors, now it's the exception."
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.
Results

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.
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)
Challenges identified in WA

- Doing “everything” in ED well entrenched
- Wards are “unskilled”
- Junior staff feel unsupported
- Only a temporary fix ie demand continues to grow
- Increase in presentations and admissions
- Need capacity for paediatric short stay areas
The goal

Safe care to patients where ever they attend an ED
Engaged and valued staff
Efficient and effective care, and thus, best use of available resources
Harness currently untapped resources
Report progress and outcomes
The challenges

Variability of inputs into ED clinical care
Variability of content and process of care delivery
Variable uptake of good practice
Limited learning and reflection

No whole system communication for ED staff
ED Management: What’s so complex?

24/7 service (truly)
Who’s on the team and who manages them
(organisational structure and constraints)
Highly visible
Political
Staffing

Junior to senior mix often different
Rotation of junior doctors
Delivery of education an imperative (24/7)
ED is a microcosm of the whole system:

Registration and information processes
Initial triage assessment
Clinical assessment
Clinical management
Ongoing monitoring
Multiple co-ordination inputs
Flow processes
ED is a microcosm of the whole system, however

Unbounded entry
Truly 24/7
Equity considerations in front of you
Limited time, limited information
Hand on to others
Usually a large unit with high management demands
Key success factors

Leadership:
local, national

Organisational support:
government, hospital

Appreciation of risk management for patient and hospital:
the front door of the health service;
the most unknown, unstable patients
mistakes are high cost
Key success factors

Resources:
Staff: consultant led; dedicated ED clinical staff
Educational
Equipment
Space
Access to information

Integrated processes:
Bed management
Admission
Mutually negotiated with other teams
Policy on a Quality Framework for Emergency Departments

“ACEM recommends all emergency departments should have a documented quality framework.”
Key success factors

Communication
Within department
Within hospital (ED the fishbowl)
Externally

Ongoing feedback loop
The system: Clinical governance

“Clinical governance is a system through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish.”

While we are accountable for continuous improvement, who is accountable for the continuously rising expectations against which that quality is measured? BMJ. 1998 December 19; 317(7174): 1725–1727. Neville Goodman
The system: Clinical governance

Are all decisions made with regard to quality of care?

What about IT access

Information access

Re-invention of the wheel
ED management: The future

ED is part of the wider system

Demographic realities

Major change just to survive
Emergency Care Institute

Supporting clinicians, LHDs and the system to improve outcomes for patients presenting to ED across NSW

- Foster **communication** across all stakeholders
- Provide forum for analysis and assessment of information and **knowledge sharing**
- **Reduce variation** in clinical practice
- Research and deliver **innovative solutions** to emergency care challenges
- **Collaborative leadership** on future directions for emergency care
- A clinical network of the ACI
Web site resources: Principles

Stop wheel reinvention
Current
Evidenced
Reviewed
 Easily accessible
Content-"one stop shop"

Ophthalmological guides and equipment

Ophthalmological guides and equipment

We will provide here a number of useful links to help you manage eye problems but first the basics. The vital sign for the eye is the measurement of visual acuity (VA). So just as you would measure pulse rate, blood pressure, respiratory rate and O2 saturations for a resuscitation or neurovascular integrity of a limb you must do the VA at the outset and particularly before you do anything or apply anything to the eye. Snellen charts are available in all EDs in many forms and you may now have one on your iphone (free). For other phones you can buy one here.

Here is nice Snellen chart to use from your computer screen right away and this has options for children (use at 6 metres).

The Eye Emergency Manual is a quick guide for most ED presentations and easy to navigate.

You will see a guide to the slitlamp embedded below and you can also go to Ophthobook which has readily available, a vast resource on eyes and easy to view.
Streamed videos
Current with evidence

**Warfarin reversal guidelines**

**Risk factors for bleeding complications**

**Supporting evidence for warfarin reversal**

**Summary**

High INR can occur for many reasons including additional medications such as antibiotics and overdosing of any cause. There is a significant relative increase in bleeding exponentially as the INR increases but the absolute risk remains small. High INR with no bleeding can be managed in the community or by short stay in ED given appropriate risk assessment.

Use of Vit K is reserved for very high INRs in all patients (>9) and most bleeding patients. IV Vit K has more rapid reversal effects (6-12 hours) than oral administration but is associated with higher incidence of thrombotic complications. Higher doses of 5-10 mg of Vit K are associated with difficulties in anticoagulation stabilisation for 1 or more weeks depending on the dose. Where there is major or life-threatening bleeding, higher IV doses of Vit K are used.
Links provided for evidence

Ross I Baker, Paul B Coughlin, Alex S Gallus, Paul L Harper, Hatem H Salem and Erica M Wood; the Warfarin Reversal Consensus Group. MJA, 2004; 181 (9): 492-497

3 Reversal of excessive effect of regular anticoagulation: low oral dose of phytonadione (vitamin K1) compared with warfarin discontinuation.

4 A comparison of the efficacy and rate of response to oral and intravenous Vitamin K in reversal of over-anticoagulation with warfarin.

http://chestjournal.chestpubs.org/content/141/2_supp/78.full#sec-2

6 Prothrombinex use for the reversal of warfarin: Is fresh frozen plasma needed?
Julie H Crawford and Bradley M Augustson MJA, 2006; 184 (7): 365-366
Patient Factsheet

Anterior Shoulder Dislocation

Understanding shoulder dislocations

The shoulder joint is a ball and socket joint. The ball, at the top of the humerus (upper arm), fits into a shallow socket called the glenoid which is part of the scapula (shoulder blade). This joint is very mobile but unstable.

The ball is held into the socket by tissue that fits over the ball like a sock. This is reinforced by ligaments and muscles.

Know the facts

- Once you have dislocated your shoulder there is an increased chance that you will dislocate again.
- The younger you are the more likely you are to dislocate again.

Tips to help your recovery

- You must wear a sling for at least the first week. The length of time you are in the sling will be determined by your orthopaedic surgeon.
- Only remove the sling to perform elbow exercises or to attend to personal hygiene. When removing the sling it is important to keep your upper arm resting by your side. Do not lift your arm to clean under your armpit, you should lean forward and let your arm hang.
- Ice your shoulder for the first 48-72 hours. Ice is helpful for pain and swelling. Use ice packs for no longer than 20 minutes every 1-2 hours while awake. Make sure you have a damp cloth layer such as a towel between the ice and your skin.
- Take pain medication as instructed by your Emergency Department doctor and continue to speak with your local doctor or pharmacist about maintaining your pain relief.
- Exercises for your elbow and wrist are important to prevent any complications in these joints.

Humerus

Glenoid (socket)

Scapula

Humeral Head (ball)

Developed by the ECI February 2012 based on NSW Emergency Department Physiotherapy Network Group Information also available online at www.ecriw.com.au

ACI Agency for Clinical Innovation

Emergency Care Institute

NEW SOUTH WALES
**Anterior Shoulder Dislocation**

**Exercises to try**
Do not commence exercises immediately as a re-dislocation may occur. Once it is comfortable to move during washing and hanging in the shower gradually start gentle exercises. Avoid 'up and away from the body' movements until advised to start these by your doctor.

- **Elbow flexion and extension**
  - Take your arm out of the sling and let your arm hang by your side.
  - Gently bend and straighten your elbow.
  - Repeat 10 times, 3 times a day.

- **Wrist flexion and extension**
  - Whilst your arm is in the sling gently move your wrist up and down.
  - Do 10 times every hour while awake.

- **Elbow pronation and supination**
  - With your upper arm resting by your side and your elbow bent, turn your palm over to face the floor and gently turn back until it faces the ceiling.
  - Repeat 10 times, 3 times a day.

- **Hand exercises**
  - Gently open you fingers so that your hand is flat then close it to make a fist.
  - Do 10 times every hour while awake.

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**Instructions:**

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**Follow up treatment**
- Arrange a follow up appointment with your Orthopaedic surgeon in a week.
- As advised by your Emergency Department doctor, or orthopaedic surgeon thereafter, arrange follow up with physiotherapy.

**Seeking help:**
In a medical emergency go to your nearest emergency department or call 000.

**Disclaimer:** This health information is for general education purposes only. Always consult with your doctor or other health professional to make sure this information is right for you.
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