Red Flags in the ED

and

Learning from our Incidents

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“The ED environment has unique operating characteristics that predispose it to error”

What we know…

![Bar chart showing the proportion of RCAs]

- Errors of omission or commission during diagnosis, planning, treatment: 35%
- False hypothesis: 28%
- Mindset narrow thinking or confined to rule-based thinking: 22%
- Pattern matching: 19%
- Acting outside widely-accepted standards: 15%
- Attention slips lapse: 10%
- Rushed clinical decision making: 9%
- Exceeding scope of practice: 8%
- Inappropriate use of equipment medications: 6%
- Unsatisfactory attitude behaviour: 6%
- Mentally fatigued, distracted or unwell: 5%
- Physically fatigued or unwell: 2%
- Memory slip lapse: 2%

Proportion of RCAs

- Good or Excellent
- Room for improvement or below standard
The case

76yo male was brought into a local district hospital ED by ambulance at midnight.
Patient complained of constipation and abdominal pain which had increased significantly overnight prompting his relatives to call an ambulance.

With ambulance, observations were found to be in normal range except for BP 170/80 and pain score 7/10.
The case

*Patient was given morphine for analgesia.*

*At triage, pain was described as stabbing, and having moved from midline to left lateral. It was reported that the patient had a four-day history of constipation, generalised abdominal pain.*

*Observations were unchanged from time of ambulance assessment.*
The case

Within 30mins, patient was reviewed by a medical officer and given a provisional diagnosis of constipation.

Patient was charted for aperients, analgesia and a fleet enema, which resulted in a small bowel motion. Nil further analgesia was given as ambulance morphine had successfully eased the pain.
The case

At 0200, there was discussion between medical staff and the patient and carer regarding patient’s disposition. A plan was devised to discharge the patient home and have them return later in the morning for further investigation.

At 0230, patient was discharged home into the care of his family.
The case

Patient returned to attend a CT later in the day.

Whilst in the radiology department, patient collapsed at 1130. On arrival of the Rapid Response Team, patient found to have GCS 3. Patient was given fluid bolus with improvement of GCS to 14 by the time the patient was transferred to ED.
The case

On examination, patient noted to be pale, cold and clammy with a pulsatile abdominal mass palpable in the patient’s epigastric region. Patient received further fluid resuscitation and transfusion of four units of blood.

At 1330, patient was transferred to a tertiary facility for consideration of urgent definitive management.
The case

During transit in the ambulance, patient suffered a cardiorespiratory arrest.

With respect to patient and family’s previously discussed wishes, CPR was not commenced and patient returned to referring hospital for certification.

Cause of death found to be due to: ruptured AAA.
Labelling an outcome as a misdiagnosis is simply a descriptive exercise that sheds little or no light on what actually occurred. It seems likely that cognitive error underlies the majority of diagnostic errors.

How can I devise cognitive forcing strategies to help me minimize diagnostic error?

1. **Learning** about common cognitive errors. For example, premature diagnostic closure, also known as “anchoring” = the practice of locking onto an early working diagnosis, subsequently ignoring or failing to seek further data that might refute one’s initial impression. The prevalence of this error has been reported to be as high as 90%.

2. **Identification** of specific clinical contexts in which diagnostic errors are most likely to occur, commonly known as “pitfalls” (eg. abdominal pain in the elderly).

3. **Routine** insertion of a cognitive forcing strategy into a clinical context known to be error prone (eg. consciously refusing to anchor onto a diagnosis of constipation in an elderly patient presenting with mild abdominal discomfort).
We can learn from the learned and experienced, and use known high risk symptoms or “red flags” to avoid pitfalls and critical incidents.
Take IMMEDIATE action!

Red Flag Warning Issued
What is a **RED FLAG**?

“Anything that arises from history, assessment and investigation, which points to the likelihood of the most serious diagnosis being the most likely diagnosis”
Unique ready reference for all complementary medicine, massage therapy and manual therapy practitioners and students alerting them to ‘red flag’ symptoms which should be referred for Western medical investigation or emergency medical treatment.

‘Red flags’ are clinical signs that suggest a patient needs prompt investigation and treatment for a potentially dangerous situation.
Your ECI task

Educational module content for

- High risk/undifferentiated patient presentations to ED (“the red flags”)

Educational module for triage nurses, JMOs and non-specialist ED clinical staff
GUT FEELING

*Learning from our Incidents:*
RED FLAGS in the Emergency Department
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At triage, pain was described as stabbing, and having moved from midline to left lateral. It was reported that the patient had a four-day history of constipation, generalised abdominal pain. Observations were unchanged from time of ambulance assessment.
What are your differential diagnoses?
The case

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At 0230, patient was discharged home into the care of his family.
What are the key principles that determine readiness for departure from ED? Have they been addressed in this case?
The case

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What are the lessons here?

It is NOT constipation or gastroenteritis until other serious diagnoses have been actively sought and excluded.
Abdominal pain is the main presenting problem in 3-13% of ED presentations for elderly patients\textsuperscript{1,2}.

Older patients with abdominal pain have been found to have higher mortality rates: Lewis et al.\textsuperscript{3} found 5% of elderly patients presenting to ED with abdominal pain had died within two weeks.
Studies have found greater inaccuracy of diagnoses for elderly patients with abdominal pain when compared to younger patients\(^3\).

Multiple factors cause the elderly patient with abdominal pain to pose a significant diagnostic challenge: increased comorbidities, unreliability of physical examination findings, and lack of sensitivity of laboratory testing\(^4\).

Clinicians should be mindful that a lack of findings in the history, normal vital signs, and laboratory values that are seemingly normal are common among older adults\(^4\).
The elderly are likely to have more subtle presentations of diseases with significant morbidity and mortality, and clinicians should avoid labelling undifferentiated abdominal pain with a more benign diagnosis, such as constipation or gastroenteritis\(^4\).

Emergency clinicians should more readily perform abdominal CT, consult surgical services, and admit older patients for further observation, diagnostic tests, and treatment\(^5\). A systematic approach should be adopted, keeping the differential diagnosis broad and searching for potentially life-threatening aetiologies\(^4\).


Some others…

HISTORY REPEATING ITSELF
-- Any patient who re-presents from any site of medical care (not just ED) for the same problem should not be dismissed

THROWN A CURVEBALL
-- Always examine the scrotum for testicular torsion in the young male with abdominal, groin or penile pain

NO STONES UNTURNED
-- Any patient over 50 years of age with suspected renal colic should have the diagnosis of ruptured AAA explicitly sought and excluded

IN THE OVEN?
-- A diagnosis of ectopic pregnancy should be considered when assessing any woman of childbearing age.
Thank you