



Highlights from this issue

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Addressing language barriers in the emergency department

The 'Editor's Choice' paper covers the critical topic of communication and the concern that patients with a different first language are more likely to experience adverse events and poorer outcomes. How do you communicate with a patient who has a different first language: do you ask a member of the family to translate or a member of staff? Google translate? Attempt some rudimentary translation yourself? Or the recommended methods of using a telephone interpreter service or an in-person professional interpreter (often more challenging due to time and availability)? In this US study, nine Spanish speaking patients were followed through their Emergency Department journey to assess how the language barrier was addressed. The ED had an official interpreter service available within the hospital for thirteen hours a day. The findings were that for the early triage and initial provider assessment, an interpreter was frequently employed, but for ongoing evaluation and treatment a recommended method was much less likely. The paper and the associated 'Commentary' from a Professor of sociolinguistics are very reflective reads.

Framing bias and diagnostic accuracy

Framing bias occurs when people make a decision based on the way the information is presented, as opposed to just on the facts themselves. It's why I don't like my juniors checking the computer to get the patient's past medical history and previous attendances before they see them! Popovich *et al*, from New Zealand, presented three written hypothetical cases to Consultants and Registrars in Emergency/Internal Medicine and asked them to come up with the diagnosis and investigations plan. The case descriptions had the same information, but the authors deliberately wrote one of the cases to be suggestive towards a diagnosis of PE vs away from PE, and another towards or away from a diagnosis of interstitial lung disease. As they hypothesised, physicians were more likely to diagnose the condition based on the framing of the case. This has important implications for how junior doctors present cases to seniors for sign-off or in clinical handovers. I'm going to show

my team the cases in the paper (without the titles) as a valuable lesson in cognitive bias.

Emotions running high: good or bad?

I am always interested in studies that look at how we might improve the detection of cardiac arrest and initiation of bystander CPR by the public. In this study from Taiwan, the authors listened in to telephone audio recordings from the ambulance dispatch centre for patients who were in out-of-hospital cardiac arrest. They graded the callers' emotional content and cooperation score (ECCS) and determined how often cardiac arrest was identified by the dispatcher, and how quickly telephone-instructed CPR was started. Dispatchers were actually *more* likely to recognise cardiac arrest as the ECCS increased and the caller became more emotional. As expected a higher percentage of the highly emotional callers were not able to initiate CPR, but in those that did, they were quicker to begin chest compressions than calm callers. The study did not assess this, but I wonder if a high ECCS in the caller might be a clue that the patient is in cardiac arrest?

Diurnal variation in chest pain and acute myocardial infarction

This US study used the ambulance call time of 2065 consecutive patients with non-traumatic chest pain to identify patterns in the presentation of STEMI and NSTEMI. 7.5% of the cohort had a final diagnosis of myocardial infarction. The inflow of all chest pain cases transported by ambulance was greatest between 0900 and 1400 hours. The peak frequency of STEMI was found at 1000 hours and NSTEMI was at 2200 hours. However, the diurnal variation of MI matched the pattern of call times of non-MI chest pain meaning that pre-hospital providers should have a high index of suspicion at any time of presentation. While it has often been said that MI's are most likely to occur in the early morning hours, for patients arriving by EMS, this is not necessarily when they will actually present to the ED.

Pulmonary embolism following complex major trauma

O'Leary and colleagues from Addenbrooke's Major Trauma Centre in

Cambridge (UK) retrospectively reviewed 30 months of data to identify the incidence of pulmonary embolism (PE) in adult major trauma patients admitted to critical care. 4.6% of the population had a diagnosed PE. Of interest, 12/48 patients had evidence of 'immediate PE' on their first Whole Body CT scan on arrival to hospital, with a further two patients having evidence of PE on their scan after emergency theatre. The pathophysiology of immediate PE is still not well understood. Could these patients have asymptomatic medical PE before their trauma? Is PE caused by direct pulmonary injury from the impact? Is this a side effect of the coagulation responses to acute trauma? Is it limb injury causing deep venous thromboembolism with rapid propagation? One thing that the authors did find is that there was no difference in the incidence of PE in patients who had been given early Tranexamic acid. The paper also discusses the risk-benefit analysis of anticoagulation following major trauma and the lack of consistency in practice.

Can we lower the age criteria for decision rules?

The Canadian CT Head Rule (CCHR) recommends, as one of the criteria, that all patients older than 65 years old with minor head injury should have a CT head performed. This Canadian study retrospectively reviewed the notes of 104 patients who underwent CT for minor TBI and found that increasing the age cut-off to 75 years did not miss any clinically important brain injuries, and could reduce the number of scans performed by 25%. Interestingly only 8 out of the 32 positive scans triggered purely on age (no other positive criteria) but in these cases, all patients were 75 years of age or older. Also in this study, there were patients excluded from analysis who *should* have had a CT based on age but did not, suggesting that some clinicians may already ignore the age criteria when using the CCHR. I think this echoes practice in the UK when clinicians use the Canadian C-spine rule, but do not perform cervical spine imaging on every patient with the 'high-risk criteria' of age >65 years.