



Primary survey: highlights from this issue

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Welcome to the August 2024 issue of *Emergency Medicine Journal*. August is a time of new beginnings with newly qualified doctors and those promoted to postgraduate specialty training schemes commencing work in our emergency departments (EDs). Welcome to our new valued colleagues! Don't forget the *EMJ* Podcast—a fantastic source of digestible evidence base updates.

This issue presents a sober and mature reflection on some of the real-life issues we face in emergency medicine including violence in the ED and implementation of evidenced based medicine as well as a dedicated section to paediatric emergencies.

Violence in the ED

Having worked in EDs in Ireland, Australia and New Zealand, I am fortunate to have never encountered a 'mass violence event' in real life. Looking across at the USA and Mexico, such events are unfortunately not rare. Magos-Vázquez *et al* describe 18 active shooter situations and 1 bomb threat in Guanajuato state public hospitals (located mostly in EDs) between 2018 and 2023. The authors go on to describe the training healthcare personnel receive on violence-related preparedness and management of active shooter events and how this appears to have decreased the incidence of injuries among staff.

What is relatable to emergency clinicians worldwide, unfortunately, are the physical and verbal violence experienced by ED staff on a daily basis as evidenced by Zaboli *et al* in their single-centre Italian study. Associate Editor in Chief Kirsty Chellen in her commentary notes that it is nursing staff and specifically triage nurses who experience the majority of violent episodes. The aggressors were mostly male, were mostly low acuity and alcohol or drug intoxication was more often than not the main reason for admission to the ED. Workplace violence can result in serious physical and psychological harm to the individual staff member, not to mention catastrophic impact on ED staffing. As physicians, we should look out

for our nursing staff and push for policies and resourcing to protect our staff.

Prehospital administration of tranexamic acid (TXA)

The headline finding from this month's Editor's Choice paper is that only 11% of trauma victims who were at risk of death from bleeding received TXA in a prehospital setting in the State of Vaud in Switzerland. In addition to overall under-treatment, there appeared to be an age and gender bias in prehospital administration of TXA. The authors postulate that the reasons for this under-treatment are multifactorial. Professor Ian Roberts, chief investigator of the Clinical Randomisation of an Antifibrinolytic in Significant Head injury (CRASH)-2 and CRASH-3 trials, provides a passionate commentary, echoing the authors' conclusion that prehospital administration of TXA in trauma is suboptimal worldwide.

Translating validated evidence into clinical practice is an ongoing challenge which has been recognised over the past few decades. In this example, the focus on engaging key stakeholders needs to start and finish with the prehospital clinician. Knowledge translation can be aided by decision rules; indeed in the above paper, the author suggest incorporating a bleeding score that can help objectify the 'risk of bleeding' that should result in TXA administration.

Clinical decision rules

Glasziou and Haynes previously described a research-to-practice pipeline model. The model involves two concepts: 'getting the evidence straight' and 'getting the straight evidence used'. This issue presents two papers which evaluate clinical decision and prediction rules to assist with 'getting the evidence straight'.

Who knew there were 21 early warning scores (EWS)?!! Guan *et al* do us all a favour and compare the performance of these scoring systems. It is perhaps unsurprising that EWS using vital signs measured in the ED are found to be more accurate in predicting 3-day mortality.

In this planned secondary analysis, the RAPID-CT coronary angiography (CTCA) investigators directly compared the HEART Score, the T-MACS model and the GRACE Score all with and without CTCA for assessment of moderate-risk patients with chest pain. Troponin-only Manchester Acute Coronary Syndromes (T-MACS) combined with CTCA had the best diagnostic and prognostic performance for acute coronary syndrome during index hospitalisation and coronary revascularisation within 30 days. Speaking from an Irish healthcare system where timely access to CT and MRI can be challenging, I am going to add timely access to CTCA for all patients where indicated to my Christmas wish list!!

Paediatric emergency medicine papers

Paediatric laceration repair procedures can be very fraught. I would like to think they have become more patient-centred with use of procedural sedation and glue etc. However, what happens after the patient leaves the ED? Martin *et al* looked at the frequency of pain and maladaptive behavioural changes in children undergoing laceration repair post discharge. The commentary by Dr Amy Drendl points out how little we know about how our paediatric patients fare after an ED visit.

Identifying paediatric patients who are low risk of acute appendicitis can potentially reduce ED and hospital length of stays. Ultrasound has become the first test of choice because of its absence of radiation, but many ultrasounds are 'indeterminate' because the appendix is not seen. These children then go on to CT, resulting in exposure to radiation and prolonging their stay. Findings from Pernía *et al*'s single-centre retrospective study suggest that patients with an Alvarado Score <7 and the absence of 'indirect' ultrasound signs of appendicitis on a radiology-performed scan are at very low risk of acute appendicitis.

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