Highlights from this issue

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The corridors of uncertainty: a focus on emergency department admission processes

In this issue of the Emergency Medicine Journal we have two papers exploring admission processes; hospital admission thresholds and admission avoidance.

First, Wyatt and colleagues, in a retrospective analysis of a database of over 20 million (!) patients, examine hospital admission thresholds across 47 EDs over a 5 year period. After adjusting for various measures of acuity, they demonstrate a 3% reduction in admissions over the study period. The authors estimate that 137 000 hospital admissions were avoided across selected hospitals in 2015. This important work demonstrate how Emergency Medicine practice is changing, with ED clinicians adopting a higher threshold for admission, despite increasing acuity and medical complexity. The accompanying commentary by Boyle and Weber urges us to be mindful that policies that encourage avoidance of hospital admission at all costs may not always be in the best interests of patients.

Second, Ibrahim *et al*, evaluate outpatient intravenous antibiotics for children with moderate/severe cellulitis. This observational analysis of 115 children selected for either home treatment or hospital treatment demonstrated no significant differences in rates of treatment failure, duration of treatment or complications. However, they estimate a significant cost saving of home treatment. While we must consider that this analysis is not subject to the rigours of a randomised controlled trial, such strategies may be considered to avoid hospital admission.

Understanding utstein and REBOA constrictors: trauma insights

We include two papers that provide insights into our sickest groups of trauma patients. Beck *et al*, in this month's **Editor's Choice** paper, examine a cohort of 660 traumatic cardiac arrest patients and evaluate whether the presence of Utstein factors predict outcomes. Utstein factors are those variables traditionally evaluated in medical cardiac arrest such as bystander CPR and initial rhythm. The authors conclude that these factors may not apply in traumatic arrest and suggest further information, such as injury pattern, should be incorporated into traumatic cardiac arrest registries. This paper is clearly a must read for anyone with an interest in this area.

Matsumura *et al*, add to the relative paucity of literature around the use of resuscitative endovascular balloon occlusion of the aorta (REBOA) in patients with haemorrhagic shock from a registry in Japan. While REBOA is used rarely (144 patients in 4 years across 18 hospitals). The authors explore whether partial REBOA, using a smaller sheath, reduces complications such as femoral artery thrombus but without a reduction in survival. Despite small numbers and within the limitations of a retrospective registry database, partial REBOA may allow increased occlusion times without a negative impact on survival. We look forward to prospective evaluations of this technique in trauma.

A minor headache?

Mild to moderate traumatic brain injury is very common. For the emergency physician prognostication and follow-up remain problematic for this patient group. Yilmaz and colleagues provide us with useful insight into the prevalence and risk factors for the development of post traumatic headache. Over 50% of patients suffer acute post-traumatic headache and over 20% develop a chronic headache. In a valuable lesson for emergency physicians, data in this report suggest significant negative impact on functional outcomes and psychological well-being.

Blue lights and major incidents

We are always proud to publish cutting-edge research in the field of pre-hospital medicine in the Emergency Medicine Journal. This issue is no exception with three papers offering novel insight into pre-hospital care.

In a cautionary tale for London's road users it appears blue lights and ignoring traffic rules are the way to go. Rehn *et al* analyse the response times of London's air ambulance road vehicle when blue lights and sirens are used, and traffic rules are ignored. While London's traffic may be unique in its density the results of this analysis suggest that it may be possible to travel at median speeds of over 45 km/hr when sirens are used - impressive stuff.

It is great to publish a manuscript by Jamie Vassallo, winner of the Rod Little Prize 2017 at the RCEM Annual Scientific Conference 2017, for his work on Major Incident Triage. Vassallo *et al* evaluate a military triage tool, the Modified Physiological Triage Tool (MPTT), in a civilian population using the TARN database. The MPTT demonstrates improved performance for the identification of civilian patients requiring life-saving interventions.

We must not forget the psychological impact of critical incidents on pre-hospital providers. In their cross-sectional survey of 813 providers, Gouweloos-Trines *et al*, found over half were at moderate to high risk of psychological distress. This work highlights a need for improved support from colleagues after a critical incident.

Reintroducing the 'black swan'

Goldman *et al*, explore the concept of 'Black Swans' in their analysis of the root cause of 72 hours reattendances. Black Swans are unexpected events whose potential to occur only becomes apparent after they have happened. This questionnaire-based observational analysis evaluates whether there is a discordance between senior physicians and junior trainees in the identification of such events. They focus on whether there has been a potential medical deficiency as to the cause of unplanned reattendance. Overall, the reattendance rate is reassuringly low (1.8%), but in 218 patients included for analysis, there appears to be significant discordance between senior and junior physicians as to the underlying cause. This may be Black Swan theory in practice, whereby learnt experiences of senior doctors' impact on the interpretation of the cause such unexpected events. The authors conclude that education may be key in improving readmission processes (and the awareness of Black Swans-*Ed*).