



# Highlights from this issue

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## Does a brief intervention in the ED reduce illicit drug use?

Health promotion is critical in Emergency Medicine (EM), and Brief interventions (BI) for alcohol use are well established. This prospective cohort study assessed the efficacy of a BI for drug use in a US Emergency Department. As expected there was a large loss to follow-up (40% and 44% in each arm) resulting in an underpowered study and we don't know if some of those were due to mortality from drug use. The BI lasted for 20–30 min with a significant number of questions, which might be hard to achieve in a time-pressured department. However, the study failed to demonstrate any reduction in self reported drug use or an increase in drug treatment service utilisation over a twelve-month period. In the accompanying commentary, Richard Saltz discusses how we still have a responsibility to address this important public health problem.

## Paediatric intubation: how low do you go?

Many Emergency physicians use the Advanced Paediatric Life Support calculation of age in years/2+12 cm to calculate the length of an oral endotracheal tube at intubation. This study retrospectively analysed the images of 499 Korean children undergoing CT of the neck and measured the distances on scan from the mid-incisor to the mid trachea. They derived a decision formula based on weight for infants ( $5.5 + (0.5 \times \text{weight in kg})$ ) and height for children ( $3 + (0.1 \times \text{height in cm})$ ) which performed better than the APLS formula or the Broselow tape at validation. Further studies would need to be conducted to validate this calculation in other populations.

## What is positionality in quantitative studies?

I'll be honest: I didn't know what the words 'positionality', 'constructivism' and 'reflexivity' meant until I read this

fascinating article by Anisa Jafar. The idea is that when appraising quantitative medical studies, you really need to know why the researchers were interested in the topic and what position they hold, to see how they might generate and interpret the results. The example of Rivers' famous study on early goal directed therapy eloquently describes how this might be relevant when assessing the validity of research conclusions.

## Physician productivity is not a simple sum

Emergency Departments commonly use productivity to plan staffing and judge individual performance according to the average number of patients seen per hour. This retrospective American study found that the number of patients seen by EM Attendings (Consultants) declined with every subsequent hour of the 8–9 hour shift. Is this fatigue or accumulation of patients waiting results? Additional patient arrivals in the ED were associated with a modest increase in hourly productivity but this was lost towards the end of the shift. Differences between the three studied sites also emphasise the importance of using local data to assess productivity.

## Does ED overcrowding impact on clinical care for medical patients?

It is getting to shift changeover time and the Emergency Department is very busy with long waits to be seen. Do patients get less comprehensive investigations and treatment at these times? And are they more likely to be referred for medical admission inappropriately? This Canadian study found that for patients with COPD, heart failure or sepsis there was no difference for patients referred at the end of a shift compared with in the middle and the same for patients referred at times of high compared with low surge. Conversion rates (ie, actual admissions) after referral were >93%. The authors agree that the results may vary for other less obvious medical diagnoses.

## Differences in epidemiology and outcomes for elderly versus young STEMI patients



This paper from Singapore is a registry review of over 14K patients who had STEMI with a comparison of the under 65 and over 65-years-old age groups. The elderly patients were less likely to receive primary PCI with greater rates of late presentation, patient refusal, contraindications and more co-morbidities to weigh up in the risk-benefit analysis. Median symptom to door times were 26 min longer, and door to balloon times were 9 min longer in the elderly group: this may be due to the fact that 28% of older patients had no chest pain. The authors conclude that the absence of primary PCI is likely to worsen outcomes for the over 65 year age group but in the over 85 year patients the survival benefit is less pronounced and requires an individual risk-benefit analysis.

## Image challenge

Test yourself on the chest x-ray and diagnose why the patient had acute chest pain following tooth extraction. You will probably have seen the condition before but this case is an unusual cause!

## IVC ultrasound and NIV

We continue to search for the optimal diagnostic modality to assess volume status and fluid responsiveness in the resus room. The winners to date remain the passive leg raise and the use of a fluid bolus. Ultrasound measurements of the IVC diameter can be used to examine fluid responsiveness in the ventilated or spontaneously breathing patient but what about in the patient having positive pressure with non-invasive ventilation? And can you use the axillary vein as a surrogate for the IVC? Spoiler alert: don't buy another ultrasound machine just yet.