Highlights from this issue

doi:10.1136/emermed-2018-207448

Simon Carley, *Associate Editor*

Avoiding troponitis in the ED

There's a mildly amusing quote knocking around the internet that goes something along the lines of '*When Troponin was a bad assay it was a great test, now it's a great assay it's a lousy test*'. It's funny but wrong. There is no doubt that the assays for Troponin have improved with the development of high sensitivity tests, but sadly the ability of clinicians to interpret the results has not kept pace with the technology. In this edition Rick Body and Ed Carlton start a series that will challenge this knowledge gap in the pursuit of understanding how we can use Troponin testing sensibly and safely. More than that is the need for all of us to understand how diagnostic tests really work. We need to move beyond a simple understanding of tests being positive or negative and increasingly understand how a test result adjusts risk and probability of diagnosis. Although this series is primarily about Troponin tests, the underlying principles in understanding diagnostics are core skills for the modern emergency physician.

Are ED attendances really avoidable?

With the UK emergency care systems under huge pressure at the moment there is much debate about how many patients 'shouldn't' be attending the emergency department. Apart from my natural disgust at blaming patients for the woes of the whole system the debate is further compounded by wild variability in what constitutes an '*avoidable attendance*' (sic). Much of this debate in the media appears to be based in personal opinion, politics or organizational bias. This month we publish an important paper examining detailed data from 12 UK departments to determine the potential for avoidable attendance. The data suggests that the avoidable attendance is lower (19.4%) than we see reported in the press, and that there is significant variability between departments and age groups (children have the highest avoidable rate). The bottom line is that reducing the number of avoidable attendances will not solve the challenges faced by the acute care system in the UK.

7 day services don't make a difference

Hospitals in the UK have been challenged to deliver 7 day services in order to avoid 'the weekend effect' of perceived increased mortality. While the original concept of the weekend effect as promoted by political agenda has largely been debunked, the impact on working practice and process has remained, but does it have an effect on patients? In an excellent analysis of the adoption of 4 clinical standards to improve 7 day services in the UK Racheal Meacock and Matt Sutton fail to find any significant different in mortality. This article should prompt questions an whether the amount of time, money, pain and frustration expended in the pursuit of 7 day services has really been worth it.

Ice cold laceration repair

Patients really don't like local anaesthetic injections for laceration repair and over the years we've seen many strategies to reduce this. Alkalanisation, warming and speed of injection spring to mind, but what about ice? In this small RCT Song *et al* use ice to cool the wound prior to injection. It's cheap, readily available and easy to administer and in this study it appears to work. This might be a strategy worthy of early adoption in the ED.

Heart rate variability as a vital sign in sepsis

Did you know that a normal heart varies its rate? Such variability is a norm, whereas a less variable heart rate may be an indicator of clinical deterioration. It does of course require ongoing monitoring of heart rate as opposed to the single point in time ECGs that we normally use in the ED. In this study of sepsis patients the authors did not find a clinically important predictive tool, but this work is important. With wearable technologies such as smart watches capable of detecting similar trend information it will be fascinating to see where work such as this may lead.

Does the ECG in PEA arrest predict outcome?

The short answer is no. In this Canadian study looking at patients with PEA the initial ECG was not found to be predictive in multivariate analysis. The key message here is that we should continue to actively and aggressively manage our PEA patients irrespective of what the ECG shows.

What's the difference between Advanced EMS and Basic EMS in trauma care?

I expect this will be rather controversial among our pre-hospital colleagues. In this natural experiment in Canada, the outcomes of patients treated in different regions by advanced and basic EMS systems are compared. Interestingly the authors find no difference in patient outcomes for trauma patients. This was the case even when patients with severe injury were compared. While the authors show caution in the possibility of individual patient benefits this is another paper in a research area where evidence for advanced pre-hospital interventions is often conflicting.

Alcohol diversion

This is not a toxicology paper on the management of poisoning, but a concept piece on how patients with acute alcohol intoxication might be diverted away from ED attendance. The idea of 'drunk tanks' has been promoted in the ED as a solution to overcrowding, which it probably isn't, but more importantly the diversion of patients might lead to a decrease in the over-medicalisation of acutely intoxicated patients.

Alcohol screening

In accepting that alcohol intoxication and emergency medicine appear to be inextricably linked it's incumbent on us to do something about it. Alcohol screening tools to identify and then target interventions have been around for many years, but they have not been universally adopted. In this paper by Robert Patton and Ghiselle Green they survey UK departments and show that many routinely screen for alcohol use. There is still room for improvement particularly in younger patients but it does appear that we are doing better at this public health/ED interface. In the accompanying commentary by Fiona Wisniacki outlines the progress we have made to date but points out that there is still much for acute care services and others to be done if we are to reverse the current upward trend in alcohol related illness.