



## Highlights from this issue

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Caroline Leech , Associate Editor**Barriers to saving lives in OOHCA**

The Editor's choice this month is a retrospective study assessing the barriers to effective dispatcher-assisted CPR when bystanders called the emergency medical services in China. The study found a median of 30 minutes delay between collapse and calling for help, a 1.9% rate of bystander CPR, and when CPR instructions were provided over the phone only 46% persisted with performing compressions. Devastatingly, there were no cardiac arrest survivors in this study. The accompanying Commentary highlights the importance of community education and training for the public to be able to recognise cardiac arrest and have the confidence to start bystander CPR, as well as a dispatcher system that can stay on the phone to guide people until the EMS arrive at the scene.

**Emergency medicine 'going green'**

There is increasing awareness of the impacts of healthcare on climate change and Emergency Medicine may be slightly behind on this initiative compared with other specialties. In this month's EMJ, authors from the RCEM Environmental Sustainability Specialist Interest Group present an interesting overview of how Emergency Departments might improve their environmental sustainability. These include reducing waste (think plastic wrapping, disposable equipment or cups, inappropriate glove use), reducing the use of nitrous oxide or metered dose inhalers, installing low energy lighting, or using telemedicine for virtual ED clinics. This is something we all need to start thinking about. However I do hope that we might be able to resume some carbon neutral conference events in the future, rather than relying on teleconferencing, which just isn't the same.

**Biomarkers for TBI**

S100B protein is one of the most studied biomarkers for the detection of traumatic brain injury (TBI). A research team aimed to identify whether the laboratory biomarker could identify clinically significant TBI in patients with GCS 13–15 attending five Canadian ED's. The patients had symptoms and signs meeting indications for a CT and were within 24 hours of injury. Using the

predetermined threshold, only 4/24 clinically significant TBIs would have been identified by the S100B biomarker test. However, this might have been due to the delay between the head injury and the blood sampling as the half-life of the S100B protein is reported to be 90–120 min. Of note, 88% of patients were under 65 years which does not match my local TBI demographics and some of the conditions defined in this paper as 'clinically insignificant' radiological findings (13 patients) would actually lead to hospital admission in the UK. The search for a diagnostically accurate TBI biomarker continues.

**TXA and TBI**

The CRASH-3 study produced great debate about whether sub-group analyses can be used to produce future recommendations about clinical management. This month, the group publish a nested substudy assessing pre and post randomisation CT scans to compare the presence or volume of bleeding in TBI patients who received TXA or placebo in the trial. The median time of the pre scan was at 2 hours post injury and the median post-randomisation scan time was at 23 hours. It was interesting to note that 39% of patients had a newly detected haemorrhage on the post randomisation scan. Acknowledging the limitations of this study, the results found that there was no significant difference in the rate of new bleeding (not seen on first scan) or progressive bleeding (>25% increase in volume). However if patients with fixed dilated pupils (who may be beyond help) are excluded, then TXA may prevent new haemorrhage. For those centres who are thinking of omitting the 8 hour infusion maintenance dose of TXA this may be relevant. (COI: CL is a co-author on this paper)

**Do we need happy doctors to provide patient satisfaction?**

This study, by Byrd *et al*, aimed to determine the effects of self-assessed empathy, burnout and patient-assessed emergency physician empathy on patient satisfaction in a single ED in the US. The primary findings were that individually, only patient-assessed empathy was relevant to patient satisfaction but there were synergistic effects when EP's had all three positive wellness markers correlating in much higher levels of patients satisfaction.



There are clearly other biases in the busy ED confounding the results, for example not giving adequate time to the patient resulting in lower patient satisfaction. However, the study should make us think about the impact of burnout and compassion fatigue, not just on the well-being of clinicians but also as a potential barrier to an effective doctor-patient relationship. How organisations can support doctors to achieve low levels of burnout and high levels of empathy is not discussed in the article.

**Handheld electronic devices in ED**

If a patient sees a staff member on an electronic device in a clinical area, do they think it is unprofessional and that the individual is using it for personal reasons or avoiding work? ED staff might be looking up a clinical guideline, checking the electronically recorded vital signs, recruiting a patient to research, or in the paediatric department we might be using a device to distract a child. During the COVID-19 pandemic, we have increasingly used devices to allow patients to communicate with families when visiting is not permitted. In 2017, 438 patients, carers and relatives from a single UK ED were surveyed to establish their perception of staff members using hand held electronic devices (HED). During the study 27% of respondents had seen a clinician use a HED during their visit with the majority assuming that this was for clinical work. 78% were happy for staff to use HED's at work, although a quarter would prefer this to not be at the bedside or during the consultation. The paper provides important considerations for how we educate and reassure patients on HED use as our utilisation expands.

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