



# Primary survey: highlights from this issue

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Hello and welcome to my first Primary Survey. I am the *EMJ*'s Social Media Editor and an Emergency Medicine Higher Specialist trainee in the East Midlands, UK. June 2023's journal is packed with a smörgåsbord of articles on topics such as COVID-19, cardiology, risk stratification, and cross-cultural impact on research in emergency medicine.

## COVID-19

COVID-19 has undoubtedly had an impact on health care over recent years and continues to do so. Therefore, it is no surprise that papers on COVID-19 feature in this month's journal.

This month's editor's choice by Beaney *et al* looks at the utility of pulse oximetry monitoring from home of patients with COVID-19 and their associated mortality and healthcare utilisation. This was part of a large national study. They found patients assessed in the emergency department (ED) and who were not admitted within 24 hours, had significantly lower mortality and requirement for critical care within 28 days than those not enrolled. Patients enrolled to the programme had higher odds of subsequent ED attendance and emergency hospital admission suggesting early recognition of hypoxia and escalation of care. This month's editorial discusses this further.

One of the challenges of COVID-19 was the need to use personal protective equipment (PPE) such as elastomeric respirator masks. With this, communicating over landline telephones could be challenging. Coats *et al* created a novel, affordable system using a throat microphone and bone conduction headset, to be used in combination with a standard hospital "emergency alert" telephone system. Testing this system on 15 participants, a mean of 73% of staff identified words for speech in this new setup vs 43% in standard practice. They found their novel headset could significantly improve intelligibility during 'emergency alert' telephone calls.

## Out of hospital cardiac arrest (OHCA)

There are a couple of papers in this month's journal focussing on OHCA. This month's reader's choice by Shibahashi *et al* considered the impact of bystanders CPR and cardiac rhythm change over time in patients with OHCA.<sup>4</sup> This large registry study from Japan, compared the first cardiac rhythm between patients who received bystander CPR and those who did not. They found bystander CPR was associated with higher VF/VT likelihood and lower likelihood of pulseless electrical activity. These are promising results suggesting the importance of early CPR for OHCA.

Managing an OHCA can be challenging for many reasons. There is limited evidence on how many defibrillation attempts should be made before transfer to hospital. Ko *et al* looked at the number of prehospital defibrillation attempts and sustained return of spontaneous circulation (ROSC). They found no significant increase in ROSC after five defibrillations and absolutely no increase in ROSC after seven defibrillations. A higher number of defibrillation were independently associated with a lower chance of sustained ROSC and a lower chance of good neurological outcome.

## Are you counting your respiratory rates accurately?

Respiratory rate (RR) measurement is an important part of the patient assessment. Fogarty *et al*, using a data set of 843 006 RRs, found that the step from a RR of 20, to 21 breaths/min is associated with a large drop in frequency of reading for patients. With a subsequent higher rate of values for the 22 breaths/min category. When compared with the expected recorded amounts on a normal distribution, these do not correlate. This is especially noticeable for the 21 breaths/min, which were significantly less than they should be. This resulted in a measurement error of 214%. Therefore, this suggests that the RR readings for 21 breaths/min are being



misclassified. They found this had potential clinical implications for the National Early Warning Score -2 (NEWS-2). As a RR of 21 breaths/min or over crossed the pre-defined threshold to the NEWS-2 score, which may change the clinical response. This research letter has made me reflect on how good I am, on counting the respiratory rate, and what affect this could be having on my patients.

## Patient involvement in research

As healthcare professionals we are ultimately there to look after and treat our patients. Therefore, understanding their perspective on how we do what we do is crucially important. Roberts *et al* share the challenges and importance of why cross-cultural adaptation (CCA) is needed for patient reported outcomes and measures. Our UK- British English can be lost in translation and cultures. They describe a worked example using the patient reported outcome measure (PROM-ED) and the adaptations from Canada to the UK.

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