Highlights from this issue

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This month's editor's choice is actually a pair of papers: one, a study on the diagnostic characteristics of the T-MACS chest pain risk stratification score AND the other, a paper explaining a key methodological concept used in this and other studies of diagnostic tests, the receiving operator characteristic ROC) curve (Richard Body (an associate editor of EMJ) and colleagues previously developed the MACS rule, which classifies patients as very low risk or very high risk after the results of an initial set of biomarkers are known, TMACS relies on obtaining both high sensitivity troponin and heart-type fatty acid, but the latter biomarker is not widely available. A modified rule, the MACS score, uses only high-sensitivity troponin and in the current study the authors evaluate this new rule's test characteristics, using the ROC curve. Hui Zhe Hoo, Clinical Research Fellow at the University of Sheffield and a respiratory physician, explains the fundamentals of the ROC curve using this paper as an example. This is the third in EMJ's occasional series of articles explaining statistical concepts frequently found in the emergency medicine literature.

Still a Cinderella service

Demand for mental healthcare in the ED continues to rise. Sadly this rise increasingly includes children and the provision of child and adolescent mental health services (CAMHS) in most emergency departments falls well short of what is needed. Thus, a systematic review in this issue by Newton and colleagues from Canada on children's mental health crises in the ED makes interesting reading. A previous review undertaken by these authors in 2010 provided some evidence to support the use of specialised care models to reduce hospitalisation, return ED visits and length of ED stay. In the current study they report an increase in research over the past few years, yet most of the evidence is limited by weak methodology. It is evident that the specialised resources and skills needed are still not readily available and the authors reiterate the need for high quality evidence to guide mental health screening, early and effective interventions and on-going follow-up care after an ED visit. I suspect few of us would dispute this view.

Ladders or smiley faces?

Accurate assessment of pain due to an acute injury can be challenging especially when the child is distressed and anxious, but providing timely and effective analgesia is key to child and carer comfort and satisfaction. This issue includes an interesting paper by Ffion James and colleagues from Wales who set out to assess the inter-rater agreement of the Royal College of Emergency Medicine (RCEM) composite pain scale. The majority of pain assessment tools for children were designed for post-operative or chronic pain and not for sudden and acute pain due to injury. The RCEM composite tool combines the numerical rating scale (Ladder), a modified Wong–Baker Faces Pain Scale (Faces scale) and a Behaviour score which groups pain into four categories based on severity. To date the reliability of this scale has not been assessed. In their study, pain severity was assessed by the triage nurse doctor and child (depending on their age) using the composite pain scale. The Faces Scale demonstrated greater inter-rater agreement than the Behaviour Scale, while the Ladder demonstrated poor inter-rater agreement in comparison with the Behaviour score. The authors conclude the Ladder score could be omitted from this composite tool.

Using emergency data for public health interventions

Two studies in this issue demonstrate how data from emergency care can be used to inform public health interventions. Acute and chronic alcohol intoxication, a worrying global public health issue, is the cause of many health and social problems. Reunion Island in the South West Indian ocean is no exception. Reunion Island is among the four French regions where premature mortality due to alcoholism and cirrhosis is the highest and foetal alcohol syndrome is seven times higher than that of metropolitan France. Vilain and colleagues undertook an exploratory analysis based on syndromic surveillance data to describe the emergency department visits for alcohol intoxication and factors associated with their variation. Alcohol intoxication attendances were the second most common reason for ED attendances after trauma and these attendances increased significantly on benefit payday, weekends and public holidays. The authors conclude this kind of syndromic surveillance system for monitoring public health data other than infectious diseases can be used to inform initiatives to reduce morbidity and mortality from alcohol intoxication.

According to the WHO, interpersonal violence accounts for around half a million deaths a year globally. This figure will come as no surprise to ED clinicians and may even be regarded as conservative by those caring for victims on a daily basis. Addressing violence has traditionally been a police concern, so it was interesting to read of a cross sectional study by Quigg and colleagues in the UK which explored the potential of ambulance call out data in understanding patterns of violence to inform prevention activity. This paper is well worth a read as ED's will see similar trajectories and trends. The majority of call outs were at night for young males in deprived and urban areas, and these calls increased on weekends and bank holidays but not for sporting events. 77.3% were assault/sexual assault while 22.7% were stab/gunshot/penetrating trauma. Interestingly, there were significant differences in call out characteristics between the two violence types. The authors conclude that ambulance call out data provides a rich source of information and sharing this data could be key in violence prevention programmes. Any information that can contribute to violence prevention programmes has to be worthy of consideration.

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