



Highlights from this issue

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Ian K Maconochie^{1b}, Deputy Editor**Reducing repeat emergency department attendance for non-urgent care: a systematic review of the effectiveness of interventions**

Paediatric Emergency medicine continues to evolve as a specialty around the world and with it, an increasing demand on those services, in the emergency departments, paediatric and mixed departments alike. How this increased demand may be managed, including the use of appropriate pathways of care, to ensure that children and young people get the right care that they require is necessary. This systematic review has found that the evidence for which interventions are effective in decreasing the demand on ED services for non-urgent care is inconclusive and needs more research. This work did suggest that the greatest benefit might be in primary care services, which would be integral to reducing such attendances and that the parents should be provided with information about the management of common conditions.

Perhaps it is time to experiment with an informed grandparent being posted at the end of community streets to provide guidance! Alternatively, health needs to be thought about in everyday living, about living healthily!

Pre-Hospital tranexamic acid shortens the interval to administration by half in major trauma networks: a service evaluation

Tranexamic acid (TXA) is used to manage blood loss from postpartum bleeding, post-surgery, hereditary angioedema and from heavy menstrual periods, and is associated with increased survival of patient with significant haemorrhage in major trauma. TARN data was used to study patients who attended London Trauma Centres and Queen's Medical Centre in Nottingham.

Over a thousand patients received TXA with data being available on two thirds of the patients being analysable, with over half of these patients receiving it within an hour following injury, but with twice the interval if they received it in-hospital. The challenge was identifying who was at risk of major haemorrhage in the prehospital environment., that is, those patients not yet in shock from blood loss.

Confirmed cardiac output on emergency medical services arrival as confounding by indication: an observational study of prehospital airway management in patients with out-of hospital cardiac arrest

Out of hospital cardiac arrest (OHCA) and airway management is still an area of controversy, with the latest International Liaison Committee on Resuscitation guidance on paediatric airway management suggesting that bag mask ventilation (BVM) rather than tracheal intubation of supraglottic airway devices should be used in OCHA, although this was based on very low certainty of evidence. (<https://costr.ilcor.org/document/advanced-airway-interventions-in-pediatric-cardiac-arrest>).

Registry studies are used as there are few randomised controlled trials, the most notable of these being conducted by Gausche but this was published in 2000; the value of this work is diminished in context of the advances since then in the delivery of prehospital care.

This paper uses Japanese registry from the Kanto region in 2012, comparing advanced airway (AAM) management and another group in whom BVM was delivered. Outcomes including neurological functioning at 1 month, adjusted by multivariable logistic regression to adjust for age, origin of the cardiac arrest, witnessed arrest, bystander CPR, with/without confirmed cardiac output on arrival of the emergency medical services (EMS). The two groups, AAM, 5893 patients and BVM had 6974 patients, with more cases of confirmed cardiac output seen in BVM (3.9%) as compared with AAM (1.9%); the impact of confirmed cardiac output by EMS had a large effect on good neurological outcomes for the patients at 1 month (30.3%) as compared with only 1.8% if there were no cardiac output detected.

This should be taken into account when considering confounding factors looking at pre-hospital care.

The association of paramedic rapid sequence intubation and survival in out-of-hospital stroke

This paper looks at pre-hospital airway management of patients with stroke in Australia, involving 131 hospitals from January 2008 to December 2017, and compares patients who had been intubated

by rapid sequence induction. Propensity score matching showed decreased survival in those who underwent RSI (OR 0.61, 95% CI 0.45 to 0.82; $p=0.001$), no significant difference for patients with ischaemic strokes, and for haemorrhagic strokes was OR 0.6 (95% CI 0.41 to 0.9; $p=0.001$).

This suggests that formal trials to see if these retrospective observational registry studies are true should be high on the list of research funding priorities.

Driving stroke quality improvement at scale in emergency departments across a nation-wide network of hospitals: strategies and interventions

Decreasing door to needle time for intravenous tissue plasminogen activator (tPA) is a perceived requirement to improve care in eligible stroke patients. An electronic dashboard was used to store and retrieve outcome data to see which interventions would improve the tPA administration rate. Over 2 years, data were collected from 2015 to 2017 from 89 hospitals and this tool revealed that specific physical resources and staff allocated to stroke management and pathways of care with checklists to determine the eligibility for tPA administration are needed.

Epidemiology of traumatic injuries presenting to an Emergency Department in Central Haiti: a retrospective cohort study

Patterns of injury vary in Central Haiti, with falls being the predominant cause in children as opposed to road traffic accidents in adults. These findings reveal that clinical and public health measures need to be enhanced to decrease the morbidity and mortality seen in Central Haiti.

Lastly

And finally, it has been a pleasure and a privilege to be associated with the journal and to see it evolve, shaping practice and knowledge in the delivery of optimum emergency care. I would like to thank readers for their comments, and the editors, past and present for their support over many years. Best wishes, Ian.

Editor's note: Ian Maconachie, Deputy Editor is stepping down from his position at EMJ. It is with great appreciation for his many years of service and of course some sadness that we say adieu, and thanks!

