

JournalScan

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Prehospital trauma severity is difficult ▶ A “standby call” from an in-bound ambulance may allow the hospital to prepare space and equipment as well as to alert key staff. On the other hand, an inappropriate call could be considered a waste of resources. This study compared prehospital alert calls with injury severity derived from the Trauma Audit Research Network (TARN) database. The researchers found that the majority of severely injured patients (injury severity score >15) were not the subject of an alert call. Seventy five per cent of calls were for patients who proved not to have serious injuries. Assessment of severity of trauma in the prehospital setting is clearly difficult, but has the potential to assist hospital management.

▲ **Crystal R**, Bleetman A, Steyn R. Ambulance crew assessment of trauma severity and alerting practice for trauma patients brought to a general hospital. *Resuscitation* 2004;60:279-82.

Prehospital hypertonic saline of no benefit in hypotensive brain injury ▶ There is continuing interest in the potential value of hypertonic saline in the management of head injury. In this double blind, randomised controlled trial of prehospital fluid resuscitation, hypotensive brain injured patients were treated with hypertonic saline or Ringer’s lactate. The investigators found no significant difference in survival to hospital discharge and crucially no difference in neurological status (as measured by extended Glasgow outcome score) at six months.

▲ **Cooper J**, Myles PS, McDermott FT. Prehospital hypertonic saline resuscitation of patients with hypotension and severe traumatic brain injury. *JAMA* 2004;291:1350-7.

Prehospital intubation shows no benefit ▶ Investigators reviewed 316 trauma patients intubated (without drugs) in the prehospital setting, comparing these with 217 patients who received respiratory support by bag-valve-mask ventilation. Mortality was significantly higher in the group who were intubated (88.9% compared with 30.0%), partly reflecting the injury severity scores, revised trauma scores, and mechanisms of injury in this group. However, the authors conclude that tracheal intubation confers no survival advantage over bag-mask-valve ventilation. The fact that this study was not prospective or randomised illustrates the difficulty of research in prehospital trauma care. Critics might argue that this study merely shows that trauma patients in whom intubation can be carried out without drugs have a poor prognosis.

▲ **Stockinger ZT**, McSwain NE. Prehospital endotracheal intubation for trauma does not improve survival over bag-valve-mask ventilation. *J Trauma* 2004;56:531-6.

Side airbags reduce injury ▶ Owners of modern cars will be reassured by this large US study of outcome after nearside collision. Occupants protected by side airbags enjoyed a 75% lower risk of head injury and 68% reduction in thoracic injury. Even when adjusted for a range of potentially confounding variables (including seat belt use), risk reduction appears to be dramatic.

▲ **McGwin G**, Metzger J, Rue LW. The influence of side airbags on the risk of head and thoracic injury after motor vehicle collisions. *J Trauma* 2004;56:512-17.

Dangers of flat roofed houses ▶ This series reports 1643 patients who were injured after a fall from a flat roof. It is remarkable that they presented to a single hospital in Turkey over a period of just four years. Head injuries were common (45%), with most of the 90 patients fatally injured dying as a result of head injury. Most of the patients who were injured were children. There is a clear local need to focus upon injury prevention.

▲ **Yagmur Y**, Guloglu C, Aldemir M, *et al*. Falls from flat-roofed houses: a surgical experience of 1643 patients. *Injury* 2004;35:425-8.

Trauma scoring systems: much more to come! ▶ Readers who follow developments in trauma scoring systems will enjoy this review. Having acknowledged the positive attributes of the more commonly used scoring systems, such as the injury severity score and its derived trauma injury severity score, their limitations are discussed. It comes as no surprise that the overall conclusion is that the perfect scoring system has yet to be found, so there is plenty of opportunity for further research in this area!

▲ **Chawda MN**, Hildebrand F, Pape HC, *et al*. Predicting outcome after multiple trauma: which scoring system? *Injury* 2004;35:347-58.

More missed injuries ▶ There is nothing new in this retrospective review of 45 patients admitted to intensive care with major injuries, but the message from this paper remains as relevant and important as ever. Injuries (particularly of an orthopaedic nature) continue to be initially undetected among patients presenting with major trauma.

▲ **Brooks A**, Holroyd B, Riley B. Missed injury in major trauma patients. *Injury* 2004;35:407-10.

Sterile compared with clean gloves for wound repair ▶ This study looked at infection rates and complications after closure of wounds using sterile or clean non-sterile gloves. The trial enrolled 816 people and demonstrated low infection rates in both groups with no statistically significant difference found. The use of clean, non-sterile gloves could save time and money, especially as many A&E departments move towards a latex free environment.

▲ **Perelman VS**, Francis GJ, Rutledge T, *et al*. Sterile versus non-sterile gloves for repair of uncomplicated lacerations in the emergency department: a randomized controlled trial. *Ann Emerg Med* 2004;43:362-70.

Never mind the weather ▶ This study examined attendances at A&E after violent assault in relation to factors such as seasonal variation, ambient weather conditions as well as calendar events. After examining 19 264 assault related presentations, the researchers in Cardiff found no correlation with weather conditions. Violence was clustered on Saturday and Sundays, New Year and on rugby international days. No surprises there then!

▲ **Sivarajasingam V**, Corcoran J, Jones D, *et al*. Relations between violence, calendar events and ambient conditions. *Injury* 2004;35:467-73.

Sorry I can’t take your call ▶ The dangers associated with the use of mobile phones in hospitals are investigated in this interesting laboratory based study. Six of the 14 mechanical ventilators malfunctioned when a cellular phone, set to maximum power output, was operated within 15 cm. Faults recorded included doubling of respiratory rate, alarming increases in tidal volumes, and in one instance a complete cessation of ventilation when a cellular phone was placed at 30 cm from the device. So it seems precautions in place in many hospitals may be well founded after all.

▲ **Shaw CI**, Kacmarek RM, Hampton RL, *et al*. Cellular phone interference with the operation of mechanical ventilators. *Crit Care Med* 2004;32:928-31.

How safe are our hospitals? ▶ This thought provoking article examines the safety of the acutely ill patient in hospital. The subject of error within medicine is considered in depth. Comparisons are made with industry, and factors that may lead to error are explored in the context of the challenges facing the health service. The authors support a systems approach to error, proposing monitoring, education, and clinical governance as means to promote patient safety and reduce medical errors.

▲ **Bion JF**, Heffner JE. Challenges in the care of the acutely ill. *Lancet* 2004;363:970-7.

Adrenaline dose in paediatric resuscitation ▶ This prospective, randomised, double blind controlled trial compared the efficacy of high dose epinephrine/adrenaline (0.1 mg/kg) with

standard dose (0.01 mg/kg) as rescue therapy for in-hospital cardiac arrest in children after failure of initial resuscitation. The primary outcome measure was survival at 24 hours. No benefit was found from high dose epinephrine/adrenaline: the authors suggest that high dose therapy might even be worse than standard therapy.

▲ **Perondi MBM**, Reis AG, Paiva EF, *et al.* A comparison of high dose and standard dose epinephrine in children with cardiac arrest. *N Engl J Med* 2004;**350**:1722–30.

Cuffed ET tubes in children ► This prospective study compared ventilation with cuffed and uncuffed endotracheal tubes in critically ill paediatric patients admitted to intensive care over a one year period. A total of 597 patients aged under 5 years were included, 210 of whom had cuffed tubes. There were no significant differences between the cuffed and uncuffed tube groups in the use of post-extubation epinephrine (adrenaline) for subglottic oedema, the rate of successful extubation, or the need for tracheostomy. Cuffed endotracheal tubes offer some potential advantages over uncuffed endotracheal tubes in that the fit of the cuffed tube can be adjusted. Modern endotracheal tube cuffs have advanced to a low pressure, high volume design, and therefore, pose less risk of trauma than the traditional high pressure, low volume cuffs of the past. It is generally believed that cuffed endotracheal tubes are contraindicated in children under the age of 8 years. This study challenges this traditional dogma.

▲ **Newth CJL**, Rachman B, Patel N, *et al.* The use of cuffed versus uncuffed endotracheal tubes in paediatric intensive care. *J Pediatr* 2004;**144**:333–7.

Lids for kids ► This randomised controlled trial assessed the effectiveness of two different education interventions plus free cycle helmet in increasing helmet ownership and use. Children in deprived areas received either a helmet and educational pack or

a helmet and multifaceted invention (educational pack, school assembly, lesson on helmets, invitation to school cycling event). The helmet and educational pack were as effective as helmet and multifaceted intervention in terms of cycle helmet ownership and wearing, with both interventions leading to increased wearing compared with the baseline. The authors acknowledge further study is required to determine the length of effect of such interventions.

▲ **Kendrick D**, Royal S. Cycle helmet ownership and use; a cluster randomised controlled trial in primary school children in deprived areas. *Arch Dis Child* 2004;**89**:330–5.

Parental anxiety watching lumbar puncture ► This study compared the anxiety levels of parents accompanying their children during lumbar puncture with those who chose not to witness the procedure. Anxiety levels were assessed using the state-trait anxiety inventory. No correlation was found between parental education and anxiety levels. Post-procedural anxiety levels were similar in the two groups, implying that parents who chose to witness the procedure coped well with it. The authors suggest that medical staff should respect the wishes of parents regarding accompanying their children during invasive procedures.

▲ **Tan M**, Tan H, Buyukavci M, *et al.* Parents' attitudes towards performance of lumbar puncture on their children. *J Pediatr* 2004;**144**:400–2.

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