



## The Cape Triage Score: update

L A Wallis and on behalf of the Cape Triage Group

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## LETTERS

### Prehospital intubation: delving deeper into the evidence

May I thank Sen and Nichani<sup>1</sup> for their recent "Best Bet" on prehospital intubation in head injury. It was a pity, however, that they neglected to look deeper into the reasons why their conclusion, at least at this point in time, was that there is insufficient evidence to support its use. The very topic of prehospital rapid sequence induction (RSI) was the subject of a panel discussion and presentation at the National Association of Emergency Medical Service Physicians annual meeting in Arizona in 2004. Fortunately, they delved deeper into the issues surrounding RSI in patients with head injury. One of the most important findings from this discussion was that most of the ambulance services involved in studies about RSI/sedation assisted intubation, did so without the benefit of end-tidal carbon dioxide (ETCO<sub>2</sub>) or even oxygen saturation monitoring. This, coupled with the widespread use of hyperventilation and inadequate preoxygenation, went some way to explain the adverse findings.

In one of the largest studies, the San Diego Paramedic RSI Study,<sup>2</sup> when one ambulance service introduced the use of ETCO<sub>2</sub> monitoring, further analysis found hyperventilation (<30 mm Hg) occurred in 79% and severe hyperventilation (<25 mm Hg) occurred in 59% of intubated patients. After introduction of ETCO<sub>2</sub> monitoring, the incidence of inadvertent hyperventilation was significantly reduced. The only RSI subgroup without increased mortality was in those patients who underwent paramedic RSI, but were then transported by air medical crews who had substantial experience using ETCO<sub>2</sub> to guide ventilation.

The San Diego trial uncovered many adverse findings, but in a positive light, and many important lessons were learned. Firstly, advanced monitoring including pulse oximetry and ETCO<sub>2</sub> should be mandatory when performing endotracheal with or without RSI. Secondly, adequate preoxygenation prior to RSI and close oxygen saturation monitoring during laryngoscopy should be routine. Thirdly, hyperventilation should be avoided. In stark contrast with the San Diego study,

the Whatcom Medic One programme in Washington has not experienced any of the problems associated with desaturation/bradycardia and has an intubation success rate of 96.6%.<sup>3</sup> All failed intubations were successfully managed. This successful RSI programme is as a result of rigorous training, clinical governance, medical oversight, continuous quality assurance and, of course, the investment in adequate monitoring including ETCO<sub>2</sub>.

The most startling contrast between the USA and the UK, is that only physicians in the UK undertake RSI. The monitoring described above is now mandatory in the emergency department and the anaesthetic room after a position statement by both the Royal College of Anaesthetists and our own faculty (Faculty of the College of Emergency Medicine). In my scheme (Hampshire) and many others, we fully extend this to the prehospital theatre. In conclusion, if we are to accept that RSI in traumatic brain injury is a valid and meaningful intervention in the emergency department, then would it not follow that this is also true prehospital?

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- 4 Wang HE, Davis DP, Wayne MA, et al. Prehospital rapid-sequence intubation - what does the evidence show? Proceedings from the 2004 National Association of EMS Physicians annual meeting. *Prehosp Emerg Care* 2004;8:366-77.
- 5 Position statement number 1: confirmation of endotracheal tube placement with end tidal CO<sub>2</sub> detection. *Emerg Med J* 2001;18:329.

### The Cape Triage Score: update

The development of the Cape Triage Score (CTS) has recently been described.<sup>1</sup> The CTS

was launched across the Western Cape of South Africa on 1 January 2006. However, as with any work in progress, time delays between submission and appearance of an article mean that development will have occurred: this is the case with the CTS, and the final version is significantly different from that published.

The first meeting of the South African Triage Group takes place in June 2006, with a view to producing a national tool, developed and suited for the South African healthcare system. We are actively seeking comments and input in the development process, as the CTS is a dynamic tool, and encourage readers of this journal to provide feedback.

The final version of the CTS is available on the website ([www.triagesa.co.za](http://www.triagesa.co.za)). Any comments, feedback, or observations would be very welcome.

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### REFERENCE

- 1 Gottschalk S, Wood D, Devries S, et al. A triage system for the Cape Town area: proposal from the Cape Triage Group. *Emerg Med J* 2006;23:149-53.

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