

## Why is this patient unconscious?

Identifying the cause of coma or impaired consciousness is a common piece of detective work in the emergency department. In this issue Forsberg and colleagues provide some estimates of the likely cause from a cohort of 938 patients with a Glasgow Coma Scale (GCS) score of 10 or below. If you want to guess the cause before even seeing the patient then poisoning is a good bet, accounting for 38% of all cases and 80% of those aged less than 40 years. From the patient's point of view you might hope that poisoning is the cause. Poisoned patients had a mortality rate of 2.8% with 2% having neurological sequelae at discharge, compared to 39% and 18% respectively in the non-poisoned patients (*see page 100*).

## Prehospital CPAP

The use of continuous positive airway pressure (CPAP) for acute cardiogenic pulmonary oedema (ACPO) seems to be following the same path as thrombolysis for acute myocardial infarction: starting in the coronary care unit, then moving to the emergency department, and then into the ambulance. Dieperink and colleagues report the use of the Boussignac CPAP system by ambulance nurses in 26 patients with ACPO. Oxygen saturation improved following treatment, although one patient died in the ambulance and 10 died during their hospital stay. The fly in the ointment of early CPAP for ACPO, and an important difference from the thrombolysis story, is that the large 3CPO trial recently failed to show evidence of mortality benefit from initial treatment with CPAP compared to standard oxygen therapy (*see page 141*).

## Tinkering with the TIMI score

The TIMI score was originally developed as a prognostic score for patients

diagnosed with acute coronary syndrome. It has since been used both diagnostically and prognostically (and sometimes as a confused mixture of the two) to identify patients with myocardial infarction at presentation and those at risk of subsequent adverse events. The original TIMI score is unweighted, so each item scores one point even though two of the items—raised cardiac markers and ST deviations—are known to have much greater prognostic power. Body *et al* addressed this issue by increasing the weighting of these two items by a factor of five and showed that the modified score had greater discriminant power for 30-day adverse events than the original score when used in an emergency department cohort with suspected cardiac chest pain. Although this modification increases the score's prognostic value its role in decision-making remains unclear (*see page 95*).

## Reducing emergency department use by frequent attendees

Frequent attendees at the emergency department (ED) have attracted a number of interventions aimed at reducing their dependence on the ED, although few of these methods have been formally evaluated. Skinner and colleagues evaluated whether case management of 57 frequent attendees at Edinburgh Royal Infirmary reduced subsequent ED use. They found that the median number of ED attendances dropped from 12 in the six months prior to intervention to 6 in the six months after. A statistical explanation for this might be “regression to the mean”, but some readers may consider the term “statistical explanation” to be an oxymoron. Fortunately the authors offer a nice, comprehensible, non-statistical description of regression to the mean: the reduction may be due to the natural

ebb and flow in the presentations of these patients. Intervention would most likely occur when presentations are going up or reaching a peak (*see page 103*).

## Is severe pain a high priority?

It would seem obvious and humane that the severity of pain should be an important factor in determining the urgency of an ambulance response. Yet the study by Lord *et al* in this month's *EMJ* found that an adjusted analysis of 1246 cases with an initial pain score and response code recorded showed no association between these two variables. Of course, it is easy to decide that pain severity should be an important factor in prioritisation but more difficult to ensure that it is appropriately incorporated into the process. Pain is a subjective assessment, so any attempt to prioritise on the basis of pain carries the risk that he or she who cries loudest will be seen first—which would be bad news for stoics (*see page 123*).

## Radiologists miss things too!

As emergency physicians grapple with interpreting CT scans and ultrasound images, Hof and colleagues provide a helpful reminder that radiologists are struggling on the same learning curve, albeit (hopefully) a little higher up. They asked radiologists, assigned into three groups on the basis of expertise, to interpret 103 abdominal CT scans in cases of suspected appendicitis. Compared to the gold standard of laparoscopic findings, the sensitivities of the three groups' interpretations were 81%, 88% and 95% respectively in order of increasing expertise. The respective specificities were 94%, 94% and 100%. As with many radiological investigations, expert review of an abdominal CT may be very helpful (*see page 92*).