The 4-hour rule: does lowering the temperature treat the system?

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The performance of hospital emergency departments (EDs) is often used politically as a barometer for the performance of the health system. EDs have many roles. As well as caring for the acutely unwell or injured, they are frequently left to deal with those unable or unwilling to access health care elsewhere, and those near the end of life who are unable to be managed in an aged care facility or at home. They are often the health service of first and last resort.

With the growth and ageing of the Australian population, and high bed occupancy rates, it is no surprise that EDs have often buckled under the increased volume of patients. In this issue of the Journal, Lowthian and colleagues (*page 128*) have confirmed what doctors at the coalface have long suspected — that ED presentations are increasing beyond what would be expected from demographic changes alone. The design of our health system is not coping.

Over the years, a clear association between ED overcrowding and increased patient mortality has emerged. To address this, the National Emergency Access Target (NEAT), or the "4-hour rule" as it is more commonly known, was introduced and is currently being rolled out throughout Australia. Until now, there has been no evidence that mortality is reduced by achieving this target (of admitting, transferring or discharging most patients within 4 hours of their arrival at an ED). In this issue, Geelhoed and de Klerk (*page 122*) present the first Australian data that suggest that such an association with lower mortality may be real. While the findings appear to be groundbreaking, this study has several limitations, as Richardson (*page 126*) counsels in an accompanying analysis.

Interestingly, in the Perth tertiary hospitals studied, the target was achieved for most patients, but a mortality benefit was achieved in only two of the three hospitals. It seems that the devil is indeed in the detail. Where it occurred, the mortality benefit was substantial, and overall equated to one fewer death every 4–5 days. Geelhoed gives us glimpses into how the target was achieved in his hospital — more admissions and investigations occurred on the wards rather than in the EDs, thus emphasising that a whole-of-hospital approach is required to competently address the problem of overcrowding.

Also in this issue, Newnham and colleagues (*page 101*) report findings from their tour of 13 emergency hospitals in the United Kingdom and the United States in search of system solutions to ED overcrowding. While they acknowledge a paucity of data examining the systems they observed, they describe several interesting variations that are worthy of consideration. These include the abolition of nurse triage from ED reception, as they argue that nursing time would be better spent initiating treatment than sorting patients. They too propose direct admission to the ward to avoid the inefficiencies that result from patients having to first pass through an ED. A strong case is made that the success of the system hinges on adequate staffing by generalists.

There is an urgent need to review our hospital systems. There is a real risk that, just as evidence appears that the 4-hour rule may be beneficial for patients, the demands on the ED may be so overwhelming that it is not achievable.

Let's hope our new federal health minister is listening. If we ignore the calls of our best thinkers and clinicians for a system redesign, it is unlikely that the current health system will cope with the demands imposed on it.

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MJA Careers

Career overview

The human face of medicine

It takes precision and patience but oral and maxillofacial surgery can be extremely gratifying

Careers follows p 144

The face of medicine

Oral and maxillofacial surgeons need an understanding of medicine, surgery and dentristry. It makes for a long training pathway, but their work can be extremely rewarding. As oral and maxillofacial surgeons explain in this issue of *MJA Careers* (*page C1*), operating on the face is very different from operating on other parts of the human body. "If it doesn't look the same after an operation, the psychological implications are huge", says one doctor. Also in this issue, Road Less Travelled (*page C8*) focuses on a public health physician who has found tremendous satisfaction providing medical care to prisoners in the ACT justice system. He enjoys the opportunity to provide measurable public health benefits in addition to the personal and family level benefits.