

Consequences of EMS delays

Chowdhury et al present what they claim to be evidence of serious consequences of emergency medical services (EMS) delays on outcome from penetrating abdominal injury.¹ We believe this to be a misrepresentation of the facts around the role and depth of issues around the transfer of trauma patients, and relating response time to mortality rates.

They indicate that response time is “considered an indicator of EMS performance worldwide”, yet the reference cited, and others eloquently reviewed by Al-Shaqsi² contradicts this. He notes that patient care may be compromised if the current non-evidence-based international culture of targeting response time as the dominant performance indicator continues. He and others such as Gale et al³ suggest there are many more meaningful measures of the performance and effectiveness of prehospital services such as outcome, satisfaction, and protocol compliance and that response time is not only open to manipulation, but also confounded by multiple factors such as the location of the incident, and appropriate resource allocation by EMS dispatchers – which in many cases may be more important than time to the scene. We would therefore question use of response time as the sole indicator which this study uses to assess EMS effectiveness.

From the small dataset collected, significant associations were found between the complicated patients and response time: those with complications had a mean response time of 0.9 hours against 0.3 hours in the uncomplicated group. The title, abstract, discussion and conclusion lead the reader to believe that this is the problem, but ignores the greatly increased injury to theatre time (2.8 hours longer), and hospital trauma centre arrival (GSHTC) to theatre time (1.7 hours longer) in the complicated patient group compared to the uncomplicated patient group. The data show that response time was by far the shortest timeframe involved: a mean delay of 0.9 hours, versus 5.6 hours for GSHTC to theatre for the complicated group. How the authors can conclude that the problem is EMS is hard to imagine.

There is no consideration of the geographic location of cases, the initial incident description, call prioritisation, the workload of EMS at the time the case was received, or indeed the workload of the GSHTC and its care process (triage, assessment, imaging, investigations etc). In addition, they do not delineate the time spent on scene by prehospital crews, which may actually have been a useful and interesting indicator of the complexity of the scene. Of even greater interest is the failure to mention or take into account any relevant resuscitation measures started on scene which may have had a significant impact on both the outcome and the time taken to definitive care. It could certainly be argued that these are material considerations indicating the effectiveness of EMS management and the delivery of quality care, rather than the emphasis on the “scoop and shoot” mentality driven

only by the clock as the authors would suggest.

In addition, even if EMS delays were the main problem, the authors fail to address any system issues: if vehicles are diverted to penetrating trauma cases, for instance, what impact will this have on cardiac arrest cases, maternity cases, or paediatric illness calls? Nor do they explore (or at the very least mention) the potential delays that the absence of a single emergency number may have had on the timeline and appropriateness of the EMS response.

The Western Cape, and particularly the Cape Town metropole, which is the predominant drainage area for the facility in question, arguably provides the best-resourced and most effective EMS in the public sector on the continent. The response time target of less than 15 minutes within the metropole for urgent cases, was met in 70.9%⁴ of cases over the study period which is almost in line with international standards and likely only aspirational elsewhere on the continent. Whilst we do acknowledge that this is still some way from the eight minutes response time target as seen in less austere settings, the argument provided within the article fails to adequately address the more compelling systems factors highlighted by the dataset, and instead adopts a fairly myopic view on the delays observed.

Although we would be the first to agree that research is key to identifying the gaps in our systems, we believe there would be greater impact from this dataset in defining the processes and delays across the patient journey which could have contributed to delays and inadequate care, and using a systems approach rather than pointing fingers at other elements in the system.

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References:

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