

# Impact of Traffic Patterns on Trauma Response Prenotification [Letter]

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## Dear editor

I am very grateful to have had the opportunity to read the article “Traffic Patterns and Emergency Medical Services Prenotification Transport Estimates in Trauma Activations”, written by Sophia Gorgens et al.<sup>1</sup> It provides valuable insights into the relationship between traffic conditions and EMS transport time estimates. The article presents three key strengths. Firstly, it challenges the common assumption that traffic patterns significantly impact transport time estimates. Secondly, it employs a clear methodology with well-defined parameters for categorising transport time estimates as accurate, overestimated, or underestimated. Thirdly, it effectively demonstrates the broader implications of inaccurate transport time estimates on resource allocation and patient care in trauma centres.

However, it should be noted that the study is subject to several notable limitations which affect both its generalisability and its comprehensiveness. Firstly, the restricted sample size of 117 cases out of 369 traumatic transfers, which included estimated transit intervals (ETIs), may have introduced a degree of selection bias. Additionally, the single-centre design at an urban trauma centre limits the applicability of the findings to different geographic and demographic settings.<sup>2,3</sup> Furthermore, the absence of actual traffic patterns and information on the utilisation of GPS technology by emergency medical services (EMS) leaves key contextual factors uninvestigated. While this weakness is not significant, it should be acknowledged as a limitation.

Therefore, future research could address these limitations in a number of ways. Firstly, it would be beneficial for researchers to conduct a multi-centre study across a range of geographic locations in order to gain a deeper understanding of how transport time estimation varies across different settings and EMS systems.<sup>4</sup> Secondly, the incorporation of objective traffic data and GPS technology usage would provide valuable context for understanding the factors influencing estimation accuracy. Thirdly, an investigation into the direct impact of discrepancies in transport time estimation on patient outcomes and emergency department resource utilisation would serve to reinforce the clinical relevance of the findings, thereby aiding the development of evidence-based solutions to enhance the accuracy of such estimation.

## Disclosure

The author reports no conflicts of interest in this communication.

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