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# Correspondence

*The Correspondence section is designed to accomodate feedback and debate regarding papers previously published in the Journal or of concern to the EMS community. It is also an appropriate place for smaller items of interest that may not require the space of a full article. The Correspondence section can be one of the most interesting parts of a professional publication, where published debate can fully explore all sides of an issue. We invite your critique and comments. Direct all correspondence submissions to the Correspondence Editor, Journal of Prehospital Medicine, P.O. Box 280173, Tampa, FL 33682. (813) 687-1574.*

## Statistics From Trauma Calls

The paper (Konrad R: An Analysis of Selected Statistics From Trauma Calls in a Large Urban EMS System. 2(1):1-6, 1988) attempts to provide a retrospective descriptive analysis of the characteristics of severe trauma in one Florida county for calendar year 1987. This objective is laudable and the data provided could be of some value if appropriately presented and discussed.

Table 1 shows that approximately 40% of the patients did not have completed times. Some analysis should be provided of this 40% of patients to see, for example, if their trauma scores were similarly distributed to the ones under analysis i.e., was a bias introduced by only having times on 60% of the patients? Why was analysis of interventions limited to just 60% when it probably could have included all of the patients? The data provided in Table 3 are interesting but should also be supplied with numbers of patients in the sample, standard deviations and statistics to show whether they are significant or not. The author has presented data and no statistics.

The purpose of collecting the data is to evaluate the system. The data presented would seem to indicate that the scene time for helicopter transport of patients is statistically significantly longer. However, is this because the helicopter is not dispatched at the same time as the ambulance? Is the delay in waiting for the helicopter worthwhile? Were these calls in a distant part of the county? What was the time interval between injury and treatment? Was it shortened by the helicopter, or would ambulance transport have been more appropriate in these patients rather than waiting at the scene for the helicopter to arrive?

No data are produced with respect to the time to definitive care, i.e. the arrival of the patient at the trauma center. What is the level of care on the helicopter? Is it superior to that which is available on the ambulance? Is the time longer at the scene for the helicopter related to the need for two teams of prehospital health care providers to describe injuries and repeat primary assessment and hand off care from one team to another? Does the author have any survival data which would compare the outcomes of the patients who are transported by land or air?

One other comment worthy of note is the incidence of the severe injuries in the population. It is quite low and the number of patients triaged to trauma centers is also quite low. This is certainly different in southern Florida where the incidence of severely injured patients requiring trauma centers is in the region of 1,400/million/year, although all of these do not have trauma scores of 12 or less.

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Reply to Dr. Champion:

Dr. Champion is quite correct in suggesting that the paper raised a good many more questions than it answered. Certainly a more thorough analysis of the entire sample of runs (including the 40% for whom data was incomplete) would be more revealing. One of the points I was trying to make is that a convenient data base inclusive enough to allow such an analysis is non-existent in this EMS system. No single record contains dispatch times for all responding agencies (including the helicopter). Hospital arrival time for the helicopter, while available in hospital flight records, is not available on the County run report. The construction of the run record demonstrates the priorities of the system in regard to analysis of its performance. The present construction of the run report makes complete analysis of the issues raised by Dr. Champion frustrating and difficult.

Dr. Champion has sensed the "identity crisis" which is inherent in this paper. I certainly make no claim to have done a rigorous retrospective study of trauma in this system. My view is that such a study should be part of the system's normal process of self-analysis. I hope that the questions raised in the article will move planners and analysts within the system to modify data recording techniques so that exhaustive studies of performance may be undertaken. This paper grew out of my amazement that a paramedic with limited experience in the county computer system (the only source of information immediately available) would be the only one looking at these issues. In retrospect, however,the paper may have seemed to promise more than it was able to deliver. Dr. Champion's comments have encouraged me to attempt to cull from a variety of sources sufficient information to make a more thorough analysis.

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