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Turning Around Ambulance Turnaround Time



The next time you walk past EMTs or paramedics in your ED who are waiting to transfer care of their patients to you, think about all the times that you've spent standing in line at restaurants and movie theaters with your family, friends, and kids—yours, and others'—and see what you can do to expedite this crucial hand-off of care.

Many of the successes in lifesaving emergency care achieved during the past 40 years are the result of having centralized 911 emergency prehospital care systems that rapidly provide well-equipped ambulances and skilled EMTs and paramedics to critically ill callers. The effectiveness of these systems depends largely on ambulance response time, which, in turn, depends on correct prioritization of 911 calls; availability of ambulances that are dispatched quickly; navigable distances the ambulances must travel; and, when an ambulance arrives at an ED, rapid transfer of care to the ED staff and return to service for a new assignment.

Increasingly, though, it is the last component, **ambulance turnaround time**, or TAT, that has become most problematic and, often, the rate-limiting step in ambulance response time. TAT begins when an ambulance arrives at the ED and ends when the EMTs or paramedics

signal dispatch that their unit is back in service. It includes a verbal patient hand-off to ED staff, transfer of the patient to a hospital ED gurney, completion of a written or electronic ambulance call report, replacement of used ambulance supplies, and (sometimes) a quick trip to the lavatory. In most large US cities, TAT is, typically, approximately 30 minutes, but might be much longer when inpatient beds are scarce and the ED is overcrowded.

Skilled EMTs and their ambulances are the lifeblood of rural and suburban EDs because they rapidly transport patients who have been stabilized at the scene and who otherwise could not get to an ED in time, or at all. In urban EDs, on the other hand, it is increasingly common to see EMTs, paramedics, and their patients waiting a long time for the ED to assume care. (During the winter influenza season, arriving EMTs sometimes are given a reception that's colder than the weather outside.)

When TATs become unreasonably long, gathering accurate data is an essential first step in identifying problems and improving the situation. To accomplish both, TATs should be split in two. The time from when an ambulance arrives until the time the ED staff assumes care of the patient should be

the hospital's responsibility. But the time from transfer of care until the ambulance crew signals it is back in service must be tracked and addressed by the EMS system in order to decrease overall TAT. In our ED, the number, variety, and frequency of cases justified a separate ambulance triage station, which resulted in an immediate and sustained decrease in TAT.

In a study published in *Prehospital Emergency Care* [2011;15(3)366-370], Vandeventer and co-workers examined the association among ambulance TAT, patient acuity, destination hospital, and time of day. Retrospectively analyzing 61,094 patient transports in a 12-month period from a single, county-wide metropolitan EMS service, they found that increases over the 35.6-minute mean TAT correlated with high-acuity calls, certain hospitals, and hours between 6 AM and 3 PM. The authors noted what should be obvious to all: **The availability of ambulances to respond to emergency calls is related to their ability to return to service from the hospital.**

Before January 1 fades from memory, I propose one last New Year's resolution: When paramedics or EMTs show up at your ED with a patient, don't keep them waiting. **EM**