DOGMA DETECTIVES Case # 02-18-13-01: RED LIGHTS RESPONSE

Does the literature support routine use of red lights and sirens for ambulance responses? Is significant time saved by using L+S, and does this have any beneficial effect on patient care and outcomes?

The literature has some variability on the time saved in a response, but it is anywhere from 45 seconds to 4 minutes. See the following links…

45 seconds… http://www.sciencedirect.com/science/article/pii/S0196064495702679

3 minutes… http://www.sciencedirect.com/science/article/pii/S019606449870037X

4 minutes… http://informahealthcare.com/doi/abs/10.1080/10903129908958920

1 hour 45 min… http://informahealthcare.com/doi/abs/10.1080/10903120090941696

So the question is… even if there is a small statistical time savings in responding lights and sirens, does this truly affect patient outcomes? This article from the Journal of Emergency Medicine shows no statistical difference in outcomes when trauma patients were tended to after the 8 minute "standard" national response time.

http://www.sciencedirect.com/science/article/pii/S0736467902004602

For practical purposes, most patients are going to wait to see a doctor once they arrive at an emergency department. The more beneficial treatments that can be started by EMS (i.e. steroids for reactive airways disease or allergic reactions), likely the shorter ED stay will be needed by the patient. So good patient care is more important than fast patient transport.

How about ambulance accidents? What is the relationship between L+S response and crashes? This article from Prehospital Emergency Care summarizes it best… "These crashes occurred more often between noon and 6 PM (39%), on improved (99%), straight (86%), dry roads (69%) during clear weather (77%), while going straight (80%), through an intersection (53%), and striking (81%) another vehicle (80%) at an angle (56%). Most crashes (202/339) and fatalities (233/405) occurred during emergency use. These crashes occurred significantly more often at intersections ($p < 0.001$), at an angle ($p < 0.001$), with another vehicle ($p < 0.001$). Most crashes resulted in one fatality, not in the ambulance. "

Read More: http://informahealthcare.com/doi/abs/10.1080/10903120190939751

Also, there is good data that being unrestrained in an ambulance increases likelihood of death in a crash. http://www.sciencedirect.com/science/article/pii/S0001457502001021

Ultimately, the decision is yours, but except in the most exceptional of circumstances, it is unlikely that L+S response or transport will save clinically significant time when it comes to final patient outcome. It will, however, absolutely increase the risk of an ambulance crash, with possible serious unintended consequences.