

Responding Safely

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On September 1, 1998 an ambulance was responding to a reported structure fire for a standby detail. The unit, responding with lights and sirens, was said to be driving at approximately seventy miles per hour on a curving road that was zoned for forty-five miles per hour. While negotiating a curve, the driver of the ambulance lost control of the vehicle, went left of center and collided head on with another vehicle, killing its eighty-one year driver, as well as injuring one of the crew members. This was an accident that should have been avoided. An obvious method to reduce the number of unnecessary injuries and fatalities incurred during the response of emergency vehicles is to put in place policies and procedures to guide the personnel responding to alarms, including policies that address state laws for responding emergency vehicles. There is also a need to manage the public's expectations of the 911 system. Not only does the public need to use this system responsibly, but 911 dispatchers should be trained to obtain the correct information while speaking with the caller; 911 dispatchers should be trained to gather and evaluate information in order to determine what the proper response should be for that particular alarm.

Every year there are numerous reports of emergency vehicles responding to calls with lights and sirens that are involved in accidents that do not require the use of lights and sirens. Part of this problem lies within the fact that the public is given false expectations of the 911 system. Although a call did not merit the use of lights and sirens, the public has grown to expect every call placed to 911 to result in this type of response regardless of the nature of the call. Likewise, many times we "rush" to false alarms because the dispatcher or responding crew did not take the additional seconds to gather

more accurate information regarding the call. 911 centers need to work with fire and emergency companies to develop a standard response policy that outlines the type of response appropriate for each call. An example of a call that should not merit a “lights and sirens” response but is seen often within our community is a call from police requesting a patient evaluation following that person’s arrest. Yet, every day this type of non-emergency is treated to an emergency response. Even though the initial response to an alarm often requires the use of lights and sirens, we need to consider the response of subsequent units: do multiple fire companies need to continue running emergency to the scene of a reported house fire when the first arriving unit reports “nothing showing?” These types of issues need to be addressed in departmental policies before a responder finds himself explaining to a family that their loved one has just been killed because of an unnecessary motor vehicle accident.

A 2005 report by W. H. Leonard stated that our industry emphasizes that quality care includes a rapid response (within four to six minutes) to ensure that brain damage does not occur when responding to a call for a non-breathing individual. Yet nationwide statistics tell us that only forty percent of all ambulance requests are for calls that are emergency in nature and of that forty percent only half are true medical emergencies – calls which include anything from broken arms to cardiac arrests to severe traumas. Of those medical emergencies, only five percent are said to be life threatening or in need of a “rapid code 3 response” which necessitates advanced life support procedures during transport. Further more, the National Fire Protection Association (NFPA) promotes quick turnout and response times. NFPA 1710 4-1-1 states that for a fire alarm, the standard turnout time is one minute, with a four minute response time for the first unit to

arrive on scene and eight minutes for the full first alarm companies to arrive on scene. For a medical emergency, the NFPA promotes a one minute turnout time, with a four minute response time for the first defibrillator to arrive on the scene and eight minutes for the first advanced life support unit to arrive on scene. The problem with these standards is that fire and emergency medical services managers treat these as laws instead of guidelines. We need to adopt response policies to avoid placing emergency personnel and the community into hazardous situations that do not need to occur.

According to the United States Fire Administration Motor vehicle accidents involving emergency vehicles have accounted for approximately 20 to 25 percent of firefighter fatalities annually. This is the second leading cause of firefighter deaths in the United States. One fourth of those reported fatalities were firefighters killed in their own personnel vehicles, either while responding to the fire station or directly to an alarm. The type of apparatus that has been involved in the majority of fatal collisions is tankers; this type of vehicle is responsible for more firefighter vehicular deaths than engines and ladder trucks combined. According to a report by the United States Fire Administration approximately 27 percent of firefighters killed in vehicle accidents were ejected from the vehicle and of the 27 percent, only 21 percent of firefighters were reportedly wearing their seatbelts at all.

In a recent NIOSH report, of incidents involving emergency vehicles involved in motor vehicle accidents during 1977 – 1999, seventy-three of firefighter deaths occurred in sixty-three crashes involving tankers. Of those deaths, fifty-four occurred in forty-nine crashes in which the vehicle rolled over (no collision) and eight deaths occurred when the vehicle left the road (no collision). The other cases involved a collision with another

vehicle (ten deaths in seven crashes) and one death from a vehicle striking a stationary object. In 2003, Fire House magazine and the United States Fire Administration reported that one hundred and ten firefighters lost their lives in the line of duty and of those, twenty-five of them lost their lives in motor vehicle accidents.

In that same Fire House issue there was an article written by Mike Wilbur called *Due Regard, The Missing Part of Driver Training*. This article discussed how many emergency vehicle operators have been taught to drive and operate vehicles, but questioned how many have actually been taught the rules of the road. These rules include requiring that emergency vehicle operators drive with due regard for the safety of all persons. For many emergency vehicle operators there is a lack of basic understanding of what the term “due regard” means in the context of state laws. Fire and emergency crews need to have policies that reflect the true meaning of due regard and these policies need to be enforced.

Fatalities and injuries can be significantly reduced by implementing reasonable awareness training and response S.O.P.’s. The public must be educated to have sensible expectations of the 911 system. Dispatchers must be trained on call taking to ensure accurate information is drawn from callers so that the dispatcher can relay this information in a manner that allows the responding units to make informed and safe decisions about the type of response. Response S.O.P.’s should address a number of issues on an emergency response, beginning with the nature of the alarm: whether it is an emergency response or a non-emergency response. Other issues that should be addressed in these documents are treatments of intersections, stop signs and traffic lights. The states due regard law should also be clearly explained within this context. It should

address a safe traveling speed that would be determined by the nature of the alarm and other relevant conditions. Although emergency vehicles are allowed to exceed speed limits, situations in which this allowance should be applied should be spelled out clearly. Some of these considerations should include the type of the alarm, the time of day, traffic conditions, weather conditions, visibility and road conditions. Policies on response should not be left up to a personal view or an individual crew's judgment. These policies should be pre-determined and allow a department to use the information that the dispatcher has obtained from the caller regarding the nature of the call.

To reduce the number of accidents involving emergency vehicles responding to alarms many fire and EMS departments have established a tiered response policy. Tiered response policies establish guidelines for when emergency vehicles are authorized to respond to an emergency using lights and sirens. Some departments further define their policy by determining who is authorized to respond emergency and who is not when multiple units are dispatched to a single alarm. By definition a "hot" response is all responding units are responding with lights and sirens, "warm" response is the first due unit responds lights and sirens with all others responding no lights and sirens, and a "cold" response or "on the quiet" all units will respond without lights and siren.

The St. Louis Fire Department and the Anne Arundel County Fire Department have received national recognition for their tiered response policies. The St.Louis fire departments tiered response policy has been sited in Fire and EMS Law for Officers safety (including Lights and Sirens) By Lawrence Bennett, and Both of these policies have been referred to in an article named It's No Longer Always Lights and Sirens by Susan Nicol Kyle in the EMSResponder.Com News. The Chart below summarizes the

types of alarms received by these fire departments and what the authorized response should be:

Type of alarm	St. Louis Fire Department			Anne Arundel County Fire Department		
	Hot	Warm	Cold	Hot	Warm	Cold
Alarm sounding			X			X
CO detector/No illness			X			X
Smoke detector (dwelling) no smoke or fire visible			X			X
Hi-life/detector/water flow alarm			X		X	
Alarm-water flow			X		X	
Appliance	X			X		
Brush/woods/trash fire			X		X	
Brush fire near structure	X			X		
Controlled burning			X			X
Chimney fire	X			X		
Dumpster standing alone			X			X
Dumpster-attached to building	N/A			X		
Electrical wires outside			X			X
Chemical spill/leak				X		
Chemical odor-in a structure		X		X		
Spill hydro +100gallons	X				X	
Spill hydro -100gallons	N/A					X
Unknown material	N/A				X	
Miscellaneous fire					X	
Odor of smoke inside	X				X	
Odor smoke/gas in area			X			X
Natural gas line struck	X			X		
Odor gas inside structure	X			X		
Service call			X			X
Apartment/high occupancy bldg. fire	X			X		
Commercial-Industrial fire	X			X		
Structure-barn/garage fire	X			X		
Vehicle fire/auto/boat	X				X	
Assist with evac.			X			X
Assist with suspicious pkg.	N/A					X
Suspicious letter not contaminated	N/A					X
Possible contaminated article	N/A					X
Wires down			X			X

The St. Louis Fire Department also uses a tiered response to all of their medical emergencies (see chart below). The policy states that all medic units will be dispatched to the following incidents with no lights and no sirens if they are coded as “Alpha’s” all other incidents should be responded to with lights and sirens. Dispatchers follow the EMD procedures to determine whether the call will be an emergency or non-emergency response.

• Abdominal pain	• Hemorrhage	• Eye Injury moderate	• Fainting
• Allergic Reaction	• Overdose	• Eye Injury minor	• Near Fainting
• Animal Bite	• 1 st Trimester Bleed	• Fall	• Special Assign
• Assault/rape	• Pregnancy Illness	• Fall > 6 hours	• Back Pain
• OBS	• Headache	• Burn	• Fire Stand-by
• OBS 3 rd Party	• Choking	• Sun Burn	• Stabbing/Shooting
• OBS Not Alert	• Seizure	• Sick Case	• CVA/Stroke
• OBS Violent	• Diabetic	• Previous Drowning	• Auto Accident
• OBS Threatening	• Heat/Cold Exposure	• Heart Problem	• Traumatic Injury

Lives are lost every year in the fire and emergency services and will continue to be lost; that is the nature of the job. Losing lives due to lack of regard for traffic laws is something that can be avoided. Putting into place and enforcing policies that train our emergency responders on proper response behavior would be a large step toward reducing the number of deaths and injuries incurred through motor vehicle accidents. Our department currently has a strict policy on the use of seatbelts and is currently looking to adopt a similar response policy with regards for the use of lights and sirens.