Unnecessary Lights-and-Siren Use: A Public Health Hazard

Jeff Clawson

Recent events trumpeted in the national news media have cast a recurring spotlight on the safety, effectiveness, and ethical use of lights and sirens in both emergency response and transport. While emergency-vehicle tragedies have punctuated the entire history of public safety's use of a HOT (lights-and-siren) response mode, the problem and its unfortunate extent have never before captured the attention of the general public as they have now.

Members of the vocal minority in the public safety community offer, in defense against these mounting questions and inquiries, a few familiar rationalizations:

- The motoring public's supposed indifference to their urgent responses (always claimed to be increasing).
- The argument that the public expects them to hurry to get there fast.
- The contention that there is a lawsuit waiting in the wings if they don't use a lights-and-siren mode during a response.
- The evolving technology of the automobile, with improved interior soundproofing, airtightness, stereo systems, and so forth.

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Rarely do we ever admit that we, the public safety community, might have a problem, and a major one at that. In a front-page article in the March 21, 2002, edition of *USA Today* the new head of the National Highway Traffic Safety Administration within the U.S. Department of Transportation, Dr. Jeffrey Runge, stated: "There are not a lot of data out there. It tells me there is not a huge safety problem."

Many experts seriously disagree. Every year, thousands are injured and hundreds killed, mostly needlessly, in an otherwise civilized society.

The incidence of emergency-vehicle collisions (EVCs) is not just a "problem" or even a "dilemma." It is a public health epidemic. If 70 deaths from anthrax or rabies were reported, the CDC would arrive in space suits and spend perhaps millions to mitigate the epidemic, if not actually to quell it. But the CDC is not the government agency responsible for this particular type of epidemic. Apparently, nobody is. Clearly, it doesn't take a scientist at the CDC to see that the 15,000 to 25,000 ambulance and rescue-vehicle accidents in the United States alone each year constitute a true public-safety disease of epidemic proportions.

Suggest that the problem may lie within the public safety community, and "patient care" and "we save lives" rationalizations spew forth like spurts of ink from a frightened octopus. The concept of reducing lights-and-siren use is just slightly more popular in our nation's fire and ambulance services than gun control is with the National Rifle Association. But unlike guns, the use of lights-and-siren is not protected by the second Amendment of the Constitution.

EMS expert, *JEMS* (*Journal of Emergency Medical Services*) publisher, and attorney Jim Page has stated in his *EMS Legal Primer*, "For some reason, most of us don't like to talk about ambulance accidents—even though most of them are preventable. Clearly, the greatest legal hazards facing prehospital personnel arise from ambulance vehicle accidents." In addition, the financial payout by local governments for these recurrent tragedies is immense, often costing millions per incident.

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This expenditure often eclipses, by several magnitudes, the medical and public-safety "malpractice" negligence awards in dollars lost. Government officials often are unaware of this impending risk because of persistent and blatantly false information routinely offered up by public safety leaders and personnel.

An examination of a long-existing and wide variety of misconceptions regarding lights-and-siren use within the public safety community reveals these mistaken beliefs:

1. Motorists can hear us.
2. Motorists can see us.
3. Motorists don't care about emergency vehicles and ignore them.
4. We can educate the motoring public to "get out of the way."
5. Fast can be safe.
6. Everyone's dying; we've got to hurry (response phase).
7. We really don't know how sick or hurt the patient is (transport phase).
8. We are more qualified than the professional dispatcher to decide when to use lights-and-siren to the scene.
9. We are more qualified than the emergency room staff to decide when to use lights-and-siren in transport.
10. Lights and/or sirens work effectively as warning devices.
11. Running with lights-and-siren saves lots of time.
12. I've never been in an accident before; therefore, they don't happen often, and one won't happen to me.

These are not only misconceptions, but myths—beliefs not supported by history or science—that are currently plaguing public safety personnel and their managers. Times are not just changing . . . they have changed. Here's what we now know:

1. The use of lights-and-siren does not routinely save significant time. In fact, several published studies show time saved to be less than a minute.
2. Time does not matter *much* in most incidents, and *not at all* in many. The vast majority of 911 calls are not time-sensitive emergencies, and most are not even emergencies at all.
3. Running HOT is a lot riskier than traveling routinely.
4. By correctly using sound emergency medical-dispatch protocols, we can identify the small population of time-critical patients at the time of their 911 calls. We can then appropriately extend the lights-and-siren safety net around *only* this small population of patients.
5. By correctly using sensible protocols (emergency-room or field-based), we can identify at the scene those patients actually needing HOT transport to the receiving hospital or trauma center.
6. For years, progressive agencies have safely responded COLD to a significant portion of their "emergency" calls.

7. Lawsuits for not responding lights-and-siren do not exist. In fact, there has never been a lawsuit in the history of the United States or Canada for not responding HOT.
8. The public does *not* always expect it. What citizens want is rationality in using these devices when this extreme practice can actually make a difference. In fact, it is not uncommon for a caller to ask for a COLD response in many situations.
9. Lots of mayhem occurs as a result of HOT response, and much of it, by anyone's definition of an emergency, is simply unnecessary. Historically, an amazing number of EMVCs (emergency medical-vehicle collisions) occur while running HOT to trivial or non-escalating "emergencies."
10. There is a significantly higher awareness of the correct use of lights-and-siren within the legal community. Dispatch tapes and records (and the clinical and operational decisions they portray) are routinely subpoenaed and commented on by an increasingly knowledgeable field of experts.
11. Widespread use of emergency medical-dispatch protocols to organize responses has created a *standard of practice* clearly separating the reasonable use of lights-and-siren mode, an often-dangerous special privilege, from its indiscriminate and potentially tragic misapplication. It is more than evident that "one size does *not* fit all" calls.
12. Special training of emergency-vehicle drivers (in EVOC and low-force driving) reduces collisions by educating the operators to a plethora of risks, predictable motorist behaviors, and the absolute necessity of exercising "due regard" during urgent response and transport.
13. Use of in-vehicle monitoring devices ("black boxes")—which record and sometimes warn errant drivers of excessive speed, unsafe movements and turns, heavy braking, and other non-optimal behaviors on the roadway—has been proven effective in the private ambulance-service community.

The Salt Lake City Fire Department has been responding COLD to all "Bravo" response codes. The biggest category within this group is the "traffic accident with injury" call (excluding defined "major traffic" incidents, high mechanisms of injury, hazmat incidents, extrications, and traffic accidents in which patients are reported "not alert"). This has been the department's response method for more than four years now, with nary a problem or complaint.

When the Salt Lake City Fire Department first fully implemented this dispatch-based response program in 1983—with 50 percent fewer units sent at all and even fewer HOT responses—its EMVC rate dropped an astounding 78 percent.

In 1994, the National Association of EMS Physicians, with the National Association of State EMS Directors, published the landmark position paper "Use of Warning Lights and Siren in Emergency Vehicle Response and Patient Transport." The author is not sure whether most EMS or public safety leaders and managers are even aware of this paper's standards and official, practice-setting recommendations, which are the following:

1. EMS medical directors should participate directly in the development of policies governing emergency medical-vehicle response, patient transport, and the use of warning lights-and-siren (L&S) mode.
2. The use of L&S during an emergency response to the scene and during patient transport should be based on standardized protocols that take into account situational and patient-problem assessments.
3. EMS dispatch agencies should use an emergency medical-dispatch priority reference system that has been developed in conjunction with and approved by the EMS medical director to determine which requests for prehospital medical care require the use of warning lights-and-siren mode.
4. Except for suspected life-threatening, time-critical cases or cases involving multiple patients, L&S response by more than one EMV usually is unnecessary.
5. The use of emergency-warning L&S should be limited to emergency responses and emergency-transport situations only.
6. All agencies that operate EMVs or are responsible for emergency medical responders should institute and maintain educational programs in emergency-vehicle operation for EMV operators.
7. Emergency medical vehicle–related collisions occurring during an emergency response or transport should be evaluated by EMS system managers and medical directors.
8. A national reporting system for EMV collisions should be established.
9. cientific studies evaluating the effectiveness of warning L&S under specific situations should be conducted and validated.
10. Laws and statutes should take into account prudent safety practices both by EMS providers and by the monitoring public.
11. National standards for safe EMV operation should be developed.

The time has come to state, unequivocally and for the record, that we can no longer disregard the thousands of injuries and deaths caused by the indiscriminate use of lights-and-siren response. We must reexamine the when,

where, how, and why of lights-and-siren use. Individual EMS field responders and emergency medical dispatchers (EMDs) must begin actively to question their managers about the irrational practice of responding HOT on all calls. In particular, EMDs should not be placed in the ethically ambiguous position of carrying out these clearly unsound response schemes.

So warned, elected officials, city and county administrators, and progressive public safety managers must act now, collectively, to prevent the recurring tragedies that are the antitheses of our mission: to help those in need when they need it most, by at least doing "no harm." The indiscriminate use of lights-and-siren mode is an outdated practice not supported by science, the medical community, or even the public we serve. To continue this unsafe and outdated practice is to violate Hippocrates' first law of medicine: "First, do no harm." PM

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Related articles on Lights and Siren Issues and Emergency Vehicle Accidents are available at www.emergencydispatch.org
(http://www.emergencydispatch.org/research.shtml)

- Is Ambulance Transport Time With Lights and Siren Faster Than That Without?
- Above All—Do No Harm
- The Wake Effect—Emergency Vehicle-Related Collisions
- The Maximal Response Disease—"Red Lights and Siren" Syndrome in Priority Dispatching
- Lights, Sirens and Liability
- Lights and Siren: A Review of Emergency Vehicle Warning Systems
- Dispelling Myths on Ambulance Accidents
- Patient Outcome Using Medical Protocol to Limit "Lights and Siren" Transport
- Running "HOT" and the case of Sharron Rose
- Use of Warning Lights and Siren in Emergency Medical Vehicle Response and Patient Transport (NAEMSP Position Paper)
- What a Waste When the System Fails

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