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Nadine Levick, MD, MPH, Addresses Ambulance Safety

The National Transportation Safety Board (NTSB) has placed a lot of emphasis lately on EMS aviation safety, but the National Institute for Occupational Safety and Health (NIOSH) has not made the same effort to protect EMS providers and patients in ground-based ambulances, according to safety expert Nadine Levick, MD, MPH, of the Department of Emergency Medicine at Maimonides Medical Center, in Brooklyn, New York. *Best Practices* asked Levick what she would recommend to improve EMS safety on the road.

Q: What is the government currently doing to address ambulance safety?

We have data on EMS aviation crashes, but similar data is lacking for EMS ground vehicles. Enhanced oversight would give us a national picture. Most frustrating is the void in population-based injury data and the absence of ergonomic data. We don't have baseline population injury data for EMS providers; therefore, it is very difficult to identify major injury types and mechanisms, or measure the impact of interventions. I don't have the resources to capture these data, [however] the federal government does and NIOSH does. I firmly believe this is the responsibility of NIOSH.

Q: How can the EMS industry promote ambulance safety?

Industry can move more quickly and comprehensively than the government. One of the first steps are voluntary industry initiatives, such as American Ambulance Association's Mobile Medical Transportation Safety (MMTS), involving

people from different backgrounds and disciplines to identify best practices, best paths forward and how to best invest time and resources to address safety.

Ambulance safety is a piece of the automotive industry that has been left behind for 30 years. I think two things will help get manufacturers out of this odd time warp: The new fleet standards, ANSI/ASSE Z15, which apply to all fleet vehicles, EMS included, and provide a wonderful guide for revamping services' safety oversight; and a multidisciplinary seminar, planned within the next year or so under the auspices of the Society for Automotive Engineers, to seriously look at automotive safety issues for ambulances through key people from around the world involved in EMS, risk management, vehicle design, automotive safety and engineering, transportation safety, ergonomics and safety oversight.

Q: What can emergency services leaders do in their own organizations to promote ambulance safety?

Fall back on aviation safety models. Secure all equipment – oxygen cylinders, defibrillators, cell phones; there is no excuse for not doing so. Unsecured defibrillators have caused serious life-threatening injury. A cell phone to the head at 40 miles per hour can kill you.


Firmly secure patients with over-the-shoulder harnesses. If medically feasible, have them sit as upright as possible for safety. Seat belt all passengers; unrestrained occupants risk themselves and others. Most of the time EMS providers do not need to move around the vehicle;

NAEMT Advocates Seat Belt Use; Promotes Safety

The National Association of EMTs (NAEMT) in July adopted a position statement advocating the use of available safety restraint systems to prevent injury to EMTs, paramedics, patients and all occupants of any emergency response vehicle. As part of its seat belt safety campaign, NAEMT has produced a four-color, 15x21-inch poster with the tag line "Everybody Buckles Up" that it is distributing free in the September issue of *EMS Magazine*. The poster shows a medic wearing a lap belt while attending to a patient wearing a shoulder harness, a child restrained in a child safety seat, and two EMTs wearing seat belts while in the front of an ambulance.

when necessary, inform the driver.

Other actions include:

- Establish and maintain vehicle inspection policies;
- Require a full stop at and avoid driving through red lights;
- Increase attention to policies and equipment to prevent on-scene EMT-as-pedestrian accidents;
- Use thorough and comprehensive driver selection and training;
- Use real-time driver monitoring and feedback devices;
- Use tiered response. Traveling at breakneck speeds to get to a sprained ankle is not wise; one crash doing that and the negative impact on EMS is huge;
- Consider using head protection inside and outside the vehicle, with a visor for biohazard protection, integrated sound and maybe other safety features;
- Implement elements of the ANSI/ASSE Z15 standard for safe motor vehicle practices; and
- Support collection of population-based injury data. 

Survey Shows EMS Personnel Not Buckling up

Two thirds of EMS personnel responding to a survey reported not wearing their seat belts on the squad bench while treating patients, and one-half said that wearing a seat belt interferes with patient care. The survey of more than 300 EMS providers was published in the July 2006 issue of *Academic Emergency Medicine*. The survey also found that 30 percent of respondents did not identify the correct method of transport for a stable two-year-old, and 40 percent did not choose the correct method of securing a child seat to the ambulance cot despite the fact that most respondents felt that proper restraint of children was neither too time-consuming nor difficult.