Vehicle Safety 2006

Part 1: 'Do As I Do'

Ambulance safety requires more than just lip service—but what else should an organization do?

Few areas of EMS are more important than vehicle safety. Many of you spend hours every day behind the wheel or in the back of a rig, treating and transporting, making your communities safer and better places to live. Your safety in that ambulance is a top concern for all of us. For vehicle designers and manufacturers, this means incorporating the latest and best features designed to protect their occupants. And for EMS providers, that means operating these vehicles with the proper training, equipment and attitude. In this special three-part supplement, we examine this equation in more depth. This month's article looks at how agencies can create a "culture of vehicle safety."

Though they lived 600 miles apart and probably never met, Sandy Shepherd and Gaylette Drummond had many things in common. They were both young women in EMS. Both EMTs. Similar in age—Shepherd, a Kentuckian, was 26, New Yorker Drummond, 27.

Two months apart in 2001, they were both riding unrestrained in the backs of their ambulances during nonemergency transports of elderly patients. Both of their ambulances were involved in head-on collisions—Shepherd's with an oncoming pickup that crossed the center line, Drummond's with a support column for an elevated railway when her driver reportedly blacked out at the wheel.

Both women were hurled forward into their ambulance's bulkhead. Both were killed.

Tragic but not unfathomably senseless—at least the young EMTs had a reason as good as patient care for being unrestrained. Their drivers lacked even that excuse. The unbelted EMT driving Drummond's rig suffered injuries from contact with the dash and air bag, and was hospitalized for three days. The medic at the wheel of Shepherd's, also unbuckled, incurred serious injuries that included a broken leg.

Shepherd's patient, an 83-year-old woman headed to a doctor's appointment, was ejected from her cot restraints. She also died. Drummond's, a 74-year-old man coming home from the hospital, was thrown partially off his cot and into the captain's chair. He was hospitalized for 12 days with head injuries and spinal and rib-cage fractures, but survived.

Investigators from the National Institute for Occupational Safety and Health examined both cases. In one final similarity, they arrived at nearly identical conclusions. To wit:

- Emergency workers in ambulance patient compartments should use restraints whenever possible.
- Patient cots should come with upper-body restraints.
- Drivers and front-seat passengers should use their restraints.
- Manufacturers should develop occupant-protection systems that improve crash survivability while allowing mobility in patient care.

INQUIRING MINDS

There's a lot to take from the deaths of these young providers, and we owe it to them to do so. So let's start with a few obvious questions:

1) Why are ambulance accidents still so prevalent and so deadly? Isn't there *any* way to make the environment safer and get those death and injury numbers down?
2) Why must providers be unrestrained in the backs of ambulances? We know how dangerous it is—shouldn't there be a way to restrain them while still allowing them to do everything they need to do?
3) Why are patients being thrown off cots during accidents? If that's happening, what use are their restraints?
4) And why are EMS drivers still not wearing their seat belts?

In this and coming issues, *EMS* Magazine will, with a series of special supplement articles, examine aspects of these problems. We begin here, with the last question first.

SAFETY DONE RIGHT

Why would an ambulance driver not wear a restraint? In EMS, the answer may not be entirely individual. Part of it may be organizational. Perhaps such a provider's organization lacks a culture of safety.

Safety in the ambulance environment entails far more than lip service, and even more than putting vehicle operators through a few token hours of driving instruction. Safety is something bigger—a philosophy that must be imbued across entire organizations. It's not just actions, but mindset and lifestyle and creed.

Safety, done right, is a broad, coherent, all-encompassing cultural commitment. And it flows from the top down.

"You have to have committed people at the executive level who are willing to say this is important," says Larry Wiersch, chair of the American Ambulance Association's Mobile Medical Transportation Safety (MMTS) working group. "You need buy-in at the very top. If you don't have that, you're going to have trouble effecting the changes that are necessary."

Yet safety is not always the priority it should be for those in authority.

"From our experience, it does present a cultural issue," says Rick Patrick, director of EMS programs for Pennsylvania-based emergency services insurer VFIS. "We preach safety as a high priority from the administrative level. But the data pretty much shows that we don't always put safety as Job No. 1. So what we need to do is create positive safety cultures in organizations where they don't exist, and enhance them where they do."

Vehicle Safety Subject of New ANSI Standard

It's not specific to EMS, but the Z15.1 standard recently approved by the American National Standards Institute (ANSI) may help businesses that operate vehicle fleets improve their safety.

The new standard, *Safe Practices for Motor Vehicle Operations,* offers guidance in developing a motor vehicle safety program, regardless of the size of one's fleet. Specifically, it delineates minimum requirements for developing driver-safety policies and procedures. It addresses factors that increase the risk of crashes and provides requirements in such areas as driver qualifications, training, record keeping, incident reporting and data analysis. The standard also provides guidelines for inspections and maintenance as well as safety considerations when purchasing or modifying vehicles. For more, see www.asse.org/z15.

THE TOOLS TO DO THAT

Easier said than done. Then again, few have ever conceived of a comprehensive, broad-based effort to help emergency-services leaders acquire the tools they need to groom their own cultures of safety.

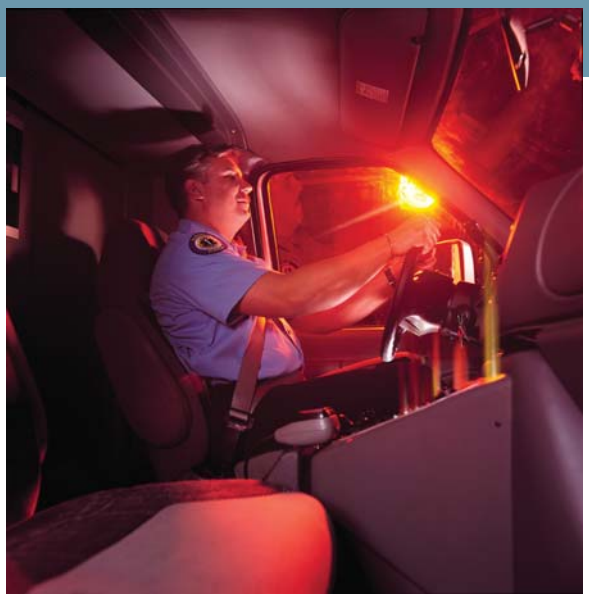
That's what VFIS is trying to do with Operation Safe Arrival, an initiative aimed at increasing safety awareness and reducing the frequency and severity of accidents.

Operation Safe Arrival entails five pledges to be made by chiefs toward the end of better safety. The idea is that these can translate into tangible actions that will reduce accidents and save lives.

"They're basically tools," Patrick says, "that will allow leadership to not just say 'Do as I say,' but to lead by example—'Do as I do'—with good, sound policies, procedures and related administrative functions. Essentially these are doable, practical, realistic policies and procedures for safe vehicle operation. And with that comes good, sound education and training on whatever the specific topic may be."

Those topics should include areas like intersections, preventing rollovers, operating private vehicles and functioning safely on the highway—all known danger areas for EMS responders.

Once armed with this tool kit, leaders can work to develop specific policies and programs to enhance the safety of



their vehicle operations. It's important that field personnel be involved each step of the way.

"The next step is to teach people about those policies and why they exist," Patrick says. "People who understand *why* policies and procedures exist in the first place, and are perhaps even involved in their development, are more likely to comply with them."

The final piece is constructive motivation. This means, for instance, recognizing and even rewarding safe operators publicly, while holding unsafe drivers accountable.

"It comes from leadership, from the top all the way through middle management," Patrick says. "That means your supervisors, lieutenants, captains, battalion chiefs, people like that, can congratulate and encourage safe driving when good habits are demonstrated, and take not-so-good driving habits and turn them into positive, constructive criticism. The guy and gal out there on the street providing EMS will eventually absorb that behavior and become safer in what they're doing, maybe without even realizing it."

VFIS offers additional resources as part of its Operation Safe Arrival outreach; for more, see www.vfis.com.

OTHER STEPS TO TAKE

Organizationally, there are other tools that have proven records of reducing accidents—things like black box and video systems. Those are great if you can afford to outfit your whole fleet. If you can't, however, there are still steps you can take to improve your organization's overall safety culture.

Wiersch outlined some of these at a May meeting of the MMTS group.

"There's a lot of high-tech, really advanced stuff out there that may not be affordable for smaller squads," he says. "But there are some things that every EMS agency can do, at relatively little or no cost, that can make an impact."

For instance:

- Driving-record checks for personnel, upon hiring and annually thereafter.
- Drug and alcohol tests, upon hiring and after accidents.
- Clear, articulated policies for things like intersections, use of lights and siren, and parking at roadside incidents.
- A review policy for accidents and near-misses to determine causation and consider methods of prevention.

"Look at your policies," Wiersch urges. "Do you have a policy on every aspect of driving safety? Do you have a safety committee that reviews every single incident and discusses what happened, why it happened and how to prevent it in the future? For the most part, these aren't intensive, money-draining things. Yeah, it costs a few bucks to go get a drug test, but if you're already doing physicals, how much more could it add? With smaller services, probably not too much. I know I'd rather find out now and be able to do something about it than have it cost me more on the liability side later."

Beyond this, the MMTS group developed a work plan that will guide its efforts in the coming months. It's built around three areas—human factors, information technology

and vehicle manufacturing and design—and members have sketched out objectives they believe they can achieve in the short term.

That work plan was still in draft form at the time of this writing, but should be available online once it's final.

GROPING IN THE DARK

A broader safety culture in American emergency services must also include vehicle manufacturers, designers and engineers, equipment vendors and even the government.

Manufacturers, designers/engineers and vendors all do their part, of course—everyone wants a safe product—but there are still deficits of data that mean even our best efforts can amount to so much groping in the dark. We still don't know as much as we need to about how crashes harm providers, or what keeps them safe.

"It's hard to get your hands around, because there's no national repository of data as far as ambulance accidents and how to construct your ambulance to survive an accident," says Connie Eastlee, RN, director of the Arkansas Children's Hospital's Angel One air and ground transport program, which was last year named Program of the Year by the Association of Air Medical Services. "We just got approval to buy a new ambulance, and there's not much out there to guide us. I'm not even aware of what the safest box structure is, you know? We already ask for metal on the floor, metal on the walls—more than just a wooden box. But should it be an eighth of an inch? A half-inch? Should it be metal points?"

On the bright side, efforts are underway to capture more and better data about accidents. These should lead to better ideas about what hurts and kills EMS providers, and how. That, in turn, should feed improvements in ambulance safety. And this has all come from an increased awareness. Incidents like the opening cases notwithstanding, most experts feel there's more attention being paid to safety issues now, and more progress being made in recent years than we've heretofore seen in EMS.

"Almost every quarterly meeting the AAA has now has a vehicle-safety component," says Wiersch. "Almost all the vendors at our shows have vehicle-safety products to offer. And most of the agendas that cross my desk, whether it's AAA or any of the other groups having symposia or seminars, almost all of them now have vehicle and crash-safety topics on their agendas. So we are making a difference." •