Needlestick Injuries: A Paramedic’s Perspective

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Paramedics and ED personnel face similar risks for blood exposures. They are both confronted by the unpredictability of the patient’s condition, and must perform a daunting variety of tasks under intense pressure. I experienced those risks firsthand as a paramedic in rural West Virginia for four years.

My interest in becoming a paramedic started as a concern for my youngest daughter, who seemed to choke on everything. I had taken the American Red Cross First Aid class, but wanted to do more. So I trained as an emergency medical technician; I took the basic course to qualify for EMT-A. After volunteering with a squad, I continued my training and took the EMT-P class to become a paramedic. That commitment required eight hours of classes per week for nine months, plus eight to twelve hours of rotations per week in a local hospital for eight months.

As paramedic students, we spent over one-third of our rotations in the ED; it was there that we honed our trauma skills. The nurses taught us how to stabilize and maintain a tenuous I.V., locate landmarks on patients of all sizes and ages, and hear the nuances of breath sounds despite background noise. We administered medications, cleaned, splinted, and bandaged injuries and wounds, and ran 3- and 12-lead EKGs. Our initial cardiac protocols were the same as the hospitals’ and included IV medications and intubation and defibrillation as appropriate. We took classes in advanced cardiac life support (both pediatric and adult) with the doctors and nurses in the ED.

ED workers have to accept whoever walks in and whoever the ambulances bring them. Paramedics, too, respond to whoever 911 sends their way.

But the paramedic’s unique turf is the back of the ambulance, the roadway, the factory floor, the home, or the lake—places where traumatic events occur and where the first line of assistance is rendered. Their working environment is often dirty, poorly lighted or exposed to the elements. Frequently they work with one other person or alone, so there are few hands available when a crisis occurs. They are exposed to dangers at the scene such as oncoming traffic or hostile onlookers. Their equipment is limited to what they can carry or what will fit in the ambulance. If equipment fails, there may not be a replacement.

I often sustained minor injuries on the job, usually while extricating patients from wrecked vehicles. Like most paramedics, when arriving at an accident scene I put on gloves, and kept extra pairs in my medic bag. But they were often torn by the sharp debris that seems to be everywhere at a crash site. Even safety glass can slice through an exam glove. I tried to avoid getting splashed or sprayed by blood, vomit, or other body fluids—but sometimes it was unavoidable. At the time, I didn’t give that much thought to such exposures or injuries; they were just part of the job.

As we headed over the mountain to the hospital, bouncing along curvy roads and trying to start an I.V., it wasn’t unusual to get stuck or nicked by a needle. We knew every curve of the road, and tried to match our movements to the rhythm of the vehicle, but a sudden swerve or bump could cause the needle to go astray and stick us rather than the patient.

The needlestick I remember most vividly occurred on a call in which I wasn’t even treating or transporting the patient; I was simply helping with cleanup afterwards. I was handed some trash to throw away—remnants of the I.V. start kit and a box that had contained tubing. A contaminated I.V. catheter needle was in the box, hidden by the packaging, and it pierced my finger. In order to report the incident, I would have had to go to the hospital that...
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was more than an hour away and fill out a lot of paperwork. I didn’t report it.

We encountered other hazards related to devices and sharps injuries. As in many EDs, we used prefilled syringes in the ambulance for cardiac arrests. Although the boxes took up precious space, they saved time and made it easier to confirm the number of doses given. But at that time, there were no safety prefilled syringes available; I know, because I ordered the meds.

Disposing of the many sharps we used on a typical run could fill the sharps box to overflowing; this created another potentially hazardous situation.

The back of an ambulance is cramped—we often got in each other’s way as we tried to complete all the initial procedures. The medic’s seat is at the head of the patient, which is useful for handling airway control, but not a good position for starting I.V.s, giving injections, or taking vital signs. I usually ended up kneeling next to the patient for most procedures. This allowed better access to the patient, but I was out of arm’s reach of the equipment. I would have to request what I needed—including sharps—and my partner would pass the items to me. I used them, then handed them back for disposal. Sustaining a sharps injury during passing was another risk in the ambulance, especially if we hit a bump in the road as we were handing off the device.

Another risk related to sharps injuries is one shared by paramedics and ED staff alike. Ambulance personnel may transport patients to any one of several health care facilities. Once the patient has been released to the ED, paramedics often go to the ED stock room to replace devices used in treating the patient; they will also exchange contaminated for sterile equipment. But in this exchange, the paramedic and the ambulance may end up with devices for which the EMT staff hasn’t received proper training. Similarly, a patient delivered by an ambulance may arrive in the ED with devices or equipment that are unfamiliar to the ED staff. This problem can potentially increase needlestick risk for paramedics and ED personnel—and could also be potentially disastrous for the patient if precious minutes are lost during a trauma while fumbling with a device.

The bottom line: for both paramedics and ED personnel, emergencies are routine and the unexpected is the norm. And that means increased risk of blood and body fluid exposures and sharps injuries.