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How simulation training makes more effective providers

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5 Things We Must Stop Complaining About >> EMSWorld.com/12194338
We need to discuss some of the things we tend to get unnecessarily upset about, says Sean Eddy in his latest post for EMS World.

A Substance Problem >> EMSWorld.com/12194336
Does EMS have a substance problem? No, not that kind of substance problem. In this month’s Life Support, Mike Rubin discusses the difference between form and substance and explains why the latter is much more important in the field.

Month in Review >> EMSWorld.com/12194339
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WEBCASTS

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Recognizing and Reacting to the Lost Advanced Airway
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Presented by Steve Wirth and sponsored by ZOLL
Steve Wirth covers the critical importance of accurate, honest and complete documentation that “paints a picture” of the patient’s condition so your organization can seek the proper level of reimbursement that is so critical to the financial health of your EMS agency.

Time Is Brain: The Need for Speed in Large Vessel Occlusion
Presented by Steve Wirth and sponsored by ZOLL
Mark Ellis presents data and case histories showing significant improvement in patient outcomes during times leading to reduced patient disability since implementing new protocols for first responders.

IHE WEBSITE

Be sure to visit our newly launched sister website, Integrated Healthcare Executive, at IHEExecutive.com.

The website offers news and articles directed to healthcare leaders and practitioners wishing to translate the best science into an integrated, patient-focused environment.
Called to Care

This year’s EMS Week theme gets to the heart of the matter

When you ask EMS providers why they work in prehospital care, many reply that it’s not just a job, but a calling. This year’s EMS week theme—Called to Care—embodies that commitment practitioners feel.

National EMS Week runs May 15–21. The EMS Strong website (emsstrong.org), hosted by the American College of Emergency Physicians (ACEP) in partnership with the National Association of Emergency Medical Technicians (NAEMT), is a one-stop shop for all your EMS Week needs, featuring stories of the people and events that inspire our industry and a toolkit detailing ways in which you can celebrate EMS Week in your agency and community.

Recognition of EMS providers during events like EMS Week is key to informing the public about EMS and the resources and community support we need to deliver excellent patient care.

As I write this message, 103 people are being acknowledged in our nation’s capital as “Stars of Life” recipients for their selfless acts as EMS professionals. As part of the event, which is hosted by the American Ambulance Association, the “Stars” meet with members of Congress and key congressional aides to discuss legislative issues critical to all EMS professionals.

Later this year, recipients of the National EMS Awards of Excellence Program, established by EMS World and NAEMT, will be recognized at EMS World Expo in New Orleans. Both programs build employee morale and showcase the “best of the best” in our profession. Nominate a colleague or your agency today at EMSWorld.com for the chance to win $1,000 cash, three EMS World Expo core program registrations, and $1,200 for travel and lodging at the 2016 EMS World Expo/NAEMT Annual Meeting, October 3–7 in New Orleans, LA. Good luck! 🍀

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CASES WITH A TWIST

By David Page, MS, NRP, & Will Krost, MBA, NRP

Powerful Distractions

Never let a chaotic scene cloud your judgment

The patient’s van was not on fire. The accelerator was stuck, and the tires were spinning loudly and burning rubber. The police officers were trying to turn the car off whilewarding off “zombies” with expired fire extinguishers from the trunks of their squad cars. The white powder covering the “walking dead” was harmless. The building was an unmarked (lilac) bakery. The surprise when our patient crashed into an employee appreciation party, smashing her van into a storageroom full of large sacks of bleached flour and powdered sugar.

After canceling the hazardous-materials teams and extra police, the crew turned their attention to the patient: a 59-year-old female complaining of chest pain. She was conscious and begging for pain relief; the responders believed she might have been intoxicated. A three-pack-a-day smoker, she sported a diabetic alert bracelet. Her son reported she had a severe headache and arm numbness after taking diphenoxylate earlier in the evening. The police also reported a starved windshield and bent steering column.

The woman’s initial vitals were BP 80/50, pulse 120 and respiratory rate 24. The paramedic student thought to ask, “Should we go to a Level 1 trauma center?” But once again the scene unfolded quickly, and before he could realize it, the back doors to the ambulance were closed and the driver was pulling into the EFR across the street.

There was only time for the student to begin establishing an IV and his preceptor to put ECG patches on for a 12-lead that was still being acquired when the ambulance reached the EFR garage. The EFR crew, having watched the event from across the street, was ready. They rapidly interpreted 1 mm of elevation in V2 as a STEMI, starting heparin and sending the patient to the cath lab.

It was the cardiology team that, upon finding no coronary blood flow obstructions, finally slowed down long enough to ask the patient properly. That team discovered and fixed a pericardial tamponade, but more astutely sent the still-hypotensive patient to surgery after interrogating the aorta. The patient was really having a dissecting aortic aneurysm.

**Case Discussion**

While it might be tempting to say the scene was not safe and the crew should not have entered, the reality is that we did not calculate risks every day. At first glance, with other responders on scene, this scene appeared (and eventually was proved to be) safe. We can’t get out of ambulances in full hazmat suits on every call. This case evolved so quickly that responders could not keep up with changing conditions. If this happens to you, it may be time to slow down, take a step back and think. Regaining situational awareness is key to ensuring safe operations. Experts suggest using three Rs: react, regain, reconstruct. A good rule to live by is “Slow is smooth, and smooth is fast.”

In many aviation crashes investigators discovered that someone on scene knew things were going badly but was afraid to speak up. In this case the paramedic student may have had valuable input that could have prevented hours of wait time and dangerous anticonglomeration therapy in a patient having a surgical emergency. Using a flat hierarchy and promoting the use of appreciative inquiry by this paramedic student may have helped mitigate potential errors. Removing one’s ego may be the hardest thing to do. In EMS we tend to place a lot of emphasis on seniority and street experience. This encourages the assumption that senior members must know what they’re doing and does not empower junior members to speak up.

The case also had a wide set of differential diagnoses—from uncomplicated angina to chest trauma, head injury, stroke and seizure. This is the detective work of EMS, making the job more interesting and challenging. The hypotensive presentation with possible hemorrage or circulatory compromise made the patient critical. Rapid transport was indicated, and the community hospital across the street may have been the right choice, but always consider that destination hospi-

tal’s capabilities—they can really change the outcome.

In this case there was a bit of tunnel vision, which can occur when we initiate a prehospital procedure such as a 12-lead and fail to take a wider look at our assess-

ment. While it is unlikely the ambulance crew would have detected a dissecting aortic aneurysm, it would have been reasonable to suspect chest and head trauma and potential bleeding:

**The Facts**

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In this case there was a bit of tunnel vision, which can occur when we initiate a prehospital procedure such as a 12-lead and fail to take a wider look at our assessment. While it is unlikely the ambulance crew would have detected a dissecting aortic aneurysm, it would have been reasonable to suspect chest and head trauma and potential bleeding. But last not least, during our critical handoff reports, ED staff should be encouraged to stop and listen. Many trauma centers that are attuned to the culture of safety have adopted a “moment of silence.” And of course, once we have the floor, we need to ensure we start with our ways, means, and measurements. If we begin with the classic “We were called for...” and cite a dispatch reason that is of little consequence to the condition we ultimately found, we are simply wasting precious time and diverting attention in a way that may confuse the next care provider.
I was recently talking to a colleague who manages a medium-size third-service EMS agency. He expressed frustration that the excellent prehospital care his crews provided for their community was overlooked. It seemed the fire department was always getting press for installing smoke detectors, responding to fires or delivering fire safety messages. He told me he would love to highlight his agency’s successes, but because of HIPAA he could not release patient information.

I asked him who his public information officer (PIO) was, and he said he didn’t have one. “How,” I asked incredulously, “can you champion your successes if you don’t have someone promoting them?”

Tell Your Story
To get the positive press you feel your agency deserves, you need to tell your story and promote your successes to the media, seeing them as a customer and not the enemy.

Whether you are fire-based, third service, private or hospital-based, you need a PIO. Your agency might not be big enough to have a dedicated PIO, but it needs to have someone who can be available 24 hours a day, since the news cycle does not stop at 5 p.m. They should have some rank or at least be authorized to speak on behalf of the agency.

Their next job is doing what I call the 4 Ps. They need to pursue possibilities to promote your perception as an EMS agency. Your PIO needs to know and develop relationships with local reporters and be able to feed them positive stories. Maybe your crew that delivered a baby is going to be reunited with the mother and newborn—by the mother’s permission, this is a perfect opportunity feed the media a human interest story. When I worked in St. Louis, we had a Ride Home program where someone who’d been resuscitated and was being discharged from the hospital would get a ride home in the front seat of a fire engine or ambulance with the crew involved in their rescue. We would always get the media involved. There’s nothing better than seeing a patient and their family singing your EMS agency’s praises all over television and the newspapers.

There are other marketing opportunities that don’t involve the media: CPR classes, car seat installations, poisoning-prevention programs, drowning-prevention programs, free BP screenings, plus more. Every EMS agency should use the 4 Ps. Look for possibilities around the time of the year, such as educating high schoolers at prom time on the dangers of drinking and driving. Some EMS agencies have promgoers sign the “prom promise,” a pledge that they won’t drink and drive on their big night. Get the media involved in these programs—you’ll promote your department while educating students.

Social Media
Every EMS agency should have Twitter and Facebook accounts. At least once a day, your PIO should tweet something your EMS agency is doing. If there is nothing planned that day, send out a safety or health message. One could say, “Over 500,000 people a year die outside the hospital from cardiac arrest—when was your last checkup or stress test?” Google for these messages; there are plenty online.

Use your Twitter and Facebook accounts to champion your successes, upcoming events, safety and health messages, and maybe just to highlight some great employees you have.

Does your EMS agency have a website? You’ll be surprised how many do not. What a perfect opportunity to promote your agency at low cost. It does not have to be fancy. People are primarily drawn to pictures on websites. If you have 20 paragraphs on your first page describing everything from how many supplies you buy each year to how many IVs you start, the reader is going to click off without even looking at other pages you might have.

There are many benefits to marketing your EMS agency: It can position you well at budget time, garner support from your elected officials and raise community awareness of the value of your EMS agency. And as that value becomes more recognized, your employees’ morale will rise.

ABOUT THE AUTHOR
Gary Ludwig, MS, EMT-P, is chief of the Champaign (IL) Fire Department. He is a well-known author and lecturer who has successfully managed large, award-winning metropolitan fire-based EMS systems in St. Louis and Memphis. He has a total of 37 years of fire, rescue and EMS experience and has been a paramedic for over 35 years.

How can you champion your successes if you don’t have someone promoting them?
**Periscope**

**What is this?**

Periscope is a free app for iPhone and Android devices that allows users to broadcast a live video stream of any event that other users can watch. A chat window allows the viewers to interact with the user running the stream in real time.

**What are the benefits to educators?**

One of the more obvious benefits of Periscope is the app's ability to give viewers a live look into any situation the broadcaster wants them to see. The streaming service could theoretically give students a “field trip” without having them leave class for a ridealong or similar activity. There are other, more out-of-the-box applications as well. The service can be used to be more inclusive of absent or distance-education students, or could be used to host small group discussions.

**Where can I learn more?**

Visit www.periscope.tv or search for it in your device’s marketplace.

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**Prezi**

**What is this?**

Prezi is a presentation software somewhat similar to Microsoft PowerPoint. As opposed to PowerPoint, which allows users to create linear, slide-based presentation, Prezi offers more an open-world concept. Users are given more of an interactive canvas, allowing them to zoom in and out to show different pieces of the presentation. There is a subscription fee of at least $4.92 per month.

**What are the benefits to educators?**

Prezi offers a more engaging and interactive experience for students. The interactivity and different canvas options chip away at the standard presentation, which can leave students bored or inattentive. The completely open canvas and storage options allow educators to make the presentation as large as they choose without having to save overly cumbersome files to their computer. A wide variation of available templates online gives users options to fit the tones and themes of their presentations.

**Where can I learn more?**


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**MedBots’ Provide Options for Distance Education**

How many of you know what a mobile virtual presence device is? Think of it as a robot stick figure.

Double Robotics uses an iPad Air 2 mounted on a pole attached to a set of wheels. The pole can be extended or retracted to put the iPad at different heights. The devices have dual cameras, one looking forward and one looking down. The camera pointed down is to assist in moving.

Using the webcam of an iPad, a user can see what is in front of them as they roll the device around. Someone looking at the device can see and interact with the user on the screen. The user can be anywhere in the world as long as both users have a Wi-Fi connection.

“In the traditional smart classroom used for distance learning, the cameras in the room don’t move. With these devices, the students can move the device and look at who is talking or face someone they want to talk to. We are calling them MedBots,” says David Gurchiek, PhD, a former paramedic and current department chair for Montana State University’s nursing, health and public safety programs in Billings, MT. “We currently have online and hybrid training programs that include online and lab skills days at the university,” explains Gurchiek. “As far as I can tell, no one else is using these devices for paramedic training.”

What Gurchiek realized was, the lab students could see patient simulators lying on the floor with the camera pointed downward. The student user can control the MedBot from another iPad or a computer. When someone looks at the MedBot, they will see the user’s face via the webcam of the user’s device. Since the MedBot moves, the student can roll to a location around the patient to get a different view or get a better look at a monitor, etc. The instructors will design the lab situations so the students using the device will be able to move around and see everything they need to see to assess the patient.

“The way we see this being used is the distant student using the MedBot will be the team leader and will direct the care of the other students who are actually in the room with the simulator,” says Gurchiek. “The distance learners will still come to class on certain days to do the individual psychomotor skills.”

Barry D. Smith is an instructor in the Education Department at the Regional Emergency Medical Services Authority (REMSA) in Reno, NV. Contact him at bsmith@remsa-cf.com.
What’s not to love about simulation?

As a method for training EMS providers and keeping their skills sharp throughout their careers, it has a lot of benefits: It allows replication and standardization of patient maladies both common and rare. It permits unlimited practice even on seldom-seen conditions. It keeps real patients safe from learners and their errors. And it’s shown to improve knowledge and skill performance across the medical fields.

That’s all easy enough to grasp, and paramedic programs throughout the land have accordingly invested in wide ranges of simulation equipment, including task trainers, manikins of varying complexity, other live-patient simulators, and computer-based and virtual reality programs. Virtually all accredited paramedic educational programs can use at least some of these tools. In fact, the 2015 SUPER (Simulation Use in Paramedic Education Research) study discovered 100% of the respondents to its survey had or had access to task trainers and simple manikins. That number was 99% for intermediate manikins and even 91% for advanced, fully programmable manikins and 83% for live simulated patients.

And that’s where the findings got interesting. Because many of those programs weren’t always using what they could. Apart from the task trainers, used by 97% of programs that had or could get them, a lot of tools sit idle. Simple manikins were available to all responding programs but only used by 92%. Intermediate manikins were available to 99% but only used by 93%. Advanced manikins, available to 91%, were used by just 71%.

That dropoff persisted among less-ubiquitous items: Live simulated patients were accessible to 83% of programs, used by 66%. Computer-based simulation was available to 71%, used by 31%. Only 19% of programs reported access to virtual reality training, and just 4% said they used it.

There are some sensible whys behind all that. Programs were asked whether they had or had access to the specified tools; those that had such tools on hand used them more than those that could merely obtain them. Further reasons involved lack of training and personnel to support simulation-related activities.

The overall picture captured by the SUPER study, then, was a frustrating one of a resource that’s common, yet remains underutilized. “These results suggest that simulation in accredited paramedic programs mirrors the proverbial three-legged stool,” the authors concluded. “To ensure simulation is used effectively, programs must have the appropriate equipment, faculty training and resources. If any of these elements is missing, the stool topples, and programs are less likely to use simulation.”

The NAEMSE Vision

The National Association of EMS Educators—some leading lights of which were among the SUPER authors—followed things up last November with a vision paper on simulation in EMS education. It examined those barriers to implementing it and looked at attributes of successful simulation programs. Finally it offered...
some recommendations for improving the use of simulation in EMS education.

First some barriers. The NAEMSE singled out:
- **Faculty training**—Less than half of SUPER respondents reported their faculty training was appropriate, the vision paper noted. Users of advanced manikins were primarily trained by manufacturers’ representatives, but nearly one-fifth said their faculty had no training specific to the manikins they owned.
- **Psychological fidelity**—How realistic is the training experience? Beyond individual tools, developing skills and integrating knowledge in complex scenario-based simulations requires a “whole experience” fidelity that encompasses the environment and mind-set of the practitioner. Most paramedic program simulations are out now. It doesn’t have to be super-expensive. The focus should be less on the technology, we can’t lose the importance of the simplified approach—the simple tabletop-type stuff as well,” says Carhart.

Secrets of Success

The first thing to know is that you don’t have to spend a lot of money to get some benefit from simulation. Even simpler tools and approaches can have value. “When people think about doing simulation, they often think of these expensive high-fidelity simulators,” says Boyer. “Simulation is more of a concept than an actual purchase. You can use student role players with some of these fairly low-cost devices that are out now. It doesn’t have to be super-expensive. The focus should be less on the equipment and more on the process.”

As much as we want to focus on the technologies, we can’t lose the importance of the simplified approach—the simple tabletop-type stuff as well,” says Carhart.

Don’t let your manikins gather dust in a closet while sitting idle and unused.

With iSimulate’s portability, versatility, and intuitive interface, you can implement simulation practices on the fly in the classroom or lab setting.
"That is also effective, especially when we’re dealing with these discrepancies between the need for training and equip -
ment sitting idle and resources being wasted. Sometimes simple is good too.

The key is to make sure simulation is used and learning scenarios built around clear,
successful learning objectives.

“We make sure every scenario we do has a specific objective, whether that’s focused on history-gathering or making a differential diagnosis and choosing a treatment path,” says Heigel. “Every scenario should have a real specific objective so the instructor knows going in exactly what it’s intended to teach and what the students are supposed to learn.”

Summative scenarios—concluding ones held at the end of a class—may be long and complex. Formative scenarios—those held during learning—need not be so lengthy; if a discrete objective can be accomplished more briefly.

With whatever equipment or tools you have, make the most of them. At Delaware Tech, manikins aren’t limited to the lab—Boyer brings them to the classroom to use as teaching aids.

“So if I’m talking about pharmacology, for example, how medications impact the sympathetic nervous system—instead of speaking hypothetically, I can project the actual computer control for the simulator, with all its functions, and say, ‘OK, we’re going to give epinephrine. Let’s talk about what epinephrine does to the sympathetic nervous system.’ And then we can give it to the simulator and all watch together what happens as it starts to take effect,”

he says. “By embracing that technology, you’re bridging that gap between knowledge and application.”

Running simulations and sce-
narios smoothly requires familiar-
ity with the equipment and practice beforehand. Master your technology—nothing dispels the credibility and flow like technologi-
cal delays and interruptions.

Fidelity, or the believability of the experience, is important on a number of levels. It applies to individual items of equipment, the environment in which train-
ing occurs and even the psychologi-
cal realm: Good simulations help suspend disbelief and create a convincing mental “moment” that helps providers learn in what they perceive as credible, convincing situations.

“We’ve all been doing simulation for as long as we’ve been doing EMS training,” notes Heigel. “The question is just how much technology you include and how much realism you try to apply to it. Simula-
tion as a technology is great, if it contributes to the flow of the scenario—if you have well-trained people who know how to use the equipment and it does regularly. If you don’t have all those things, the technology can get in the way. In that case I’d rather have a non-technical manikin lying on the floor and just describe to the student what they’re finding. That may not be as effective, but it’s probably more effective than a scenario where the instructor has to stop the students while they try to get the manikin caught up to what was supposed to happen next.”

Fidelity is holistic. It can be as simple as using a female manikin to represent a female patient, but can also span aspects of the training experience like backgrounds, sounds, smells, even the motion of an ambulance.

There’s no doubt high-tech manikins that have vital signs and react to treat-
ments can improve the fidelity of the learning experience. At this year’s EMS World Expo (Oct. 3–7 in New Orleans), Boyer will describe how simulation can be a disruptive innovation.

“Some folks might object to that description, because disruptive innovations are typically lower cost, and all the high-fidelity simulators, for example, are expensive to purchase,” he says. “The efficiency of having students be able to train on a device that actually responds like a human patient would be where the disruptive innovation part comes from. Because you’re basically uti-
lizing the limited time you have in the lab much more effectively. You can get your students to understand and grasp concepts more quickly, and move them into more com-
plex tasks by actually demon-
strating to them, especially your more hands-on learners: I give Drug A, Drug A takes two minutes to work. Well, instead of doing the magic ‘shake the fists’ type thing we do in labs sometimes—OK, two minutes has passed—they actually have to watch this medication take effect and watch some of the side effects.”

Some other good ideas for simulation education:

• When possible, seek train-
ers with EMS experience. Our environments and practices are unique. There’s benefit to intra-
professional training opportuni-
ties too.

• Stay abreast of current litera-
ture and involved in user groups, profes-
sional organizations and the like, where you can exchange insights and lessons with colleagues.

• Students may appreciate the chance to run through scenarios more than once. “We run them through a scenario where they may miss key things, stumble on something or not be particularly effective,” says Hei-
gel. “We stop, do a debrief, talk about what was done well or not, and then we reset and let them redo the same scenario, knowing exactly what they’re walking into and how
How the National Registry Is Transitioning to Scenario-Based Examinations

There are a few reasons behind the NREMT’s move toward scenario-based verification of psychomotor competency for paramedic students. One is to assess students in a way that more simulates actual practice. Another is to improve their ability to integrate individual skills into their overall scene and patient management.

Certification standards starting this year require students to have a portfolio of vital skills and show progression from performing simple psychomotor skills and scenarios to integration of skills and assessments in complex simulated scenarios. Next year the NREMT will launch the first phase of its new scenario psychomotor exam. “Scenario examinations,” the organization says, “allow the NREMT to incorporate essential attributes of Team Leadership along with scene and patient management, thus better reflecting actual out-of-hospital care as opposed to continuing to test 12 isolated skills.”

To prepare educators to construct and deliver these new scenarios, NREMT and the National Association of EMS Educators (NAEMSE) are partnering to put on a series of regional scenario development workshops. These are free two-day classes designed to help program leaders develop offerings of appropriate type, variety and difficulty. They cover areas like scenario writing, calibration and evaluation. Scenarios created in the workshops will be available for use afterward.

“While the Registry has not really ever prescribed or done education—we’re about verifying competency—in this case we decided educators needed some help,” says Heather Davis, EdD, NRP, a member of the NREMT’s executive committee and the planning committee for the workshops. “So the Registry partnered with NAEMSE to bring this opportunity to educators and program directors to help them understand the process, what they need to be doing in their skill labs, formative vs. summative scenarios and how scenarios are different than full-blown simulation. We’ll use folks who have already done this successfully in their programs to help answer questions and serve as mentors.”

There will be more than 20 regional workshops held across the country (see http://naemse.org/nremt) through December, including one on October 4 at EMS World Expo in New Orleans, LA. Feedback is being actively courted and employed to improve the workshops as they go. Resources to help have also been assembled on the NREMT’s website, including sample video scenarios and things like sample rotation schedules, student job descriptions and an example of a portfolio collection tool.

“So often, particularly if you don’t have a lot of experience writing scenarios or aren’t in the habit of including your faculty in the calibration process, you can think you’ve written a great scenario, and then it turns out to be a mess when the students actually perform it,” says Davis, program director for the UCLA paramedic education program. “Then you don’t really get the feedback you’d hoped to gather. So it’s really valuable feedback for groups of instructors, and the hope is that they’ll leave these workshops and go model this behavior back in their own programs.”

they’re supposed to manage it. It really helps reinforce positive behavior.”

- Post-training debriefing is often overlooked. “It’s that debriefing process, that reflective process, where the learning actually takes place,” says Carhart. “Sometimes we get so caught up in everything we’re juggling, we get to the end of the simulation and have more of a hasty hot wash than a proper debriefing. That is to our detriment.”

‘Like Night and Day’

“Evidence seems to indicate,” the NAEMSE vision paper concludes, “that high-fidelity simulations facilitate learning when used under the right conditions.” It offers, from authors led by the University of Miami’s Barry Issenberg, MD, 10 habits of effective simulation programs (feedback; repetitive practice; integration into the standard educational curriculum; range of difficulty level; adaptability to multiple learning strategies; capture of a wide variety of clinical conditions; controlled environment to make, detect and correct errors without adverse consequences; individualized, active learning; defined outcomes and tangible measures; and simulator validity).3

“What we’ve seen is a remarkable improvement in our students’ level of preparedness that shows up when they actually get to the field internship,” says Heigel. “For many years we did EMT classes in a classroom, and we’d just sort of talk about things: ‘OK, here’s your patient, you pick them up and put them on the table. Now pretend you’re in the back of an ambulance, and imagine you’re doing this.’ And we’d put students through a variety of steps, basically asking them to visualize what it’s going to be like when they get out in the real world, and assuming they’ll translate that pretty well.

“Well, our students have been getting through those processes for years, and they’ve been successful. But when we really started incorporating the realism, the feedback we’ve gotten from our clinical sites and our internship sites is like night and day. The students actually understand what it’s like to work in the back of a moving ambulance, because we run scenarios where they have to package the patient in unpredictable situations and get them on a gurney and into the ambulance and do interventions while it’s moving. We used to just talk about those things. So I think each component of that better prepares our students for stepping into that real environment.”

REFERENCES


No book is big enough to contain everything you need to know about being an EMT, and no author is smart enough to write such a book.

Besides knowledge, a good EMT needs to be equipped with other things as well. Wisdom, for instance. Kindness, intelligence, situational perception, quick reflexes, emotional stability, physical strength, a sense of humor, perhaps a reverence for the beauty of life, and certainly a giving heart.

Most of those things are gifts—talent, that we’re either born with or we’re not. If you’re born with the right gifts, being an EMT can seem like the most reasonable, most sensible, most comfortable thing in the world for you. Without them, EMS can seem more like a feat of endurance. And as any field training officer can tell you, there are plenty of book-smart people who get into the field but just can’t seem to put it together.

Wisdom is special, and I can think of only two ways for an EMT to accumulate it. Exposure to a great many sick people is the deepest source of wisdom, although that requires years of experience and usually involves some mistakes. Exposure to a great many experienced caregivers is a much quicker source of wisdom, because it encompasses the benefits of their collective wisdom—including what they’ve learned from their own mistakes (and those of others before them.)

I retired from EMS almost two years ago and have spent some of that time thinking about the mistakes I made in my career. I learned a lot from those mistakes and from scores of great colleagues as well. I’ve often wanted to share some of the lessons I learned with new EMTs just embarking on their careers. I’d like to offer 50 or so of them here, which I consider pearls. I wasn’t wise enough to think of them all myself, but fortunately, I had many fine teachers. I’ve attributed their ideas to them the best I can.

Pearls are some of the most popular treasures in the world. There are plenty of imitations, but real pearls are elegantly simple, and available in a variety of colors and lusters. Pearls originate as grains of plain sand, made beautiful through years of suffering by humble, unremarkable-looking shellfish. Yet even when unembellished by gold chains, settings, trinkets or trim, they’re intrinsically and uniquely beautiful—so much so, the word pearl has become a universal metaphor for something valuable.

I hope you find the following pearls helpful, whether you’re just starting out or you’re a seasoned EMT with students of your own. Please feel welcome to expose them to scrutiny from other providers. No doubt, they’ll offer you some pearls of their own.
1. Insist on your right to come home safe, shift after shift and year after year.

2. See much more than you accept from the testimony of others. Listen much more than you speak. And keep your mind wide open to stuff you don’t know.

3. No part of an EMT’s training qualifies you to arrest, indict, judge or punish somebody you’ve never met, doing something you didn’t witness.

4. Life ain’t easy for a trained observer.

5. A whole lot of stuff is funnier than you think. (Six Sides)

6. Burnout is not a static, terminal event in one’s career. It’s not unpredictable, and it’s certainly not inevitable. Instead, it’s more of a dynamic in the ongoing management of your personal balance. Those of us who are being honest will admit we’ve grappled with it more than once.

7. Nobody knows everything. Nobody’s done it all. Even those of us who are being honest will admit we’ve grappled with it more than once.

8. Where there’s a rule, there should be a reason. The reason should be explainable, and the explanation should make sense.

9. Nobody knows everything. Nobody’s done it all. Even those of us who are being honest will admit we’ve grappled with it more than once.

10. When someone overreacts to something you’ve said, it’s not personal. It’s one of the ways we all handle stress.

11. If you find yourself working with someone whose driving scares you, it probably should. And no matter who they are, if they say they “can handle it,” you should bet your life they can’t.

12. EMTs get lied to for a living. All people lie sometimes. That’s not personal, it’s one of the ways we all handle stress.

13. People who lie routinely are liars, and liars lie. That’s not personal, either.

14. Some people are just bad. When they’re sick, and you don’t take good care of them because they’re bad, they win.

15. An EMT’s work is about serving others. Expecting it to be about you, even once (your sleep, your schedule, your vacation, your family), would be your mistake.

16. Some systems are toxic. If you find yourself working in one, make a change before it changes you. (Yes you can, and you must, because it will.)

17. We gossip too much. Gossip destroys people’s lives, and that makes it a safety hazard.

18. If you find yourself wondering whether you’re gossiping, you probably are.

19. A whole lot of people you encounter as an EMT will neither respect you nor appreciate what you do for them. As a professional, it’s your job to be nice to every single one of them.

20. Most street people don’t live where they live or die, and the impact of their deaths on those who love them.

21. You probably won’t make a lot of money as a caregiver, but you can make enough. More important, your loved ones will never have to be ashamed of what you did with your life. And neither will you.

22. Never do anything you know is stupid.

23. Modesty matters, when it’s yours.

24. Touch only with permission, and then gently.

25. People have names, and their names are important.


27. Respect and be honored by the gift of trust. And make no mistake, it is a gift—never an entitlement.

28. Many people clamor to be called heroes. Only a few are awarded that distinction, and those awards are often based on faulty information. It’s enough in life to be recognized daily by the owner of that face in your mirror, and those who love it.

29. Honor people’s right to live, their right to die, and the impact of their deaths on those who love them.

30. When someone trusts you with their life, try to be truthful toward them and silent about them.

31. You’ll never be omnipotent. Admit your limitations openly and without embarrassment.

32. Sick people deserve as many pillows and blankets as they think they need. (Robert Barton)

33. Life is full of people who know more than you do and people who know less. Try to learn from the ones who know more, and share with the ones who know less.

34. A man wrapped up in himself makes a very small package. (Ben Franklin)

35. Don’t be too sure you’re better than anybody. (Robert Tilton)

36. Respect and be honored by the gift of trust. And make no mistake, it is a gift—never an entitlement.

37. Modesty matters, when it’s yours.

38. What is popular is not always right. And what is right is not always popular. (Leo Tzogman)

39. Some of the most beautiful people you’ll ever meet as an EMT will be plainly wrapped.

40. No one loves and understands EMTs like other EMTs do, so it’s easy for us to regard our colleagues as family. Just remember, your family at home is the one to whom you’ve made your lifelong commitments.

41. Nobody gets out of here alive. (Jim Morrison) All people die someday, despite our best efforts. That’s OK.

42. Nobody gets out of here alive. (Jim Morrison) All people die someday, despite our best efforts. That’s OK.

43. EMS is a serious business, and you have to take it seriously. But try not to take yourself too seriously.

44. People have emergencies every day that have nothing to do with medicine. We’re here to help those people along with the rest.

45. Western medicine is based on the premise that sick people are impotent. Eastern medicine, which is more ancient, is based on the premise that all people have the capacity to heal themselves, and a few special people have the capacity to facilitate healing.

46. Fake smiles don’t do dilly for sick people. Real smiles come from inside of us.

47. Sick people and their diseases are supposed to have different names.

48. People who’ve just lost someone they love don’t always want to hear what you believe God is thinking or what the angels are doing.

49. Skeptical observations are usually framed as questions. Cynical ones are usually framed as judgments. (Mike Talisman) Skepticism is one of an EMT’s most valuable tools, but you need to turn it off before you get home from work.

50. It’s not your emergency. It’s somebody else’s emergency, and what you can do to help may not be enough. That’s OK.
How supplementing classroom lectures with realistic simulation improves the EMS student’s experience

By Drew Hooker

Do you remember the days of sitting in classrooms watching slide after slide of boring PowerPoint presentations, or listening to EMS lectures on the same material you spent hours reading the night before? What about the frustration of watching a piece of equipment demonstrated, but never getting the opportunity to practice with it hands on? Those days are over in the Motlow College EMS education programs in Lynchburg, TN. In an era of progressive medicine, we have chosen to be aggressive in our approach and to teach progressive, evidence-based medicine to our students.

In 1996, at the National Teaching & Learning Forum, professors Joan Middendorf and Alan Kalish from Indiana University described the effect of lengthy lectures on the retention of material. They stated that most adults only retain information from the first 15 minutes of lecture. Additionally, a study published in the Proceedings of National Academy of Sciences of the United States of America showed a 55% higher probability of failing a class during traditional lecture vs. active learning.

With that information, why do we continue to lecture for hours on end? Are we slaves to tradition? Or are we simply resistant to change? Either way, our methods and styles of teaching need to evolve.

It’s About Timing

There are many ways to present material other than the traditional lecture. We use several techniques in the classroom including whiteboard challenges, case studies, games, video projects, research projects and student-led classes. There are new methods of “flipping” the classroom, using scenarios, employing case studies, relying upon student interaction and creating situational simulation. At Motlow, we rely heavily on simulation, not only during scenarios, but also in everyday teaching.

A paramedic’s timing is vitally important to treating patients and managing a call. If our scenarios and simulation only take 10 minutes, but calls take 40 minutes, how can a student perfect timing of treatment and continued assessment? When a student is supposed to wait 3–5 minutes to administer a drug, what do they do with the time between doses? In the past, many educational facilities just verbalized the actions rather than perform them. Without this practice, how can students develop timing and their internal clock?

When a student wants to treat a patient with medication, she or he has to draw the simulated medication into a vial and go through the “six rights.” If they want to give a specific dose of medication, they have to perform the skill. They can’t simply verbalize that they administer it. Students are always amazed at the length of time it takes to draw medications properly, and how important timing is.
A lab located at the Tennessee Fire and Codes Academy facilitates additional simulated training. This location offers 330 acres of simulation space and includes a real fire station, a six-story burn tower, a simulated house, a hotel, an education building and our full operational ambulance.

This location allows us to run “real” simulated calls. We create scenarios and have students “respond” and assess not only the patient, but also the entire scene.

Moreover, our program, along with the fire recruit classes, holds simulation days where we work together on large scenes. This allows for exposure by both fire and EMS students to communication and understanding of each other’s job requirements.

Students learn how to rescue, treat and transport patients to the simulated hospital. They are even required to give radio reports and hand-off reports to the receiving facility.

Each spring, the college holds its overnight experience with the AEMT (Advanced EMT) classes. At that point in their curriculum, these students have never experienced the effects of having to perform paramedic work on little sleep, much less having to function as an actual AEMT. This class gives insight into handling a full shift.

Students arrive at 8:30 a.m. for their regularly scheduled class time and participate in class until 4:30 p.m. At that point, they get ready for the overnight experience. The students get process, which very closely simulates the realities experienced in the back of the truck. The students operate out of jump bags with code boxes, narcotic boxes, drug boxes and real oxygen. The students even have nebulized saline to simulate nebulizer treatments. That process has been successful because a nebulizer treatment takes 4–6 minutes to administer. If the student doesn’t simulate using the nebulizer, his or her timing will be off.

An additional method of realism we use is to hand them a “bag of bottles” with popular prescription drug names (both trade and generic), requiring them to determine the medical history of the patient based only on the medications. This strengthens both assessment and pharmacology skills. Each of these processes is vital to the growth of the student as he or she works through the requirements for becoming a paramedic.
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their paramedic students create the scenarios and become the patients for the AEMTs. We have several ambulances that respond to the student calls.

During the night, the AEMT students respond to 26 emergencies ranging from canceled calls to situations involving nursing home patients and multipatient accidents. The students are allowed to sleep and are awakened when their truck needs to respond. The night is capped off with a mass-casualty event requiring the students to identify properly the triage colors of 10–12 patients.

Paramedic students have several training days to accomplish before being released to clinicals. They are required to have a “high stress, low light airway day” prior to being allowed in the operating room or intubating on the ambulance. Students are placed in a room with little to no light and told to manage the airway of a patient in a hard-to-reach location. The room has red strobe lights, the instructor plays loud music and, at times, the student’s equipment is removed or is deemed not operational. This forces the student to think creatively in order to achieve the desired outcome. For example, to manage the problem, the student may have to utilize a supraglottic airway rather than intubate. However, the students don’t always receive straightforward scenarios. This training creates students with the ability to treat outside of algorithms. They also must accomplish check-offs for obstetrics, pediatrics and competencies prior to the field internship.

**The End Goal**

Students respond well to the methods and come to class each day looking for ways to improve. Our goal is to have students ready to respond to calls the first day they step foot on the ambulance, a goal made possible through the use of realistic simulation.

**REFERENCES**


**ABOUT THE AUTHOR**

Drew Hooker is the program director at Motlow College in Lynchburg, TN. He has experience in both collegiate and service-based EMS systems administration. He has over 13 years of EMS experience with a dedication to help move forward progressive evidence-based medicine. Contact him at Dhooker@mscc.edu.
Education Through Simulation

Current and effective education is a linchpin to success in the EMS community. Gaumard Scientific Company provides essential tools for just that.

Headquartered in Miami, Gaumard produces multiple lines of simulators used in 70 countries to train healthcare professionals, including EMS personnel.

Gaumard has designed, manufactured and produced these simulators for more than 60 years.

Dave Tauber, paramedic program director at Yale-New Haven Hospital in Connecticut, has been using Gaumard simulators in training for a little under a year, and has seen largely positive results since implementing them.

“We’ve been very pleased with the simulators. My faculty members have taken to them quite well,” Tauber says.

Yale-New Haven uses a variety of Gaumard products, including the Victoria simulator, Trauma Hal, and an array of newborn and child simulators.

Tauber says one of the biggest benefits has been the ease of implementing them into his organization, noting that a number of faculty members took a liking to them almost immediately.

Although they are using them primarily for education now, Tauber says his organization has plans to expand their use in the future. He says they will be great for reviewing how trouble-some cases could have been handled better and for skills verification for active paramedics as well.

Tauber says the positive impact on his education programs has been obvious and immediate: “The students love them, and they like the hands-on aspect. We get some disbelief from them because it’s so similar to the real thing, and they like that a lot.”

He says he would absolutely recommend Gaumard’s simulators to any educators looking for realism in training.

“It’s a much better way to teach,” Tauber says, “compared to having students be passive and letting slides wash over them or ignoring a droning-on instructor.”

For more information on Gaumard Scientific Company and their products, visit Gaumard.com.

Circle 35 on the Product Information Card

Teaching in a Changing Landscape

With the landscape of the EMS profession constantly changing, keeping up on the most current research in education is a key to help students learn correct techniques.

To help ensure this is the case, NAEMT recently released its 2nd edition Advanced Medical Life Support (AMLS) program. The AMLS program addresses how to manage common medical crises in patients, and teaches students to “think outside the box” when providing care.

Endorsed by the National Association of EMS Physicians (NAEMSP), AMLS is a two-day continuing education program that consists of interactive, case-based lectures and critical thinking patient simulation stations. The course emphasizes the use of the AMLS Patient Assessment Pathway, an important guide for assessing medical patients with urgent accuracy and group discussion to identify potential treatment strategies. Students receive 16 hours of CECBEMS-approved credit upon successful completion.

Leslie Hernandez, an EMS educator at the University of Texas Health Science Center in San Antonio, has been using NAEMT education programs for about 25 years, and recently made the switch to the 2nd edition AMLS program.

Hernandez says the transition went smoothly, as it usually does when NAEMT releases a new edition of its educational materials.

“There are some substantive changes,” Hernandez says. “It’s been fleshed out and enhanced extensively, but the general concepts and the principles and the faithfulness to the NAEMT philosophy on how to deliver education is there, so it’s easy to transition.”

Hernandez, who oversees the paramedic program contracted to the university by the U.S. Army, says the way the AMLS program is structured works very well for her and her students.

“It’s extremely important for us to take what we learn in the classroom throughout the program and culminate it with a two-day, or blended, hybrid program such as AMLS,” Hernandez says. “At the end of the program, we ensure they can link all the theory into practice.”

Hernandez says she would absolutely recommend the program to other educators because the content is developed by national experts and is consistent, reliable and timely. She says NAEMT is constantly reassessing where it’s at in the practice of medicine, which keeps the information fresh.

For more information about the AMLS program or other NAEMT continuing education programs, visit the education section of NAEMT.org.

Circle 36 on the Product Information Card
Utilizing community paramedics in a postacute or chronic disease management role has been shown to be a real benefit to populations both rural and urban. Today the struggle in almost every community in the United States is access and treatment for mental health issues. Mental illness is a disease that can impact many patients as a significant comorbidity and is a major factor in overall health. There is some mystique around mental health, and it’s generally the last thought for most providers. Paramedics and EMTs get very few hours of education on the subject, didactic or clinical. Yet it is one of the most common issues practitioners face in the field on a daily basis.

Community paramedics can provide psychological first aid by meeting the patient’s basic physical needs, then their most basic psychological needs.

By Anne Montera, RN, BSN

With some extra preparation, CPs are ideally suited to help this vulnerable population address the needs of mental and behavioral health. With additional education and clinical time to prepare them to provide assistance to this population, community paramedics can help patients deal with emotional distress resulting from an accident, injury or a sudden shocking event. They have the tools to identify the different signs of stress, observe and document various defense mechanisms, and analyze existing conditions and situations that affect how the patients will react to stressors. They can also provide psychological first aid by meeting the basic physical needs, then the most basic psychological needs.

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Utilizing community paramedics in a postacute or chronic disease management role has been shown to be a real benefit to populations both rural and urban. Today the struggle in almost every community in the United States is access and treatment for mental health issues. Mental illness is a disease that can impact many patients as a significant comorbidity and is a major factor in overall health. There is some mystique around mental health, and it’s generally the last thought for most providers. Paramedics and EMTs get very few hours of education on the subject, didactic or clinical. Yet it is one of the most common issues practitioners face in the field on a daily basis.

Community paramedics can provide psychological first aid by meeting the patient’s basic physical needs, then their most basic psychological needs.
or inform the patient’s primary care provider of an underlying mental health issue. Sometimes the mental health issue may not be present at a physician’s office but might be more readily apparent at home. When the CP visits the home, they need to be prepared to identify, document and notify of mental health conditions observed there. The CP should be aware of medications a patient is taking. Often the diagnosis with a mental health issue may not be part of the patient’s medical record. Upon further inspection, the CP might find prescriptions from one physician that interact or interfere with the medication regimen of the primary care provider.

The CP Curriculum

To become a community paramedic, the provider must complete the core competencies of the national community paramedic curriculum. One component of this education covers the mental and behavioral health of the patient they will encounter on a daily basis. Community paramedics are uniquely poised to assess, identify, treat and refer their patients to the appropriate level of care in the right setting. Different than the traditional 9-1-1 paramedic, CPs have the time, education and resources to meet different aspects of the patient’s health needs. They might not be the expert in all areas, but they have the knowledge to get the patients the care and resources they need. Despite the prevalence of mental and behavioral health disorders, detection is difficult, and recognition and treatment rates are low. Even if patients obtain care, adherence to treatment guidelines is usually less than 50%. This is mind, the national community paramedic curriculum development team made this part of the education a priority.

During the didactic portion of the course, students are taught how to conduct a psychological assessment. They evaluate how the patient is functioning, determine if they are in a psychiatric crisis, determine current psychological status, collect history about substance abuse, and assess the social marginal of the patient. Their time is spent learning about how to conduct the mental status examination and screening for depression, suicide, dementia and substance abuse. Ultimately they bring everything together and determine the patient’s unmet or undermet needs and get them connected with resources to improve their overall mental and physical health.

Important areas of the mental status examination are noted in Figure 1. The clinical portion of the class re-emphasizes the learning by having the students attend a Psychological First Aid course and obtain clinical hours in behavioral health settings unique to the service area of the CP. Their time is spent in mental health settings, hospital social work departments, and with other social service and public health organizations. These settings allow the students firsthand experience working alongside nurses, social workers, therapists and caseworkers. These professionals can provide the students with exposure to patients in a controlled environment, ideal for learning. The community paramedics not only gain the knowledge and understanding to care for patients in the out-of-hospital environment, but also create relationships through which they can collaborate in the future. Now these professionals will have the resources to refer patients so they can continue their care and treatment once they have gone home or between visits.

The Wellness Coordinator

With the rising costs of health insurance and pressure to provide coverage for everyone, did you consider employing a wellness coordinator? A wellness coordinator organizes and directs programs, people and activities to achieve the best mental and physical health possible.

What about using a community paramedic as the wellness coordinator for your organization? A community paramedic receives the education needed to guide individuals through a physical and mental well-being evaluation. They can assist personnel through nutrition and activity assessments, smoking cessation programs, an evaluation of the effects of stress and burnout, and overall discussion of the benefits of wellness. CPs can provide prevention services like cardiac screens, vaccinations, ergonomic evaluations and stress management classes. All of these can improve the health of employees, decrease lost work days and ultimately increase productivity.

Look to healthcare partners in your area, such as hospitals and public health clinics. They might already have a program in place your CP can work alongside and expand to your employees. Some wellness programs even extend to employees’ families, if they are covered by the insurance plan. Just think if you could see the one-on-one community paramedic interaction with the patient to prevent on-the-job injury, illness or burn-out—what a way to save healthcare costs! If EMS wants to work beside other healthcare professionals and be considered part of the healthcare team, we need to start acting like other healthcare agencies.

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The Heavy Burden of Pediatric Care in the Field

Many EMS providers are suffering in silence from the toll of traumatic calls

By Peter Antevy, MD, & Rachel Sobel

Eight years ago, in a gated South Florida community on a summer afternoon, Lt. Jonathan Robbins found himself racing to his first serious pediatric call. He and his crew knew they were responding to an unresponsive 2-year-old drowning victim. This was Robbins’ first month on duty as a paramedic, he’d recently completed paramedic school and the required probationary period at the Coral Springs Fire Department. His adrenaline was surging as he mentally prepared for what was to come.

Eight years later, he recalls the scene as a blur. “We took the child from the mother’s clasped arms and quickly loaded him in the back of the ambulance.” The engine crew had been on scene to provide extra support and when it was time to go, Robbins, the rookie, was told to drive so the more seasoned providers could tend to the lifeless child.”

“We want me to drive. I’m not supposed to do that, but this is no time to ask questions, he thought to himself. Back then, getting the child to the hospital was the number one priority and every second mattered.

Robbins started the engine and quickly put the vehicle in drive. As he departed the scene, lights and sirens blaring, the mother and father watched in horror, hoping for the best possible outcome as their son was whisked away. But this would not be the last they would see of the child. They want me to drive. I’m not supposed to do that, but this is no time to ask questions, he thought to himself. Back then, getting the child to the hospital was the number one priority and every second mattered.

Robbins returned to the scene and declared the child dead. He had been submerged for 30 minutes and that any efforts would have been futile. “That didn’t matter, and it didn’t help,” Robbins says.

Confidence from Education

Fast-forward eight years to when Robbins and I met for the first time during a pediatric resuscitation course. There he was, a youthful presence sitting in the front row with his eyes intently focused on every slide. By day’s end I noticed he’d filled a notebook with handwritten notes. I had no idea why this young kid was so engaged but I could sense something special about him. For an instructor, there’s nothing better than an engaged student.

When I thought of this as my chance to finally beat this internal conflict I’d been engaged student.

Fast-forward two weeks and Robbins and his crew were on shift again. This time they were to respond to an unresponsive 1-year-old girl who had choked on a grape. They arrived at the parking lot of a multifamily apartment building to a police officer holding a lifeless child in his arms, waiting to transfer her to their care. Robbins remembers saying to the officer, “Put her down right here.”

As his partners started CPR, Robbins succumbed a mouth full of blood secondary to the multiple fingers swept attempted by the

Available Resources

There is a growing concern that suicides are affecting the emergency services at higher levels than ever before. Fortunately an increasing number of resources offering providers education, assistance and counseling are available.

» The Center for Public Safety Innovation (@CPSITraining) at St. Petersburg College has been grant-funded to develop a suicide prevention training-of-trainers course. The eight-hour course provides an overview of the global suicide issue in the United States, and breaks down the problem at the local level. The suicide prevention course is broken into five modules that include information about suicidal behaviors and communication, prevention efforts, protocol and policy development, issues revolving around stigma and how to care for survivors. The training is designed for fire service trainers, chaplains and SAP representatives who wish to teach suicide prevention

» The Code Green Campaign (@CodeGreenEMS) is another group bringing desperately needed attention to the issues of PTSD, suicide, depression and other mental health problems in public safety.

» Mental Health Resource Toolkit: Additional mental health resources can be found online at EMSWorld.com/12064878.
mother. He then inserted his laryngoscope blade, visualized the foreign body and gently removed it with Magill forceps. A sudden rush of air and then a pulse! Another return of spontaneous circulation on scene in a span of two weeks.

This was their time. Robbins and his crew were hailed as heroes by the department, and by the families.

“But it wasn’t the attention I longed for,” Robbins says. “What I really wanted was to get rid of those demons in my head. No one knows how heavy a burden that was for me, and I never told anyone the story. I can tell it now because I’m on the other side of it. It hurts me to know how many EMS providers are out there today harboring these same feelings.”

The soft-spoken lieutenant humbly credits the outcomes to his agency’s rollout of a new pediatric system, which he says “systematically improved the outcomes to his agency’s rollout of a new pediatric system, which he says “systematically improved the outcomes to his agency’s rollout of a new pediatric system, which he says “systematically improved the outcomes to his agency’s rollout of a new pediatric system, which he says “systematically improved the outcomes to his agency’s rollout of a new pediatric system, which he says “systematically improved the outcomes to his agency’s rollout of a new pediatric...”

Culture Adjustment

Mental health intervention for those who provide prehospital care has been in desperate need of new direction and this past year we may finally be turning the corner.

Departmental “culture” remains the biggest roadblock to date. For decades, showing burdensome events. Robbins will tell you how deep his wound was and how long it festered for providers to open up in order to...
The alleviation of pain depends on the provider’s ability to identify, measure and interpret it.

By Bill Lord, BHlthSc, GDipCBL, MEd, PhD

The Assessment of Pain

This article is republished from the EMS Reference, an online, peer-reviewed EMS journal. Read other evidence-based articles at emsreference.com.

Table 1: OPQRST

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Case Study F1

You respond to a nearby residential aged-care facility for a person unwell. The case is coded as “sick person, no priority symptoms.”

On arrival you are met by a carer who tells you that a 90-year-old female resident appears unwell. When you are taken to the patient’s room, you find her sitting in a chair, grimacing and rocking in her seat. On examination you note she is alert but does not respond to your questions. The patient’s vital signs are pulse 60, blood pressure 140/95, respiratory rate 20/min with no signs of increased respiratory effort, and SpO₂ 96% on room air. The carer tells you the patient’s communication is impaired due to deafness and dementia. You are told the carer called 9-1-1 due to concerns that the patient was acutely unwell. You are told the woman is normally well and mobilizes without assistance.

You undertake a clinical examination to identify alterations in the patient’s health due to illness or injury. This clinical examination should include an assessment of the presence of pain. If pain is present, its severity needs to be measured to guide treatment decisions. How will you undertake this assessment?

Case Study F2

A 46-year-old female presents with a four-hour history of hypogastric abdominal pain. The patient is alert and oriented and tells you that the pain began at approximately 0800 today while she was sitting at home. The pain increased in severity over the last 60 minutes. She describes it as “dull” and says it’s worse on movement.

You undertake a clinical examination to identify alterations in the patient’s health due to illness or injury. During your assessment of the patient’s complaint, you attempt to measure the severity of the pain using a verbal numeric rating scale. The patient’s first language is not English, and another adult family member has to translate your instructions to rate the pain on a scale from 0–10, with 0 representing no pain and 10 representing the worst pain imaginable. You are told that the patient reports the pain severity as 9 of 10.

You are confused by this report, as the patient is sitting quietly and not demonstrating behaviors you’d expect to be associated with severe pain. You also note the patient is not tachycardic or hypertensive. However, you note she is asking for help for the pain and that there is evidence of lacrimation. Explain why you might be a factor in the pain assessment process and the patient’s report. What factors influence the perception and expression of pain?

Introduction

The alleviation of pain is one of the most important components of paramedic care. Effective pain management relies on clinical practice guidelines and a scope of practice that enables independent clinical decisions. Yet despite the availability of pharmacological and nonpharmacological interventions that have demonstrated efficacy in prehospital pain management, the alleviation of pain is highly dependent on the provider’s ability to identify, measure and interpret this symptom.

Pain affects more Americans than diabetes, heart disease and cancer combined. This symptom is typically associated with chronic pain syndromes, cancer-related pain and inadequate postoperative pain control, but is also a common finding in individuals with an acute illness or injury. Pain is a common finding in patients requiring care provided by EMS and will often be the chief complaint that results in a call for assistance.

Research from North America has shown that up to 30% of patients transported by ambulance have moderate to severe pain. However, information regarding pain severity is not commonly documented on patient care records. Inability to assess pain may be one reason for the lack of data, and this has been cited as a barrier to effective analgesia in paramedic practice. If paramedics do not actively seek information to identify the presence of pain, this symptom may be missed.

The lack of data regarding pain severity is particularly prevalent in cases involving children. In a 2008 study published in Prehospital Emergency Care that evaluated paramedic assessment of pain in pediatric trauma, just one of 69% patient care records included a pain score derived from a validated pain assessment tool. Even in the air medical setting, few pediatric patients have pain scores documented.

Assessment of pain severity has been called the “fifth vital sign.” This phrase was initially coined by two researchers in a 1997 American Journal of Nursing article in an effort to highlight the need to routinely question and examine patients for evidence of pain.

Standardized recording of pain severity using validated and age-appropriate pain severity scale is useful in the following ways:

- Identifying pain when the patient may not volunteer its existence or is unable to self-report due to age, cognitive impairment or language difficulties;
- Guiding the selection of appropriate interventions to alleviate pain; and
- Evaluating the efficacy of analgesia through documentation of trends in pain severity over the duration of care.

The assessment of pain provides important information about the injury or illness an individual is experiencing. For example, a sudden onset of chest pain may indicate myocardial ischemia, but this pain may also result from an injury to the chest or a diverse range of diseases. As such, a focused clinical examination is required to make a clinical decision regarding appropriate interventions. This includes decisions regarding the management of the pain.
In some EMS systems, the recording and reduction of a pain severity score has been established as a key clinical performance indicator. When organizational policy mandates assessment of pain, and documentation of pain severity score, compliance is high. Several Australian EMS agencies have established benchmarks for reduction in pain severity. The United Kingdom, research has identified relief of pain as one of the most important clinical outcomes in paramedic practice. Although change in pain severity is an important clinical performance indicator, this requires routine mandatory recording of pain severity in all patients, including documentation of a 0 pain score when the patient reports no pain. Minimum standards for pain reduction should be based on the change in pain severity score required to obtain a perceptible difference. Research has shown that the minimum clinically significant difference (MCSD) in pain severity is 1.5 on an 11-point numeric rating scale, or a proportional change of 25%. Several Australian EMS agencies have established benchmarks for reduction in pain severity. The United Kingdom, research has identified relief of pain as one of the most important clinical outcomes in paramedic practice. Although change in pain severity is an important clinical performance indicator, this requires routine mandatory recording of pain severity in all patients, including documentation of a 0 pain score when the patient reports no pain. Minimum standards for pain reduction should be based on the change in pain severity score required to obtain a perceptible difference. Research has shown that the minimum clinically significant difference (MCSD) in pain severity is 1.5 on an 11-point numeric rating scale, or a proportional change of 25%. Authors led by Dawn Kendrick, MD, who used a prospective study of analgesia in patients presenting to the Department of Emergency Medicine at Maine Medical Center and used MCSD as the primary outcome, reported a MCSD of 1.3. Polly Bijur, PhD, et al. reported MCSD was 1.5 or a change of 25% from the initial pain score in another prospective study of patients 65 years or older presenting to a U.S. emergency department. Based on this data, a reduction in pain severity of 30% or more of the initial pain score using an 11-point verbal numeric rating scale was the primary outcome of interest in “Effectiveness of morphine, fentanyl and methoxyflurane in the prehospital setting,” an Australian study of paramedic-initiated analgesia published in Prehospital Emergency Care in 2010. Easily assessment and management of pain is especially important because unrelieved pain may be associated with significant morbidity that includes the development of chronic pain syndromes. Situations in which pain assessed by paramedics has been associated with more effective treatment include cases of suspected acute myocardial infarction. In addition, there is a humanistic dimension to the alleviation of pain, with its relief having been established as a basic human right.

Assessment of Pain

The initial survey of the patient’s health status follows the primary survey and identification of the chief complaint or disability. This involves a focused clinical examination and history of the events leading up to the call for assistance. This should include standard questions about previous episodes and medications. In addition, it should include questions to obtain the following information:

- The region where the pain is felt;
- What brings the pain on and relieves it;
- The quality of the pain;
- Factors that provoke and palliate the pain;
- The duration of the pain;
- The temporal nature of the pain.

Several mnemonics can be used to guide the assessment of pain. OPQRST is one that is commonly used to develop a clinical impression of the patient’s complaint. The information derived from this process will help guide management decisions. It is important to ask open-ended questions. The initial survey of the patient’s health status follows the primary survey and identification of the chief complaint or disability. This involves a focused clinical examination and history of the events leading up to the call for assistance. This should include standard questions about previous episodes and medications. In addition, it should include questions to obtain the following information:
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The assessment and measurement of pain severity produces data that is quite different from the data obtained during the measurement of weight, blood pressure or temperature. This is because it is impossible to use scientific metrics to directly measure another person's personal experiences, in the same way it is not possible to directly measure mood or emotions. Indirect measures of pain (and other symptoms such as nausea) can be made by asking the patient to rate the experience compared with normal health or mood. Although this enables an estimate of the dimension of the reported experience and allows for observation of trends over time, confusion may occur if health professionals treat the numbers as objective data. It is important to remember that the use of a pain score enables a conversation between the paramedic and the patient to better understand the personal significance of the pain. It is the patient who is judging this, not the paramedic.

A perceived mismatch between the pain score a patient reports and the paramedic’s observation of the patient may occur in some cases, particularly where there is no observable injury or disease associated with the pain. For example, the patient may show little overt behavior but still be reporting severe pain. This may be a normal behavioral response for this patient and may not represent a sign of malingering or untruthful reporting of symptoms. When a patient states that they have severe pain, there is no scientific (i.e., reliable, repeatable and objective) way of disproving it, particularly in the prehospital setting, where patient history is often limited. As a respected pain researcher and patient advocate once said, “Pain is what the patient says it is.” As such, providers need to accept what the patient says. But experience has shown that paramedics and other health professionals may confound this process.

A slide scale is also available (see Figure 2). When using this device, move the slider to the “no pain” point and ask the patient to move the slider to a point that represents their current level of pain severity. The result is read on the reverse of the scale in millimeters. Research has confirmed the validity and reliability of the VAS for assessing acute pain in adults and children 7 or older.27,31

**Evaluation of Pain**

Evaluation is the process of combining all the information gathered to form a clinical impression, which leads to a decision about how best to manage the pain. Although this looks like a systematic and objective process, the complex nature of pain and the paramedic’s personal beliefs about it may confound this process.

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<tr>
<th>Scale</th>
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<tr>
<td>VNRS: A 50 mm on the VAS is calculated to be 50 mm. This score correlates well with the VNRs.</td>
<td>When using this tool, move the slider to a point that represents current level of pain severity. The result is read on the reverse of the scale in millimeters. Research has confirmed the validity and reliability of the VAS for assessing acute pain in adults and children 7 or older.27,31</td>
</tr>
<tr>
<td>FLACC Scale: The facial expression, (eg, movement, activity, cry and consolability (FLACC) scale has been researched in children aged 2 months to 7 years and shown to be a valid and reliable tool, and is one that is currently used and recommended for use in the prehospital setting (see Table 2).</td>
<td>This has been validated in children 4 and older (see Figure 3).</td>
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<tr>
<td>EVENDOL Scale: The recently developed and tested Evaluation Child Pain Scale, from an abbreviated form of the French for evaluation child pain, has demonstrated excellent validity for the assessment of pain in children aged less than 7 years in the emergency department.</td>
<td>The scale has not yet been validated in the prehospital setting. An evaluation of the strengths and limitations of the various pain scales has been undertaken, and this should be used to inform clinical practice guidelines for the assessment of pain in the prehospital setting.</td>
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<tr>
<td>Wong-Baker FACES Pain Scale: This has been validated in children 4 and older (see Table 2).</td>
<td>A range of pain severity assessment tools exists for older patients with cognitive impairment. Advanced dementia is a common disease in the elderly and is associated with difficulty in understanding instructions required to rate pain using the VNRS or VAS. This situation may require the use of a tool that rates behavioral cues associated with pain.</td>
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**Special Populations**

The use of a pain scale for self-reports of pain severity demands the cognitive ability to quantify a subjective experience. This requires a degree of abstract reasoning that young children and patients with cognitive impairment may find challenging. This places these populations at risk of unrecognized and untreated pain. Research has identified this as a problem when treating children and patients in paramedic practice settings.29

When attempting to measure pain severity in children, a numerical rating scale (0–10) should be understood in children 8 years and older.38 In younger children, such as preverbal infants, it is difficult to differentiate between pain associated with a medical condition and the distress associated with hunger and fatigue. In this instance, a pain scale should be used to rate behavioral cues associated with pain.

**FLACC Scale:** The facial expression, (eg, movement, activity, cry and consolability (FLACC) scale has been researched in children aged 2 months to 7 years and shown to be a valid and reliable tool, and is one that is currently used and recommended for use in the prehospital setting (see Table 2). Several other pain scales are available for the assessment of pain in infants and children, but few have been trialed in paramedic practice.31

**EVENDOL Scale:** The recently developed and tested Evaluation Child Pain Scale, from an abbreviated form of the French for evaluation child pain, has demonstrated excellent validity for the assessment of pain in children aged less than 7 years in the emergency department.30 The scale has not yet been validated in the prehospital setting. An evaluation of the strengths and limitations of the various pain scales has been undertaken, and this should be used to inform clinical practice guidelines for the assessment of pain in the prehospital setting.40

A range of pain severity assessment tools exists for older patients with cognitive impairment. Advanced dementia is a common disease in the elderly and is associated with difficulty in understanding instructions required to rate pain using the VNRS or VAS. This situation may require the use of a tool that rates behavioral cues associated with pain.

**Abbey Pain Scale:** This has been designed to assess pain in older adults with dementia who cannot verbalize their pain experience. Although not commonly used by paramedics, the scale should be used in aged-care facilities. Paramedics should ask nursing staff whether they use the tool, and if so, if they can use it to assist with the assessment of the patient’s pain.40

Behavioral cues should also be used to assess for evidence of pain in patients with impaired level of consciousness due to injury or disease. Just because a patient cannot verbalize pain does not mean they are not experiencing it.40,68
Pain is a complex phenomenon involving biological, psychological and environmental dimensions that may change over time. The current level of distress. The resulting number (if using a numerical scale) describes the patient’s pain at that point in time. Pain is a complex phenomenon involving psychological, biological and environmental dimensions that may change over time. As such it’s important to avoid references to prior pain experiences such as childbirth to establish a benchmark for very severe pain, particularly when assessing pain associated with a later, unrelated condition. It is also unhelpful to compare the patient with others who express similar levels of pain severity. Pain is a uniquely individual experience, and the ways individuals express their pain is highly variable. Again, the pain score is an attempt to initiate a conversation with the patient to better understand their current level of pain. This information should then be used to guide management decisions, which may include pharmacological and nonpharmacological interventions. In rare cases the paramedic may reach a clinical decision to withhold treatment for the pain. This should only occur where a risk/benefit analysis has been completed and the patient has been informed of the basis for withholding treatment. Again, this should be a rare situation because although there are contraindications for specific analgesics, there is no contraindication to the alleviation of pain. Research has shown that paramedics are reluctant to administer opioids to patients without significant objective signs of pain being present. However, objective diagnostic tests to confirm the presence of pain are unavailable. Although the use of functional magnetic resonance imaging (fMRI) can identify areas of the cerebral cortex that are active during episodes of pain, these areas are also active in some individuals who vicariously experience the pain suffered by others. Because of this, no reliable scientific means exists for validating an individual’s level of pain. In addition, the use of fMRI in an ambulance is impractical.

Educational resources used by paramedics suggest using vital sign changes to validate the level of pain severity experienced by an individual. In some settings, it is believed that severe pain must be associated with evidence of a sympathetic nervous system-mediated stress response. Paramedics and other health professionals often believe that patients with severe pain will be tachycardic and hypertensive in response to the pain, but research has shown a poor correlation between vital sign changes and pain severity. Therefore, such vital sign changes should not be used to confirm or rule out the presence of pain.

Conclusion
Health professionals have a tendency to underestimate the pain observed in patients. Research has also found that the degree of underestimation increases as clinical experience increases.48 It is not clear whether this is due to a “recalibration” of the emotional response to pain due to repeated exposure to patients with severe pain. This may be a natural response that protects the provider from the psychological stress of dealing with others’ pain and distress, enabling objective and dispassionate care. Although the reason for the underestimation is unclear, there is ample evidence that the assessment and management of patients in pain is affected by the caretaker’s beliefs, values and attitudes.

In paramedic practice, fear of malingering can alter the evaluation of the patient’s report of pain.49 Paramedics have reported disbelief of the patient’s report of pain where the associated behavior is inconsistent with the paramedic’s expectations. 46 It is important to remember that it is difficult to confirm malingering without accurate knowledge of the patient’s prior medical history, and this fear may adversely affect the quality of care if the patient’s motives for seeking analgesia are incorrectly attributed to behavior associated with addiction.

Paramedics play an important role in the alleviation of pain in patients they care for. The effective management of pain relies on a focused assessment of the patient’s complaint and the measurement of pain severity using reliable and valid tools. However, the evaluation of the data may be affected by personal beliefs about pain, and paramedics must be aware of the influence that cultural norms, bias and stereotyping can have on their clinical judgments and quality of care.

Improvements in the quality of care provided to patients in pain will depend on appropriate educational interventions that target knowledge of pain physiology, pharmacology and pain assessment, as well as evidence-based guidelines to support paramedic practice.

References for this article are available online at EMSWorld.com/52187476.

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PART 1

Alternative EMS Careers

If you’re tired of the 9-1-1 grind, opportunities abound for delivering nontraditional EMS

In part one of a two-part feature, columnist Mike Rubin discusses nontraditional EMS jobs in the hospitality and entertainment industries.

When I started paramedic school in 1994, I couldn’t imagine EMS outside of 9-1-1. Every full-time EMT and medic I knew seemed attracted to the urgency of ambulance lights and sirens.

The public favors an analogy of ambulances as “officers,” but that’s pretty far from the truth. Our rigs are reminders that we don’t need offices; that we’re not white-collar workers. We take pride in the independence and imagination of our vocational job, being involved in one less wreck or none at all.

Some jobs I’ve had have been so specialized, they’re rare. For example, supervising medical control for a large, mostly volunteer EMS system with 100 individual agencies was mostly a matter of being in the right place at the right time. Although it would be fun for me to recount those years, I don’t think there’d be much of a payoff for you.

The advantage of EMS-related activity I’ve pursued that would be hard to replicate—not due to any brilliance on my part, but just because of the specialized assistance I needed to succeed. I wouldn’t want to waste your time discussing such low-probability ventures.

Writing is my main EMS job now. We could debate whether that craft belongs in an article like this one, so let’s just leave it out. Teaching is another “off-road” EMS vocation, but so many of you already do that on the side, just as I did for years. I don’t think there’s much value I could add to your experiences.

I’ll focus instead on seven other nontraditional EMS opportunities that I feel are among the most favorable alternatives to 9-1-1 work. As of this writing, each of those occupations has openings at salaries competitive with those of your kids’ kids someday without the use of hydraulics, eliminating patient transports from your job can be positively therapeutic after a decade or more of lumbar abuse.

» Variety: Saving lives gets so monotonous, doesn’t it? Seriously, it’s OK not to feel the same adrenaline surge answering calls as you did your first year. Maybe it’s time for a change, especially if 9-1-1 is becoming not just less interesting for you, but more frustrating or even unhealthy.

» Extended practice: During one of my first shifts as a medic in the hospitality industry, I encountered a young man who asked about a rash on his palms. Somewhere in an underused, rarely accessed part of my brain, a neural connection between “palmar rash” and “syphilis” fired, leaving me wondering if I might heroically diagnose a disease that had been mentioned perhaps once, and with very little emphasis, during my entire paramedic program.

» Health and safety: Ambulances crash. Being involved in one less wreck or none at all increases your chances of grandparenthood. And if you’re looking forward to lifting your kids’ kids someday without the use of hydraulics, eliminating patient transports from your job can be positively therapeutic after a decade or more of lumbar abuse.

» The challenge: At one of my nontraditional jobs, I operated without the support system we usually have in EMS—hospitals, well-integrated medical control and even partners. On my way to work, I’d relish the prospect of running “my hotel” or “my boat” for the day. It helps to have a positive sense of self when you’re on your own, as long as you don’t start thinking the job is about you. Let’s take a look at the first three nontraditional EMS opportunities worth considering.

Entertainment

Growing up in Framingham, MA, Jonathan Hall liked amusement parks as much as any kid, but he never thought he’d eventually help run one.

Hall, who supervises EMS at Six Flags New England in Agawam, MA, says 9-1-1...
And different it is at Six Flags, where your patients often value entertainment over medical care. “We work for a company whose job is to provide a good experience for people who are trying to get away from their usual routines, maybe only for a day,” Hall explains, “but by the time they come to your first-aid station, they’ve already waited in line for 4 hours waiting for their morning coffee, had to fight traffic into the park, spent $200 to get in and then, just when the fun begins, one of their kids throws up. Medical care really isn’t the main issue for these customers; it’s trying to turn things around for them—going the extra mile to finally give them that good time they’ve been seeking.”

“Maybe it means getting them on a ride without having to wait, or offering them free ice cream. We want employees who are compassionate and are going to look for opportunities to provide that special experience. If you don’t like being around people, this job isn’t for you.”

Surprisingly, years in EMS isn’t a prerequisite for Six Flags. “Some recruits come right out of EMT school,” he says. “They’ve never been on an ambulance, never worked the streets. It’s great because we train them the way we want them to be. They come to us for 6–7 years, then go on with their careers. Some of them become medics while they’re with us. We have a program that encourages that.”

A staff of approximately 15 Opryland medics are taught to give directions around the 172-acre complex as effortlessly as they offer medical assistance. It’s also not unusual for medics to act as intermediaires for guests about hotel matters like billing or accommodations. As Hall discussed, EMS providers’ success at vacation destinations like Six Flags or Opryland usually depends more on employees’ courtesy, friendliness and the ability to connect with assessment skills.

Guests are reluctant to become patients when they have to choose between a hospital visit and a round of golf. Consequently, most EMS calls at Opryland become refusals or treat-and-release, the criteria for which are far more flexible than in most traditional systems. Even with a remotely located physician serving as medical control, treat-and-release decisions are routinely made by paramedics alone, who must thoroughly document guest-patients’ wishes. Transports, when necessary, are handled by Nashvillie’s fire department.

The most challenging medical scenarios often occur aboard the General Jackson, a 300-foot showboat that carries up to 1,200 passengers and 150 staff members around the 300-foot showboat that carries up to 1,200 passengers and 150 staff members. The Cumberland River. The General Jackson is always staffed with at least one paramedic who might work alone on an unsanctioned event scenario. The most common event setup is a cruise, which occurs in the presence of sudden and severe illness or trauma, medics are expected to remain personable and customer oriented.

Salaries for full-time, part-time and per-diem paramedics at Opryland are in the $15–20 range—average for the region. EMS providers are no longer hired.

The lighter side of EMS in an entertainment setting is that the public doesn’t always recognize you as a caregiver. That’s not such a bad thing during an idyllic afternoon cruise, after years of high-visibility patient encounters.

One day when I was running the elevator between decks as a courtesy on the General Jackson, a guest mentioned what a great idea it was to give elevator operators stethoscopes. I had to agree.

Events
Carole Matthews-Dempsey is no stranger to nontraditional occupations. The former paramedic and catfish-farm manager has been involved in event EMS since becoming an EMT in 2004. Now a full-time paramedic at Nashville’s Opryland, Matthews-Dempsey say still supplements her income by working events for a medical-services provider, CrowdRx.

In (non)traditional EMS, you never know what you’re going to get,” says Matthews-Dempsey, “but in event medicine, you can anticipate who your primary patients will be. You might just need to do a little research; a horse show is going to be different from a music festival. With a little knowledge and experience, you can be very comfortable.”

Getting acclimated to event medicine also requires a mixture of humility and technical know-how, according to Matthews-Dempsey.

“Prepare to go back to the bottom of the pecking order,” the 32-year-old Sparta, TN, native says. “It’s like moving from EMS to nursing; no one’s going to know or care about your past. There are lots of paramedics

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**About the Author**

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**SAE of the Month**

SURFACE

**SURFACE**

A new genus and species of plant species was discovered in the Amazon Basin by a team of botanists from the University of Cambridge. The plant, named *Cordyline euphorbica*, was found growing in the dense jungle of the Amazon, where it was able to thrive in the warm, humid climate. The plant was discovered during a recent expedition to the rainforest, where the team was conducting a survey of the local flora and fauna. The discovery of *Cordyline euphorbica* is significant because it is the first time that a new species of plant has been discovered in the Amazon Basin in over a century. The team is currently analyzing the plant’s properties and considering its potential use in traditional medicine. The discovery of this new plant species is a testament to the importance of continuing to explore and study the Amazon rainforest, as it is home to many unexplored species of plants and animals.
Child Abuse and Neglect: Mandatory Reporting for EMS Providers

What to look for, what to report and how

By Matt Concaldl, MS, NR-P, & Stacey Read, BA, MSW

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ut of an estimated 60 million children in the United States, three million cases of child abuse and neglect will be reported each year. In 2012, 1,640 children died as the result of child abuse and neglect, and there are concerns not all deaths are reported. Thousands of children abused and neglected every year fall through the cracks. We are all taught in EMS education that it is mandatory to report, but how do we recognize child abuse and neglect, and how do we report it? Congress has reported that “the failure to coordinate and comprehen-

sively prevent and treat child abuse and neglect threatens the futures of thousands of children and results in a cost to the nation of billions of dollars in tangible expenditures, as well as significant intangible costs.”

According to the Child Maltreatment 2012 report, 81% of the children abused were abused by one or both of their parents, and 88% were biological parents. These are the people taking care of children on a daily basis who are supposed to love and care for them—and the people we are likely to come across.

Fractures

Fractures in children are not uncommon; however, depending upon the type of fracture, it may indicate a degree of foul play. Rib fractures are the most common fractures seen in abuse and are often found in shaken baby syndrome. These fractures normally occur bilaterally on the chest and include multiple ribs. The mechanism is typically compression forces from anterior to posterior. In addition, posterior fractures are typically only seen in abuse cases, not in everyday childhood accidents. Any fracture in an infant under 6 months is highly likely to be inflicted and should raise a concern of abuse. Spiral fractures of long bones like the femur or humerus due to twisting or jerking are considered suspicious injuries that count as the mandatory reporting. Other reasons include:

- Lack of awareness of who is a mandatory reporter;
- Fear of unnecessary removal of children;
- Fear of being involved in a lengthy court case;
- Uncertainty what information to report or how to report it;
- Stigma in smaller communities against being a “snitch.”
- Perceived lack of response by child welfare and law enforcement agencies.

Recognizing Child Abuse and Neglect

Most professionals are trained to identify obvious child abuse. Child injuries are often easily observed, explainable and understood. Children are known to fall and bump their heads learning how to walk; it is understandable for children to break arms and long bone metaphysical injury as well. Very rarely are there any external signs of trauma. The rate of morbidity and mortality is 30% in infants who suffer from shaken baby syndrome.”

Let’s review examples of abuse and neglect:

Shaken baby syndrome

Shaken baby syndrome is the deliberate or unintentional act of inflicting nontrauma-

catic head injuries. The mechanism of injury is vigorous shaking with a sudden deceleration. Typically this syndrome is found in infants 6 months or younger, but it can also be found in children up to age 2 or 3. Signs and symptoms include irritability, lethargy, vomiting, decreased feeding, unexplained seizure, apnea and/or respiratory distress. Retinal hemorrhages are seen in the majority of the cases, in addition to subdural hematomas and posterior rib fractures.

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When people think of neglect, they usually think of a lack of food, a cluttered house or a lack of supervision. But what really is neglect? Do you know what to look for?

Neglect is an “ongoing pattern of inadequate care and is readily detected by inspection of the child and contact with the child.” Neglect can be the alcoholic parent who is passed out in the garage while the children are left to survive on their own. Signs to look for are inadequate or poor hygiene, lack of medical care when needed, frequent absence from school and poor weight gain.

According to Psychology Today, more children suffer from neglect than from physical and sexual abuse combined. In 2005, 14.3% of child abuse victims suffered various types of neglect, such as abandonment, threats of harm and neglectful or dependent drug addiction. Neglect can be hard to spot but is just as damaging to a child as physical and sexual abuse.

According to the New York Times, children suffer from neglect when:

- Wearing dirty clothing
- Not eating a proper diet
- Not getting proper medical care
- Not getting the proper amount of sleep
- Not being given adequate attention
- Not being given proper educational opportunities
- Not being given proper emotional support
- Not being given proper physical care

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It’s OK to be OK
Difficult calls impact us in different ways

“A couple of years ago, I did a talk about EMS war stories. To build it, I asked my friends what their ‘worst calls’ were. The stories were horrific, even by EMS standards. They are difficult to read on a page and heartbreaking to narrate aloud for an audience. After the session, a woman about my age approached me. She was a 20-year veteran of a local urban department and seemed genuinely worried as she asked me, ‘What if I don’t have a “worst” call?’ She had seen the things we’ve all seen, but at the end of her shift she would take off her uniform and go home to her family and did not give those calls any more consideration. She did not have nightmares or see evil behind every door, and she viewed bad calls as part of her work. She appeared to be every bit the well-adjusted adult professional.

Now she was worried that something was wrong with her. She felt out of place among her peers because she did not believe herself to be permanently damaged by serious calls. I reassured her that just because a call is memorable to someone does not mean it also inflicts irrepairable damage. I know how she feels. Today I am almost afraid to say aloud when something doesn’t bother me.

I went on my first ambulance call at the age of 17. Terms like “critical incident stress” were not in the EMS lexicon yet. There was no structured debriefing model or other attempts made to mitigate the harsh reality of being exposed to tragedy on a daily basis. It would be a few years before the idea came about that responders might be at risk for psychological damage from exposure to traumatic scenes.

Eventually people began to notice that many responders were addicted to one thing or another, developed depression or were really bad at things like marriage. This awareness was galvanized when some of those responders began dying by their own hand. Terms like “PTSD” and “resiliency” moved from the research journals to the topic of conversation for operational leaders and rightly so. Today we things like the Code Green Campaign and other advocates who have admitted they struggle with stress and depression. Consideration for our mental health is moving to the forefront. Knowing where you end and the patient begins is important.

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With all this outcry about traumatic stress and its negative effects, what happens to those providers who have demonstrated resiliency and remain functioning and even well-adjusted? Not everyone struggles or suffers long-term issues. In a media wash filled with despondency and devastating images. It can be easy to lose sight of the positive aspects of the work. Yes, we all take hits, every one of us. However many of us, most of us, can and do get up again.

In a couple of my presentations I open up with my “dead baby resume.” I never script it. I just rattle off the first dozen or so dead infants that come to my head. Some are from abuse, others from SIDS or other maladies, all of them represent a class of patient that gets universally touted as deeply traumatizing. I do it without flinching, as if I were reading the offerings on a menu. What’s worse, the fact that I have seen all those things or that I can say them aloud without crying? What does that say about me? Am I a sociopath or the bearer of some other antisocial personality disorder? Perhaps enough time has passed that the emotions have faded to a functional level, or maybe I simply did not identify enough with the mother or situation for it to bother me. I could have worked through my stages of grief and simply internalized it. Maybe it is as simple as my experience and training helped buffer the stress and allowed me to work through it. Resilience is unique to the individual, and we are just now learning how to offer the tools to build it with.

I worry that by not balancing the advocacy of resiliency with the need for increased awareness we are infusing new providers with fear and expectation that will become a self-fulfilling prophecy. Empathy is a powerful thing and it comes with risk. Knowing where you end and the patient begins is important, as is a strong support system. Choosing a career in emergency services does not doom you to a life filled with despondency and devastating images, it can be easy to lose sight of the positive aspects of the work. Yes, we all take hits, every one of us. However many of us, most of us, can and do get up again.

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THE MIDLIFE MEDIC

By Tracey Loscar, NRP, FP-C

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