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The Narcan Monologues >> EMSWorld.com/12166441
When a Weymouth, MA firefighter proposed letting drug addicts die in a Facebook post in January, responses ranged from sympathy for the firefighter to sympathy for his patients. See what Mike Rubin has to say about that in the March edition of Life Support.

Social Workers at the Station >> EMSWorld.com/12166308
An innovative partnership between SourcePoint, a community support organization for seniors 60 and older, and local fire departments is helping to reduce the number of nonemergent EMS runs throughout Delaware County, OH.

Month in Review >> EMSWorld.com/12166919
If you’re looking to catch up with the latest news, most popular articles and EMS chatter on social media, check out EMS World’s new Month in Review column for a handy roundup of the top headlines.

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A Whole Community Response

A Mesa Fire and Medical Department trial is improving patient care while decreasing costs

A year and a half ago the Mesa (AZ) Fire and Medical Department (MFMD) received a $12.5 million CMS grant to fund a three-year trial dedicated to improving care and lowering costs by more effectively managing low-acuity calls. The “Mesa Community Care Response Initiative” sends a nurse practitioner or physician assistant—along with a captain/paramedic—to examine and treat patients in the field without transporting them to the emergency department. The call center flow chart illustrates how calls are processed. The program aims to increase patient satisfaction, decrease ED and EMS transport costs, make more efficient use of MFMD resources and lessen ED overcrowding.

I recently met with the architect of this innovative approach, MFMD Medical Director Gary Smith, along with Fire Chief Harry Beck, who is tasked to implement it.

High- or Low-Acuity?
The first question is, “is this a high-acuity call?” If yes, MFMD sends out a four-person ALS company. If the answer is no, the call transfers to an RN employed by MFMD to triage. Both Smith and Beck believe this RN triage component will be the cornerstone of a future telemedicine rollout. That program would involve another partnership as well, this time with local physician groups to provide after-hour physician calls.

“One of the things we picked up on pretty quickly,” says Beck, is that, “anything we can do to interrupt or prevent a 9-1-1 call is a process that we should be involved in.” An effective nurse triage line will reduce frequent callers and improves patient care.

Unit Types

Transitional response vehicles—four units staffed with an EMT captain and ALS firefighter—manage the low-acuity calls and keep ALS units available for bigger emergencies.

The community care unit (CCU) is staffed by a NP or PA, while the community care specialists (CCS) unit is staffed by a licensed social worker and captain/paramedic.

The CCUs are reporting a 64% diversion rate from the ED and the CCS behavioral units are even higher. Both the CCU and CCS are a result of non-FD community partnerships. Mountain Vista Medical Center supplies the nurse practitioners and physician assistants, while CPR (Crises Preparation and Recovery, Inc.) supplies the licensed clinical social worker who delivers the patient with a full psychological work-up at the time of delivery to the psych center.

“The power of a prescription pad” because they can take care of the individual right then,” says Smith.

MFM has also added i-STAT handheld blood analyzers to the advanced practice ambulance, so practitioners can get an outpatient basic metabolic panel. “We get an H&H (hemoglobin and hematocrit) to determine if the patient is anemic. We are adding lactate to that so we can go on sepsis calls. Sepsis is now a core measure for CMS, because of the high readmission rate,” notes Smith.

The Power of Partnerships

Smith credits partnerships between healthcare entities as critical to the success of the program. His ultimate goal is to create a model that can be reproduced throughout the healthcare system. An added bonus to the integration with allied healthcare providers is the opportunity for current paramedics to grow into some of the advanced healthcare roles.

For more information on the MFMD system, visit EMSWorld.com/12167512.
Advocates in Canada Demand Legislation to Stem Responder Suicides

Stakeholders recently gathered to discuss solutions.

By Blair Bigham, MD, EMT-P, MSc

Bob Baillie barely reacted when he received his dispatch instructions. A paramedic for 13 years, he has responded to nearly every 9-1-1 call imaginable, but he sensed something was different as he approached the lobby of the hotel where a woman had been found without vital signs. “I’m sorry you have to see this,” Baillie recalls a police officer saying to him. Upstairs, his colleague lay dead of helium asphyxiation, a carefully planned method of suicide.

The ride back to base was silent between him and his partner, Baillie recalls, and he felt a profound sense of being disconnected from reality. Baillie had seen firsthand what most paramedics, police officers and fire fighters knew only as rumor: First responders kill themselves in alarming numbers.

A Sense of Urgency

Thirty-nine first responders died by suicide in 2015 according to the Tema Conter Memorial Trust, a Canadian organization that supports first responders with mental health illnesses such as PTSD.

“We’ve already had five first responder suicides this year,” says Director Vince Savoia. According to data tracked by Savoia, PTSD was diagnosed in 60% of those who died by suicide.

While all first responders can be affected, two paramedics took their own lives at the end of January, and a sense of urgency has heightened within the paramedic community, where the prevalence of PTSD is highest.

“Some employers are known to terminate paramedics with PTSD, so no one comes forward and asks for help,” says Savoia.

While the stigma around PTSD in the first responder community is improving, Savoia states that treatment options are expensive and recovery is slow. The Trust is advocating for changes to legislation so that mental healthcare is covered by OHIP (the Ontario Health Insurance Plan) and the Workplace Safety and Insurance Board.

Savoia asks: “Why can I go to the ED and get my broken leg fixed, but if I need counseling, I have to pay out of pocket?”

For seven years advocates have been calling for presumptive causation legislation that would make PTSD a workplace injury. “The issue of legislatively presumptive causation and funding tools for taking care of paramedics in Ontario is one of our three top priorities,” says Geoff McBride, president of the Ontario Paramedic Association. “It can’t happen soon enough. It is time for people who care for others to be cared for.”

Progress, says McBride, is slow but steady. Through education and popular media, people are realizing that mental illness is like any other illness, like a broken bone. McBride thinks we have reached a tipping point: “It is becoming easier to talk about mental illness among colleagues, but governments need to act.”

Stakeholders Gather for National Roundtable

Politicians seem to be taking notice. Canadian Prime Minister Justin Trudeau has promised to develop a suicide prevention program for the Canadian Forces, and Public Safety Minister Ralph Goodale has a mandate to develop a “coordinated national action plan on post-traumatic stress disorder, that disproportionately affects public safety officers.”

Funding has been promised for PTSD research to the amount of $20 million and in January, stakeholders gathered at a national roundtable in Saskatchewan to discuss solutions.

On February 1, 2016, the Province of Ontario announced a strategy to help reduce the incidence of PTSD and suicide among first responders. Yasir Naqvi, minister of community safety and correctional services, oversees first responders in Ontario. “We have all seen the devastating and far-reaching impacts of PTSD on our first responders” he said in a statement, adding that the Liberal government is “sending a strong signal today that we have a comprehensive approach” to ensure first responder well being.

That approach has both “preventative and legislative components,” says Minister of Labour Kevin Flynn. While unable to offer specific details until a bill is formally introduced later this month, the Ministry of Labour says it is taking a very “serious look at presumptive benefits.”

Cheri DiNovo, a member of the provincial parliament from the New Democratic Party, says, “Good intentions aren’t what’s needed, what’s needed is action.”

cont. on page 56
The sponsor of five private member bills over seven years—all of which failed—DiNovo says that PTSD must be recognized as a workplace injury as it is in Manitoba and Alberta. “If the government doesn’t recognize PTSD as a problem, why would employers?” she questions when asked about municipalities terminating paramedics with PTSD.

**Less Talk, More Action**

Until legislation is passed that facilitates the delivery of mental health services to the paramedics who need it, paramedic Natalie Harris will continue fighting for change.

Harris was on the road in 2012 when she was dispatched to a 9-1-1 call for two women who had been brutally murdered. “I was aware that I would see horrible things, but was not prepared for the mental turmoil I felt when I saw firsthand the evil humans are capable of,” she says. Harris became depressed and suicidal, turning to alcohol. The day after she testified at the murder trial, she overdosed and stopped breathing. She spent the next year in and out of hospitals and treatment programs. As part of her therapy, Harris started to blog about her journey. “My blog gave me freedom from the grip mental health stigma had on me,” she recalls. Harris is now a globally renowned advocate for first responders who suffer from PTSD.

McBride is pleased to see politicians holding summits and releasing press releases but remains skeptical. “We’ve talked this thing to death...what we need now is less talk, more action,” he says.

Harris and Baillie agree. They go to work on the road every day, wondering if the next call will bring trouble for themselves or a colleague.

“We won’t get rid of suicide,” acknowledges Savoia, “but when we peel away the emotion, what people are truly asking for is to be seen, heard and understood. It’s that simple.”

That’s why Savoia offers first responders a crisis line staffed by trained professionals at 888/288-8036.

While governments talk about PTSD, DiNovo sits in her Queens Park office, hearing about yet another paramedic who took his own life. “I don’t know what we’re waiting for...how many deaths will it take?” she says.

**ABOUT THE AUTHOR**

After a decade working as a helicopter paramedic, Blair Bigham, MD, EMT-P, MSc, completed medical school in Ontario, Canada, where he is now a resident physician in the emergency department. After completing his Masters of Science at the University of Toronto, Blair worked as an associate scientist at St. Michael’s Hospital in the fields of resuscitation science, knowledge translation and patient safety. E-mail him at blair.bigham@medportal.ca or follow him on Twitter at @BlairBigham.

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Checks and Balances
As an EMS leader, it is your responsibility to prevent theft

I often scan the headlines on websites like EMSWorld.com to see the latest happenings in the EMS community. In mid-January, I saw a headline I have seen before, yet it disturbs me every time: It concerned a former EMS director and his wife arrested after an audit uncovered missing funds. In this case, an EMS director of a county service in Arkansas and his wife, who served as the bookkeeper, were accused of stealing nearly $700,000 from the EMS service over a five-year period. An audit discovered the missing money. Sadly none of the 34 employees in the service had received a pay increase in four years.

Just do a Google search and you will see this is not uncommon occurrence in EMS. One of the largest I found on a search for this column was the theft of $1.6 million over a seven-year period by the treasurer of a volunteer EMS organization in Long Island, NY. This averaged out to about $230,000 a year.

It appears that theft and embezzlement in EMS organizations occurs quite often. The sad part is that we are entrusted by the public with their confidence and, even though those who steal are not reflective of the entire profession, their actions form the basis of public opinion and can erode confidence.

Former President Ronald Reagan coined the phrase, “Trust but verify” when talking about his relationship with the Soviet Union on nuclear negotiations. The same is true for those who are allowed to handle money for EMS organizations. There should be checks and balances in place for anyone who handles money in an EMS organization. If a bookkeeper or treasurer is insulted by this, then tough! It is not a question of their honesty; it is a question of maintaining the public trust. Besides, if a bookkeeper or treasurer has nothing to hide, they should not be bothered by checks and balances.

Any money that comes into an EMS organization should be put into a checking account. If you have someone who does your billing for you, have them transfer the money directly into your account instead of sending a check. The inverse is true: Any money that leaves the EMS organization should be taken out of a checking account. This documentation of receivables and payables cannot be tampered with since it is all controlled by the bank. This documentation is important later for reconciling the amount of money an EMS organization has and can help with auditing processes.

If possible, you should have at least two different employees handling payments going out. Unless they collaborate, they cannot set up a fake vendor, authorize payments and issue checks. The same goes for issuing payroll checks to employees. There have been cases of paramedics being intentionally overpaid and the difference being split between the bookkeeper and the paramedic.

As the EMS manager, you should periodically review your books. Randomly pull a transaction and ask that the bookkeeper run you through the process of how the invoice was received, paid and recorded. Ask questions of any transactions or vendors you do not recognize.

Finally, you should have a periodic independent audit conducted of your financial transactions. It does not have to be a full-blown audit, but sometimes spot audits can catch wrongdoings. Even the knowledge that periodic audits will be done by a third party is enough to keep people honest.

The protection of the funding that operates and helps your EMS organization function is essential. Any form of theft or embezzlement also eats away at the confidence the public has in your organization. Even though theft may not have anything to do with patient care, any public knowledge of the theft can transcend into the public’s confidence in all aspects of the EMS organization.

Do all you can to prevent thefts of monies in your EMS organization.
Why You Need to Prepare for EMS 3.0

Are you ready for the unprecedented transformation within our healthcare system?

For the past few years, the EMS profession has focused on developing mobile integrated healthcare and community paramedicine (MIH-CP) programs as a way to offer added value to our stakeholders in a healthcare system that is undergoing an unprecedented transformation. But the changes necessary to survive—or even thrive—during this healthcare transformation transcend beyond MIH-CP. Market forces will dictate that we re-evaluate every aspect of EMS delivery through a different lens—the lens of value.

This healthcare transformation is being referred to as “Healthcare 3.0.” Use of the term “3.0” by healthcare system leaders represents the understanding that the healthcare system is in its third phase of evolutionary transformation, and that there is likely to be more change in the future (4.0, etc.).

Almost everything you read regarding “Healthcare 3.0” references that “the new normal” is based on a different lens—lens of value. Things like pay-for-performance, outcome-based payments, bundled payments based on episodes of care, accountable care organizations, shared-risk contracting, penalties for adverse outcomes such as readmissions or healthcare-acquired infections, financial bonuses for reporting outcome data (and penalties for not reporting it), and externally measured patient outcomes have all had a significant impact on hospitals, home health agencies, and pharmacies. Why? Because they economically incentivized correctly to focus on patient outcomes.

Ask Tough Questions

How all these changes will impact EMS is relatively predictable—all we have to do is look at what’s happened to our fellow healthcare providers and begin preparing ourselves for the third evolutionary transformation for EMS, or what we could refer to as “EMS 3.0.” And like Healthcare 3.0, we need to base EMS 3.0 on the value proposition we bring to our stakeholders. In order to do this, we have to answer some difficult questions like:

» Do we own a space in the healthcare system?
» If we do, what’s it worth?
» Why are we uniquely positioned for that space?
» Is EMS safe? What is the adverse outcome rate when EMS treats a patient? How many times when we don’t transport a patient do they end up in the ED hours later?
» What is the economic value we bring to the patients, payers and our healthcare partners? Are we economically incentivized correctly to focus on patient outcomes?
» What is the clinical value (peer reviewed and published) we bring to the patient? Did the fact that the patient called 9-1-1 for “x” condition make a difference in the patient’s outcome?
» Who should really be paying for EMS? And what should they actually be paying for?
» Are our practitioners educated and credentialed for the role they should be playing in the healthcare system? Is a 750-hour paramedic course the right one?
» When EMS treats a patient? How many times when we don’t transport a patient do they end up in the ED hours later?
» What does it actually cost to deliver EMS? And if one service delivery model costs “x” and another costs twice “x,” can they prove that the value they bring is worth the extra cost?
» Should accreditation, or conditions of participation, be required of EMS agencies to be eligible for reimbursement like other healthcare providers?

For more information on The EMS Transformation Summit: Welcome to “EMS 3.0,” visit naemt.org.

About the Author

Matt Zavadsky, MS-HSA, EMT, is the public affairs director for NAEMT. Matt has helped guide the implementation of several innovative programs with healthcare partners that have transformed MedStar’s role as a mobile integrated healthcare provider.

More Online

For more information on The EMS Transformation Summit: Welcome to “EMS 3.0,” visit naemt.org.
When a Call Turns Violent

There are strategies you can take to mitigate your risk of becoming a victim of violence

Woman tries to stab Pennsylvania medic in the chest; two Detroit paramedics stabbed and slashed in the face; EMS shot at, ambulance stolen in Alabama; chief calls stabbings “near-death experiences.” All of these headlines have one thing in common—they all happened in 2015, along with many similar events.

Violence against police receives a lot of media attention. What about violence against EMS providers? The public often does not view EMS as a target for violence, and event reporting and tracking is sporadic at best. In this article we review a recent attack and outline strategies to mitigate our risk of becoming victims of violence.

Case Presentation

On Wednesday, November 25, 2015, at 10:38 p.m., an EMS crew responded to a domestic violence call. On scene they began treating their patient when a woman holding a knife lunged at the EMS crew yelling, “I’m going to kill you.” She stabbed one of the crew members in the chest and slashed at his abdomen. The second crew member had the presence of mind to reach for the orange trouble button on his radio. He pressed it, tripping the radio’s silent alarm and transposed the scene.

Fortunately the EMT who was attacked was wearing a protective body armor vest, which is still relatively uncommon in EMS. The vest blocked the knife, and the responder did not sustain any injuries from the initial stabbing attempt.

Unfortunately accidental trips of the orange button are common in that system, so dispatchers are forced to check on the crew before sending help. You can imagine the look of dismay on the crew and assailant’s face when the radio chirped: “Ambulance 10, reset your trouble button, we are getting a false alarm up here.”

The assailant, upon hearing the dispatcher’s radio reply, became angry and struck the face of the crew member holding the radio. The radio flew out of the hands of the crew member and a struggle for survival in close quarters ensued. The lack of a follow-up reply after two more unanswered radio transmissions did eventually prompt the dispatcher to send additional help. It is lucky neither crew member sustained career- or life-ending injuries.

The Facts

The risk of non-fatal assault resulting in lost work time among EMS workers is 0.6 cases per 100 workers a year; the national average is about 1.8 per 10,000 workers. This means the relative risk of non-fatal assault for EMS workers is roughly 30 times higher than the national average. Over a five-year period during which 911 line-of-duty fatalities were identified, 10 (9%) were violence related. The relative risk of fatal assaults for EMS workers is about three times higher than the national average.

The risk of fatal assault resulting in lost work time among EMS workers is 0.02 cases per 100 workers a year; the national average is about 0.01 per 100 workers. This means the relative risk of non-fatal assault for EMS workers is roughly 30 times higher than the national average.

From the first day of EMT school, we focus on “gloves on, scene safe.” While it’s great that this is at the top of our skills evaluations, it is often a checkmark that is quickly and definitively answered by the evaluator saying, “it’s safe,” and that mind-set then never changes.

In our opening scenario, it appeared exactly the same way on arrival and the responders believed the scene was safe. Unfortunately, scene safety is never static or clear cut. The level of risk always varies as a call naturally evolves. In this case, the violent action was rapid and lethal.

Hindsight is 20/20 and the facts from this case—along with multiple other incidences of violence against our colleagues—may lead many of us to blame the crew for letting their guard down, or a complacent dispatcher for not reacting immediately to the call for help. But in a culture of safety, a root cause analysis would set up processes with multiple redundancies that account for human errors and ensure a systematic response focused on safety. In this case, waiting for or arriving with police to a high-risk event (domestic dispute call), wearing body armor, and maintaining radio systems and protocols so help can be summoned quickly are all key processes.

Current Trends

The increase in attacks on EMS providers is causing some systems to evaluate their preparedness.

Cleveland EMS cited national trends as its reason for mandating the use of bullet-proof vests by anyone responding to any emergency call. The use of vests is not entirely new to Cleveland EMS; they have had a policy in place since 1990 that required the use of these vests “in high-risk” responses. While not all services can afford vests, a thorough risk assessment should be undertaken to determine strategies necessary for ensuring personnel safety.

Another example of protective strategies comes from New York City, where officials established the “Assaults Against Paramedics and EMS” initiative. In this initiative, legislators and city administration have established more stringent processes for prosecuting those who attack EMS personnel.

Additional strategies that mitigate the risk of violence to EMS providers include:

» Concurrent dispatching of police in all high-risk calls (e.g., suicide, homicide, domestic violence, intoxication, psychiatric illness).

» Staging at a remote location for high-risk calls until police have secured the scene.

» Uniforms that clearly identify EMS as separate from law enforcement.

» Continuous education in the use of de-escalation strategies.

» Continuous education in the use of physical restraints if necessary (and how to determine when necessary).

» Establishing a different set of triage and treatment priorities if the EMS service supports law enforcement or responds to tactical operations.

» Advanced tactical training and defensive skills for close combat encounters.

CRM Tips

Identify the improbable or unpredicatable: In EMS we are constantly considering the worst-case scenario. Scene evaluation should ask that same question. In this case, responding to a domestic dispute should create more intentional situational awareness.

Post-event review: In a rapid “hotwash” or more extensive analysis it is crucial we evaluate our performance on difficult cases. Discussing facts and identifying—non-blaming, non-judgmental way—different outcomes and processes that worked and those that did not will help prevent the same scenario from occurring again.

Additional references for this article are available online at EMSWorld.com/12166008.

ABOUT THE AUTHORS

David Page, MS, NRP, is director of the Prehospital Care Research Forum at UCLA. He has a master’s in social work and a PhD candidate at the University of Washington.

Will Krost, MBA, NRP, is a fourth-year medical student at the George Washington University School of Medicine and Health Sciences. He has over 23 years of experience in EMS and continues to be active as a field paramedic for Aila Health EMS in the Minneapolis/St. Paul area.

The use of de-escalation techniques is one strategy to defuse the potential for violence.

Reports of errors and near misses that affect the safety of EMS providers and patients. Report events anonymously at www.emsreport.com.

E V E N T

The use of de-escalation techniques is one strategy to defuse the potential for violence.
The audience was deliberately chosen to include not only local law enforcement, but also cross-disciplinary, multijurisdictional representatives from all stakeholders who would be impacted by a significant active-shooter event at a local elementary school.

Participants included elected and appointed city officials, city and county law enforcement, emergency dispatchers and representatives from the fire department, EMS, public works, transportation services, the district attorney’s office, the coroner’s office, public information officers, emergency managers, school district leaders and members of the local medical community.

The purpose of the exercise was to discuss, in depth, how each of the interdependent agencies would function together to prepare for and respond to an active-shooter event. Several “do-outs” and “take-aways” were identified during the exercise, but there was perhaps nothing more significant than the exchange between Chris Wistrom, DO, associate EMS medical director for Mercy-Rockford Health System’s emergency medical services, and Yolanda Cargile, EdD, director of student services for the Janesville School District, regarding a key question: “What happens for medical care from time of injury to time safe to enter?”

A Troubling Answer
In February 2014, the FBI’s Milwaukee Division facilitated an active-shooter tabletop exercise at the invitation of the Janesville (WI) Police Department.

The Columbine attack forever altered the law enforcement approach to active-shooter events. Police training and attitudes have been reshaped, and equipment and tactical procedures have evolved to adapt to the threat.

Law enforcement agencies are better prepared to respond, but there is another segment of the population impacted by active-shooter events that has not, before now, been effectively engaged to help. This article sets forth how one community chose to make a difference in preparedness by engaging and empowering those closest to the victims to act during a critical incident or attack.

A Multidisciplinary Approach
Under the guidance of Wistrom and Cargile, a core cadre of volunteers was formed, including representatives of law enforcement, local fire/EMS, the school district and the local hospital.
The goal was to find a program to bridge the gap from time of injury to the arrival of trained medical responders. Literature searches and best-practices reviews by all volunteers failed to identify easily implemented programs or universally recognized solutions. It became clear a multipronged, multidisciplinary approach was needed. This would ensure trained EMS providers were prepared to enter the “warm zone” more quickly and efficiently, but it would also leverage and engage an entirely new resource—the people already inside the scene—to start lifesaving treatment.

From left, Yolanda Cargile, EdD, former director of student services for the Janesville (WI) School District; Christopher Wistrom, DO, emergency medicine physician at Mercy Health System; Sgt. Mike Blaser of the Janesville Police Department; and Capt. Tom Brunner of the Janesville Fire Department have worked together to bring trauma kits to Janesville’s schools.

The first prong of the community-preparedness program was the full adoption of the rescue task force (RTF). RTF is not a new concept. Ironically, the framework for such a program was outlined in the Winter 2001 edition of *The Tactical Edge* magazine by two officers from the Beloit (WI) Police Department. The concepts in their article, “Confined Threat Escort Tactics,” were not widely recognized or adopted at the time.

In October 2013, however, the International Association of Fire Chiefs (IAFC) adopted a position paper that identified supervision and other school staff the critical lifesaving skills not found in the school handbook.

Once trained, lay personnel would become well-qualified “first” first responders, a population increasingly referred to as immediate responders. With it taking only minutes to bleed to death from a severe arterial injury, no RTF would be able to make the difference for the most critically injured. But the immediate responders would already be there!

Once the need was identified, the challenge became creation of the right program. In that quest, some age-old questions had to be answered: Who? When? Why? Where? What? And, dauntingly, how?

Identifying who to train was fairly straightforward: School personnel were the target audience for the immediate implementation of the education program. It made sense that those already inside the situation would make the ideal first line of defense. But who was best positioned to provide the training?

Almost immediately after deciding to tackle this project, the core group identified that it wanted to create a model program that could be implemented in any community. This led to the development of a train-the-trainer model that could be implemented in any community. The core team determined if the training could be kept to 45 minutes, it could be accomplished in nearly any in-service training window. In fact, the Janesville School District utilized a 45-minute window for in-service topics every week. To ensure consistency, a short video was developed that provided an overview of...
The initial consideration was to utilize the same type of equipment traditionally carried by SWAT operators and tactical medics. This includes Israeli bandages, SOF or C-A-T tourniquets, hemostatic gauze, chest seals and needle-decompression devices. The training requirements to teach and maintain the skills to implement the equipment were problematic, however, and acquisition of the materials proved cost-prohibitive after research determined each kit would cost approximately $120!

In an effort to make the most cost- and training-effective, sustainable kit possible, the core group decided the contents of the kit would at a minimum include gloves, ACE wrap, rolled gauze, SWAT-T tourniquet and instructional card. Research concluded all those items could be acquired and packaged within a plastic bag for a total unit cost of under $20.

The ACE wrap combined with gauze could serve as an excellent pressure dressing and be used alone as a makeshift tourniquet. The rolled gauze is ideal for packing wounds. Plastic packaging material, the plastic bag or the gloves could all be used as excellent makeshift chest seals. The SWAT-T had several advantages as well: instructions for application are printed clearly on it, it requires no fine motor skills to apply, and it requires less strength to apply than a SOF or C-A-T. Additionally, the SWAT-T could accommodate any size extremity (important for elementary schools with pediatric patients), be cut for use by multiple patients, and be used as an excellent pressure dressing. The SWAT-T was much less expensive than traditional windlass tourniquets and had about the same shelf life.

One identified limitation with the SWAT-T was that self-application could be difficult, especially without consistent practice. In the final analysis, however, to achieve deployment of the maximum number of kits at an acceptable cost, the identified materials represented the minimal supplies necessary for effectiveness. Additional supplies could be added to these kits if needs or gaps were later identified.

In addition to hemorrhage control, the group evaluated what other training topics could be addressed by the program. One identified limitation with the SWAT-T was that self-application could be difficult, especially without consistent practice. In the final analysis, however, to achieve deployment of the maximum number of kits at an acceptable cost, the identified materials represented the minimal supplies necessary for effectiveness. Additional supplies could be added to these kits if needs or gaps were later identified.

the training program. It was designed to be made available to the target audience via an e-mail link sent the day prior to training to introduce staff to the topic. The training material was streamlined so the day of training included only a 10-minute lecture, followed by 35 minutes of hands-on skill-building exercises.

The why aspect became fairly apparent following an extensive review of medical literature. The research, including a review of the Committee for Tactical Emergency Casualty Care’s TECC guidelines, showed the greatest number of preventable deaths in penetrating trauma are either directly or indirectly related to bleeding. The sooner massive bleeding can be slowed or stopped, the higher the likelihood of survival. With that in mind, hemorrhage control became the cornerstone of the new training program.

The group evaluated where the program should be implemented, and it made sense to start in the Janesville schools. The program had to be universally applicable, however, and it was designed to work in any part of the country and any setting—schools, hospitals, businesses, public venues—where attacks could occur. Not unlike CPR and AED training programs, the hemorrhage control program was intended to be easy to implement anywhere. The large-scale goal was to teach as many people as possible how to stop life-threatening bleeding, whether by use of commercially available products or through improvisation with tools at hand.

In addition to hemorrhage control, the group evaluated what other training topics could be addressed by the program. They arrived at hemorrhage control as the primary goal, followed by management of other preventable causes of death, including simple airway management and use of the recovery position.

Perhaps the greatest amount of time spent in program development was determining how to deliver the training content. The team had to address the realities of whether those to be instructed would be amenable to the topic. They had to identify what supplies and equipment to obtain, how to finance them, and whether there was an understanding of the need for the training outside the ranks of the professional responder community. Additionally, if training materials and actual medical supplies could be obtained for deployment, were there practical limitations on what could be placed in the schools based on state law or school policies?

The multidisciplinary nature of the group again proved essential to resolving these questions. A quick straw poll of school employees identified that they indeed wanted the education. Surprisingly, many of those asked expressed substantial interest in learning to apply the materials as well.

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The core group determined it made the most strategic sense to deploy one casualty care kit to each classroom. Placing kits in hallways or office areas would limit access to the lifesaving tools in a lockdown situation, and students or staff could be exposed to danger if they tried to retrieve them from a central location. The dispersed-deployment plan required substantially more kits to cover a single school, so the overall cost of each individual kit was an important consideration (see sidebar).

**Implementation**

To date, the Casualty Care in the Classroom program focused on stopping life-threatening bleeding has been presented to more than 3,000 school employees in Southern Wisconsin and Northern Illinois. Surveys sent to participants before, right after and at one year after training substantially increases confidence in participants’ abilities to stop the bleeding. It has also served to better inform school personnel about the roles of law enforcement and EMS at the scene of active-shooter and other mass-casualty events. Most important, the training did not change participants’ perspectives on how likely an active-shooter event was to happen in their schools. In fact, the training reduced fear, increased confidence and relieved anxiety.

Since inception of the program, hundreds of casualty care kits have been fielded to schools throughout MercyRockford Health System’s service area. Funding for the kits has included private donations, grant sources, community foundations, direct school funding and law enforcement seizure program funds. “We are doing this because it is the right thing to do,” says MercyRockford Health System CEO Jason Bea.

The Casualty Care in the Classroom program has proven successful because it utilized a multidisciplinary, community-based approach to problem solving. The core group enjoyed incredible support from MercyRockford Health System and hospital administration, which partnered with the team to provide the education and materials at as low a cost as possible.

Since the inception of the Casualty Care in the Classroom program over two years ago, several significant strides have been made in immediate responder care. Two of the more notable include the Hartford Consensus Third Compendium7 and initiation of the White House “Stop the Bleed” campaign.8 None of these directives or programs, including the Casualty Care in the Classroom program, can prescribe a one-size-fits-all approach to hemorrhage control, but each demonstrates progress toward helping this country stop the bleeding.

Special thanks to the following for their contributions to this article: Todd Daniello, MD; Sean Marquis, MD; John Pakiella, DO; Capt. Tom Brunner, EMT-P; Scott For-
In 2014 it became clear that the mechanisms we had in place to prevent death from exsanguination during mass shootings and other atypical trauma were inappropriate. To our dismay, we noted that during real-life active-assailant scenarios and full-scale drills, victims were not being addressed and treated rapidly. Implementation of the RTF (Rescue Task Force) model was supposed to address this, yet invariably times remained unacceptable. If we were to make a real difference in outcomes, the solution required a different distribution model.

Typically bleeding victims had no choice but to wait for emergency first responders to provide lifesaving hemostasis, yet even reorganization of the response was not able to solve the timeliness issue. By considering other life-threatening conditions such as sudden cardiac arrest, anaphylaxis and overdose, it became clear that the answer for hemostasis required a similar path.

AEDs are a staple of most public locations and have been pivotal in saving the lives of many victims of SCA. Epinephrine auto-injectors for anaphylaxis have become ubiquitous and in some states are required in schools. In the town of Davie, FL, Assistant Fire Chief Julie Downey and EMS medical director Peter Antevy, MD, reacted to the hemostasis problem first by training the public on bleeding control. Town employees were trained first, followed by incorporation of bleeding control education into standard CPR classes in the community.

They determined that if the public could be trusted with CPR, defibrillation and intramuscular injections, it could be similarly trusted with bleeding control. That decision was the first step toward allowing uninjured victims within hot zones to assist those with life-threatening bleeds.
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Best Practices for Active Shooter Response
By Raphael M. Barishansky, MPH, MS, CPM

Unlike many other types of incidents, an active shooter/hostile event (ASHE) will almost always result in the deployment of all types of first responder. Recognizing the need for EMS, fire and law enforcement to come together for these events in a coordinated manner, the InterAgency Board recently released a broad-based document with recommendations from lessons learned and potential “best practices” for this type of event.

Improving Active Shooter/Hostile Event Response: Best Practices for Integration of Law Enforcement, Fire and EMS outlines specific recommendations across the emergency service spectrum, which include:
- Integrate and improve coordinated pre-event law enforcement, fire and EMS policy development, planning, training and exercises. This is probably one of the most important lessons learned from previous events and speaks to the need for a practiced approach as a foundation for a successful response to these incidents.
- Create and implement a common operating language. The need for all responders to understand each other and communicate critical, time-sensitive messages in a common language cannot be overstated.
- Employ Tactical Emergency Casualty Care (TECC). This approach advocates that in areas of high threat, casualty triage should be limited only to categorizing the wounded as ambulatory, wounded or deceased. There was also mention of the need to engage in proactive public outreach as well as informing and educating a variety of specialty groups/stakeholders.
- Establish evidence-based guidelines and education for medical and rescue equipment. The emphasis here is that lifesaving interventions and rapid extraction are the ONLY required medical interventions in high-threat areas. Also, it is incumbent on decision-makers to limit equipment to that defined by TECC, to issue individual first aid kits to law enforcement officers and to balance training and operational goals against acquisition of equipment.
- Promote two-way public communication as an essential component for effective ASHE. The public is clearly identified in this document as a real first responder and a valuable resource. It was also stressed that it is essential to promptly and effectively communicate critical incident information and clear instructions on the proper public response.

For more information, see EMSWorld.com/12152344.

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Distribution of bleeding control kits from within was the most obvious way to do this. The town had put in place, years prior, a law that required large public buildings to register their AEDs, and this allowed immediate knowledge of most of the public-access AEDs. Chief Downey then constructed severe-bleeding kits using a pencil case, two tourniquets, gauze rolls and pads, scissors and a pair of gloves, using funding from the town of Davie. By early 2015 the program was fully implemented, and members of Davie Fire Rescue continued to educate the public at health fairs, community gatherings and basic life support classes. The response was always positive, and the required training time was limited. Furthermore, the police were outfitted with a specialized kit that was purposely very thin and vacuum-sealed so it could fit easily along their chest, beneath their vest. This kit used a SWAT-T tourniquet and also added hemostatic gauze and a chest seal.

Stop the Bleed

Antevy presented the innovative concept at the Gathering of Eagles conference in February 2015, and it was well received by those in the EMS community. During this time Rick Hunt, MD, director of medical preparedness at the White House, was working on developing consensus on this same issue by bringing national stakeholders to the table. In October of that year the White House unveiled a new nationwide initiative—Stop the Bleed—which would provide bystanders access to bleeding control equipment, just as they have now with AEDs. The town of Davie was invited to attend the bystander “Stop the Bleed” forum at the White House. Vice Mayor Susan Starkey joined Downey and Antevy at the forum on Tuesday, October 6, 2015. The four-hour event began to lay the groundwork for local entities to plot a course for the future. If the general public can be given sanction to take action to stop life-threatening bleeding by providing access to tourniquets and other bleeding-control equipment, many lives can be saved. The town of Davie was recognized as one of the leading municipalities in the country that has already added severe-bleeding kits to community AEDs. In 2015 Davie already has two critical saves thanks to the public access bleeding kits. In one case a town employee severely injured himself using a power saw, and a colleague rapidly provided hemorrhage using techniques he learned in the course. The town’s mayor and commissioners later honored the employee for his heroic actions.

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From hurricanes isolating segments of the population to the dynamic terrorist events in Paris and San Bernardino, the threats to our society are both complex and often overwhelm local resources. Because of their storied success, there is a widely held regard for the availability and professionalism of our emergency medical services, and deservedly so. Accordingly, most of the financial resources dedicated to disaster preparedness and counterterrorism are primarily focused on improving our uniformed response. Yet the unspoken secret of EMS is that there is a systemwide overreliance on the existing EMS structure. Too often this reliance means our communities prepare based on the assumption that medical care will be readily available. As recent events continue to prove, this is not always the case, and it suggests our current response paradigm may need improvement.

Now is the time to educate and empower everyone to be able to bridge this gap and provide emergency care. Perhaps Amanda Ripley says it best in her book The Unthinkable: “Regular people are the most important people at a disaster scene, every time.”

Trauma is the leading cause of death from birth to nearly age 50, but there has yet to be a concerted effort to improve outcomes from traumatic injury within this population. Under the best circumstances, medical response takes anywhere from 7–11 minutes on the way to the patient. A security guard applies a tourniquet during a simulated earthquake training exercise at a Westminster (CA) mall.

By Joshua P. Bobko, MD, William J. Harris, NREMT-P, & Stuart Thomas

**The First Care Provider System:**
Improving Community Resilience for Unexpected Disasters

**Why civilians should be prepared to act in mass-trauma events**

Photos courtesy First Care Provider

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The First Care Provider Concept

Organizations and agencies across the world now conduct regular active-shooter exercises. While many of these programs teach familiarization with the DHS-recommended “run, hide, fight” approach, the “first care provider” concept creates an all-hazard approach to situations where life may be compromised yet medical care is unavailable. This was the next critical step in the trauma chain of survival, considering that current trauma education programs are not designed for a civilian audience. Further, the situational response and prioritization of care differs dramatically from civilian medical programs (first aid, CPR) but adheres to the consensus guidelines recommended by C-TECC. Finally, the universality of the first care model makes it an appropriate subject to be included as a part of all ongoing safety programs and new-employee orientations, or as a stand-alone course.

Some of the most impressive outcomes were achieved in Westminster, CA, through a community-led effort to improve resilience. As a small city (pop. 90,000) with limited resources, Westminster’s pilot project was launched through a public-private endeavor to improve preparation for mass-casualty disasters, including acts of terrorism, violence and natural disasters. In partnership with FirstCareProvider.org, the community sought to reach areas of community interface that have substantial public use or risk for traumatic injury but are often completely reliant on the 9-1-1 system (such as schools, city hall, city maintenance, non-sworn police personnel and local businesses). Following an active-shooter curriculum administered by the Westminster Police Department, the First Care Provider model was introduced to create a communitywide network of trauma-trained individuals capable of providing lifesaving interventions to trauma and potentially augmenting the capabilities of first responders.

This model proved the key to success. Acting Chief of Police Daniel Schoonmaker summarized the program by saying, “Some treatments are covered in other courses average during non-surge operations, and departments around the country are self-identifying their own inability to meet NFPA 1710 standards.” Given this reality, there have been outstanding efforts highlighting the science of civilian survivability, particularly from hemorrhage. The Committee for Tactical Emergency Casualty Care (C-TECC) has made great strides synchronizing civilian-based prehospital guidelines for medical providers across the world. Subsequently the Hartford Consensus, convened following the Sandy Hook massacre, has effectively pushed the need for improving hemorrhage control within communities. Following on the success of these groups, the federal government has attempted to make recommendations for civilian actions (DHS active shooter pamphlet) and recruit the community with the “Stop the Bleed” program.

While these efforts are critically important, what has been missing until now is a unifying solution to meet these new mandates. Recent publication of the First Care Provider white paper (http://firstcareprovider.org/white-paper) has provided a foundation for this effort, combining the currently supported TECC guidelines with systemic lessons learned from a fully operationalized public education model. In this paper (excerpted on page 36) we share a

The public can be trained to deliver immediate lifesaving care. In this photo, a construction worker applies an improvised tourniquet to his leg after he was impaled on a metal bar.
An educated populace can help produce a seamless transition of care for victims of traumatic injury

The following is excerpted from Building Community Resilience to Dynamic Mass Casualty Incidents: A Multi-Agency White Paper in Support of the First Care Provider, authored by the Committee for Tactical Emergency Casualty Care, FirstCareProvider.org and the Koshka Foundation for Safe Schools. Find the whole document at http://www.firstcareprovider.com/#white-paper.

Natural and manmade disasters are creating increasingly complex response challenges. The current U.S. emergency response model relies heavily upon the availability and expertise of highly trained public safety agencies. Too often this leads the public and our leaders to assume professional emergency medical care will be immediately available. Unfortunately there are often delays in first responders accessing victims, especially in complex high-threat events.

Initiatives such as the Rescue Task Force model and the 3-ECHO program are creating “warm zone/indirect threat care” operational paradigms for first responders and are an important first step in shortening the time from injury to first medical intervention. However, despite aggressive and expedient deployment of professional medical providers, there remains a time gap from point of injury to lifesaving intervention that only First Care Providers—empowered and trained community members—can address.1 The First Care Provider represents the first link in the trauma chain of survival from point of wounding through definitive care.2 A First Care Provider-empowered system offers a universal, flexible bystander-initiated trauma protocol. This shared language, based on the principles of Tactical Emergency Casualty Care, empowers the FCP and the arriving medical/rescue assets to integrate effectively and work off the “same sheet of music.”

There are four key requirements to the development and implementation of a successful community First Care Provider program:

1. Administrative leadership and operational policy development—Successful FCP integration requires grassroots initiatives and national public policy leadership. Leaders must evolve past the complete reliance on traditional 9-1-1 response and overcome the widespread reluctance to introduce policies that empower medical action in the broader population. Non-medical leadership is critical to creating an effective whole-of-community system that reduces potentially preventable trauma mortality.2

2. Public access trauma kits—Many government buildings and public businesses in the United States are grossly underprepared to support FCP interventions for traumatic injuries during targeted violence events. The deployment of public access trauma kits serves two critical roles. First, they provide a visual cue to prompt First Care Providers to act. Second, if properly equipped, they can provide critical material to support lifesaving interventions for more than just hemorrhage control. Public access to readily available medical equipment should be part of a multi-pronged approach to community safety.

3. First responder training—The training of professional first responders currently focuses on unified command, operational coordination and direct lifesaving interventions. This traditionally marginalizes the bystanders and uninjured persons on scene. This must change. First responders must be familiar with the capabilities of the FCP as well as have operational plans that incorporate these available resources as force multipliers in the response.

4. First Care Provider training—Data from across the globe demonstrates that training individuals empowers action and improves survival from medical and traumatic emergencies.1,3 Trained First Care Providers demonstrate a willingness to operate independently, are able to recognize critical injuries, and can properly allocate resources for maximal benefit.3

External hemorrhage control is a critical skill for many traumatic type injuries; however, it is not a panacea. Recent events reveal that access to the wounded, recognition of significant injury and rapid evacuation to medical care are at least as important as immediate hemorrhage control. Education on all of the preventable causes of death4 in penetrating and blast trauma should be the ultimate goal and can be accomplished with a limited time investment. In addition to reducing mortality through application of TECC, this training will improve resilience by empowering individuals to take action in times of crisis.

First Care Provider Outcomes

This concern was evident during the Westminster exercise. “I felt myself panic,” says Patricia Singer, one of the volunteers who braved the study without prior preparation. This hesitancy was one of the primary barriers the First Care Provider model sought to overcome. Its evolution over the past several years and ongoing contact with our communities have extracted several lessons particular to public trauma education.

One of those is that the reluctance to act is possible to overcome once the root cause of this reluctance is identified and an easily retailable model that integrates with existing emergency procedures is provided. The success of this approach was made evident by Berri Williams, a teacher who had completed FCP training almost two months prior to the exercise. “They taught us exactly what to care about first,” Williams says, “so we knew exactly what to look for.” This familiarization and recognition of the preventable causes of death can be impacted to the layperson and must be included in any civilian course.

Second, in the uninjured population there is a tendency to congregate in times of emergency, and a hesitancy to take individual action. With a brief familiarization, First Care-trained members of the public demonstrate a notable willingness to operate independently, recognize critical injuries and properly allocate resources for maximal benefit. This type of outreach effort may actually encourage independent thinking in times of disaster. This becomes critical given that recent events (e.g., Tucson, Aurora, Boston) have shown that rapid evacuation to medical care can be as important as hemorrhage control.2 This community safety training and recognition of critical injury and rapid evacuation should be the key objectives in civilian training, with the preventable causes of death as a secondary objective.

Finally, one of the most notable observations was incorrectly captured by one of the participants who had the most medical education. “We are so used to having equipment to rely on that you don’t know what to do in a situation like that,” says Hiram Diaz, a registered nurse. The reality is that there must be a mandate within our medical educational system to highlight this developing skill set and prepare providers to face the threats of terrorism, active-violence incidents and disaster medicine. There has been dramatic support preparing first responders, but there has not been a parallel effort to educate “first receivers.”

Recommendations and Future Direction

Refractance to change is perhaps the most critical barrier that must be overcome for a successful community resiliency program. This will require leadership to move beyond a complete reliance on traditional 9-1-1 response and brushtfire to introduce medical policy into the broader population. However, the evolving threats facing our society make it necessary to recognize the gap left by...
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Response to Atypical Incidents: New Demands for EMS

Complex new challenges and threats hold more danger for EMS providers

By Mac Kemp, MSs, MEd, EMT-P

EMS has always faced the possibility of responding to acts of violence, but as the world changes, new challenges and threats are presented that are more complex and hold more danger for EMS providers. Recent events such as the terrorist attacks in Paris and San Bernardino make it imperative that EMS providers understand and adapt their response to these threats accordingly, to save the lives of victims and fellow first responders. New procedures must be developed and clearly understood by all involved in these critical incidents.

Weapons have been utilized. However, over the past decade, EMS has faced a growing number of higher-risk incidents—those involving active shooters, and also heavy weapons, terrorist attacks and the possibility of additional attacks that include explosives and hazardous materials. This trend demands not just a simple shift in response, but an entirely new thought dynamic for EMS.

According to the FBI, from 2000 to 2013, 18 incidents met the criteria for an active shooter incident in which a single law enforcement officer arriving on the scene was clearly documented engaging the perpetrators immediately. Of those 18 incidents, 13 were still in progress and in 12 of those incidents, the officer immediately neutralized the threat. For law enforcement, the Columbine school shootings were the sentinel event that changed their response to active shooter incidents. A lesson learned was the immediate need for first-arriving officers to engage the perpetrators rather than contain the incident and wait for SWAT teams.

For EMS, the Aurora, CO, movie theater shootings were the sentinel event. Due to several issues in communication and coordination, such as misunderstandings between agencies regarding EMS entry and scene safety, fire and EMS assets were unable to gain access to the critically injured, resulting in many severely injured patients being transported by law enforcement. These gaps in communication left some responders without situational awareness of current circumstances and immediate needs.

A review of the incident revealed that EMS and law enforcement must better coordinate and begin to practice and respond differently when these types of incidents occur. Citizens are demanding that law enforcement and EMS find alternatives to rescue and improve outcomes for severely traumatized patients. The fact is that many of these critical trauma patients can be saved if EMS is aggressive in its approach and clearly understands and mitigates the risks as much as possible.

With the most recent Paris and San Bernardino incidents, EMS personnel must recognize another, higher-risk threat level than an active shooter. These types of attacks are coordinated and complex events that have been planned and perpetrated by terrorists whose intent is to kill as many citizens as possible, including public safety Congress members, EMS professionals, and to gain as much media attention as achievable for their cause. This is a game changer for EMS response. For these types of events, EMS agencies can no longer remain siloed with an insulated response from other community resources. Overall community response, particularly among all first responders, is key to success in such atypical incidents.

The Traditional Response

Traditionally in EMS, when a violent incident of any type has occurred, personnel have staged their response at a safe distance. Since EMS providers are not armed or trained to confront a violent incident, this model should remain intact for all typical violent incidents. EMS should not be forced to confront a violent incident under normal circumstances without law enforcement clearing the scene. Once law enforcement has contained the threat, EMS providers can enter the scene and treat the injured. The types of incidents discussed here are different from a normal response and require a different approach.

The Response to Atypical Incidents

Response to an atypical incident must be planned and practiced before an actual incident occurs. Risk is involved in every EMS response; however, the response to an atypical event contains higher-risk elements, thus preplanning and careful training must occur to lessen the risks faced by responders. EMS providers should clearly understand how they need to interact with other public safety entities and how this coordinated interaction can reduce their exposure to danger and improve patient outcomes. This is not to be taken lightly because in these types of incidents, the intent of terrorists is to cause as much death and destruction as possible, including public safety resources. The perpetrators have the advantage of surprise; however, public safety has the advantage of superior training, preplanning and the pool of community resources to improve their approach.

As in active shooter events, law enforcement officers should directly engage the perpetrators upon arrival. The first four arriving law enforcement officers should eventually form an initial contact team that directly confronts the perpetrators, attempting to neutralize the threat and end the carnage. The fifth-arriving law enforcement officer should assume a position of incident command and begin organizing other arriving resources to adequately meet the needs of this very fluid incident. The incident commander should begin reporting the situation to dispatch, requesting additional resources as needed, collecting information about the current status of the incident, and forming additional initial contact teams of law enforcement officers and rescue task forces, consisting of arriving EMS, fire and law enforcement as they arrive on the scene. This incident commander should utilize situational awareness to determine where initial contact teams and rescue task forces are needed to engage the enemy and evacuate victims.

The rescue task force is a team with a minimum of one law enforcement officer and one EMS and/or fire personnel. However, two law enforcement officers per team is optimal. The configuration may be larger, depending on the available personnel and the needs at the incident. The mission of the rescue task force is to enter the warm zone behind the initial contact teams to begin hemorrhage control and rapid evacuation.

Ideally, this would include tourniquets and blood-clotting pressure bandages and any means of rapid evacuation of the injured. With limited personnel, particularly in the beginning stages of an incident, there may not be time to set up formal triage areas. In lieu of triage, patients should be moved to casualty collection points, where they can then be moved by additional personnel to the cold zone for rapid transport.

Going into warm and hot zones in an active and dangerous event with shooting and violent threats represents a new thought process for fire and EMS personnel. Fire may be familiar with operating in warm and hot zones of hazardous materials, but the actively violent threat is different and requires a different approach. EMS is very familiar with the golden hour of trauma; however, these severely injured patients lacking that hour need immediate evacuation and transport to survive. Injuries this catastrophic require that these patients be transported to a trauma center or surgery to save lives.

Active Shooter Incident: The United States Department of Homeland Security defines the active shooter as “an individual actively engaged in killing or attempting to kill people in a confined and populated area.”

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New Command Structures

While conventional incident command works in normal disaster situations, in an atypical incident there are not enough personnel or enough time to set up this formal structure. Rapidly moving events, the possibility of multiple attack sites and limited resources call for a new approach to command structure. Each individual incident has an incident commander. However, with multiple simultaneous incidents, coordination of available resources is key to the needs of each individual incident. The answer is Area Command.

Area Command is a new concept, but it works in rapidly changing events with the potential for multiple sites of response and operations. Once there is recognition of a coordinated terrorist series of incidents or atypical incident, the first-arriving supervisor should find a location that is safe and located appropriately far enough away from all incidents to establish an Area Command for coordination of community resources for all incidents. The Area Command never need to be moved if the threat shifts toward the command post. Commanders must always consider security at the Area Command since terrorists may plan secondary attacks on command posts once they are established. This includes setting up an Area Staging spot for initial response of resources to be directed as needed to each incident. Remember, the incident command at each scene and Area Command are abbreviated command structures to operate until a full incident command setup can be established, once enough personnel arrive on all scenes. The supervising Area Staging commander can be from any response discipline.

All responding personnel should be ready, through cross training and temporary role exchange, to perform whatever duties may be needed for the incident. Obviously, only armed law enforcement can engage the perpetrators; law enforcement can treat victims while in the hot and warm zones if they are trained and appropriately equipped with tourniquets and pressure bandages. Fire and EMS could provide perimeter control or guard evidence if immediate medical or hazard control is not needed. A successful outcome is helped if all response personnel are willing to fill whatever roles needed to be filled at the moment and shift with the changing stages of the event. All responders should be ready to function outside of their normal lane of activities and play the role that is immediately needed.

New Agency Requirements

For new approaches to succeed, critical thinking is necessary. Leadership, with the use of resources that may not be utilized in a traditional response.

All public safety agencies and other potential responders should plan and train together for these types of incidents. Pre-planning is one of the greatest advantages public safety has in dealing with these types of attacks.EMS should play a large role in bringing all community partners, regardless of local politics or jurisdictions, to the table for input and coordination. Agency protocols should be coordinated to reflect the enhanced roles of the agency and its personnel responding in these types of incidents. Accordingly, mutual aid agreements should be in place before an incident occurs so that incident and area commanders are aware of available resources in a given situation.

Unconventional Resources

Many times in an atypical event all resources will be strained and possibly unavailable. Responders should be aware of possible resources that could help them to complete their mission. Unconventional resources for extreme atypical incidents can include:

- Private businesses and entities;
- Correctional personnel;
- National Guard and Civil Air Patrol;
- Private security guards.

Many of these resources may have surprising answers to the problems that present themselves.

Needed specialized equipment may also be in short supply. Thinking creatively can help alleviate equipment shortages. Use of barricades and dump trucks from public works can assist in establishing a perimeter. Plywood, tables and chairs may be used to assist moving patients. When ambulances are in short supply, could other trucks or busses be used to move patients to hospitals with medical personnel on board? The answers will be different in each location and at each different incident. Local and state law should be reviewed to determine if these resources can be utilized in a disaster situation.

Critical Thinking & Risk-Based Decision Making

With these new challenges for EMS comes the need for critical thinking and decision making that reduces risk and improves outcomes. Since the attackers have designed these incidents to overwhelm local responders, the EMS personnel be aware of potential threats and be prepared to look for unconventional approaches to mitigate the situation.

Critical thinking involves being open-minded to alternatives, judging source credibility when information is received, asking clarifying questions, forming a hypothesis and drawing conclusions based on available information. Critical thinking is also being cautious about conclusions, understanding that conclusions can change based on new information. The good news is that EMS providers use critical thinking on everyday responses. How they need to use their critical thinking skills in an expanded manner to encompass larger and more complex incidents. Critical thinking is not making uninformed snap decisions; rather, it requires making the best decision possible based on current information.

Conclusion

An atypical incident, such as a terrorist incident, can demand that critical thinking response to any EMS agency. However, with careful thought and planning, the ability to respond as a community-based team utilizing all community-based resources can improve outcomes for injured patients and for responders.

The Department of Homeland Security has begun work on training courses related to atypical incidents. The Louisiana State University National Center for Biomedical Research and Training is in the process of developing courses for these types of attacks. Many courses exist for law enforcement on active shooter incidents and EMS personnel should seek this same type of training.

While there is risk responding to these incidents, planning a coordinated approach, critical thinking, risk-based decision making, unconventional approaches and the creative use of resources can make the outcomes successful and save lives.

ABOUT THE AUTHOR

Mac Remp, MS, ME, EMT-P, is deputy chief of operations at Leon County EMS in Tallahassee, FL. He has over 30 years of EMS experience and has worked for county, hospital and private EMS systems. He began his career at General Electric and spent four years in the military. He has a master’s degree in Health Education from Florida State University in Tallahassee, FL, and a master’s degree of Security Studies from the United States Naval Postgraduate School, Center for Homeland Defense and Security in Monterey, CA. He also designs and teaches homeland security courses for the Louisiana State University Center for Biomedical Research and Training.

REFERENCES

Permissive Hypotension in Trauma

Permissive hypotension can be a viable strategy in the prehospital setting when used appropriately.

Introduction

The theory behind permissive hypotension in the actively hemorrhaging trauma patient is not new. The idea dates back to the early 20th century when a group of captains in the Army Medical Corps described their experience managing injuries during World War I, noting, "Injection of a fluid that will increase blood pressure has dangers in itself. If the pressure is raised before the surgeon is ready to check the bleeding that may take place, blood that is sorely needed may be lost." 1

Unfortunately, these recommendations were largely forgotten for most of the 20th century despite several animal studies performed in the 1950s and 1960s. 2 The most current debate regarding hypotensive versus normotensive resuscitation strategies for trauma patients was sparked by a landmark randomized controlled trial (RCT) in 1994, which demonstrated a significantly lower mortality rate in hypotensive patients with penetrating torso trauma who received no or very little fluid resuscitation prior to the operating room. 3

The theory behind permissive hypotension is that overly aggressive crystalloid administration leads to worsened outcomes via clot disruption ("popping the clot"), dilutional coagulopathy, dilutional anemia and hypothermia, all of which contribute to the "lethal triad" of coagulopathy, acidosis and hypothermia.

In theory, permissive hypotension maintains a careful balance between organ perfusion and the risk of bleeding or rebleeding. It should be understood that permissive hypotension is neither a treatment nor a substitute for surgery or definitive hemorrhage control, and it currently only applies to trauma patients who are actively exsanguinating in the prehospital or ED setting while awaiting resuscitation with blood products and emergent damage control surgery. Per the permissive hypotension theory, only once the bleeding is controlled should aggressive attempts be made to restore normal physiology.

Animal Studies

In the early 1990s numerous animal studies using rats, oxen and sheep were performed to compare techniques for fluid resuscitation in uncontrolled hemorrhage. In 2003, a systematic review of 52 RCTs in animal models included nine trials that compared a normotensive (mean arterial pressure >80 mmHg) versus hypotensive resuscitation strategy. 4 Five of these trials used rat models, while four used a porcine model. Uncontrolled hemorrhage was induced under anesthesia. When compared to normotensive resuscitation, animals who received hypotensive resuscitation had a 67% lower risk of mortality. The obvious limitation of this study was the use of animal subjects, as well as the use of a wide variety of anesthetics with different hemodynamic properties.

A more recent animal study in 2011 attempted to determine an ideal target mean arterial pressure (MAP) and maximal tolerable duration of hypotension during uncontrolled hemorrhagic shock in rats. 5 After splenic parenchyma and splenic artery transection, uncontrolled hemorrhage continued for 20–30 minutes. Afterward, rats (who, coincidentally, have the same MAPs as humans) were fluid-resuscitated with different target MAPs for one hour. Hemostasis was then achieved by splenic artery ligation. Animal survival and survival time in the 50- and 60-mmHg target MAP groups were higher than in all other groups, including the no-treatment group. This was statistically significant. Therefore,
researchers concluded that 50–60 mmHg may be the ideal hypotensive resuscitation target MAP in uncontrolled hemorrhage. Using a new target MAP of 50 mmHg, they found that patients who received 50, 90- to 120-minute duration of progressive hypotension, rats subjected to 120 minutes of hypotension had significantly lower survival times, as well as worsened renal and hepatic mitochondrial function. Additionally, they concluded that more than 90 minutes of hypotensive resuscitation could cause irreversible injury and should be avoided. Obviously, the most fundamental limitation of these studies is that the applicability of animal models to human injury remains unclear.

Human Studies

While the previously mentioned landmark prospective RCT in 1994 compared fluid resuscitation strategies in hypotensive patients with penetration injuries,6 an RCT from the United Kingdom in 2002 looked at the effect of two different prehospital MAP targets in bleeding trauma patients of T.I.B. 1,309 trauma patients, of whom more than 90% suffered blunt trauma.6

Paramedics in two ambulance services were randomly allocated to one of two treatment protocols. Protocol A required that IV fluids be administered on scene to all adult trauma patients who, under current protocols, would have had fluids started. Protocol B required that fluid be withheld until arrival to the hospital, unless time of transport was greater than one hour.

In patients with penetrating injuries and short transport times (less than 30 minutes), fluids should be withheld in the prehospital setting in patients who are alert or have a palpable radial pulse. Fluids in the form of small boluses, i.e., 250 mL be given to return the patient to a normal mental status or strength of peripheral pulses), to blood pressure at all (as opposed to maintaining systolic blood pressure greater than 90 mmHg).15

Most but not all studies on hypotensive resuscitation in trauma patients exclude those with T.B.I. Interestingly, animal models looking at effects of fluid resuscitation in rats and swine with both head injury and major trauma showed that rats who underwent low-volume resuscitation had better neurologic outcomes and that pigs who were aggressively resuscitated had increased intracranial pressure and worse cerebral oxygen delivery, presumably secondary to cerebral edema.6,14

This being said, a retrospective observational study in 1993 showed that a single episode of hypotension (SBP < 90 mmHg) in severely brain-injured patients was associated with a doubling of mortality and a parallel increase in morbidity rates among fluid-repleted patients.6

Regardless of whether fluid resuscitation was or was not correct in the field had a worse outcome than those whose hypotension was corrected by time of ED arrival.6

Guidelines published by the Brain Trauma Foundation in 2007 advocate maintaining SBP above 90 mmHg in severe TBI, but do not specifically state whether this applies to actively hemorrhaging patients.15 A more recent retrospective review actually recommended that the threshold for hypotension in TBI be lowered to 70–90 mmHg.16

Finally, the most updated European consensus on trauma resuscitation protocol6 stresses that “a target systolic blood pressure of 80 to 100 mmHg until major bleeding has been stopped in the initial phase following trauma should be considered.”6

The guidelines also state, “A controlled hypotensive fluid resuscitation should aim to achieve a mean arterial pressure of 65 mmHg or more.”

In cases of hypotension have significant direct or indirect effects on the prehospital setting, as altered levels of consciousness are often seen in polytrauma patients suffering hemorrhagic shock from major trauma and occult injuries, the administration of opioid analgesia or the ingestion of alcohol or illicit drugs should be avoided. Most obviously, the most fundamental limitation of these studies is that the applicability of animal models to human injury remains unclear.

It is imperative that the prehospital provider not miss non-hemorrhagic causes of hypotension such as tension pneumothorax,

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Protecting Patient Privacy in Community Paramedic Programs

Amid HIPAA and other rules, how should you approach the need to share protected health information?

Mobile integrated healthcare and community paramedic (MIH-CP) programs face a seemingly complex landscape when it comes to sharing and receiving protected health information (PHI). With an expanded role in the community, EMS operations are finding they may not have policies and procedures to guide community paramedics as they engage in this workflow. However, the decisions community paramedics make in regards to information-sharing can carry greater responsibility, require greater discretion or self-control, and introduce greater risk. For this reason administrators are right to be concerned about developing policies, procedures and training for patient privacy in their MIH-CP programs.

This article focuses on a theoretical approach to patient privacy, rather than a technical approach. MIH-CP at the Intersection

Just like the general EMS discipline, MIH-CP programs operate at the intersection of healthcare, public health and public safety. For example:

- A healthcare version of MIH-CP might deal primarily with chronic disease management or post-hospital discharge follow-up.
- A public health version of MIH-CP might include prevention, communicable disease monitoring or immunization programs.
- A public safety version of MIH-CP might be involved in crisis intervention, frequent-user care coordination, or alternative destinations to preserve response readiness.
- A single MIH-CP program might operate in any combination of these.

Healthcare agencies and MIH-CP programs focused solely on healthcare often have straightforward approaches to patient privacy because the majority of their transactions occur under the medical umbrella. However, if your MIH-CP program extend beyond the medical umbrella, chances are you have struggled, or are struggling, to make sense of privacy laws.

Medical privacy laws do address non-medical disclosures. For example, the Health Insurance Portability and Accountability Act (HIPAA) allows for disclosures for reasons other than healthcare activities, like public health interests, oversight and safety issues. A series of these permitted disclosures under HIPAA is contained in Title 45 of the Code of Federal Regulations, parts 160 and 164. Figure 1 shows samples of permitted disclosures (a majority drawn from §164.512 of HIPAA) organized to illustrate the types of disclosures with possible applications to the different MIH-CP categories.

The mission of the MIH-CP program will determine what specific policies and procedures are needed for client care.

Once your program has a comprehensive set of privacy standards, implement training, compliance and ongoing assessments and revisions. If your program requires additional policies to supplement a consent form, a systematic approach can make policy development less intimidating.

Lee Swanson

If your program requires additional policies to supplement a consent form, a systematic approach can make policy development less intimidating. Lee Swanson
Examples of these situations include care for clients with cognitive disabilities from dementia or mental illness, cognitive impairment due to substance abuse, or when the client is a threat to the safety of self or others. In other words, CP programs with a crisis intervention component, or those that deal with cognitively vulnerable individuals, may not be as effective without policies and procedures to cover disclosures in these cases.

Going Further With Policy Development

If the program requires additional policies to supplement a consent form, a systematic approach will make policy development less intimidating. The following instructions represent one approach to building a comprehensive set of policies and procedures, though it is certainly not the only approach.

Step #1: Perform a Gap Analysis

A gap analysis may sound formal or arduous, but a person familiar with the workflow of the CP could perhaps accomplish this in less than a day. In this case a gap analysis involves comparing existing policies and forms to a list of desired policies (see Figure 2).

The goal of this process is to create a wish list of disclosures. If the disclosure doesn’t seem permitted under current law, include it anyway. The resulting list should contain items that seem both possible and impossible, not to get away with as much as possible but to create tools that will help the CP be the best advocate for the patient.

Step #2: Create a Disclosure Matrix Form

Divide the list from Step #1 into two parts: one list for the type of information disclosed, and another for the recipient. For example:

> Information type—Medical information, number of hospital visits, mental health diagnosis, etc.
> Recipient type—Law enforcement, hospitals, primary care physicians, etc.

Refine the list into categories. For example:

> Information category—Medical information, mental health information, substance abuse information, medical information, service information, service utilization.
> Recipient category—Correspondence on an incident; law enforcement; covered entity; noncovered entity.

Use the category lists to create a disclosure matrix. For example, see Figure 3.

Step #3: Complete the Disclosure Matrix

The next step is to complete the privacy matrix. The agency may already have policies for some of the boxes. For the remaining boxes, it is best to involve the agency’s legal team.

For each box, answer the question “Under what ethical and legal circumstances can I provide this disclosure?” Privacy law usually settles down into the following categories:

> Permitted without authorization from the client;
> Permitted when disclosed to a partner or business associate under a formal agreement;
> Permitted with authorization from the client;
> Required by law.

There may be times when your agency chooses to be more stringent than privacy laws. In that case you could add other categories. For example:

> Never;
> Permitted without client authorization but requires management approval.

This may be especially relevant for disclosures that require discretion. For example, disclosures to avert a serious threat require that the threat be credible and the disclosure is expected to lessen the threat. It may be that management wants to exercise discretion and assess credibility before allowing the CP to make the disclosure.

With the matrix complete, the privacy concepts are ready to be written into policy.

Policies in Action

Once the MIH-CP program has a comprehensive set of privacy standards, administrators should implement training, compliance and ongoing assessments and revisions of the policies and procedures. Additionally, as a closing concept, there is a cultural component to this new set of rules: CPs need training to deal with the casual, and sometimes inappropriate, exchanges of information that take place in a community setting that is isolated to a 9-1-1 incident. The CP should be prepared with helpful scripts or otherwise understand that awkward social exchange.

FIGURE 3: SAMPLE DISCLOSURE MATRIX

<table>
<thead>
<tr>
<th>Covered Entity</th>
<th>Noncovered Social Entity</th>
<th>Law Enforcement</th>
<th>Correspondent</th>
<th>Family/Friends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics/svc. util.</td>
<td>Medical info.</td>
<td>Mental health info.</td>
<td>Substance abuse info.</td>
<td></td>
</tr>
</tbody>
</table>

Have your CP clients sign a consent or authorization form that allows you to disclose their information to other caregivers. Loo Swayne

More Than HIPAA

HIPAA may not be the only privacy standard that’s applicable to your MIH-CP program, though it is the most dominant. Other laws and situations may apply:

> State privacy laws—States may have their own privacy laws to consider. HIPAA has specific text to define the relationship between federal and state laws, and an attorney is best suited to interpret this relationship.
> Privacy requirements associated with federal funding—MIH-CP programs that anticipate receiving federal funds for targeted efforts, such as substance abuse or mental health efforts, may need to look at additional privacy standards.
> Privacy requirements associated with organizational structure—if you employ care providers other than CPs, like certain licensed mental health professionals, your organization may be subject to a higher level of confidentiality.


To provide the variety of resources needed to help the patient, CPs not only need to share these new types of information with healthcare entities, but with mental health, social service agencies, police and others that may not be covered by the agency’s current privacy-related policies and procedures. Anne’s framework for defining the types of information and entities that might be involved is an incredibly useful tool for agencies and attorneys to understand the complex but mission-critical nature of these communications. Thanks to Anne for sharing her experience and guidance in navigating these new regulatory areas.

—Dan Swayne, MIH-CP Advisor

Communication Complexities

As mobile integrated healthcare and community paramedic (MIH-CP) programs create new services to help patients, one of the challenges they will face is how best to develop important policies and procedures to guide CPs in their new roles. One critical consideration will be how to provide patients the new types of assistance they need while maintaining the patient’s privacy. This month community paramedic innovator Anne Jensen describes a comprehensive approach to developing those policies and procedures that will help CPs and their administrators think through the various ways patients’ information will need to be exchanged.

Community paramedics conduct a broad assessment of the patient that reveals medical, mental health, social, economic, environmental, and other factors that influence the patient’s health. To provide the variety of resources needed to help the patient, CPs not only need to share these new types of information with healthcare entities, but with mental health, social service agencies, police and others that may not be covered by the agency’s current privacy-related policies and procedures. Anne’s framework for defining the types of information and entities that might be involved is an incredibly useful tool for agencies and attorneys to understand the complex but mission-critical nature of these communications. Thanks to Anne for sharing her experience and guidance in navigating these new regulatory areas.

—Dan Swayne, MIH-CP Advisor

FIGURE 2: EXAMPLE GAP ANALYSIS

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<td>Field disclosures to primary care</td>
<td>Field disclosures to substance abuse treatment center</td>
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ABOUT THE AUTHOR

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PRODUCT APPLICATIONS interviews with end users of EMS products

Connecting Rural Care Providers

When the nearest hospital is miles away, advanced communications can shorten the distance between the patient and lifesaving care.

Matt Tatum, MA, NREMT-P FF, director of public safety for Henry County, VA, knows this firsthand. For the past year, emergency services in his rural community have been using the GD e-Bridge system. Often, he says, “When we pick up the patient and get them to the ambulance, we’re still 20 or 25 minutes from the closest hospital.”

With the e-Bridge system, EMS crews now send secure text, photos, videos, ECGs and other data from the scene to the hospital: emergency department. “It allows the IED to be more prepared for what’s coming in,” he says.

In other cases, Tatum says, the EID physician has used the system to alert a cardiologist, who was at the hospital when the patient arrived. And the ability to send video clips has allowed EMS teams to get physician input when assessing patients for stroke or other conditions.

Tatum says the e-Bridge system also helps improve care in a community that relies on a combination of career and volunteer EMS services.

“A lot of our volunteers are trained as EMT-Basics only,” he says. “When they get that critical patient, the career departments will bring them a paramedic if they need it. With the e-Bridge system, the EMT can send images or messages to the paramedic before he or she gets on scene.”

It’s also helpful that the technology requires little training. Another advantage for Tatum’s community: compatibility with the varied 12-lead ECG technology used among nine first-responder agencies in the region. “The GD product is universal. It works with any of them,” says Tatum.

As a next step, Tatum plans to trial the live-streaming video capabilities of e-Bridge and hopes to implement that with a mobile integrated healthcare service in the future. Plans are still in their early stages, but Tatum foresees it as a way to extend care into the community through both scheduled patient visits and non-life-threatening 9-1-1 calls.

Circle 32 on the Product Information Card

Safe Patient Lifting

Every day EMS professionals are called to lift assist fallen patients, meaning agencies face the daily challenge of workforce safety. The repetitive nature of lifting can cause injury and subsequently lost work days.

Mulberry’s ELK lifting cushion reduces injury risk by minimizing the amount of manual handling required. The compact, portable and battery-powered lifting cushion inflates at a push of a button, raising patients from the floor to a seated position. This makes it easy for them to be transferred off or on a stand.

Chris Mulberry, assistant chief paramedic of Platte Valley Ambulance Service in Colorado, says his agency uses the lifting cushion and is very satisfied with the results.

“The nice part is that it’s not big or heavy, and can be used anywhere,” Mulberry says. “The ELK can be used to lift patients of any age and weighing up to 1,000 lbs. It provides a comfortable, stable and most importantly, dignified lift.

Chirs Lokits of Louisville Metro EMS says the lifting cushions have been “a blessing.” “When doing a lift assist by myself I am confident that I can successfully get the patient up without hurting them or myself,” he says.

Mulberry says the cushion is especially useful when handling elderly patients. “With elderly patients some have more fragile skin because of the medications they take. The cushion makes the lift safer and more comfortable because we don’t need to grab or yank the patient,” Lokits says some elderly patients had concerns at first that the cushion was not stable but after a short explanation those concerns subsided.

The ELK can be used indoors or outdoors, and it is particularly useful if someone has fallen in a confined space. Providers can shimmy or roll a patient onto the cushion, and once correctly positioned, the ELK is inflated using a handset. Providers no longer have to dead-lift patients, reducing the risk of injury.

Even though some contact with the patient is still required, Lokits says the product increases safety for both the patient and the provider.

“A lot of our volunteers are trained as EMTs only,” he says. “When they get that critical patient, the career departments will bring them a paramedic if they need it. With the e-Bridge system, the EMT can send images or messages to the paramedic before he or she gets on scene.”

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Circle 32 on the Product Information Card
The Right Tool for the Job

In EMS, it’s essential to have the right tools for the job. Arion Corporation, based in Florida, helps provide those tools to EMS agencies across the country.

For Ronald Bray, of Nature Coast EMS, this product was Arion’s, pNeuton model S ventilator with CPAP.

The pNeuton model S ventilator allows you to start with mask CPAP and, if the patient needs it, provide ventilation as well. The product is completely pneumatic, so battery or electrical power is not required. Providers can choose between 100% FiO2 or 65% using the device.

Bray says the products he had before didn’t have the ability to alter the FiO2. As a rural agency, this caused some issues.

“The other product we had was completely oxygen generated,” Bray says. “Some transports would be an hour long, and you would need a trailer of oxygen tanks to keep them that far.”

Bray says another big benefit of the pNeuton model S is the ability to have the ventilator. “We use the ventilator during cardiac arrests, and it frees up a person for resources,” Bray says. “It’s kind of like a force multiplier. When we put the patient on a ventilator, the paramedic is free to work on other aspects of the patient.”

Bray says ease of use is another reason the product has worked so well for his organization, and he says it was easy to implement as well.

“We did an in-service and made a laminated card with bullet points for setting it up and we were off and running,” Bray says. “I don’t believe we’ve had any significant operator error with the product.”

Bray says he would “very much” recommend the product to other organizations.

Great Products, Great Service

Quality Education for EMS Students

A quality education is a big part of a successful career in EMS, and Lenor Community College helps provide that education to its students. Equally as important is providing an education that leadership currently in place finds useful.

Mark LaMont, battalion chief, paramedic and training officer at Idylwild Fire Protection District in California, says his organization has worked with Lenor Community College since 2010.

LCC offers paramedic training to students beyond its service area of Lenor, Jones, and Greene Counties in North Carolina. It is one of only two CAAMHEP-accredited distance education paramedic programs in the country.

“The Lenor student’s knowledge, patient care and ability to build patient rapport are outstanding,” LaMont says. “We have found that Lenor students are very well- rounded.”

The college offers multiple EMS programs, including paramedic training, EMT-B training, and multiple outreach programs and bridge programs.

LCC also offers programs to enhance EMS personnel’s existing knowledge, such as advanced trauma education, critical care education, EMS refresher courses, pharmacology for paramedics and more.

LaMont says the process the students go through leaves them aptly prepared for their careers.

“Through our outreach programs, these students are rotating through clinical and hospital settings at the same time, and we believe this provides the students with a practical application during their studies,” LaMont says. “This is rarely found in other programs.”

LaMont also praises the administration at Lenor Community College.

“From the administration’s willingness to work with, and is always helpful,” LaMont says.

LaMont says his organization has benefited greatly from working with LCC.

“Even the most partnering with the college has allowed our paramedic employees a unique opportunity to receive feedback from their students, and it keeps our paramedics on top of their skills,” LaMont says. Visit lenoricc.edu.

Circle 36 on the Product Information Card

Top Notch Customer Service

In every field, customer service is of the utmost importance.

Taylor Healthcare Products, Inc., places an emphasis not just on their products, but how they deliver them as well. In the eyes of Lisa Gray of MedStar Mobile Healthcare in Texas says Taylor Healthcare’s products, customer service are equally important.

“We have looked at other products in the past, but have found these to be superior in quality and the most cost effective products on the market.”

Gray expresses about their customer service as well. “The customer service is amazing. Gray says. “We have had a mishap or two with FedEx mishandling our pallets, and Taylor Healthcare loaded vans with pallets and drove them up from Houston to Fort Worth. That’s what customer service is all about.”

Gray says that compared to other companies, Taylor’s product and service are superior. “As a purchaser, I have looked at other items in the past 10 years that I have been associated with MedStar, and I have yet to find any products that come close to their quality that are cost effective,” Gray says.

Gray says he would certainly recommend Taylor Healthcare’s products to any other agencies, and she has in the past.

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Gray says she would certainly recommend Taylor Healthcare’s products to any other agencies, and she has in the past.

“Have we not had any issues in the last years we have used them,” Gray says. Visit Taylorhealthcare.com.

Circle 38 on the Product Information Card

Staying Current on Tactical EMS

Continuing to learn about your craft is necessary to be the best. This concept does not exclude paramedics, and they must focus on the profession in active shooter situations and tactical EMS, the goals of paramedics are changing to an extent. The Journal of Special Operations Medicine helps its readers accomplish these goals.

Established in 2000 and privately published since 2011, JSOM aims to improve quality of care by promoting education among special operations forces medical personnel. The peer-reviewed journal promotes the examination of the latest advancements in unconventional medicine and provides information and debate on tactical situations and tactical EMS, the goals ofJSOM, provide practical and practical knowledge for military and civilian medicine, respectively.

The financial support of printer/editorial team is a skill set for tactical health professionals worldwide,” Miller says, explaining his preference. Miller says JSOM is innovative and cutting edge in the way it approaches the issues.

“The publication is on the leading edge, providing not necessarily what is relevant now, but what thought leaders envision will be important in the near future and on the horizon,” Miller says.

Because of this, Miller says he recommends JSOM to others, and encourages others to read it. Visit jsmolinema.org.

Circle 35 on the Product Information Card

Bound Tree Medical

Bound Tree Medical focuses on the quality of their service along with the quality of their products.

Carl Flores, deputy director and chief New Orleans EMS, has experienced this firsthand. Flores says they have contract ed with Bound Tree for nearly five years, and have been pleased with the decision.

“The service and the variety of resources they provide has been the biggest benefit,” Flores says. “For example, there have been multiple times where they might have been out of a product in one area, but had it in another area and were able to get it in.”

New Orleans EMS gets nearly all of their products through Bound Tree, and Flores says the quality of the products has been exceptional.

We have not had any issues in all the years we have used them,” Gray says.

Visit boundtree.com.

Circle 37 on the Product Information Card

Great Products, Great Service

BoundTree medical

As a company, Bound Tree Medical focuses on the quality of their service along with the quality of their products.

Flores says one of the most impressive things about Bound Tree, headquartered in Ohio, is the ability of their local and management to provide not necessarily what is relevant to others, and encourages others to read it. Visit jsmolinema.org.

Circle 35 on the Product Information Card
There’s no time like today to fix your fitness

“When it comes to eating right and exercising, there is no ‘I’ll start tomorrow.’
Tomorrow is a disease.” —Terri Guillemets

I stood on the apron, gulping air and water and looking up at a slate grey sky over a foreign mountainous landscape. What am I doing here? Maybe I’m too old, too out of shape. I was 4,000 miles from my home and family and my dream was evaporating because I had allowed myself to become a liability.

I am an excellent paramedic. I am who you want making those critical clinical decisions for your loved one when nobody else can. Trouble is, how can I call the shots if after climbing some stairs I cannot catch my breath long enough to speak? If this is not you then I guarantee you’ve worked with someone for whom you’ve made that exact observation, where you wondered how they could do their job effectively in the shape they are in.

I was allowed to retake the test, this time with appropriately fitting equipment and better orientation with the equipment being used. It was my last chance. I beat the time by a full minute and 27 seconds. I refused to waste this opportunity—if I am to do the job that I still love then I need to function at the best of my ability. I am back in the gym, back in the kitchen, and back to reprioritizing my time and energy.

Eating well and exercising should be cultural norms, not hobbies or side interests. Bring a cooler, make better choices and do the research. Websites like www.fit responder.com or www.555fitness.com have great matching apps and offer strongly supportive programs or else.

Clinical Studies Suggest the Sternal IO Route Improves Patient Outcomes

1. Hoskins, Stephen L, et al: “Based on the present data, we recommend that sternal IO route be considered as the first choice of drug delivery during CPR when IV access has not been established…” (1)

2. Pasley, Jason, et al: “…the sternal IO site provided the highest flow rates compared with the humeral and tibial insertion sites. The sternal site was also associated with a 100% success rate of initial placement facilitated by its consistent anatomy.” (2)

3. Burgert, James, et al: “There may also be a relationship between the anatomical location of the IO device and serum drug concentrations; the more distal the IO infusion site is from the sampling site, the longer concentrations of drug take to rise.” (3)

The quotes above are taken from three of the four important studies reviewed in the Clinical Review Paper by Dr. Alan Moloff. To download the full paper and access references (1), (2), and (3), visit go.pyng.com/sternal-IO

For More Information Circle 39 on Reader Service Card

ABOUT THE AUTHOR

Tracey Loscar, NRP, FP-C, is a battalion chief for the Minnesota State Patrol. Through EMS in Alaska, her adventures started at the East Coast, where she spent the last 27 years serving as a paramedic—educator and supervisor in Novak, NJ. She is also a member of the EMS World editorial advisory board. Contact her at taloscar@gmail.com or www.taloscar.com

9 Seconds

There’s no time like today to fix your fitness

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For More Information Circle 39 on Reader Service Card

THE MIDLIFE MEDIC

By Tracey Loscar, NRP, FP-C
Meet the latest technology in active shooter and mass casualty simulation-based training.

Trauma HAL lets you train triage, care, and transport with the highest degree of realism. Thanks to a fully wireless and tetherless design you can simulate scenarios without interruptions, which improves communication and teamwork.

Trauma HAL® S3040.100

- Rugged and splash proof
- Active eyes, seizures, and programmable secretions
- Difficult airway with surgical access
- eCPR™ – Real-time CPR Monitoring
- Use real monitoring devices: ECG, Defib, Oximetry, EtCO₂, BP
- Bleeding trauma limbs (Quadruple amputee)
- Tourniquet sensors
- Pressure sensitive bleeding wounds and arterial sites
- 1.5 Liter internal blood reservoir
- Wireless and tetherless up to 900 ft.
- Up to 10 hour battery life

Visit www.Gaumard.com and learn why more educators use Gaumard solutions to train emergency and trauma care skills.