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o much in life depends on a change in attitude. However, the cliche that might sound, I have found the principle to hold true during the toughest transitions.

My simplistic example—fitting of the cliche—has to do with the onset of winter. I prefer warm weather, and it took a tweaking of attitude to embrace the coming of winter.

I found it in the winter solstice (which was Dec. 22 in 2015). Although the winter solstice is the shortest day of the year in the Northern Hemisphere, it also launches the sun’s steady climb into longer periods of light. The solstice is the first day of winter and that, to me, means the sun is turning, the days are getting longer, and summer is within reach.

There’s also a beauty to solstice. It is a celebration of light. I can watch the transition in seasons from a chair by a window in our kitchen, and how much I see each day depends on how early I get up for my morning cup of coffee. The window faces east, away from other homes, giving me an unobstructed view to watch the sun rise over the Wasatch Mountains east of our house in Salt Lake City, Utah.

After the summer solstice (which was June 21 in 2015), I watched the sun play hide-and-seek within the foothills while it slowly moved south. Over the next several months, the sunrise I see from my window will slowly move north, repeating the peak-a-boo game in reverse. Granted, the progression is slow. The more days I skip in between, the more noticeable the passing of season.

I can sometimes do the same when riding my bicycle, and that also depends on how early I get up for my commute to work (on non-icy days). Light filters through the foothills, forming patches of sunlight that develop into the blanket of day. Night doesn’t seem to approach. Rather, darkness tends to fall fast like a shade pulled over a window. Night apparently lacks the grace of day.

This visible change of seasons makes the transition not only bearable but, also, significant. For centuries people have watched the transition in seasons from a chair by a window, and how much I see each day depends on how early I get up for my morning cup of coffee. The window faces east, away from other homes, giving me an unobstructed view to watch the sun rise over the Wasatch Mountains east of our house in Salt Lake City, Utah.

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This visible change of seasons makes the transition not only bearable but, also, significant. For centuries people have watched and recorded the movement of the sun. In the Northern Hemisphere, people sang, danced, and feasted—and some continue to do so—on the day of winter solstice. Ancient civilizations were known to make offerings when the sun dipped below the horizon to ensure its daily return.

Neighbors would not take kindly to early morning singing and dancing or burnt offerings outside my house in front of my darkest days. •

DEAR READER  •  •  •

SUN RISE, SUN SET

Audrey Fraizer
MANAGING EDITOR
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Anthony is the Performance Improvement Coordinator for Northwell Health Center for EMS in New York. He has worked in emergency communications since 2001, having served as EMT, field training officer, dispatcher, and communications tour commander. He is a member of the Journal’s Editorial Board.

Art is a software instructor and IAED™-certified ED-Q™ instructor for Priority Dispatch Corp.” He has been a fire and EMS dispatcher for 18 years and works at Union County Regional Communications in Westfield, N.J. Art has been involved in 911 telecommunicator training and medical quality assurance since 1999.

Sherri is the training and operations manager for Waukesha County Communications, Wis., a combined dispatch center in southeastern Wisconsin, just west of Milwaukee, a land where the beer runs freely and locals proudly stack cheese on just about everything and call it great. You can contact Sherri at 262-446-5085 or by email at sstigler@waukeshacounty.gov.

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By June 30, 2015, all U.S. wireless carriers and other text messaging providers were required to respond to PSAP requests to accommodate text-to-911.

That doesn’t mean the Federal Communications Commission (FCC) will require all PSAPs to accept text messages; it does mean that if your PSAP is ready to accept texts, the provider must be capable of supporting the request.

The FCC maintains a monthly update of text-to-911 “PSAP Readiness,” which in November 2015 listed 480 PSAPs in alphabetical order (rather than by date of readiness). In July, Indiana was the national leader in offering the ability to send a text message to responders, with 88 of the state’s 92 counties in “PSAP Readiness.” The saturation is attributed to IN911, an Emergency Services InterNetwork connecting all primary PSAPs in the state, which, since initiated in 2006, has grown to include texting services, IDACS, wireline 911, CAD, database, and disaster recovery systems.

Utah plans a similar approach—a statewide initiative—according to Eric Parry, 911 Director, Utah Communications Authority Network. Earlier this year, the state kicked off its texting to 911 public education program.

The number of text messages received at text-ready PSAPs, however, speaks of the public’s slowly developing readiness to text for assistance, and it is a big driving force behind Utah’s effort to get the word out about the appropriate use of texting to 911. Its slogan: Call if you can, text if you can’t.

According to Barry Ritter, Executive Director, Indiana Statewide 911 Board, only eight of the state’s 911 centers have received more than 50 text messages for assistance since May 2014, when the service officially went online, and 30 dispatch centers have received fewer than 50 messages.

Dane County (Wis.) 911 went live with texting to 911 in mid-November 2015, and in the first few days of operation, the center had received, most notably, a “wonder if this works” text, according to Director Paul Logan.

The commonly used text-to-911 process is fairly standard: Users text for help in the emergency, a notice of the text pops up on the dispatcher’s screens, and, once confirmed, the dispatcher begins gathering information and notifying response.

The International Academies of Emergency Dispatch® (IAED™), through its software partnership with Priority Dispatch Corp.™ (PDC™), gives ProQA® Paramount users the ability to send SMS-compatible, exact protocol-based text to their CAD system. ProQA does not interface directly with the phone system and requires the CAD middleman.

CADs that support this feature with ProQA Paramount and have the readiness to accept SMS through wireless carriers can relay SMS text messages to the caller containing Case Entry (CE) Questions, Key Questions (KQ), and Dispatch Life Support (DLS) instructions, including lifesaving PAIs, PDIs, and safety warnings exactly as they are already written.

Since Chief Complaint selection depends on a series of KQs, the dispatcher simply enters the text caller’s response to safety relocation questions in the Police Priority Dispatch System™ (PPDS®) Caller in Danger (CID) Protocol guides appropriate PDIs.

The dispatcher can customize clarification questions and send the PDIs and PAIs as text messages. Description Essentials dialog boxes are also available.

Texting to 911 is still in its early stages, and, as yet, is not a mirror image of making voice calls to report an emergency. For example, while most 911 systems can pinpoint the tower routing a wireless call to determine a caller’s location, the location identifier is not SMS supported.
Ken:
Looking for assistance!
We have a female living in a group home who likes to eat pens and toothbrushes. Most people have been doing these on Protocol 25: Psychiatric/Abnormal Behavior/Suicide Attempt, as she doesn’t present with any symptoms. Staff has been trying to keep an eye on her but, well, clearly not preventing it. At times the caller has felt she was suicidal; however, other times she is not suicidal and has told the case workers she “likes the way it feels.”

I look forward to hearing Dr. Clawson’s thoughts, especially as this is a weekly occurrence with this patient!

What do you guys think?

Bethany K Walker
City of Biddeford Police
Emergency Communications
FTO/QA
Biddeford, Maine, USA

Bethany:
I have forwarded this to the Academy and Dr. Clawson to get their thoughts. I would give credit to the calltaker if they chose 25 or 26: Sick Person (26-O-21 – Object swallowed). Thank you,

Ken Hotaling
Priority Dispatch System™ Program Administrator—Medical, Technology Integration and Training

Ken and Bethany:
Interesting question, indeed. This is a well-known condition called “pica disorder,” wherein people, or even animals, eat non-nutritional things—some non-problematic and some bad—based on what they are, contain, or do once inside the body. Often these folks have a known mental condition like schizophrenia, autism, obsessive/compulsive disorder, and some have very specific mental retardation syndromes in which this behavior is commonly found.

I have attached below the link to the Wikipedia page on the subject that is very insightful.

Regarding the coding, first would be to select it based on any priority or significant symptoms reported—internal bleeding, abdominal or chest pain. In their absence, I would lean toward using P-26-OMEGA-21 – Object swallowed (without choking or difficulty breathing, can talk), rather than P-25, since most likely in such cases occurring at care or oversight centers, including group homes, the patient’s psych/mental diagnosis is well known, and, even though it contributes to them ingesting strange and inappropriate things at times, that root cause is not the clinical issue being presented.

I would advise that a comm. center/EMS system receiving multiple cases like this, in the absence of priority symptoms, should have a policy in place not to call 911, since these patients do not clinically need an ambulance, hence the OMEGA-level coding. While they might need an X-ray or ultrasound to determine the place or state of passage of the object, EMS transfer should only be done (theoretically speaking) when other patient movement options are not present.

Having a medical director or EMS supervisor visit such a care center to discuss, agree, then formulate a reasonable policy is the name of the game. I have done this as medical director, although not for the exact same occurrences. Hope that clarifies this issue. You just can’t make this sort of thing up, now can you?!

Doc

Having a medical director or EMS supervisor visit such a care center to discuss, agree, then formulate a reasonable policy, is the name of the game.

More about pica can be found at en.wikipedia.org/wiki/Pica_(disorder)
Laboratory-based scientific research generally involves human or animal subjects to test a hypothesis. It also involves white laboratory jackets, bacteria-swabbed Petri dishes, test tubes and stoppers, and microscopes, or some close variation on the biology and microbiology theme.

Right? Not always.

That’s one style of research, however, that is not the methodology the International Academies of Emergency Dispatch™ (IAED™) is seeking to enhance emergency dispatch protocols and, consequently, not the emphasis of discussion at the Academy’s pre-NAVIGATOR research session.

For starters, we don’t have a laboratory at our disposal, and we’re not asking EMDs, EPDs, or EFDs to explain the science behind the causes of emergencies covered in our dispatch protocol systems. The Academy’s emphasis is the validation and improvement of the protocols, and we rely on our research staff, and affiliated councils, institutions, and boards, and you—the protocol users—to keep the systems sharp, relevant, and fine-tuned.

The type of research we want doesn’t involve cell counts or tissue dissection, eye protection to guard against deadly chemical exposure, or anything that remotely presents a potential risk to the investigator. Rather, the Academy relies on far less dangerous approaches, such as data collection through the emergency dispatch systems and/or surveys, and data analysis and interpretation, including case studies, to assist in the Academy’s ongoing commitment to the dispatch science behind protocol.

The following information provides a broad overview of what we will talk about in the pre-conference research session at NAVIGATOR. We want to encourage your participation in research by suggesting ways you can comfortably contribute.

Surveys
Surveys often involve a set of “yes” or “no” questions, a numerical scale (such as a one to five ranking), and/or open-ended questions. Survey responses provide the foundation to associate behavior or a data point in the context of a specific population to help determine trends and patterns—through data analysis and interpretation. In dispatching research, surveys can be given to a wide variety of subjects: dispatchers, responders, supervisors, quality assurance (QA) directors, emergency medical services (EMS) medical directors, administrators, and critical care units. The results can improve existing data or provide a better understanding of specific characteristics in a general group. For example, a survey can look at the association of positive/negative outcomes of providing bystander CPR according to Pre-Arrival Instructions in the Medical Priority Dispatch System™ (MPDS™).

Generally, the length allotted to the research project often favorably corresponds to the strength of the results. For example, comparing patient outcomes (survival to hospital) immediately following the incident (sudden cardiac arrest and bystander CPR) carries a different weight than longer-term outcomes (release from hospital). For users of the MPDS, this might mean accessing data gathered using ProQA® software and, also, reviewing patient EMS ambulance and/or hospital records.

Case study
A case study is designed to share interesting, difficult, or unusual cases with others. It can be based on information/data and resources readily available at the communication center. The challenging part is moving the investigation from a description of “what happens” to a piece of research that can provide a worthwhile addition to educate your staff on the broader emergency dispatch community.

Well-planned case studies offer insight and serve as a vehicle for further exploration.

Benefits
Research findings will provide you with valuable information to help your center and personnel to know and gauge your performance. Support resources are accessible (at the Academy) for research investigators. The time commitment is flexible because the investigation can be done in the comfort of your center. There is no cost to publish the research in the Annals of Emergency Dispatch and Response peer-reviewed scientific journal (www.aedjournal.org) and/or submit it to the annual research poster contest hosted at NAVIGATOR.

See more about the Dispatch Research Data Analysis course at www.emergencydispatch.org/NAVIGATOR/iaed-workshop/
No matter your age, you’ve probably heard these words as a refrain from the famous song by the recently deceased (Jan. 10, 2016) David Bowie, “Changes.” The lyrics encourage us to “turn and face the strange.” Yes, indeed, I’m fairly confident that it most certainly defines what we do in the public safety communications environment on a daily basis. We face the strange. We ARE the strange, and we ch-ch-ch change all the time.

As I write this article, we are living through a major transformation in our center: a new 911 phone system. And we survived! Sure, we prepared; we trained; we practiced. But there is something about the “going live” part that brought everyone to a heightened level of anxiety. Nobody ran screaming from the operations floor. There was, however, a looming presence almost palpable in the room. You could see it in the eyes of the dispatchers as they sat glued at their positions amid the hustle and bustle of technicians, IT folks, implementation teams, and supervisor types. You could sense the uneasy feeling of the unknown, trying to grasp at a new and different way of answering and processing calls ... of ch-ch-ch changes.

Change is especially active at this time of the year in the communication center world. New budgets, shifts, personnel, and policies are rolled out. Maybe some of you are testing an entirely new schedule for the dispatchers. I can tell you that this ch-ch-ch change is one that carries a boatload of increased anxiety, because schedules are absolutely one of the most important and potentially controversial issues in communication centers today. Why? Because in this business, we need to be mindful of when the most calls for service come in and if we have enough staff to manage these high volume times.

We also need to take care of the people behind 911, because they are our core and most precious commodity. Often, the key to finding and maintaining work and life balance for dispatchers can be found within a carefully developed work schedule, one that perhaps offers a shorter work week, more days off in a row, or variations of staffing based on needs of the center.

So the reality exists that our meticulously planned new schedule may do exactly as our scheduling committee hopes it will do. More staff will handle busier times. Dispatchers will be happier and more rested. Life will be good! However, it’s possible that it may unintentionally do the opposite. That’s the danger of change—it always holds the potential of coming back on you with vengeance, just like a spicy dinner.

But here’s the thing—change involves taking risk in order to explore the unknown—the thing that is different, the thing that is, as Bowie points out, “strange.” Just remember that it is our willingness to try something new that often bears positive fruit. It is our motivation to care for our team and our partners that is worthy of making an effort to try something new and potentially better. It is our determination to step outside of our comfort zone and consider the possibilities of positive change that will bring great results. You will never see the rewards of improvement if you fail to try something different in the first place.

Which brings us back to Bowie’s recommendation to turn toward those “strange things.” What do those look like in your center? Will you find the courage to turn toward them, or will you abandon the opportunity to see new life because it looks a little scary on the outside? All things considered, it is my hope that you will embrace the promise of this year by turning to and welcoming those ch-ch-ch changes, no matter how difficult they appear.
S
taying in shape is good for you. Two of my fellow dispatchers go to a gym regularly. Another has been pushing for a treadmill at his console ever since he saw one at a NENA conference. (Walk a mile or two while you’re dispatching . . . what a concept.) It’s strange, if you think about it: We go someplace on our own time when we could be doing something else, and we pay for the privilege of exerting ourselves when we don’t have to—often getting hot and sweaty in the process. We do it because it’s good for us and for the results we can see and feel.

Before you conclude that this is a boring article on fitness or nutrition, it’s not. It is a wake-up call about something we shun even more often than exercise or eating right: getting enough education on the protocols and ProQA. That’s especially important given how far ProQA has evolved. The Academy considers that, beginning as of the year 2000, the full expression and content of the MPDS—soon to be followed by the FPDS and PPDS—can only be fully represented within the automated (ProQA) version of these protocols. By that time, ProQA had evolved to the point where it was no longer possible to duplicate manually what the software could accomplish through its increasingly complex protocol algorithms. In addition, the protocols themselves now address so many specialized situations that the EMD using Medical ProQA will sometimes be able to handle what first responders are untrained for, as happened at Union County Regional Communications (N.J.) when on-scene officers were guided through a very difficult breech birth with Pre-Arrival Instructions relayed through the caller.

Herein lies the problem: The increasing sophistication of the protocols and ProQA mean that you run a serious risk of not being able to handle a critical and rapidly unfolding situation if you don’t train for it and don’t keep up on your protocol knowledge. Passive learning is not enough; you have to go after the knowledge you need. It’s not enough to simply read the comments on your call review and tell yourself you’ll do better next time. There is no such thing as “ProQA for Dummies.” With Key Question answer choices in MPDS version 13.0 like “Cervical cerclage (stitch),” you can’t afford to be ignorant of the definitions, terms, Rules, and Axioms that are fundamental to protocol use.

Recently, three of the dispatchers on my shift asked me if we could get together for some advanced ProQA training. Our manager approved the overtime, they all came in on their day off, and we spent three hours putting ProQA through its paces by going through pathways and permutations that they might encounter in choking, childbirth, and other challenging situations. Everyone attending not only wanted to do it again but requested it on a monthly basis.

Traditionally, continuing dispatch education (CDE) flows from the top down: The Quality Improvement Unit or training staff decides on what the dispatchers need, and they push out education in its various forms. But if you’re a dispatcher, you need to take the initiative as well. Take five minutes during your morning coffee break to review a protocol card or its Additional Information section. Re-

run a call you had and explore some of the other pathways you might take next time. Get together with your peers to request some advanced training or even just time off the floor as a group to challenge each other with scenarios.

A little time at the “ProQA gym” will keep you in better shape for those times that 911 demands more of you. Your callers are counting on you. Keep in shape with the protocols for their sake, if not for yours.

A little time at the “ProQA gym” will keep you in better shape for those times that 911 demands more of you. Your callers are counting on you.
It’s hard to believe that NAVIGATOR is here. It doesn’t seem like a year since we were in Las Vegas. When I boarded the plane for NAVIGATOR 2015, I was both excited and scared. My wife and I were expecting our first child, and I hadn’t exactly planned on leaving her behind when she was seven months along. Luckily, our daughter waited until daddy was home, and baby Cheyenne greeted us in the wee hours of May 31. The phrase “what if it were family?” has certainly hit home in the last year, and I am grateful a center dedicated to using the Medical Priority Dispatch System™ (MPDS®) is only a phone call away.

Helping people in an emergency has been the foundation of my career, which started in 2001 as a dispatcher for two local fire departments and one police department. Because there was no protocol system in place, we dispatched working fires by the seat of our pants, hoping we had sent the right people to the scene and that they would arrive home safely at the end of the day. No matter the call—gas leaks, brush fires, structural fires—we simply obtained basic information and sent the cavalry. We waited to hear if our “response gamble” had paid off and, at the same time, worried if we had gathered and then relayed all the necessary information. Without a protocol to assist in gaining this information and without a standard recording system, the answer was more often “no.”

Implementation of the Academy’s protocol gave us the security of gathering the essential information and relaying that to responders. The information record systems help us tell callers “exactly what to do next” and let us report to agency members and leadership. It has simplified the After Action Reviews (AAR) process. These reviews are vital to high-performing agencies, and if your agency isn’t using the Priority Dispatch System™ as part of your AARs, then jump on board and see what you can do to make it happen.

Having a great center, however, is more than implementing the protocols. That’s a start, but to be really good, the agency must provide the training to motivate emergency dispatchers to deliver the best possible service, provide consistent QI/QA, and work toward accreditation. For managers, this means supporting the drive of QI/QA staff, making sure they have the tools and time required, and becoming aware of their strengths in working to improve and mentor calltakers and dispatchers. With the support of management, QI/QA staff can develop expertise to elevate performance.

Greatness can be achieved, and the Academy helps you find it at NAVIGATOR.

Opportunity is everywhere at NAVIGATOR. While the educational sessions are at the forefront, the conference entertainment is also an anticipated highlight. The big event this year starts with an outdoor party in the Orchard Terrace overlooking the historic Potomac River. Jugglers, face painters, balloon makers, games and prizes, and blow-up slides are only the beginning. Fireworks are the prelude to the “Rock the Block” After Party where a music and dance explosion will continue inside the Woodrow Wilson Ballroom.
Note: The following article is a correction to an article published in the November/December 2015 Journal regarding the use of the FPDS in Maine. The Journal apologizes for any inconvenience the earlier article may have caused.

All PSAPs in Maine will soon be adding the Fire Priority Dispatch System™ (FPDS™) Protocols to the already existing Medical Priority Dispatch System™ (MPDS™) Protocols through funding from the state’s E-911 surcharge.

The Maine law passed in June 2015 provides for PSAP dispatcher training and certification, necessary software and printed support materials, as well as the training and software necessary for PSAPs to implement quality assurance programs to measure compliance. The law allows for up to 5 cents of the E-911 surcharge to fund the program.

The law also directs the Maine Public Utilities Commission’s Emergency Services Communication Bureau to adopt administrative rules related to the adoption, implementation and administration of standardized fire dispatch protocols and to seek input from the management of all PSAPs in developing criteria to phase the program in over the next three years.

In 2009, the Maine EMS Board transitioned to the IAED Medical Protocol statewide, including the IAED™ EMD quality assurance/quality improvement program. Maine EMS Board requires that centers review 100 calls monthly.

Maine approves funding for Fire Protocols

Congress passes 9/11 first responder compensation bill

On Dec. 18, 2015, after months and even years of delays, Congress finally passed the James Zadroga 9/11 Health and Compensation Reauthorization Act. This law provides health benefits, such as medical monitoring and treatment, along with compensation for 9/11 first responders, affecting an estimated 70,000 emergency personnel who survived the attacks.

In October 2015, when key parts of the program began to expire, several legislators attempted to extend the law through the five-year $305 billion highway and mass transit bill that subsequently passed on Dec. 1, 2015; the 9/11 responder funding was not approved as part of the highway package. To renew the 9/11 program through 2025, it would cost an estimated $8 billion to $11 billion.

According to a 2006 study by New York’s Mount Sinai Hospital, an estimated 70 percent of 9/11 first responders and cleanup crew workers developed lung conditions. Those who had existing lung problems reported even worse lung health.

The World Trade Center Health Data Center at the Icahn School of Medicine at Mount Sinai confirmed that, since 2002, there have been 2,300 cases of various forms of cancer for Ground Zero rescue and recovery volunteers.

Lights, camera, apprehension

Response to emergencies at the Veterans Memorial Park in Niagara, N.Y., won’t rely on a phone call, depending on whether town board members approve placement of solar-powered cellular units that self-activate upon detecting motion and instantly connect to emergency dispatch.

The wireless security camera system relies on a cellular network to monitor activity in remote locations that are costly to patrol on a regular basis and, also, alert authorities by SMS to the possibility of an illegal activity.

Town operating costs are estimated at a government rate of $40 a month per line. Although the amount of units has yet to be determined, preliminary quotes price each unit at $6,089. The next step would be determining how many will be needed and where they would be placed.

Many areas have already adopted the technology for the same reasons behind Niagara’s growing concern: remote location patrol when staff is already engaged at full capacity. For example, Los Angeles spends about $12 million a year to clean up waste from illegal dumping, and, according to the city’s Bureau of Sanitation, 65 percent of the 600,000 service requests annually involve illegal dumping. California issues stiff penalties, including fines as much as $10,000 and up to six months in jail.
FDA approves drug in fight against opioid epidemic

The U.S. Food and Drug Administration approved the first nasal spray version of naloxone hydrochloride, better known as Narcan, in hopes that the ease of delivery will help combat the opioid epidemic.

Narcan, which previously was administered by injection, can stop or reverse the effects of an opioid overdose. Many police departments and first responders carry the drug. Opioids include prescription medications such as oxycodone, hydrocodone, and morphine, as well as the illegal drug heroin.

In 2013, the Centers for Disease Control and Prevention reported the number of drug overdose deaths had steadily increased for more than a decade. Drug overdose deaths, driven largely by prescription overdoses, are now the leading cause of injury death in the United States, surpassing motor vehicle crashes, according to the FDA.

Until the FDA fast-tracked approval, Narcan was only approved in injectable form by syringe or auto-injector. Because of the risk of using a contaminated needle, there’s been widespread use of unapproved naloxone kits that combine an injectable formulation of naloxone with an atomizer that can deliver naloxone nasally.

The National Institute on Drug Abuse conducted the clinical trials required to determine that the intranasal formulation delivered naloxone as quickly and as effectively as an injection. Clinical trials have shown that administering the drug in one nostril delivered the same levels or higher of naloxone as a single dose of a naloxone intramuscular injection, and in approximately the same time frame.

Study suggests supportive environment at 911 promotes better health

Training and recognition of the professional skills necessary for 911 employees could translate into improved physical and psychological health at the communication center, according to a study published by the scientific research organization Institut de recherches Robert-Sauvé en santé et en sécurité du travail (IRSST) (Occupational Health and Safety Research Institute).

The study looked at the results of interviews among managers, trainers, and call-takers/dispatchers at 10 different 911 centers regarding difficult calls and suggestions for improvements in the support systems following these traumatic situations (such as callers with suicidal tendencies, arrogant callers, and major emergency events). The study continues previous research aimed at reducing on-the-job psychosocial risks leading to musculoskeletal and psychological problems among 911 employees.

Based on the information gathered, the study’s authors recommend a six-step approach that begins with the creation of a training coordination committee spread across a network of centers. The committee would work collaboratively to develop and distribute content relevant to each particular situation cited.

According to the authors, the “approach would lead to increased recognition of the professional skills needed for the job and of the human beings behind the job title,” and would “translate into protective and preventive measures for employee health.”

Laws limit liability for breaking into vehicles to save sweltering child

In July 2014, Tennessee became the first state in the nation to pass a law that specifically protects people from liability for forcibly breaking into cars and rescuing kids they think are at risk of heatstroke. The law requires those individuals to call 911 first and follow instructions.

Tennessee’s law was novel because of its approach to tackling the issue. Other states make it a crime to leave the child in the car but do not address the legalities of bystander intervention. Some examples include:

- Florida makes it a misdemeanor to leave a child younger than 6 unsupervised in a car for more than 15 minutes or for any time if the vehicle is running or the child appears to be in distress. It becomes a felony if the above action results in great harm to the child.
- The law also allows a law enforcement officer who sees an unattended child in distress in a vehicle to use whatever means necessary to get the child out of the vehicle.
- Nevada makes it a misdemeanor to leave a child age 7 or younger alone in a vehicle if the conditions present a safety risk to the child or if the vehicle is left running.

According to the National Highway Traffic Safety Administration (NHTSA) more than 40 children die each year of vehicular heatstroke.
FYI | in the news

Satellite fitted to enhance ham communications in an emergency

The amateur radio-hosted payload going into orbit with the Millennium Space System (MSS) geosynchronous satellite in 2017 is set to enhance emergency and disaster communication extending over the U.S. from the Mid-Pacific to Africa.

Transmitting emergency communications via the geosynchronous satellite lets amateur radio volunteers provide more reliable communication support since, with a geosynchronous, the satellite will always be within a band of longitudes over the Americas, continually accessible to amateur radio operators.

MSS will operate the satellite on behalf of the U.S. Air Force, while the Radio Amateur Satellite Corporation (AMSAT) will manage the ham radio payload, being designed and built by researchers at the Hume Center for National Security and Technology at Virginia Tech, Blacksburg, Va. The payload must be delivered for testing and integration by spring 2016.

The Hume Center team is also designing a ground terminal that emergency personnel could use to relay communication channels through the satellite.

Amateur radio operators relying on mobile and easily transported equipment have long assisted with emergency communications in the event traditional communications networks collapse. AMSAT was organized in 1969 to foster amateur radio’s participation in space research and communication. The very first Amateur Radio satellite, OSCAR, was launched on Dec. 12, 1961.

FCC wants to expand personal public warning system

Public comments to a Federal Communications Commission (FCC) Notice of Public Rule Making (NPRM) could lift the Wireless Emergency Alert system (WEA) to the next level of service by providing more community-initiated alerting and, in addition, expand the amount of information relayed.

The notice was released Dec. 14, 2015, and comment was due Jan. 13.

WEA sends an alert to smartphones when an event threatens public safety, such as tornadoes, flash floods, winter storms, and Amber Alerts. The smartphone sounds an alarm and flashes a message of up to 90 characters across the screen. The alerts from authorized national, state, or local public safety officials are sent through FEMA’s Integrated Public Alert and Warning System (IPAWS) to wireless carriers, which then push the alerts from cell towers to mobile devices in the affected area.

It’s the brevity of information 90 characters can relay that the FCC addresses in NPRM. The FCC is asking for an increase to 360 characters to provide more specific information, such as instructions to follow during an emergency.

The NPRM would require participating wireless providers to geo-tag alerts and deliver the messages to a more concentrated geographic area. WEA is a free system and allows carriers to opt out at any time.

Number of PSAPs declines; wireless readiness increases

As of December 2015, the U.S. has 5,899 primary and secondary PSAPs and 3,135 counties, which include parishes, independent cities, boroughs, and census areas, according to the National Emergency Number Association (NENA). The figure represents the steady decline in the total number of PSAPs in the U.S. Since 2013, for example, the Federal Communications Commission’s PSAP Registry shows a drop of about 2,500 PSAPs, a number that includes 908 PSAPs considered “orphaned” and are no longer utilized.

The decline in PSAPs, however, has not daunted the country’s wireless readiness implementations. According to NENA, 99.1 percent of PSAPs have some Phase I (calltaker automatically receives the caller’s wireless phone number), and 98.3 percent have some Phase II (allows calltakers to receive both the caller’s wireless phone number and his/her location information).

NENA, in partnership with the U.S. Department of Transportation (USDOT), and other stakeholders, conducted a Wireless Implementation Program to stimulate wireless Phase I and Phase II implementation throughout the U.S.

Services developed as a result of the program include the NENA/USDOT Clearinghouse, featuring documents useful to PSAPs, wireless carriers, and 911 service system providers, and the Wireless Deployment Profile that provides information about state, county, and PSAP wireless readiness.
Queensland Emergency Operations Centre handles it all

Two parallel wings in the Queensland Emergency Operations Centre (QEOC) in Kedron, Australia, accommodate State Disaster Center and the Triple Zero Communications Center for both the QAS and the Queensland Fire and Emergency Services for the greater metropolitan area of Brisbane.

The QAS 000 communication center, which handles more than 600,000 Triple Zero (000) calls every year, includes 10 dispatcher and 34 calltaker stations, supervisory staff, and secondary triage and referral positions.

The major incident room has three dispatch and calltaker consoles set up for use during large occasions such as concerts and sporting events. A gallery above the floor gives visitors a view of operations without disturbing the work going on at the center, and the entire staff can view real-time traffic camera feeds, hospital status, weather information, and live news from the large video wall, allowing immediate delivery of updates to field responders.

Newly formed European organization exploring best EMS practices

The newly formed European organization exploring best EMS practices will hold its inaugural EMS meeting (EMS2016) May 30 to June 1 in Copenhagen, Denmark.

Designed to emulate the goals of the U.S. Gathering of Eagles, an organization created in 1997 for EMS medical directors and chief medical officers, the European congress will act to stimulate innovation and best practices in EMS. Establishing an EMS Leadership Network in Europe is a primary task planned at EMS2016, along with providing a platform for the exchange of information.

According to Jerry Overton, Accreditation Board Chair, International Academies of Emergency Dispatch™ (IAED™), and EMS2016 co-founder, the three-day meeting will be a catalyst for future research, education, and product development.

“At EMS2016, we will create a setting where the leading experts in the field can share their experiences and where you as a participant have the opportunity to contribute with professional input across different fields,” Overton said.

In addition, EMS2016 will host the scenario-based European EMS Championship that tests an EMS team’s ability to manage patients in various circumstances with common critical medical conditions and trauma, with an international team of judges selecting the winning team following two days of competition.

More information about EMS2016 is available by contacting the congress secretariat at ems2016@regionh.dk.
So, why did the Academy trade in the traditional paper route in favor of an electronic data exchange system?

What’s all this about going green?

If you’ve spent far too much office time hunting through stacks of paper looking for a performance statistic or certification date and grimacing each time you have to make multiple paper copies when correcting an error, the answer is easy.

“It was frustrating,” said Carlynn Page, IAED™ Associate Director and ACE Project Manager. “It was frustrating for me. It was frustrating for reviewers, and it was frustrating for people going through the ACE process.”

And there’s no getting around the benefits of making the switch to online accreditation, Page added.

For example, going paperless, she said:

- Enhances document security (through the use of encryption)
- Provides quicker access to information
- Makes the process accessible anywhere
- Boosts productivity
- Improves data quality

The Academy’s Electronic Data Interchange (EDI) system automates the entire ACE process, making it faster, more economical, and simply better for everyone compared to the old way of paper, binders, and shipping costs. It provides end-to-end content management by linking documents to content gathering, tracking, and compiling and organizing for an efficient one-stop shop for ACE application management.

Every point of accreditation—from Point 1 to Point 20—can be completed online using software that integrates tutorials, task assignments, color-coded progress bars, and virtual Academy assistance. The steps begin at authorization—the agency enters data identifying it as a current user of the medical, fire, police, or ECNS™ systems. Once Page verifies the information, the process is a go.

ACE crowd pleasers—and there are already 199 applications submitted using the EDI since it opened for operation in October 2014—include real-time analytics that visually display the percent of work completed and the percent yet to be completed in each of the Twenty Points.

Real-time analytics gives instant access to the most current data, which means ACE data can be reviewed using a more dynamic approach with less interruption to workflow. Real-time analytics also alerts Page to when and where assistance is needed before she’s asked. A variety of permitted users can access the detailed transaction data in a timely fashion (granted they are provided official access) that is in a far more protected environment than filing cabinets, bookshelves, and desktops.

“You’re able to see the tasks still in the application process and how much of the...
work remains for each point,” she said. “The less work in progress, the closer you are to submitting your ACE application. It really adds to motivation.”

The EDI approach also requires far less storage space for future reference since everything is archived on a hard drive available to the Academy and the respective center. Other benefits include cleaner documentation, speedier confirmations, and daily reports that give an up-to-date audit trail and application status. There are no time delays to transport the data. A new submission process gives users the choice to upload documents and/or enter text for each sub-point.

Melissa Blessing, Public Safety Dispatcher III and Training Specialist, manages the tri-ACE process for Harford County Department of Emergency Services, Forest Hill, Md. She said the paperless process saves her time. One grammatical, factual, or contextual change and she’d be leafing through three binders—or more depending on the point—to find where the change needed to be made.

“That takes time,” Blessing said. “And then there’s sending the binders to the Academy. It all added time to the process.”

There’s also time saved in organization by going online, compared to putting pages into a binder.

“If the information was somewhere else than where you thought it should be, that prolonged the process,” said Don Perry, EMD/QA Coordination, in-house EMD Instructor, Metro/Nashville Emergency Communication Center, Tenn. Perry understands both perspectives, having been a reviewer for the Board of Accreditation for nearly 10 years and responsible for his agency’s ACE packets. Metro/Nashville is an accredited EMD ACE since 2000, and an accredited EFD ACE since 2010. So far, he’s only been on the review side, anticipating what his experience will be going through online re-accreditation.

“I hope it’s as easy for the user,” he said. “I really do hope that’s the case when I’m ready to submit ours for re-accreditation.”

But it’s not just time saved; trees are saved too.

The pieces of paper needed to satisfy the Twenty Points of Accreditation requirements could run up to 400, beefing up the ACE binder to an unhealthy 4 pounds. Two sets of binders were required, potentially adding up to 800 sheets of paper. A ream of paper (500 sheets) equals 6 percent of a tree.

“Multiply that by the number of ACE binders we receive each year, and pretty soon you’re talking about a forest,” Page said.

Visit the Academy’s online accreditation site to start your journey toward ACE at accreditation.emergencydispatch.org

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**ACE goes GREEN**

- **400** pages per binder (average)
- **Two** binders per ACE application
- **198** applications since EDI became available = 396 binders
- **396** binders x 400 pages = 158,400 sheets of paper
- **158,400** sheets of paper = 316.8 reams = 19.7 trees
- **198** sheets of paper (two binders) = slightly more than one-quarter of a tree (26%)
- **198** sheets of paper (one ream) = one-sixth of a tree (16%)
- **800** sheets of paper (four binders) = one tree

Visit the Academy’s online accreditation site to start your journey toward ACE at accreditation.emergencydispatch.org
Brett:
El Paso County Sheriff’s Office recently had a call involving a 2-year-old girl on a BiPAP (Bi- or two-level Positive Airway Pressure) machine not awake/breathing problems, and it raised some questions.

Because these machines are now commonly used for a wide range of medical reasons, I was wondering if there was any information from the Academy. Are there any forthcoming instructions dealing with these machines?

Thanks in advance for any help you can provide.

Connie Chavez
QA Analyst for Teller County
El Paso-Teller County 911 Authority
Colorado Springs, Colo., USA

Connie:
BiPAP and CPAP (Continuous Positive Airway Pressure) are common types of therapy that assist breathing by helping to maintain an open airway. Most commonly, BiPAP and CPAP machines are used to treat obstructive sleep apnea, a condition where the patient’s upper airway becomes obstructed when the patient falls asleep. This condition is similar to common snoring, which is essentially a partial airway obstruction that does not completely stop regular breathing. Sleep apnea patients typically snore, and each expiration shortens in length until the airway relaxes enough to become completely obstructed and breathing ceases or pauses. When the patient’s carbon dioxide level then increases to a critical level, and blood oxygen levels drop, the patient gasps to breathe, and typically does not completely awaken, and the cycle starts over again. These pauses in breathing can last anywhere from a few seconds to a minute or more, and they may happen many times per hour.

Obviously, this condition is not healthy, as the fluctuating oxygen and carbon dioxide levels, as well as the startling interruptions in deep sleep, can have side effects such as rapid and/or irregular heart rate, high blood pressure, and loss of needed sleep, among other things. Sleep apnea increases one’s risk of heart attack, heart failure, stroke, diabetes, and obesity. Additionally, because sleep apnea patients are often deprived of sleep, they are more at risk of having a driving or work-related accident.

The difference between a BiPAP and a CPAP machine is pretty simple. The CPAP blows air into the patient’s airway at one continuous pressure, whether the patient is inhaling or exhaling. Conversely, the BiPAP machine produces one pressure for inhalation and another for exhalation. Either CPAP or BiPAP may be prescribed for sleep apnea, depending on the results of a sleep test, and other factors like price, comfort, noise, etc. BiPAP machines are also used to assist patients with lung issues such as Chronic Obstructive Pulmonary Disease (COPD) or congestive heart failure, as these machines provide extra support for the lungs, including help with the elimination of carbon dioxide from the blood.

Now that I have bored you with the details, here’s a more direct answer to your question about how the EMD should handle cases in which a BiPAP or CPAP is involved. Remember, these machines do not actually breathe for the patient like a ventilator does. Therefore, removing the machine to assess or access the patient is not problematic. If there is no need to remove the machine, simply leave it on, but make sure it is running.

Here are some example scenarios:

- If the patient is breathing effectively then s/he should be left on the machine.
- If the patient is not breathing effectively and needs CPR with ventilations, the machine must be removed.
- If the patient is in arrest and you are providing compressions only, the machine should probably be removed to facilitate compressions on a hard surface.
- If the machine can be left on without obstructing rescue efforts, that’s fine, but the compressions are the priority when the patient is in arrest.

I hope this has answered your question. Please feel free to keep ‘em coming!

Brett A. Patterson
Academics & Standards Associate
Medical Council of Standards Chair

Does Academy have plans for instructions in protocol?

Brett Patterson

PAP MACHINES

BiPAP and CPAP machines are used to treat obstructive sleep apnea, a condition where the patient’s upper airway becomes obstructed when the patient falls asleep. This condition is similar to common snoring, which is essentially a partial airway obstruction that does not completely stop regular breathing. Sleep apnea patients typically snore, and each expiration shortens in length until the airway relaxes enough to become completely obstructed and breathing ceases or pauses. When the patient’s carbon dioxide level then increases to a critical level, and blood oxygen levels drop, the patient gasps to breathe, and typically does not completely awaken, and the cycle starts over again. These pauses in breathing can last anywhere from a few seconds to a minute or more, and they may happen many times per hour.

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Here are some example scenarios:
Two dispatchers are sitting in the break room. One asks the other: “So, why do you think we need incident dispatch?”

The other dispatcher, who happens to be Portland Regional Communications Center (Portland, Maine) Supervisor Anthony Favreau, answers: “Because it gets the incident out of the room.”

That, in a sentence, is a major reason Favreau favors taking dispatchers trained in incident dispatch out of the communication center and on the road to manage resources on scene from a command post during a major incident.

“Phones don’t stop ringing inside the center because you have a building fire or mass shooting,” Favreau said. “No, the phones keep ringing and everything else your center usually handles doesn’t go away.”

Favreau has been in dispatch for his entire career, and he is specially trained to provide crucial incident dispatch during a large-scale emergency. As part of an incident dispatch team (IDT), he assumes tasks that had previously been assigned to line staff that, in turn, is now able to resume tactical operating. The IDT may also provide status support, resource tracking and accountability, and just plain “know how” in finding information from dispatch experience.

Take for instance a three-alarm apartment fire in Portland on Nov. 1, 2014, that killed six adults in their 20s. The number of apartments and the difficulty of knowing the names of people visiting (non-residents) when the fire occurred complicated identifying the dead on scene.

That’s where Favreau’s experience shined.

“I assisted with other support from the center to help identify four of the deceased persons from resources available,” Favreau said.

He also emphasized the help provided by people at the communication center.

Favreau spent nearly 16 hours at the scene, which, he said, stands out as a qualifier for selecting an incident dispatch team from available staff. It’s not a good fit for a “40-hour” person who packs up at the end of a shift, nor for someone who likes the day-to-day routine of claiming a favorite chair for sitting out the shift at a CAD. A less-than-professional demeanor is also unfavorable.

“We have people [in high places] coming into the command center,” Favreau said. “You want to make sure the people well represent your agency. You want the best and the brightest.”

And you want to keep the best and brightest working for your agency, said Dave Larton, First Contact 911 instructor and 35-year emergency response veteran.

“You have to give them opportunity,” said Larton, whose credentials include certified incident communication center manager and founder of the National Incident Dispatchers Association. “These are people who want to give the extra. They like being part of a team, and anything you can do that adds to the job keeps the best people around for a longer time.”

While motivation is essential, it also helps to have the appropriate equipment available. For example, Portland’s $500,000 mobile command unit doubles as a conference and communications center and as backup for the dispatch center. Portland and South Portland police and fire have access to the unit.

If a mobile unit is not within budget, there’s always the option of working from a laptop from the back of a police chief’s vehicle or—for the really dedicated and adventurous dispatcher—signing up for TERT (Telecommunicator Emergency Response Task force). Dispatchers qualifying for TERT respond to large scale, multi-jurisdictional emergencies, such as Hurricane Katrina.

“When you think you’re really good at your job, TERT lets you take it to the next level,” Larton said. “Sometimes it scares me half to death going where the radio frequencies, CADs, and voices are different from what I’m used to, but if it sounds like a great challenge to you, sign up. We’d love to have you.”

More information and resources are available at www.incidentdispatch.net
TODAY’S PHONE HOAXES CAN BE DEADLY SERIOUS
Dispatch can hit back when it comes to swatting

Audrey Fraizer

A popular prank call prior to the advent of caller ID was the question “Is your refrigerator running?” The unsuspecting “victim” who said “yes” to the question would be told “You better go catch it.” Sometimes, a prankster would call a pizza parlor and order an anchovy and sausage pizza for delivery to the home of a friend, now considered former for reasons only junior high students can understand.

Except for the interruption and unwanted pizzas, the pranks were silly and harmless, and—unless the victim was a frequent target of a spiteful caller—the phone pranks were nothing that provoked police surveillance or response.

“There’s nothing new about prank phone calls,” said Christopher Carver, NENA Director of PSAP Operations, during the free webinar on swatting sponsored by NENA and the National 911 Office. “They’ve been around a long time.”

And while refrigerators keep on running and pizza parlors verify delivery addresses, phone pranks are here to stay, and, in this day and age, they are ascending a gag ladder built on technology and social media.

Not all the gags are silly and harmless. Despicably aimed false 911 SWAT calls result in serious consequences.

Swatting is neither funny nor valuable to the common good. Swatting is the malicious act of deceiving an emergency service. Swatting goes hand-in-hand with cellphones (no pun intended) since the hard-wired landline phone system was immune to attack.

“Social media and the ability to create distance [from the actual source of the call] are unique components, along with advances in technology, that will probably make phony calls impossible to eradicate,” said Carver, retired, Deputy Director of Dispatch Operations for New York City Fire Department (FDNY). “We can take steps to reduce the frequency and lessen the impact, but they’re not going away.”

Swatting

Swatting is not a new phenomenon. Internet gamers are credited as among the original swatters. They could use gaming technology to hide behind online personas and fake names to deceptively report their online opponents had a gun and were taking hostages in the real world outside of the gaming platform. The response from law enforcement often drew full-scale SWAT teams to the location (thus the name swatting); the gamer could post the response on social media to impress and entertain others with his or her hoax.

Swatting also became a means of getting back at someone. The intent was spiteful. This was a game of evildoing.

In 2009, Matthew Weigman, then 19 years old, was sentenced to 11 years in federal prison for telephone conspiracy that included swatting. Weigman and co-conspirators—many receiving federal sentencing, also—were convicted of using
There are giveaways despite how meticulous the preparation. For example, in the age of cellphone preference, a tragic or otherwise monstrous event generally results in calls flooding the comm. center.

Swatters can purchase prepaid spoof cards from spoofing services, and when ready to initiate the spoof call, they do so through the spoofing service provider’s website or app. The spoofing service provider calls the swatter back at the real phone number, calls the target’s number, and links the calls together, providing the spoofed caller ID information to the target.

Spoofing makes the 911 swatting crime difficult for police, and spoofing services are not always eager to provide the names of their customers. “After all, they are being paid for services that hide identity,” Fletcher said.

In any situation, however, there are giveaways, despite how meticulous the preparation. For example, in the age of cellphone preference, a tragic or otherwise monstrous event generally results in calls flooding the communication center. There’s more than one call to report the event.

“We have to treat everything as real,” Fletcher said. “But think about it, do you ever receive just one call to report a highway crash? Would someone take the time to look up a 10-digit number and use that to make that call? These are red flags. Something about the call doesn’t make sense.”

**NENA guidance document**

Swatting calls come from two sources, according to a guidance document released by the National Emergency Number Association (NENA); direct to the PSAP or relayed from a third-party through a telecommunications relay service or a “Good Samaritan” using social media. If the incident is identified as a possible swatting, law enforcement will investigate, and the PSAP should be ready to provide the following information:

- Call recording (if a voice call)
- Call detail information from the 911 and telephone systems providers.

Note: Some system logs are purged after a short period, and notifying these providers early may help to preserve evidence. Request info from each provider and work back through the path of call origination. This information may not be provided to the PSAP, but notifying the provider to capture the log information will assist the investigation.

social engineering and other scams to obtain a target’s personal data, impersonate telecommunications employees, and harass their victims to carry out dozens of swatting incidents, along with other crimes!

Their hacking schemes were often variations of older scams and newer spoofing technology. They “pretexted,” pretending to be employees or customers of a phone company in order to obtain private information; they used war-dialing to dial thousands of phone numbers from a computer to gain system access; and they traded passwords with phone hackers known as “phreakers.”

In a high-profile swatting hoax in California, gamer Nathan Hanshaw agreed to plead guilty to a federal charge of making interstate threats to use explosives and firearms. Tracing the calls would have taken months had it not been for information obtained from a second gamer initially suspected of the crime. The swatting calls had been placed through the Internet, and the caller was technologically savvy enough to shield the source computer by using a clone of a modem, according to reports.

The state of California now requires those convicted in swatting cases pay restitution for the cost of the law enforcement response, which can run into the tens of thousands of dollars.

Weigman’s and Hanshaw’s technical abilities that included caller ID spoofing combined with their dogged determination went far beyond the skills of most phone phreaks, even the veteran hackers, and that’s the good news.

“If spoofing becomes a problem, this would be a bad, bad day,” said Mark Fletcher, Chief Architect, Worldwide Public Safety Solution.

**Getting the goods on the target**

A good swatter doesn’t make a call at the spur of the moment. A good swatter does his or her homework. A good swatter will know how to use social engineering and pretexting to learn as much as possible about the target before making the fake call. Swatters might be savvy enough to disguise their voice and, if not, they can buy cheap technology readily available to do it for them (social engineering).

In pretexting, another form of social engineering, the swatter obtains target data by creating an artificial, non-threatening scenario to mask true intentions and use the information to make the fake swatting story sound real. A swatter might find the target’s home address, phone number or IP address, and information about the target’s family by contacting customer service departments, such as Amazon and PayPal, and pretending to be a chat support agent or the customer targeted.

“They attack the weakest piece in the chain, the human element,” Fletcher said. “Swatters work on emotions. For 911 dispatchers, you have a caller crying out for help.”

The technological piece “caller ID spoofing” allows callers to deliberately falsify the telephone number and/or name relayed as the caller ID information to disguise the identity of the calling party. A caller ID spoof tricks the telephone network into giving a location that’s different from the actual location of the swatter. It’s not new technology, and spoofing services were originally created for valid reasons—for example, to show the general number of a multiple physician practice and not the individual numbers of the practicing physicians to discourage patients from calling back individual numbers or extensions for lab results or condition reports, Fletcher said.
Information gathered from the calltaker and any additional notes (the elements that make the call suspicious, such as background noise the calltaker heard during the call and the tone of the caller’s voice) 7

Communication centers can also take precautions to prevent caller ID spoofing, Fletcher said. If the call raises suspicions, the dispatcher can contact the cell tower and request the phone number to determine the caller of the incoming call. In the second approach, the dispatcher can call back the number of the incoming call using an unlisted number to check for a busy tone.

“If someone answers, it’s a tip-off for a suspected caller ID spoofing,” Fletcher said. “If the number is busy, it’s possible that the incoming call is truly coming from that number.”

Carver said dispatchers must rely on their skills.

“Keep the caller on the phone and collect as much information as possible,” Carver said. “Listen to background noises and the caller’s voice. These elements might provide valuable clues that this is not a legitimate incident. This information is important to give responders.”

Fletcher said finding the swatter involves following the breadcrumbs and working with other centers.

“Think of it as data forensics,” he said. “You need to have a suspect to look for a match. This is why Network IP tracing evidence needs to be collected and shared.”

Protocol

The International Academies of Emergency Dispatch™ (IAED™) does not have a specific protocol to handle these types of calls since it involves a false reporting of an incident with the intent to illicit a tactical response.

Protocol is not designed to support fabricated incidents, and any incident is up to local response configurations.

Although the ability to identify and respond to swatting is a local issue, protocol provides the ideal point of departure, said Shawn Messinger, Priority Dispatch System™ Program Administrator—Law Enforcement.

Make sure you have strict enforcement and strong punishment. Enforcement is a critical, critical piece to let them know you’re taking this very seriously. There will be consequences.

“Response can start with a good statement obtained from the CE [Case Entry] question ‘Okay, tell me exactly what happened,’” Messinger said. “Each agency has its own due diligence to determine a real incident from a false one, and, in the end, communication centers are only as good as the information provided to them.”

While protocols are the best tool for eliciting quality incident information from a caller, a person devious enough to make the call is generally devious enough to mask identity and perpetuate the mistruth. Weigman, for example, was known for his ability to imitate voices and maintain the intensity of the situation—fake from his angle—during the call.

“If a person intentionally wants to deceive a calltaker, that can be tough to defend against,” Messinger said. “That’s one reason why we teach the concept of foreseeability in the legal section of our universal materials.”

According to the law, “foreseeability requires only that we draw reasonable conclusions from the data given by the caller. That is the EMD [EPD/EPD] is not required to predict that a certain set of circumstances will result in findings reported at the scene that are not reasonably similar to the data given.”

Furthermore, the IAED maintains that legal protection for the EMD/EPD lies with the concept of foreseeability and that “It is reasonable to assign dispatch priority based on what the caller says. If the caller’s information is incorrect, the EMD/EPD cannot be faulted, assuming that the EMD/EPD followed protocol and made reasonable efforts to obtain the appropriate information.”

Make consequences clear

Carver recommended preparation.

“The best measures for an agency are taken ahead of time to stop these calls from happening,” he said. “Make sure you have strict enforcement and strong punishment. Enforcement is a critical, critical piece to let them know you’re taking this very seriously. There will be consequences.”

The NENA and National 911 Program guidance document provides several precautionary recommendations, and these include coordinating policies among responding and investigative agencies, reviewing PSAP policies and procedures, and updating training to cover information on swatting. 9

Sources

7 See note 4.
9 See note 4.
10 See note 5.
OnStar crash data includes Injury Severity Prediction.

EMD-certified OnStar Emergency Advisors can relay crash data that includes Injury Severity Prediction (ISP). Using Automatic Crash Response* data — such as change in velocity, direction of impact and more — the ISP algorithm calculates and reports if there is a high probability of serious injury. This helps you prepare for the scene and make decisions about the best treatment center for patients. It’s our way of helping you deliver the right care, right away.

Learn more about Automatic Crash Response and ISP at onstarISP.com.

*Visit onstar.com for vehicle availability, details and system limitations. OnStar acts as a link to existing emergency service providers. Not all vehicles may transmit all crash data. ©2016 OnStar. All rights reserved.
Game Changer

CPR required at the high school level opens the field for lifesaving plays

Audrey Fraizer

The solid rubber ball Louis Acompora blocked with his chest during his first high school lacrosse game was part of the sport the 14-year-old had been playing since the second grade.

The shot was routine, coming in level to his chest, and so like most goalies, if he could not stop with his stick, he would use his chest to stop the ball from entering the net. And that was it.

He stumbled and collapsed. The captain and goalie of the Northport High School, N.Y., freshman lacrosse team didn’t make it off the field alive despite the trainers and coaches rushing over to administer CPR.

It didn’t have to end that way.

“He could have been saved,” said his mother Karen Acompora.

But he wasn’t. The automated external defibrillator (AED) that could have saved Louis’ life arrived too late, nearly 15 minutes after the blow to his chest.

“I am 100 percent sure our son would be here today if an AED had been present,” Acompora said.

Moving through their grief

The Acompora family changed irreversibly and tragically on March 25, 2000, the day that Louis died. Fast-forward 15 years to May 31, 2015, when Louis would have been celebrating his birthday or, as his mom prefers, in the present tense.

“He turned 30 this May,” she said.

The family turned their grief into a cause.

Karen Acompora and her husband, John, learned all they could about the “arrhythmic event” called commotion cords that killed their son, which, at the time, was nearly as tough to find as an AED in a public school. They certified in CPR/AED and later so did Louis’ younger sister, Alyssa.

They acted on what they learned, starting locally with the founding of the Louis J. Acompora Memorial Foundation (also called LA12, which is a combination of his initials and the number “12” on his lacrosse jersey). The nonprofit LA12 is dedicated to sports safety with a focus on placing AEDs in all public schools.
Family friends, including Louis’ lacrosse coach, rallied to their side, and together they pursued a law mandating AEDs in all New York public schools. The legislation, Louis’ Law, was signed in 2002.

They partnered with the American Heart Association (AHA) to raise public awareness of cardiac conditions and increase the push for mandatory CPR and AED training in public high schools, making it a requirement for graduation.

**Hands-only CPR in high school**

This past year, the Acomporas had another reason to celebrate in honor of their son.

On Sept. 17, 2015, New York became the 26th state mandating hands-only CPR training as part of public school curriculum. When combined with numbers from the other 25 states, 1.5 million high school students in nearly 50 percent of U.S. public high schools will be trained in CPR every year.

New York law requires the Commissioner of Education to make logistical recommendations to the Board of Regents in regard to requiring high schools to train students in CPR and the use of an AED. Students will be trained using AHA Hands-Only™ curriculum, and schools may choose from a variety of low-cost and no-cost options that provide hands-only CPR instruction, including programs and personnel from agencies such as the Suffolk County Regional EMS Council (REMSCO), NY.

The road has been a long one, Acompora said.

“Advocacy is a job we do every day, and getting something like this passed in a state takes the persistence of advocates,” she said. “It also takes someone in a state’s legislature willing to listen and act.”

The legislation is the perfect step forward, said Tom Lateurele, Chief, Training and Education for the Suffolk County Department of Health Services/EMS Division, which features the largest AHA community training centers in the Suffolk County region.

“The first link in the chain must start immediately, and the more people we can get trained, the better our resuscitation survival rates,” he said. “If this helps—and it certainly will—we’ll take it.”

Lateurele’s office has certified close to a thousand providers for the New York State EMT-B, EMT-I, EMT-CC, and EMT-P certifications through courses sponsored by the Suffolk EMS Division. The division’s full-time staff member, Ellen Kmosinski, oversees the training for the AHA Training Center that also provides separate courses for instructor certification. The instructors—there are now more than 200 certified—are available to give CPR instructions anywhere in the region, including high schools that have requested the training for several years prior to the current mandate.

Lateurele said the hands-only CPR required for the high schools is “very popular” nationwide no matter the age of students and takes only about 30 minutes to teach. The method, by AHA instruction, has just two easy steps: *If you see a teen or adult suddenly collapse, (1) Call 911 and (2) Push hard and fast in the center of the chest to the beat of the disco song ‘Stayin’ Alive.***

Medford (Suffolk County, N.Y.) Volunteer Ambulance EMT Bobbi DeBono helped train more than 2,000 Patchogue-Medford High School students in hands-only CPR through the Citizen CPR program of the Suffolk County Chief’s Association.

Citizen CPR teaches the hands-only method, and in the two years since the program started, volunteers such as DeBono have provided instruction for more than 6,000 residents of Suffolk County.

“The more people know what to do the better it is for the patient and the ability to perhaps bring a person back to leading a very viable life,” said DeBono, an active member of Medford Volunteer Ambulance Inc. for 37 years. “Too often, we respond to a scene where the family or some relative is standing over the patient crying and screaming but not knowing what else to do to assist them.”

DeBono whole-heartedly supports the legislation and has found high school students receptive to learning CPR and—in some cases—motivated by the course.

“The majority thanked me,” she said. “Some even approached me afterward about getting into the medical profession.”

**Long-term effects**

Training introduced at an early age also has long-term effects in alleviating the fear associated with providing CPR to a stranger, said cardiologist Lawrence Phillips, M.D., Assistant Professor, Director, Nuclear Cardiology, New York University Langone Medical Center and member of the AHA board of directors in New York City.

“What better than to start with students?” he said. “It’s a game changer. Think
of the number of people one high school student can influence. It’s exponential. The power of this program is tremendous.”

According to the AHA Heart Disease and Stroke Statistics—2014 Update, more than 1,000 people suffer non-traumatic cardiac arrest outside hospitals—including nearly 30 children—each day in the U.S. Overall survival rates are about 10 percent. Among young victims, the survival rate is about 5 percent.

In addition, according to the AHA:

- Hands-only CPR performed by a bystander has been shown to be as effective as conventional CPR (CPR that includes breaths) in the first few minutes of an out-of-hospital sudden cardiac arrest. Provision of conventional CPR may be better than hands-only CPR for certain victims, though, such as infants and children, adults who are found in cardiac arrest, or victims of drowning or collapse due to breathing problems.

Medical Priority Dispatch System” (MPDS”) v13.0 contains a new option for a Compressions Only pathway that must be authorized by Local Medical Control. The Compressions Only pathway provides agencies a choice between the current Compressions 1st pathway and the new Compressions Only pathway (see accompanying story).

Public awareness

The blunt and non-penetrating crack of the hard lacrosse ball into Louis’ chest profoundly altered the electrical stability of his heart, resulting in cardiac arrest and sudden death from ventricular fibrillation. There was no relation to a genetic abnormality of the heart.

“The coaches thought he was breathing,” Acompora said. “His breathing was agonal, and, at that time, we had no idea what that meant.” The cause, they later learned, has a name: commotio cordis (agitation of the heart). Although considered a rare event, the impact must occur within a specific 10–30-millisecond portion of the cardiac cycle.

The Acomporas were stunned.

“This is something we would never expect,” Acompora said. “We had no way of knowing this could happen to him.”

They found they weren’t alone. Commotio cordis is a leading cause of sudden death from cardiac arrest for young, predominantly male athletes with no underlying cardiac disease and the reluctant motivator behind Parent Heart Watch. The national network of parents, families, and their partners is dedicated to reducing SCA in youth through education, advocacy, and action.

Lateurele gives credit to the schools, the Acomporas, and others who have suffered the same loss for the increased awareness of commotio cordis among young athletes.

“These families help so many people by taking up the cause,” he said. “The Acomporas turned their tragedy into saving lives, and they are no less passionate today than they were 15 years ago [when Louis died].”

The advocacy is a godsend, providing the Acomporas a hopeful outlet for their profound grief.

“This has saved our lives,” Acompora said. “We’re able to talk about him every day and introduce him to people from all over the country. He is still very much a part of our family.”

Sources
AHA revises CPR guidelines

More dispatch is added to the action

People should continue to jump in quickly to give CPR, using breaths if they’ve been trained in CPR and employing mobile technology to speed up the rescue of cardiac arrest victims, according to the American Heart Association’s (AHA) 2015 Guidelines Update for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiovascular Care (ECC).

The 2015 guidelines cite high-quality CPR training for both bystanders (lay rescuers) and health care providers to boost confidence and provide better CPR to cardiac arrest victims. This update also recommends that all bystanders should act quickly and use mobile phones to alert dispatchers, with the ultimate goal of having immediate CPR given to all victims of cardiac arrest.

According to the guidelines, there is an increased emphasis on the rapid identification of potential cardiac arrest by dispatchers, with immediate provision of CPR instructions to the caller (i.e., dispatch-guided CPR).

Key points from the 2015 Guidelines Update:

- Untrained lay rescuers should provide compression-only (Hands-Only) CPR, or CPR without breaths, with or without dispatcher guidance, for adult victims of cardiac arrest. The rescuer should continue compression-only CPR until the arrival of an AED or rescuers with additional training. All lay rescuers should, at minimum, provide chest compressions for victims of cardiac arrest. In addition, if the trained lay rescuer is able to perform rescue breaths, he or she should add rescue breaths in a ratio of 30 compressions to two breaths.
- To help bystanders recognize cardiac arrest, dispatchers should inquire about a victim’s absence of responsiveness and quality of breathing (normal versus not normal). If the victim is unresponsive with absent or abnormal breathing, the rescuer and the dispatcher should assume that the victim is in cardiac arrest. Dispatchers should be educated to identify unresponsive with abnormal and agonal gasps across a range of clinical presentations and descriptions.
- Bystanders should use mobile phones to immediately call 911 and place the phones on speaker so the dispatcher can help bystanders check for breathing, get the precise location, and provide instructions for performing CPR.
- Mobile dispatch systems that notify potential rescuers of a nearby presumed cardiac arrest can improve the rate of bystander CPR and shorten the time to first chest compressions.

The recommendations highlight intervention at dispatch is a perspective the International Academies of Emergency Dispatch® (IAED™) has always supported in the development of the Medical Priority Dispatch System® (MPDS®).

“It’s encouraging to see that the AHA is adding more dispatch-specific guidelines,” said Greg Scott, IAED Operations Research Analyst. “These are things that we’ve had in our protocols for years.”

A new hands-on-chest Fast Track was added in MPDS v13.0 and is intended for patients who are initially and obviously described as being in cardiac arrest in the Case Entry sequence. A Dispatch Life Support (DLS) Link from Case Entry to Pre-Arrival Instructions (PAIs) was introduced in MPDS v12.2, but the new Fast Track feature in v13.0 has already proven to further reduce hands-on-chest time, which translates into lives saved.

“This is perhaps the single most important change to v13.0,” said Brett Patterson, Chair, IAED Medical Council of Standards. “The latest research clearly illustrates the vital role EMDs have in providing lifesaving PAIs to people calling 911.”

The Academy relies on its now-famous Standards Council, made up of international DLS experts, and a resuscitation sub-council consisting of renowned cardiopulmonary research physicians—who are dispatch oriented—to assist in the evolution of the MPDS. These experts follow, and in many cases participate in, the research and evaluation that is the backbone of the International Liaison Committee on Resuscitation (ILCOR) recommendations, published every five years by the AHA and the European Resuscitation Council (ERC).

According to Dr. Jeff Clawson, co-founder of the IAED, the evolution of the MPDS is an ongoing process that does not depend on the formal issuance of new guidelines for change; this was evident by the IAED’s implementation of compressions only (400 continuous) in 2004, over 10 years ago, he said.

“You will notice that most of the changes recommended by the new guidelines have already been implemented in the current version of the MPDS,” Clawson said. “Most importantly, you can be assured that your current version of the MPDS reflects the current DLS standard of care and practice.”

The AHA guidelines have been published since 1966 to provide science-based recommendations for treating cardiovascular emergencies—particularly cardiac arrest in adults, children, infants, and newborns.

The last update to the guidelines was in 2010.

The AHA is providing the 2015 update in three forms: the full Guidelines Update, a Guidelines Highlights document summarizing key points, and a mobile-friendly, searchable website compendium of all the association’s scientific findings.
Commotio Cordis:
Ventricular fibrillation and sudden death triggered by a blunt, non-penetrating, and often innocently appearing unintentional blow to the chest without damage to the ribs, sternum, or heart (and in the absence of underlying cardiovascular disease) constitute an event known as commotio cordis, which translates from the Latin as agitation of the heart.

Maron, B. Estes, M (2010). NEJM, 362:10

Cases have been reported to the U.S. Commotio Cordis Registry since 1995; however, it’s estimated that many more cases have not been reported.

95% of cases affected males.

The ages between which commotio cordis most frequently occurs; however, cases have been documented between the ages of 7 weeks and 51 years old.

50% of episodes occur during competitive sports; a further 25% occur during recreational sports, and the other 25% occur during other activities that involve blunt force trauma to the chest wall, e.g., kick by a horse, violent act.

95,000 children, estimated, each year experience EMS-assessed non-traumatic out-of-hospital cardiac arrest in the U.S., and of these 7,700 children are treated by EMS.

224+ cases have been reported to the U.S. Commotio Cordis Registry since 1995; however, it’s estimated that many more cases have not been reported.

24% survival rate based on the registry cases of commotio cordis.

Baseball has the highest incidence of commotio cordis, followed by softball.
Pocket Dialing
Accidental calls are more than just annoying

Josh McFadden

It’s embarrassing, but we’ve all done it before: made an accidental phone call to an unintended recipient.

Usually, this mishap occurs when our phone is in our back pocket and we sit down. Next thing we know, we’ve inadvertently dialed up one of our contacts or perhaps even a stranger. Sometimes we’re even unaware the connection has been made, and someone on the other end is saying “hello, hello,” with no response.

This is a phenomenon known as “butt dialing,” or “pocket dialing.”

As annoying or frustrating as these calls can be, imagine being a 911 operator and receiving these accidental calls. Indeed, pocket dialing is a significant issue in emergency response.

Hang-ups vs. pocket dials
There is a difference between pocket dials and hang-ups, though a pocket dial could double as a hang-up. A call to 911 with a deliberate hang-up is a serious offense that could lead to a citation. A person might do this as a prank or simply upon realizing they have mistakenly dialed 911. Panicking about what they have done, the person might hang up rather than speak to a calltaker.

In either case, anytime a call comes into a communication center and the caller hangs up, the calltaker is required to call back to verify whether there was a legitimate emergency. If the caller does not answer the callback, the calltaker will make another attempt.

It’s easy to see how calling back one or two times wastes valuable time and resources that could be spent handling actual emergencies. The time spent receiving a hang-up call and calling back, for example, could be put to use helping a heart attack victim or someone reporting a home invasion.

By nature, a pocket dial is not intentional; the unknowing caller is not meaning any mischief or harm. Sometimes the person won’t even notice he or she has pocket dialed 911. If the person has noticed, in many cases the offender quickly hangs up without saying anything to the calltaker. Nevertheless, it hinders emergency response...
and jeopardizes the safety of others whose own responses may be delayed.

Thankfully, the majority of people are apologetic and remorseful about the mistake.

“Most people are pretty good about talking to us and apologizing for the call,” said Kerry O’Connell, Gallatin County (Mont.) 911 Communications Director. “They are cooperative, give us their location, and answer our questions, which are then relayed to law enforcement. At times, they immediately hang up on callback or are generally uncooperative, but once again, this is information then relayed to law enforcement.”

**The numbers**

According to a study conducted by the Pew Research Center at the beginning of 2014, more than 90 percent of American adults own a cellphone. More specifically, 64 percent of U.S. adults have a smartphone.

What does this mean? Among many other things, it means the potential of pocket dials reaching 911 is increasingly high and rising as cellphones become more prevalent. It’s become a common issue in communication centers everywhere.

Take, for example, Valley Emergency Communication Center (VECC) in West Valley City, Utah. Each day, about 2,000 calls come into the center; annually, more than 1 million calls are made to VECC. But here’s the real eye-opening statistic: Nearly 29 percent of these calls are pocket dials. This means close to 600 calls each day are of the unintentional variety. But they’re calls nonetheless, and VECC dispatchers are obligated to take them seriously.

That’s a lot of time following up on what amounts to meaningless phone calls made from people sitting on their phones.

VECC Police Operations Manager Gigi Smith estimates that on each pocket dial dispatchers spend 90 seconds to two minutes returning calls.

Other communication centers report similar findings. In Montana, O’Connell’s Gallatin County 911 Communications serves a much less-populated area than does VECC. Still, the center gets its share of pocket dials. The center received 30,000 calls in 2014, nearly 5,000 of which were the result of accidental pocket dials.

O’Connell said because calltakers have no idea whether a pocket dial hang-up is an actual emergency, police are usually sent to make sure there isn’t a real need. After all, it’s not uncommon for a person in peril to make a 911 call only to hang up or not speak because remaining on the line, in their minds, is too risky or dangerous.

“It drains time and resources, because dispatchers spend time calling back, and law enforcement is responding to events that are not emergencies,” O’Connell said. “This is an extremely inefficient use of resources and could cause a delay of an actual emergency.”

Trying to determine whether the pocket dial was a legitimate emergency is not easy. This can be complicated when dispatchers don’t have the ability to call back the offending cellphone.

“I’m sure all centers have stories about serious calls that started out as 911 hang-ups,” O’Connell said. “We can cite the same examples. Another frustration is when they come in during the busiest times—when multiple calls are already ongoing.
Probably the worst ones are the uninitiated cellphone calls that we are unable to call back and have no way of knowing if it was an emergency or not.”

**The San Francisco study**

In October 2015, Google researchers Diara Dankert, James Driscoll, and Nancy Torres conducted a monthlong study. The study focused on the trend of the increased 911 call volume in San Francisco, Calif. Though the study included elements of many different factors related to these increases, one component examined accidental calls made to the San Francisco Department of Emergency Management (DEM), which handles 911 calls for the city.4

The Google team found that between 2012 and 2014, 29 percent of all calls made to DEM were classified as accidental. More specifically, the percentage of accidental calls in 2014 alone was 34 percent.

Because these accidental calls could have either been wireless or landline, it’s impossible to know from these numbers how many were pocket dials and how many were instances of people accidentally physically dialing 911 from their home phone.

However, to help give perspective on the pocket-dialing problem, the Google study took data from DEM and examined the regularity of accidental calls from wireless phones.5 The study first showed that out of a 197-call sample size, 30 percent were accidental. Of those 30 percent, dispatchers called back 88 percent of the callers. The average duration of the callback process was one minute, 14 seconds. Another sample size was a look at 79 calls. Of these, 37 percent were accidental calls with a 43-second average callback duration.

The study confirmed what managers from other agencies have said: Accidental and/or pocket dials from cellphones can be a time-consuming process and can hamper valuable resources.6 In fact, the study points out that 39 percent of surveyed dispatchers said these accidental calls from cellphones are the largest “pain point” they face in their work.

O’Connell said her center has similar numbers to those in the San Francisco study. Fortunately, she believes the number of pocket dials and hang-ups should level off.

“I would say at this point [hang-up numbers] are pretty steady but it was increasing as the number of cellphones increased,” she said. “I think at this point the only reason it would increase would be with an increase in population. About everyone who is going to get a cellphone already has one.”

**There’s an app for that**

Seems like there is a smartphone or tablet app for just about everything. There are even some designed to help prevent pocket dials and other accidental calls. One of these is Call Confirm, an Android-based app that when installed requires your confirmation before the call can be sent. If you’d like, you have the option of listing “exceptions” to the confirmation. Doing this allows you to put in any numbers that you’d like, permitting you to bypass the confirmation step when calling.

For iPhone users, there’s the app AskToCall, which works similarly to its Android counterpart. When a number is a dialed,
a dialogue box appears on your phone that reads “Do you want to call?” Callers then have the option to press “call” or “cancel.”

Of course, neither of these apps is a foolproof solution to pocket dialing. It’s conceivable that a phone could be pocket dialed and then the confirmation or “Do you want to call?” buttons could also be pocket-pressed. However, these apps decrease the likelihood of pocket dials occurring.

Educate your callers

Communication center managers, dispatchers, and emergency responders should urge the public to be aware of ways to minimize the likelihood of making pocket dials and other accidental calls. There are a few simple steps anyone can take that will save communication center personnel time and headaches. And, as a result, these actions just might help save someone whose response might otherwise be delayed due to these time-wasting calls. Here are some things you can say to callers:

• First, no matter what, do not hang up. If you’ve sat on your phone or someone pocket dialed 911, and you happen to realize you’ve made the error, stay on the line. Don’t be ashamed or nervous. Remember, in this case, the dispatcher will call you back anyway. Instead, stay on the phone, admit your call was made inadvertently, and assure the dispatcher that everything is OK.7

• If you are one of the 90 percent of U.S. adults who own a cellphone—or one of the 64 percent who own smartphones—become familiar with its features. Locate your emergency icon and situate it on your phone someplace where you know you won’t easily press it by accident.

• Another way to help ensure you won’t accidentally dial 911 is by using a passcode to lock your screen. You can set most phones to do this automatically after a specific number of minutes pass and the phone is not in use.8

“Because these calls are about 100 percent cellphone calls, we advise people to keep their screens locked when not in use,” O’Connell said. “We also advise them to stay on the line if they call accidentally because we’re going to have to call them back anyway. The more information they can give us on their initial call, the less time it will take for follow-up.”

The Federal Communications Commission recommends turning off the 911 autodial feature.

Also, always know where your phone is. Keep track of it, especially if you’ve placed it in your back pocket where pocket dials frequently originate.

Sources

4 Danket D, Driscoll J, Torres N. “San Francisco’s 9-1-1 Call Volume Increase.” Google. 2015; October. https://docs.google.com/document/d/1b6OT8sO1mogTjZV_mtvFja-t9Rk7zt6rYKqILcvE3jI/edit#heading=h.2vrdmm3fe971 (accessed Nov. 23, 2015).
5 See note 4.
6 See note 4.
7 See note 3.
8 See note 2.
What could be more important than protecting our children?

Announcing 9-1-1 COMMUNICATION CENTER BEST PRACTICES IN CASES OF MISSING CHILDREN

A missing child is a critically important and high profile event that can rip the fabric of your agency and community if not handled correctly. In terms of urgency, use of resources and potential impact on the community, a missing child requires a level of readiness akin to a disaster. This joint initiative of NAED, APCO, NENA, National AMBER Alert and the National Center for Missing & Exploited Children (NCMEC) was created to:

- Promote awareness of the critical role of the 9-1-1 communication center in handling missing and exploited children calls
- Develop and endorse best practices
- Develop tools for handling incidents of missing and abducted children

Helping to PROTECT OUR CHILDREN is as easy as 1-2-3!

2. **Request** a copy of the Public Safety Telecommunicator Checklist for Missing Children.
3. **Apply** to attend NCMEC’s CEO Overview Course in Alexandria, Virginia.

CEO Overview Course

9-1-1 Communication Center Managers and Directors are invited to apply to attend the two-day overview course held at the National Headquarters of NCMEC in Alexandria, VA. Courses are conducted approximately every six weeks at no cost to participants.

For more information, visit www.missingkids.com/911 or email 911@ncmec.org
Sometimes, what a caller tells a dispatcher is not explicitly stated, as much as it is implied. Sometimes, it takes reading between the lines.

“As a dispatcher, you just don’t know what is going to happen, and it’s difficult at best, at times, to determine from what the caller tells us,” said Tracy Deitschman, EMD, EFD, during her NAVIGATOR 2015 presentation, “It’s the Law—Five Laws of Responders.” “Never get complacent, thinking, ‘This is just another routine call.’ Listen carefully because if you don’t, that’s when bad things do happen.”

While prevention is often 100 percent hindsight, dispatchers do have tools at their disposal to better protect responders and bystanders in real-time, including the International Academies of Emergency Dispatch” (IAED”) protocols, training, and now the five laws that encapsulate Pre- and Post-Arrival Instructions, as laid out by Deitschman, Record and Communication Manager, San Jose State University Police Department, and former San Jose Fire Department dispatcher (24 years).

“I’m so glad we have the protocols; when I started, the one thing we could say was, ‘Help is on the way,’” she said.

**Five Laws of Responders**

Deitschman’s five laws correspond to the dispatcher’s role as the “first, first responder” and the ability to make the difference between life and death through the use of specialized skills and equipment to minimize risk. The laws can apply to EMDs, EPDs, and EFDs, although Deitschman’s presentation highlighted their application to the Fire Priority Dispatch System™ (FPDS”) and the EFD. Here are the five laws primarily based on laws found in the protocols:

1. Don’t take more victims to the scene.
2. Don’t get it on you or even touch it.
3. If there is more than one unconscious patient on-scene, there may be scene safety implications.
4. All electricity goes to the ground.
5. What you don’t know can kill you.

**First Law:**

Don’t take more victims to the scene.

Bystanders quick to react and responders lacking on-scene information can lead to a domino effect of catastrophe, turning a single incident into a mass casualty incident. This is a principle that applies to several emergencies scripted in the FPDS.

For example, a 16-year-old playing fetch with his dog along the coast of Northern California led to the death of three members of his family in November 2012. The dog was swept up by a wave; the teen jumped into the water to save the dog; the boy’s father went next to help his son; and the mother soon followed him. Only the dog survived.

While it’s easy to understand why the incident turned tragic, Protocol 72: Water Rescue/Sinking Vehicle/Vehicle in Floodwater could have possibly saved
CO is an odorless, colorless gas produced when cars, small engines, stoves, furnaces, and other devices burn fossil fuel. CO poisoning can cause sudden illness and death, and, each year, CO poisoning kills an average of 430 people in the U.S.

Second Law:

Don’t get it on you or even touch it.

Once again, the protocols come heavily into play, particularly in Protocol 61: HAZMAT. Protocol 61 includes two new Determinant Descriptors, corresponding Rules, and a new DLS Link that could help to avoid the following scenario from occurring in the aftermath of a chemical suicide, which in this case, happened in Lowell, Mass., in June 2015:

A man has died in a possible suicide involving a chemical gas, which injured seven responders trying to save the man, Lowell police said today in a statement.

“Early indications are the death may be a suicide involving a male who has been the subject of domestic issues,” Lowell Police said. Captain Timothy Crowley, a spokesman for the department, said a state fire marshal and hazardous material personnel are at the scene on Rock Street and will soon determine what the gas was.

“The smell was pretty strong,” Crowley said of the scene. “Officers were hit by it down the block.”

Crowley was not at the scene and did not know what the gas smelled like. Four officers, a paramedic, and two EMTs were among 11 people hospitalized after the incident. Four of the building’s residents sent for evaluation are not initially believed to be injured.1

The new Determinant Codes 61-D-4 “UNCONTAINED chemical suicide” and 61-C-3 “CONTAINED chemical suicide” address risks associated with hazardous chemicals and allocate the appropriate resources. Two Rules were also added to identify the Determinant Descriptor appropriate for the incident:

- Determinant Code 61-D-4 refers to “Chemical suicide situations in which the vehicle or room has been opened (no longer sealed).”
- Determinant Code 61-C-3 refers to “Chemical suicide situations in which the vehicle or room is still closed (sealed).”

The DLS Link, Chemical Suicide—D-1, directs the EFD to a new PAI Protocol D: Chemical Suicide. The PAI Protocol instructs the caller on what to do in the event of discovering a chemical suicide in a vehicle, building, or outside. The Protocol was added to FPDS v6.0 due to increased reports of chemical suicide and the urgency to protect the caller and bystanders from further exposure or contamination.

Protocol 61: HAZMAT also contains an Additional Information section on chemical suicide that provides background on the dangers of exposure to hazardous chemical mixtures and common indicators that aid in recognizing the scene of a chemical suicide.

Third Law:

If there is more than one unconscious patient on scene, there may be scene safety implications.

Several FPDS Protocols indicate the potential of broader safety implications, including Protocol 52: Alarms, Protocol 55: Electrical Hazard, and Protocol 61: Alarms related to possible carbon monoxide (CO) poisoning are covered in Protocol 52, and the medical consequences should be handled using the Medical Priority Dispatch System™ (MPDS™).

Carbon monoxide is an odorless, colorless gas produced when cars, small engines, stoves, furnaces, and other devices burn fossil fuel. CO poisoning can cause sudden illness and death, and, each year, CO poisoning kills an average of 430 people in the U.S.2

When responding to a CO alarm, the priority should be the safety of all individuals, including the would-be rescuers since, as Deitschman said, “Anyone trying to drag out people affected by CO poisoning might get asphyxiated in the process.”

The last sentence of PDI-d in Protocol 52 was revised in FPDS v6.0 to instruct the caller to “Leave the building/area immediately (and leave the door open)” to prevent further exposure and begin ventilation, if applicable. Two suffixes—X = CO/Industrial gas with single sick person and Y = CO/Industrial gas with multiple sick persons—were added to allow fire departments to differentiate their responses accordingly.

Fourth Law:

All electricity goes to the ground.

In the late evening of Aug. 22, 2013, two female good Samaritans coming from
different directions jumped into water pooling curbside and into the road in an effort to save a driver who had crashed his car into a light pole and fire hydrant. The hydrant had burst, shooting water into the air, and unbeknown to the women, the gushing water pooled underneath the vehicle concealed the light pole’s exposed electrical wires, sending 7,000 volts pulsating through the water.

Five others, ranging in ages from 19 to 57, followed, and in their attempts to save the women were electrically shocked. The Good Samaritan rescuers died; the driver survived.

The women were electrocuted prior to the call connecting to 911. Fifty-five firefighters were dispatched to the scene, securing the area and treating victims.

“My heart aches for those two women,” Deitschman said. “Their doing the right thing resulted in tragedy. No one could see the vehicle was sitting on top of a light pole. This raises a question for dispatchers. If there is any question as to safety, is it wrong to provide PDIs for something you might suspect?”

The answer is found in Protocol 55, and, in this incident, it is dependent on information relayed or indicated by the caller (i.e., the downed light pole).

PDI-c in Protocol 55 raises awareness of the electrical risks and electrified water and PDI-d cautions: “Do not touch any unconscious people or anything touching the electrical hazard.”

According to Rule 4 in Protocol 55, and corresponding to Deitschman’s Fourth Law: “When an electrical wire is down but not ARCING, the wire as well as the ground are considered dangerous because wires can cause the ground to become charged.”

New to Protocol 55 is an “All dispatch codes” send point added after Key Question 3 (“Is water involved or near the hazard?”) with the “Send & return to questioning” symbol. Two suffixes—X = Single injured person and Y = Multiple injured persons—were added to give fire departments the ability to differentiate responses accordingly.

“It’s great we have the bystanders who want to help,” Deitschman said. “But we need the PDIs to keep them out of harm’s way.”

Protocol does help us provide responders with better updates, and if you feel something is not right, let them know. It’s our job to deliver all the important information as quickly as we can.

Fifth Law:
What you don’t know can kill you.

The fifth law can apply to “absolutely anything,” Deitschman said. “It could be walking into a meth lab, answering an alarm—anything.”

In the example Deitschman provided, the incident involved firefighters going to the scene of a house fire in upstate New York on Christmas Eve 2012. The man believed to have started the fire waited in sniper position, shooting four firefighters and killing two of them upon their arrival to extinguish the flames. One of the dead firefighters was also a 911 dispatcher.

While dispatch had no indication of the suspect in hiding—who later died from a self-inflicted gunshot wound—the information came in immediately after the first shots were fired. The wounded firefighter speaking over the scanner reported two possible DOAs, stopping firefighters from extinguishing the blaze until SWAT arrived and evacuated other people in the neighborhood.

The incident emphasizes the importance of timely updates in dispatch, Deitschman said.

“Protocol does help us provide responders with better updates, and if you feel something is not right, let them know,” Deitschman said. “It’s our job to deliver all the important information as quickly as we can.”

Sources
1. Protocol 72: Water Rescue/Sinking Vehicle/Vehicle in Floodwater PDI-b instructs the caller to do the following:
   a. Stay on the line and I'll tell you exactly what to do next.
   b. Climb to higher ground and don't move.
   c. Do not go in the water/mud or out onto the ice.
   d. Have someone constantly maintain direct sight of the person or the last spot that s/he was seen.

2. The Determinant Code added to FPDS 6.0—72-D-8 Surf rescue—allows:
   a. fire departments to assign a separate response and resource allocation for the rescue of people caught by incoming waves on a seashore or reef.
   b. more precise directions for a vehicle caught in floodwater.
   c. the release of information involving next of kin.
   d. information regarding the availability of the nearest hyperbaric chamber, whether or not it is considered local.

3. Determinant Code 61-D-4 refers to:
   a. the blue “Transfer” symbol.
   b. UNCONTAINED chemical suicide.
   c. the red “Notification” symbol.
   d. CONTAINED chemical suicide.

4. The DLS Link to D-1 in Protocol 61 directs the EFD to the new PAI for:
   b. Fire and Hazards Rescue.
   c. Tunnel Fire.
   d. Chemical Suicide.

5. Which of the following is an odorless, colorless, and potentially deadly gas produced when cars, small engines, stoves, furnaces, and other devices burn fossil fuel?
   a. oxygen
   b. acetylene
   c. carbon monoxide
   d. freon

6. PDI-d in Protocol 52 was revised in FPDS v6.0 to instruct the caller to:
   a. drag out as many survivors/victims as possible.
   b. leave the building/area immediately (and leave the door open).
   c. tell the person(s) not to move.
   d. do not use, turn on, or turn off any additional electrical devices.

7. Suffix Y in Protocol 52 indicates:
   a. CO/Industrial gas with single sick person.
   b. CO/Industrial gas with multiple sick persons.

8. PDI-d in Protocol 55 cautions:
   a. do not touch any unconscious people or anything touching the electrical hazard.
   b. do not go in the water.
   c. if you can, keep some type of shield between yourself and the device (or site) as protection from flying objects.
   d. stay calm and follow their instructions.

9. When an electrical wire is down but not ARCING, the wire as well as the ground are considered dangerous because wires can cause the ground to become charged.
   a. true
   b. false

10. On Protocol 55, the “All dispatch codes” send point added after Key Question 3 indicates that the EFD should:
    a. ask Key Question 4.
    b. initiate dispatch (send) and return to the interrogation.
    c. place the call on hold.
    d. provide Post-Discpatch Instructions.

To be considered for CDE credit, this answer sheet must be received no later than 04/30/17. A passing score is worth 1.0 CDE unit toward fulfillment of the Academy’s CDE requirements. Please mark your responses on the answer sheet located at right and mail it in with your processing fee to receive credit. Please retain your CDE letter for future reference.
show of hands at a NAVIGATOR 2014 session indicated at least a few dispatchers felt like they were simply going through the motions—in their case verbal—when providing PAIs for CPR.

“It was the same way with field responders,” said Dr. Douglas Kupas, Emergency Medicine Doctor, Geisinger Medical Center, Danville, Pa. “They were going through the motions. Many couldn’t remember someone they had saved.”

In time, attitudes changed. Responders were brought into the loop, linking the “every minute, every person counts” philosophy to the work they did in the field. Knowing their actions in the field were instrumental in the chain of patient survival led to a deeper commitment, Dr. Kupas said.

“We now have EMS providers who are very disappointed if they don’t get a survivor,” he said. “We have to take that same culture to dispatch. We know that dispatch-assisted CPR saves lives, and we have to get the success stories back to dispatchers so they know what’s going on. They know they are a linchpin in the patient’s survival.”

As facts continue to bear out, everybody in the chain of survival has a role to play. The survival rate for a person in sudden cardiac arrest (SCA) decreases 10 percent with each minute following collapse. Conversely, victims of SCA can survive if they receive immediate CPR and are treated quickly with defibrillators. To be effective, this treatment must be delivered quickly—ideally, within three to five minutes after collapse.1

That’s why bystander CPR is so important and why we’re targeting dispatcher CPR, Kupas said.

“I call it assertive dispatcher CPR,” he said. “Hopefully, we’ve all moved away from the era of saying to the caller, ‘I can help you with CPR. Do you want to try?’ We’re no longer taking ‘no’ for an answer. We no longer give the option.”
and ProQA®/MPDS users, large and small, contribute a stream of data through the application of the AQUA® software.

On the MPDS user side, Richmond Ambulance Authority’s (RAA), Va., research into reducing the time it takes to get a 911 caller to initiate CPR was incorporated into the MPDS v12.2 upgrade.

RAA conducted the international research project with the University of Oslo, Norway, comparing the MPDS with a European equivalent, and a spinoff of that program resulted in the realization that the time from receipt of call to the bystander placing hands on the patient to deliver quality CPR could be shortened.²

Before submitting a formal Proposal for Change (PFC) to the Academy, the RAA authenticated its data against similar MPDS user organizations, including MedStar in Fort Worth, Texas; Medic EMS in Charlotte, N.C.; and the East of England Ambulance Service in the U.K.

Armed with the data, the RAA team submitted the results and its MPDS scripting recommendations to the Academy, which, after extensive review by the Academy’s Medical Council of Standards, were incorporated into MPDS v12.2.

The changes in protocol toward a higher number of compressions between ventilations follows from several studies finding that the rate of neurologically normal survival 24 hours after resuscitation in animals receiving continuous-chest-compression (CCC) CPR was significantly better than that in animals receiving the standard 30:2 (30 compressions every two breaths) CPR.

“The continuous compressions keep perfusion pressures consistent,” Kupas said. “Pressures drop when we stop compressions to ventilate and then take several compressions to rise again. Continuous compressions keep the blood flowing and improve survival.”

The MPDS gives the following instruction: “We’re going to do this (600 times or) until help can take over.” The parentheses were added in v13.0 since the text becomes situational with the addition of the “Compressions Only” (C Only) pathway.

**Protocol advances**

MPDS users got a good look at what to expect in MPDS v13.0 with the release of MPDS v12.2 in September 2012.

**The Academy tries to stay on top of science. The buzz [at the time the Academy developed the tool] was recognizing agonal breathing. This was a tool that could help the EMD from missing this.**

—Brett Patterson

The interim version introduced the Fast Track pathway to PAIs, bypassing the questions and instructions on Protocol 9: Cardiac or Respiratory Arrest/Death for patients with suspected medical arrest and directing the EMD to proceed with CPR immediately from Case Entry.

The interim version also modified the wording of the breathing detector to clarify its use for calltakers and added mandatory links to improve agonal breathing detection. Use of the breathing detector tool is mandatory for all unconscious patients triaged on Protocol 31: Unconscious/Fainting (Near) who are not breathing completely normally.

**AGONAL BREATHING Detector**

Released in 2004, the AGONAL BREATHING Detector was created to assess a patient’s breathing and, ultimately, identify patterns consistent with SCA.

“The Academy tries to stay on the top of science,” said Brett Patterson, Chair, Medical Council of Standards, International Academies of Emergency Dispatch (IAED). “The buzz [at the time the Academy developed the tool] was recognizing agonal breathing. This was a tool that could help the EMD from missing this.”

And, like the development of the MPDS as a whole, the AGONAL BREATHING Detector has gone through changes consistent with evolving clinical standards, scientific research, and member experience.

In some respects, the breathing detector was too successful, especially once EMDs discovered its significance in detecting breathing patterns indicative of SCA when the caller was unsure, Patterson said.

“There was a time when EMDs told us, ‘Your protocol does too much,’ and now it’s the exact opposite,” Patterson said. “EMDs want the protocol to tell them exactly what to do. That’s what happened with the breathing detector, and, in many cases, it was being used inappropriately.”

For example, EMDs were applying the breathing detector to verify use of compressions or when the caller was unsure whether the patient was breathing (in answer to MPDS Key Question 6 in Case Entry: Is s/he breathing?) or if the pattern of breathing didn’t indicate to the caller that the patient is at risk of SCA.

“EMDs should use the detector when they are unsure, not when the caller is unsure,” Patterson said. “If a patient is gasping, we need to be doing CPR, not going back to testing them, which is where we got.”

If the EMD is unsure, the EMD tells the caller to “Say ‘now’ every single time s/he takes a breath in” and applies the detector to time the intervals during a maximum of four breaths (three intervals tested).

**MPDS v13.0**

The Determining AGONAL BREATHING section was again modified in MPDS v13.0 to encourage decreased time to hands-on-chest.

More than three lines—about one-third of the language—in the Determining AGONAL BREATHING section were modified, without changing the intent of the information. Also, as cited earlier, the interval between breaths was decreased from “10 seconds or more” to “eight seconds or more.”

The section revision appears in Case Entry, Protocols 9, 31, and 12: Convulsions/Seizures:

“Use when the patient is unconscious and breathing reported by the caller is questionable, or when mandated by the protocol. A time between breaths of 8 seconds or more is considered IN-
EFFECTIVE BREATHING. Check a maximum of four breaths (three intervals tested).”

In the cardset, the red “Mandatory AGONAL BREATHING Detector use” symbol has also been added following the first sentence.

The last portion of the revised Determining AGONAL BREATHING text also appears in the corresponding PAI Panels on Protocols N, A, B, C, Ya, Yb, and Yc.

Protocols C and Yc also contain a new “Compressions Only (C Only)” pathway director in Panels 4, 6, 9, 11, and 12. The pathway director gives Local Medical Control the choice between the Compressions 1st pathway and the new Compressions Only pathway, owing to the debate regarding when ventilations are absolutely necessary and whether the benefit of ventilations outweighs the risk of stopping compressions to provide them.

In addition, instructions regarding an AED were revised to a more direct approach—if there is one available “go get it”—and the caller is instructed to let the EMD know when the AED is there to use on the patient.

What’s so important about AGONAL BREATHING?

Agonal respirations are an abnormal pattern of breathing characterized by shallow, slow, irregular inhalation followed by irregular pauses. Agonal respirations are commonly seen in patients immediately prior to and during cardiac arrest, and, according to Kupas, agonal respirations indicate a more favorable prognosis than in cases of cardiac arrest without agonal respirations.

The duration of the agonal respiration phase varies.

According to the Sudden Cardiac Arrest Foundation:

When SCA occurs, the heart stops beating in an effective, organized manner. As a result, blood is no longer pumped throughout the body. The person suddenly passes out and appears lifeless, except for abnormal “gasping” which may last for several minutes. Occasionally, SCA victims experience 10–20 seconds of seizure activity (shaking of the arms and legs) at the onset of the event, as the brain stops receiving blood and oxygen from the heart.3

This is vastly different from a person breathing effectively.

“If breathing effectively, the patient will be struggling, and gasping isn’t a sign of life,” Patterson said. “It’s the struggling, and if that stops, it’s a sign to start CPR. It’s about getting hands-on-chest.”

Rather than the EMD relying on whether the patient is gasping, Patterson suggested that the EMD ask the caller for signs of life.

Measuring matters

Kupas said paying attention to the research available, making small changes in methodology, and tracking the results do lead to more efficient CPR and potentially higher survival rates.

MPDS incorporates the most current standards, including the increased number of compressions to ventilations ratio, the Fast Track to hands-on-chest, and instructions for hand positioning and method: “Pump the chest hard and fast, at least twice per second and 2 inches (5 cm) deep.” Centers can track dispatcher time to hands-on-chest through the ProQA Paramount software.

“Measuring matters,” Kupas said. “You have to know the numbers of patients receiving dispatcher-assisted CPR and the outcomes. If you don’t know, there’s no possible way to suggest that you’re doing the best for your patients by providing dispatch CPR to everybody that you can when they need it.”

Sources


3 See note 1.
1. The survival rate for a person in cardiac arrest decreases by what percentage with each minute following collapse?
   a. 5 percent  
   b. 10 percent  
   c. 15 percent  
   d. 20 percent

2. Which of the following organizations provided research to reduce the time it takes to get a 911 caller to initiate CPR that was later incorporated into MPDS v12.2?
   a. Mayo Clinic  
   b. Sudden Cardiac Arrest Foundation  
   c. Richmond Ambulance Authority  
   d. National Institutes of Health

3. The rate of neurologically normal survival 24 hours after resuscitation in animals receiving continuous-chest-compression (CCC) CPR was significantly better than in animals receiving the standard 30:2 CPR.
   a. true  
   b. false

4. The MPDS gives the following instruction:
   a. “We’re going to do this (600 times or) until help can take over.”  
   b. “We’re going to do this (30:2 or) until help can take over.”  
   c. “We’re going to do this (200 times or) until help can take over.”  
   d. “We’re going to do this (10:2:10 or) until help can take over.”

5. When using the AGONAL BREATHING Detector, the EMD is timing the intervals during a:
   a. minimum of eight breaths (four intervals tested).  
   b. maximum of 12 breaths (three intervals tested).  
   c. maximum of four breaths (three intervals tested).  
   d. minimum of 12 breaths (four intervals tested).

6. In MPDS v13.0, the interval between breaths when using the AGONAL BREATHING Detector was changed from “10 seconds or more” to:
   a. “every other breath.”  
   b. “six seconds or less.”  
   c. “12 seconds or more.”  
   d. “eight seconds or more.”

7. The new “Compressions Only (C Only)” pathway director gives:
   a. EMDs the choice in the number of compressions that should be applied to a patient in SCA.  
   b. a direct link to the AGONAL BREATHING Detector.  
   c. the caller the choice of whether to use a 30:2 ratio or compressions only.  
   d. Local Medical Control the choice between the Compressions 1st pathway and the new Compressions Only pathway.

8. Agonal respirations indicate a more favorable prognosis than in cases of cardiac arrest without agonal respirations.
   a. true  
   b. false

9. Which of the following are signs indicating SCA?
   a. suddenly pass out and appear lifeless  
   b. abnormal “gassing,” which may last for several minutes  
   c. occasionally, 10–20 seconds of seizure activity (shaking of the arms and legs)  
   d. all of the above

10. The MPDS contains the following instructions for hand positioning and method when giving compressions:
    a. “Pump the chest hard and fast, at least twice per second and 2 inches (5 cm) deep.”  
    b. “Pump the chest hard and fast, at least four times per second and 4 inches (10 cm) deep.”  
    c. “Pump the chest hard and fast, at least once per second and 2 inches (5 cm) deep.”  
    d. “Pump the chest hard and fast, as many times as you can per second and at a depth you can manage comfortably.”

To be considered for CDE credit, this answer sheet must be received no later than 04/30/17. A passing score is worth 1.0 CDE unit toward fulfillment of the Academy’s CDE requirements. Please mark your responses on the answer sheet located at right and mail it in with your processing fee to receive credit. Please retain your CDE letter for future reference.
It was a Friday, late in the day, autumn 1989, and Dr. Jeff Clawson was mulling over an issue in protocol when he caught up with Michael Smith in the company elevator.

“Jeff was concerned about the charts used for the Pre-Arrival Instructions,” Smith said. “He thought they were too complicated and hard to read. He asked if there was something I could do.”

Smith said he’d give it a try. He was the company’s graphic designer and, like Dr. Clawson, thought the PAIs in their current configuration were difficult to decipher. The challenge of visually tracking the linear boxes and arrows diagrams could be frustrating to a dispatcher handling an emergency call requiring fast action to help the patient.

“In emergency situations, the high cognitive load of the PAIs as they were formatted was detrimental to the dispatcher’s ability to perform,” he said.

Smith went home and spent the next two days sketching on a yellow legal pad. He wanted to get away from the charts that significantly differed for each PAI and develop a framework—a pattern—compatible with every PAI. He was aware of how the keypad of the touch-tone telephone was designed to replace the old rotary phones and liked the 3-by-3 orientation (essentially three rows by three columns, plus one row for the “0” digit).

This design, he said, tapped into a primitive sense of time and space we all have: top/middle/bottom, left/center/right, before/now/after, and above/here/below. The critical challenge was to preserve the logic encoded in the linear boxes and arrows diagrams.

Smith’s aha moment was a matter of simple association with the 3-by-3 grid concept and a “modular” principle that is common in nature as well as engineering and computer science. He said by embedding the logic of the arrows inside the boxes, orienting them in a grid pattern, and assigning addresses to the instruction “modules,” he could improve the dispatcher’s ability to help in the delivery of complex medical instructions over the phone.

This evolved into the complex non-linear grid pattern introduced in version 12.0 of the Medical Priority Dispatch System™ (MPDS™). Similar to the phone keypad, the grid design for the PAIs used space efficiently, fit neatly into the concept of protocol, and would reduce a “cognitive overload.” The grid pattern also reflected the quality control, universal application, and repeatable results that prompted the invention of protocol.

“Jeff recognized opportunity in my idea,” Smith said.

Turning the idea into a workable framework, however, was not a weekend project. Transitioning the existing CPR, childbirth and delivery, choking, and other PAIs into a grid pattern was more than a matter of spilling instructions into boxes. It took months of effort, reworking, and review.
Smith shakes off the compliments. He had a “great time” working for the Academy and, at that time, with the relatively small staff in offices on South Temple. He left after seven years in 1996 to pursue a career “morphing” into computer science and Web development. He is now a technical program manager for Amazon in Seattle, Wash., working to match customer preferences to advertising messaging in mobile apps. His research interests include machine learning systems that can mimic the brain’s abilities to recognize patterns and make decisions.

Smith said his “first career job” at the Academy was an ideal experience and a launching pad for his subsequent interest in technology.

“The constant challenge intrigued me,” he said. “It’s also nice to know that what we developed helps people and has some longevity.”

Blast from the past

Before they were ready for prime time.

“This took a medical reworking of the protocol,” Smith said. “Jeff had to break down the instructions. In the long run, this improved the PAIs and made it possible to deliver a higher standard of care with more complex procedures.”

His work was a lasting contribution, and it was one that has earned him a permanent place card in the history of protocol development.
Dayana Fisher celebrated the "best day" of her working life alongside the 8-year-old who made it all happen. "She was full of high energy, bubbly," said Fisher, EMD, EFD, EPD, St. Cloud, Fla., Police Department 911 communication center. "She was so grateful, and the best part, she said, was receiving the medal."

St. Cloud resident Alexandra Becerril probably had the second-best day of her life on Oct. 2, 2015, one month after the first best day nearly two months earlier. On the day in October, St. Cloud Police and Fire Chiefs, Pete Gauntlett and William Sturgeon, respectively, presented Alexandra a 911 Hero Award, and Fisher was right there to meet her and receive her own commendation. A plate of frosted cupcakes sweetened the deal.

"Her brother, mom, and grandmother were all there for the reception," Fisher said. "They were very proud of Alexandra." Alexandra was home the Sunday in August when her 17-year-old brother Alejandro Arroyo fainted and, despite the urging of his family, would not respond. She called 911.

"My brother got his wisdom teeth out, and he's fainting," she said after giving Fisher her address and phone number. For nearly five minutes, until paramedics arrived, Alexandra was the go-between for Fisher and her mom, Kim Arroyo, who was keeping close tabs on her son's condition. His breathing was irregular and he was pale. "She did a great job," Fisher said. "She was not nervous. She stayed quite calm throughout the entire call. She stayed a lot more calm than most adults."

The same held true at the reception at the St. Cloud Police Department in October. Alexandra answered questions from the media, had a big smile on her face in the group photos shot at the event, and put in the good word for learning 911. "She thinks all kids should know how to call 911," Fisher said. "She was quite certain of that."

Fisher was in her first month of training on the floor at the time of the call and making the transition from biomedical research following college graduation. But there was something missing and, as it turns out, answering emergency medical, fire, and police calls appeals to the adrenaline junkie side of her personality and complements her ability to defuse stressful situations. "Every day I like this job even more," she said. "It's constant learning, and the protocols offer a great level of care."

Training Coordinator Lizzy Graham started using the Medical Priority Dispatch System™ (MPDS®) 10 years into her current 19-year career. "When I started, we were using the five 'W's' and 'H,'" she said. "Sometimes we'd forget a priority question, and that's not good. The protocol is very comforting because we have the instructions right in front of us."

Graham was responsible for bringing Fisher's call to the attention of the police chief after she had reviewed the call. Fisher was relatively new at dispatch and still in training when Alexandra called 911. "The chief loves stories that help people to use 911, and this was an excellent call," Graham said. "Dyana adhered to the protocol. She did an excellent job, and the little girl did an excellent job. It's a very positive story."

Fisher is glad the call ended on a positive note. "The call definitely was a highlight in my career," she said. "I'm just grateful when everything turns out well."

The St. Cloud Police Department 911 center uses the medical, fire, and police protocols and is a medical ACE. Graham said they are working toward tri-ACE.

In 2014, city officials purchased land with the intent to build a new police headquarters, new 911 center, and a new stand-alone fire station and fire administration building to accommodate a population that has doubled during the past 15 years from 20,000 to 40,000 residents.
LOOKING AHEAD

Serious injury suffered when fighting an apartment blaze may have kept former firefighter Wendy Norris bedridden for several months, but the recovery period also led her on a quest to help other firefighters experiencing similar trauma go through the healing process. She founded Firefighters Ministries, which led to a Texas-wide voluntary strike force that would respond within 12 hours of a fatal accident or injury. You can learn more about her story and the organization that continues to assist firefighters and their families cope through desperate times. Your next issue of the Journal also debuts a personal column from a dispatcher’s perspective. “In Between the Chaos” introduces Daphanie Bailes and her uncanny ability to make sense out of the unpredictable. You will also find the usual Journal favorites, including Continuing Dispatch Education, FAQs, and Dr. Jeff Clawson’s words of protocol wisdom.

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YOU DONATE THEM, WE LOAN THEM
Ambulance delivers passengers from single location

Audrey Fraizer

Richmond Ambulance Authority (RAA), Va., is in its second year of offering a unique drop-off/pick-up program in an ambulance built to withstand all weather.

Benefits include a 24/7 schedule and room for up to 50 passengers. No fuel is required, and because passengers sit on wooden planks arranged on two levels inside a vehicle also made from wood, expenses are kept to a minimum. Lights flash only when the doors open. The design does not include sirens.

“We wanted to keep it neighbor friendly,” said RAA Chief Operating Officer Rob Lawrence.

The vehicle, however, does have its drawbacks. It is stationary, and the interior space isn’t large enough to actually carry people. Anyone attempting to enter the space would certainly bump a head or knee. The best way for access is an arm because, after all, this vehicle is a library that accommodates hardcover and paperback passengers as a registered affiliate of the Little Free Library book exchange program. At 4 feet long and 2 feet wide, the RAA book exchange is larger than most libraries in the system.

“We wanted to start big,” said RAA System Status Controller Rebecca Szeles, EMD, who with RAA Paramedic Jennifer Norment, put the idea in motion as part of the RAA Wellness Program.

Once the project was approved, Szeles volunteered her husband, Steve, to bring the project to lending life. The Richmond police officer built and painted the little library in the image of a RAA fleet ambulance and drafted Dan Fellows, RAA Fleet Manager, to install the electronics needed to make the installed lights flash. Fellows, a fiction writer, contributed the first book.

The RAA EMS Little Free Library, which operates on an honor system, has proven to be a top seller.

“We’ve been through about 500 books in the two years since it was built,” Szeles said. “People take a book, leave a book, and if they don’t have a book to leave, they can bring one by the next time.”

The RAA Wellness Committee is, for all practical purposes, the librarian staff. They straighten the two shelves of books donated by RAA personnel and the public and place library-like stickers in each book as a reminder to return when done for others to enjoy. They try to keep their selection current.

“Star Wars’ books went flying off the shelves when the movie was released,” said Szeles, who also maintains the separate and indoor RAA employee wellness library.

The RAA Little Free Library is part of a nonprofit program that Todd H. Bol unintentionally started five years ago when he assembled scraps of wood to create the first freestanding book exchange in memory of his mother and in the interest of encouraging communities to read. He started by giving away 30 books, and, as of January 2016, Bol’s tribute in 2010 has stacked up more than 36,000 Little Free Library book exchanges around the world.

Although a wooden box and books are all it takes to get started, these small libraries have taken a departure from the original schoolhouses model and branched into designs complementing the lender.

Lawrence hasn’t heard of other local public service agencies picking up on the idea, although he had his hopes up.

“In my heart of hearts, I thought the fire department would take the bait,” he said. “They haven’t.”

Szeles doesn’t anticipate a second—or branch—RAA EMS Little Free Library. The first was a time-consuming job to build and stock, and other Little Free Library book exchanges in the area can pick up any of the slack.

Lawrence said the public has welcomed the library located at the RAA EMS headquarters for reasons that also include convenience.

“We watch people show up all the time,” Lawrence said. “We get lots of bikes. It’s on the same route as the breweries.”

For more information, the Little Free Library book exchange website at www.littlefreelibrary.org/faqs explains how to become part of the “take a book, return a book” network and where to find libraries closest to your neighborhood.
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VPI
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NENA/THECALL
BOOTH #726

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Learn more at www.nena.org

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911TRAINER.COM
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For more information, visit deniseamberlee.org

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BOOTH #205

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