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Colleen is deputy director over operations for Salt Lake City 9-1-1, with current duties involving the consolidation of fire and police dispatch offices and assisting in the near-future move to a new Public Safety Building, which will include a new phone system and new radio system. She was the project manager for the recent implementation of the PPDS®. Colleen has worked for Salt Lake City for 31 years.

**BRETT PATTERSON**
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Not All Thumbs Alike
Some prefer ink to chlorophyll

Audrey Fraizer, Managing Editor

W e have a bet going in the office over keeping potted plants alive the longest, excluding our department director—Kris Berg—because she has a green thumb and probably has plants thriving in her office and certainly at her home dating back generations to pioneers crossing the prairie pushing handcarts.

The rest of our thumbs aren’t nearly so green and it’s readily apparent, particularly in the vicinity of the three-person editorial department. I guess you could say that we represent the Bermuda Triangle of potted plants and fresh flowers. Set a potted African violet, Jade plant, or Spider plant or a spring bouquet of Daffodils given in celebration of a birthday in the area bounded by our three desks and their green leaves, stems, and flowers are soon to mysteriously droop into office air. Our triangle simply sucks the life right out of them.

Contrary to the Bermuda Triangle, however, I don’t think it’s the paranormal at work, or the power of the mythical Atlantis drawing energy away from our greenery. Our building resides in a section of Salt Lake City once notorious for vice and corruption, but that was more than a century ago and spirits of the past hellbent on getting back at the present would probably choose something other than my azalea to avenge their darkness.

I think it comes down to finesses and the botanical color of a thumb. Ours aren’t green.

Personally, I wouldn’t want a green thumb anymore than gardeners with chlorophyll-stained thumbs envy the black ink-smudged thumbs of editorial types, metaphorically speaking. Some thumbs are more contented when stuck out in traffic to catch a free ride across town or tapping on the space bar of a keyboard.

Maybe that’s the subtle and suitable excuse. My thumbs, and the thumbs of my associates and editorial predecessors, are not shaped for pinching plants or holding shovels for digging around in the dirt (except perhaps metaphorically speaking). Our thumbs are best in repetitive motion and, apparently, the same goes for dolphins.

Maybe you haven’t heard. An article in The Onion has grave implications for the privacy of humankind, as marine biologists at the Hawaiian Oceanographic Institute recently reported that dolphins, or family Delphinidae, have evolved opposable thumbs on their pectoral fins. According to research scientist Dr. James Aoki, the opposable digits thus far encountered appear to be fully functional, making it possible for dolphins—believed to be capable of faster and more complex cogitation than man—to fashion tools, construct pulley and lever systems, and give the thumbs up.

If that’s the case, and all dolphins evolve thumbs, maybe everyone should be worried about losing jobs to dolphins. I’m sure dolphins could write swell stories, although, in your favor, thumbs on pectoral fins would take major re-engineering of CAD terminals.
Salt Lake City’s Mayor Ralph Becker is a bicycling proponent. Big time. 
And since he is technically my boss as chief executive, I feel somewhat obliged to give his bicycling initiatives thoughtful consideration. I’m not a bicyclist at heart, and coming to work perched on two wheels will never happen for me; however, in the spirit of community I decided to take my bike to the streets pedaling alongside other officials celebrating the Year of the Bike.

The inaugural ride was scheduled for after work on June 5, and it was estimated to take about two hours, depending on ability. The later start would permit more people to follow a 13.5-mile loop developed by the Salt Lake City Transportation Department. We’d also avoid rush-hour traffic. On paper, the route sounded, well, nice. It led from a park, continued through several more parks, and passed a few of the city’s architectural gems before ending close to where we first clipped into our pedals.

Safety factors were a concern, even more so than wearing Spandex.

Fortunately, our city streets are wider than most, thanks to the planning of City Founder Brigham Young. He wanted roads sufficiently wide for maneuvering ox and cart. We promote train and bus transportation.

I wouldn’t say I was stoked, but the ride was doable. My road bike tuned, a new, properly fitted helmet to wear, and I was ready to hit the road for a practice ride prior to the big event. I knew the route, and off I went.

In hindsight, I didn’t realize what I was getting into, and it wasn’t about putting on clothing that fits a little too closely for my comfort. The mayor’s advocacy of bike riding bringing more bikes to the road, and the infrastructure to support it, is apparently bringing resentment to the roads. It’s a battle of territory and nerves. One doesn’t like the other.

In all fairness, the road rage comes from both sides. During my ride, I saw bike riders ignoring traditional rules of the roads, blasting through stop signs and lights, blowing past traffic by riding on sidewalks and jeopardizing pedestrians, and traveling in side-to-side formations swooping down roadways like a school of angry fish. Impatient motorists cut in front of riders to turn corners and beat red lights, drove inside designated bike lanes, and—in more than one instance—swung open car doors without glancing back directly in the path of cyclists.

I won’t start on the number of drivers talking on phones and texting or in other ways distracted from what was supposed to be taking their attention. Again, to be fair, bicyclists zoned out with ear buds and head-phones missed the sounds of sirens, honking horns, and trains.

I later read that this type of inattention and negligence resulted in the deaths of 677 bicyclists involved in car collisions nationwide in 2011. The statistics do not include the number killed in the associated vehicles. I was glad to get off my bike.

And the ride (which I’m not ashamed to admit ended well before the “finish” line) made me think about how we safely and sanely mix bicyclists and motorists in overall transportation policies. I’m no expert, and can only offer my opinion from the angle of public safety, but, from what I’ve read, it seems that Mayor Becker is onto something. It’s a more the merrier approach. Studies have shown that bicycling fatalities tend to decrease in a counterintuitive way: As the number of bicycle riders on the road increases, the number of bike crashes and deaths has declined.

Bicycling experts call it a “safety in numbers” phenomenon attributed to the higher level of awareness among drivers when more cyclists are sharing the road.

In Philadelphia, Pa., dozens of bike lanes and bike routes have been created, and according to an article in the Philadelphia Inquirer (Paul Nussbaum, Sept. 17, 2012) the safety in numbers phenomenon is really playing out. Traffic crashes involving bikes in Philadelphia have fallen from a high of 1,040 in 1998 to 553 in 2010. The city hopes to increase bike lanes to 300 miles, with a goal to boost the percent of commuters traveling by bike from the current 2% to 5% by 2020 and to reduce injuries and fatalities by 50%.

Salt Lake City’s Bicycle & Pedestrian Plan, now in the public comment stage, includes enhanced walking and bicycling facilities with an emphasis on developing a network of low-street, family friendly bikeways. Similar to Philadelphia, bike lanes will be added, with the goal of more bike commuters and fewer accidents.

I won’t pretend that such a plan will have a bicycle commute for me. I won’t trade in my car and—truth be told—I was unable to make the June 5 ride. I like to blame my busy schedule for missing the chance. Yet, I’m slowly developing into a fan of two wheels, especially if more biking means safer biking, and that can only mean fewer calls to 9-1-1 involving bicycling fatalities.
New Generation Will Take Lead
Time to develop qualified applicants

Ivan Whitaker, MBA, EMT-P

As citizen demands shift, so do the landscape leadership requirements for the public safety profession.

Over the last decade, leadership requirements in the 9-1-1 emergency dispatch environment have changed drastically. Sound judgment, commitment to customer service, off-the-chart multitasking abilities, and confidence in taking on added responsibilities are skills and personal characteristics centers must maintain. This provides the best opportunity to develop a steady pool of qualified applicants for leadership positions.

Reminiscing on the ways of the past is a sure recipe for failure.

The next generation is ready to inherit top positions held by the past generation, and their expectations and management principles are very different from the departing baby boomers. And if retirement is still a few years into the future, existing leaders must pay close attention to the evolving work culture of their dispatch centers. Leaders must possess the ability to move associates cooperatively and cohesively toward stated goals. Ineffective and overbearing leadership styles are magnified in a dispatch center. The “my way or the highway” attitude deters progress and results in the loss of potential future leaders.

Leaders must also recognize the hidden talent in their centers—the people willing and capable to take responsible control.

The belief that field experience makes for more knowledgeable and successful 9-1-1 center supervisors is not always accurate. In fact, the transition from the field may be extremely difficult and the correlation between leadership in the dispatch center and field experience (paramedic or law enforcement officer, for example) may be miniscule.

Today’s dispatch center leaders, and those in the future, need the relevance of hands-on experience and the versatility required to keep up a demanding profession moving into next generation technology. In addition, certification and continued education have the advantage over applicants lacking the now nearly universal qualifications.

Great managers

So, what’s the secret to great leadership? The following are a few indicators I’ve learned over the past years in my management and leadership positions.

Create a reliable and honest culture

Good leaders create a culture of quality assurance and accountability. Well-run dispatch centers are responsive, professional, and develop specific processes and procedures applied across the board. No one plays favorites or circumvents the culture’s expectations.

Build an employee development program specific to telecommunications

HR departments initiating global development programs are missing the point. The position includes, although it’s certainly not limited to: recruitment and management of staff, preparation and maintenance of the operating budget, and oversight of the daily operations. That might sound generic to any profession until inside the walls of a busy, progressive communication center.

Disregard previous notions

Conduct an honest analysis of what it takes to efficiently run a dispatch center. For example, are you—or the leaders selected—capable of providing an overview of future radio system/infrastructure improvements, and do you have the know-how to find grant funds to improve radio communications and prepare for the narrowband mandate? Can the individual handle multiple tasks and multiple generational personalities?

Put morale at the forefront

Morale directly impacts everything. If employees are unhappy, the public suffers. Poor morale leads to increased sick leave, unsatisfactory performance, turnover, and the inability to select in-house individuals for promotion. Good management establishes employee ownership, encourages potential, and nurtures individual strengths. A servant leader offsets challenges associated with stress and challenging work schedules. A self-serving leader has lost sight of priorities.

Provide opportunities

When leadership positions are available, a lack of available applicants might reflect the organization’s attitude toward developing its employees. A good leader seeks to incorporate succession training in advance of a “two weeks’ notice.” While successors will make changes, the best approaches to the future build upon past leadership success. Ego should be set aside. After all, a leader’s decision to leave should not adversely impact the organization as a whole.

Make it a team effort

Pardon the cliché, but if the shoe fits, wear it, and if it doesn’t fit, give it to someone it will fit. Leadership, and leadership in a communication center, is not a one-size-fits-all proposition. No one has all the answers and insight. Seek out and invite participation with the budget planning process, strategic planning, and the complexities of next generation communication. Let others participate in the future of your center and give credit where the credit is due.
Matter Of Space
Chairs can be so unsettling

Colleen Conrad

chair | CH(e)(ə)r | noun
1. A piece of furniture consisting of a seat, legs, back, and often arms designed to accommodate one person.

Chairs!! They are the bane of dispatch centers. They are a subject at dispatch conferences and dispatch forums. I stay out of discussions about them—chairs are not one of those one-style things that can make everyone happy.

Dispatch chairs must be able to accommodate a variety of people: short, tall, skinny, stout, happy, and grumpy. Dispatch chairs must accommodate a person 24-hours a day, 7-days a week, 52 weeks a year, and for many years to come.

When multiple types are available, most dispatchers have a type of chair considered their favorite. In the dispatch office where I work, there are approximately five different types of chairs. At shift change, dispatchers wander around the floor before they relieve the next shift, hunting for their favorite type of chair. It’s like the story of the three bears, multiplied by the number going on shift. This one wants the chair that is black and soft. That one wants the mesh back chair that has a thinner seat. This one wants the harder seat gray chair. The chair I occupy in my office is a beautiful microfiber, soft reclining chair that a dispatcher purchased out of her own pocket and, before she retired, bequeathed it to me.

A variant of the game musical chairs is played every four hours during the rotation of dispatchers and calltakers from one side of the office to the other. At that four-hour mark, dispatchers and calltakers load up personal belongings onto their favorite chair and move it through the doorway separating the two sides and over the metal door divider. The rollover creates a ripping sound—a metal on metal sound. It’s an odd symphony that you can set your clock by. Oh my goodness, is it 11 a.m. already? Ah, it must be shift change; the chair song is playing.

Back before the terms hostile work environment, sexual harassment, workplace harassment, and political correctness became everyday terms and things to be avoided at all costs, pranksters had full reign of public safety offices. It was not uncommon for a female officer to find her patrol car painted pink. Workplace pranks could result in some strange repercussions once the love turned sour. So, in comparison, a little entertainment involving dispatch chairs was innocent fun.

Years ago we had a dispatcher who was very chair territorial. Her chair was a hideous lime green color, but no matter, it was “her” chair and she would show up early to stake her chair claim and, if need be, stand behind a dispatcher sitting in her lime green chair until shift change. She would go so far as to offer that person a different chair so she could take early possession and slide it under her favorite console. Her chair devotion made her a bit of a target for the other dispatchers. It became a game to hide her chair. In the most extreme “hide the lime green chair” prank, a few dispatchers disassembled the chair and hid the pieces five floors down in the building’s basement—inside the women’s shower. I’m not sure how she found it but she did. She carried the pieces upstairs and put the chair back together. Years later, the favorite pink chair of many a dispatcher was given the name of the green chair-loving dispatcher long after she had retired.

We also had a supervisor who would have none of the trading places business. Finding her favorite chair “missing,” she went out to the floor from her office and made the rump currently occupying the chair cease and get up. “It doesn’t have your name on it,” a dispatcher said. The supervisor returned to her office, grabbed a bottle of whiteout, and painted her name on the chair in big, beautiful white letters. Well, now it did.

Chairs will probably long rule the dispatch office. Not just the one where I work, but at the majority of centers. I don’t think anybody will ever find one that’s just right—for keeps.
Let the Good Times Roll
Don’t let the profession steal away your life

Shawn Messinger

As I’m writing this we’re in the full swing of summer and with it the usual uptick in call volume, accidents, and annual leave requests. This can be a particularly stressful time for both staff and supervisors in communication centers. The heat seems to bring out the “crazy” in everyone; couple that with alcohol and drugs and the proverbial pot is ripe for boiling over. What better time to initiate a plan for personal stress management?

Outside friends and interests—positive influences—are important aspects of our lives that I always cover in the Dispatch Stress sections of a certification course. As pointed out in a favorite book of mine, *Emotional Survival for Law Enforcement* by Kevin Gilmartin, a behavioral scientist specializing in issues related to law enforcement, these are the things that keep us whole, sane, and human. His goal in writing the book was to assist officers and their families in maintaining and improving quality of life amidst the mayhem of the profession. The same applies to emergency communications.

Dr. Gilmartin prefaces his advice in pointing out the differences among people in our career choice, compared to professions outside law enforcement. A major personality trait is our tendency to pull back from friends, family, and activities in exchange for a life dominated by careers. This is not done on purpose; it just happens. When we start in emergency services, we are excited about our new career and, consequently, the focus of our lives changes. We put work first, which is only natural and, in many ways, a good thing. We are eager to learn, excel, and prove ourselves to bosses and coworkers.

Our new careers also affect our daily schedules. We don’t often work the same hours as others. By necessity, we work afternoons, nights, holidays, weekends, and whenever needed, even if not scheduled. Before we know it we have not seen our friends for months or years, except when we pass carts at the supermarket. We miss our kids’ soccer games, birthday parties, and dance recitals because we are too busy working or trying to catch up on sleep. We begin hanging out with police officers, dispatchers, paramedics, and fire fighters who have similar shifts and understand our sometimes macabre sense of humor. These new friends are not bad for us, and our service to our community is honorable, but there within lies the problem: Eventually we let the profession take over our lives.

This is where Dr. Gilmartin’s advice comes in: We must make an effort to maintain our relationships with old friends and family to balance our lives.

Long-time friendships established prior to the job and family keep us grounded in who we are, not just what we do. They are the ones who know us best and can see when the “job” is affecting us negatively. Coincidentally, they are often the same people with the guts to bring up issues that might be worrisome although not obvious to us or our fellow law enforcement associates. A favorite quote of mine is from George Herbert: “The best mirror is an old friend.”

Dr. Gilmartin’s second piece of advice involves spending time doing what is truly enjoyable: the activities we loved prior to law enforcement. It’s not unusual to drop activities we once enjoyed, blaming it on our schedules and being “tired” from a week of working nights. Try making a list of activities enjoyed pre-emergency services and a list of activities enjoyed during the past three months. How do they compare? Are there any activities left over from the not-so distant past?

The best advice is taking stock and retooling, especially when the person you used to be is fading away. Go to the neighborhood barbeque. Get tickets for you and a friend to attend a ball game. Schedule a date night. If you have kids, ask them what they’d like to do on your evening off. Make eating dinner out with a close friend a monthly routine. Break out the fishing pole, bicycle, camping gear, or whatever equipment it takes to refresh the quality of your life. And keep your promises—the promises you make to family and friends and yourself.

You might be surprised how much adjusting the focus of your life and rebalancing it helps at work. We need time to unplug the headset, take off the gun belt, or put away the stethoscope to regain the person and lose the shadow.
Heat Stroke Versus Brain Stroke
Will the real stroke please raise your arms?

Brett Patterson

Dr. Clawson:
I am an EMD-Q® for my agency and we have a few people who will try to use the stroke card for a heat stroke rather than heat exposure. I wanted to know if we could get the International Academy’s explanation regarding which card to use. I’ve tried explaining the reason for using the heat exposure card; however, I would like to have something in print from the Academy, which would help all of us make the better choice in these situations.

Ashley Partridge
EMD-Q
Macoupin County ETSB
Carlinville, Illinois, USA

Ashley:
I forwarded your question to Brett Patterson, chair of the Medical Council of Standards for the Academy. I also added my comments to his response.

Dr. Clawson

Ashley:
Your question is interesting as I have not heard it before. I will try to explain the difference between the two clinical terms you are referring to and describe when to use each associated protocol.

“Stroke” is a term used to describe disruption of blood flow to part of the brain. There are two primary stroke types, the most common of which occurs when a clot lodges in a blood vessel in the brain and cuts off blood supply to the part of the brain fed by the affected artery. Left untreated, this leads to part of the brain dying and the patient experiences symptoms related to that area of the brain’s function, i.e., loss of motor function, paralysis, weakness, speech or sight deficit, and even death. This type of stroke is called a thrombolytic stroke, or a “clot” stroke. It is most common in elderly patients and can now be treated with clot-busting drugs, provided the patient is diagnosed and treated promptly.

The other type of stroke is called a hemorrhagic stroke, or brain “bleed.” In this case, a blood vessel in the brain bursts, often because the vessel is malformed and weak (often called a brain aneurysm). The condition is usually present from birth but the patient is unaware of the problem until the vessel breaks and bleeds into the brain. This condition happens in younger patients far more frequently than clot strokes, and it is often fatal. It is also increased in people with cardiovascular disease and high blood pressure. The symptoms of a hemorrhagic stroke may be the same as a thrombolytic stroke, but often the patient either experiences a sudden onset of a severe headache, or sudden coma, or death.

Fortunately, the EMD does not need to differentiate between a thrombolytic stroke and a hemorrhagic stroke, but rather be familiar with the signs and symptoms, which are usually easy to recognize. In fact, the lay public often recognizes the symptoms of stroke and reports the Chief Complaint as a stroke. Caller accuracy regarding this diagnosis is why Protocol 28 is titled “Stroke,” rather than some symptom of stroke. However, the EMD must also be familiar with the signs and symptoms of stroke, which are listed on Protocol 28 in the STROKE Symptoms definition section.

The EMD should select this protocol when the caller either reports a stroke, or when the Chief Complaint is consistent with the signs and symptoms listed in the STROKE Symptoms definition section of Protocol 28. The symptoms include a sudden onset of weakness, numbness, or paralysis on one side of the body; sudden trouble seeing, speaking, or understanding; or sudden loss of coordination or balance. Notice the common theme here? Sudden onset is a hallmark of stroke.

“Heat Stroke” is a diagnosis used to describe the very serious, latter stages of heat exposure when the internal body temperature exceeds 104 degrees (this definition varies by a degree or so, depending on the reference). The word “stroke” is probably used in this diagnosis because severe hyperthermia (high body temperature) affects the brain, and can even destroy brain cells. Heat stroke occurs when a patient is exposed to abnormally high temperatures for an extended period of time or when a patient exercises/worked excessively in a warm environment. Various factors that inhibit the body’s ability to cool itself can predispose patients to heat stroke, such as a lack of fluid intake, alcohol/caffeine/stimulant intake, or very young or old age.

The signs and symptoms of heat stroke are different than the more common vascular stroke in several ways. First, the complaint of heat stroke is almost always associated with heat exposure and is preceded by the more common signs and symptoms of heat exhaustion (sometimes referred to as heat prostration). When a patient is exposed to heat, the body naturally cools itself through sweating and exhaling warm air. When the external heat and/or exercise exceeds the body’s ability to cool itself, the patient’s internal temperature rises and the patient becomes fatigued, often nauseated, and may develop cramps. These patients are generally sweaty and pale in color. Eventually, if the patient is not removed from the heat source and cooled down, the patient’s internal temperature rises to a point where the body can no longer
maintain a safe temperature, and the brain, being very sensitive to extreme temperatures, becomes affected. This is the point where heat exhaustion becomes heat stroke—the patient’s skin becomes dry and red and her/his level of consciousness deteriorates. S/he may become confused to the point of not recognizing the danger of the heat and, eventually, the patient will become unconscious and may suffer brain damage or even die if not treated promptly. The highest reported human temperature in which the patient survived was 115.7°F (46.5°C) in 1980.

Note that a primary difference between these two conditions is the patient’s recent history. A typical stroke has a very sudden onset when blood flow to the brain is suddenly slowed or stopped completely. This is emphasized in the STROKE Symptoms definition section of Protocol 28 by the repeated term “sudden,” i.e., the patient suddenly has trouble speaking or suddenly cannot move the left side of her/his body. Additionally, a typical stroke is most often unilateral. In other words, it generally affects one side of the body only. With heat stroke, the signs and symptoms are associated with heat exposure and a slower development of symptoms, i.e., clammy, nauseated, and cramping, followed by changes in level of consciousness.

Ultimately, correct Chief Complaint Protocol is achieved by listening carefully to the caller’s response to “Tell me exactly what happened?” and repeating/clarifying this when a clear answer is not obtained. A Chief Complaint involving heat exposure drives the selection of Protocol 20, while a complaint of stroke or sudden onset of stroke symptoms should prompt the EMD to select Protocol 28. Familiarity with the signs and symptoms of these two very different conditions will also help the EMD differentiate the two. Fortunately, heat stroke is relatively uncommon, and the likelihood of a caller confusing the two is also low because heat stroke is recognized by callers as being associated with heat exposure and stroke is recognized as a sudden onset of one or more physical deficits, such as the sudden inability to speak, see, or move one side of the body.

I hope this explanation will help clarify for your EMDs which protocol to use for these very different conditions.

Thank you,

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

A Meridian Moment
FPDS v6.0 ready to go

TWO NEW PROTOCOLS ADDED TO v6.0

The International Academies of Emergency Dispatch® (IAED®) is pleased to announce the release of Version 6.0 of the Fire Priority Dispatch System® (FPDS®), a comprehensive upgrade of the dedicated fire dispatch protocols.

FPDS v6.0 was developed by the IAED with the field fire expertise of FPDS users; it reflects current and evolving fire science and standards. Version 6.0 gives emergency fire dispatchers (EFDs) the ability to provide lifesaving Pre-Arrival Instructions (PAIs) and Post-Discard Instructions (PDIs) covering 26 Chief Complaints, an increase of two protocols since the release of FPDS v5.0 in 2009.

New Chief Complaints highlight Motor Vehicle Collision, Suspicious Package (Letter, Item), and Bomb Threat.

Water plays a big, new role in v6.0—sinking vehicles, vehicles caught in floodwater, and structure fires on or near water. The Water Rescue Post-Discard Instruction was expanded to include flooding that results in structural collapse or passengers in vehicles trapped by rising water.

There’s also language specific to emergency dispatch centers using watercraft in response to emergencies along coastal areas or to facilities built on harbors and for the direct dispatching of lifeguards stationed on beaches (Surf Rescue).

“Lifeguards in observation towers are everywhere on beaches,” PDC® Fire Consultant Jay Dornseif said. If someone is drowning or in trouble a hundred yards from where the lifeguard is stationed, Dornseif explained, response time can be significantly reduced because he or she can react almost as soon as if the person were right in front of the guard post.

Other improvements include PDIs for caller in danger—not trapped during Case Entry Questions, Determinant Suffixes to delineate response and safety in fuel spills, and PDIs for chemical suicide in Protocol 61: HAZMAT.

“Chemical suicide is a HAZMAT situation because whatever the person has mixed together is going to be toxic and perhaps lethal to anyone who happens to be nearby,” Dornseif said. “[Chemical suicide] isn’t common, but it’s always going to be a dangerous incident. Unfortunately, recipes are easily found on the Web.”

A noteworthy endorsement of the standards and practices contained in v6.0 comes from the Insurance Standards Organization (ISO) through its national program rating community fire departments. The ISO’s Public Protection Classification Services gauges the fire protection capability of the local fire department to respond to structure fires.

“That affects basically everyone, not just dispatch centers,” Dornseif said.

For example, ISO ratings are important in the formulation of insurance quotes, although the weight can vary from company to company and often includes factors such as homeowner fire prevention and actions fire departments take to reduce risks.

FPDS v6.0 operates on the ProQA® Paramount platform that facilitates response based on caller feedback and coordinates data flow across applications, among other features. New to Paramount are several functions designed to group answers to ProQA questions based on general meaning to streamline the calltaking and dispatch process.

Since FPDS version 1.0 was released in July 2000, more than 400 agencies have incorporated the protocol into their current standard of dispatch care and practice. The IAED is responsible for updating and maintaining the fire, police, and medical protocol dispatch systems.
Bounce-back counters text misconception

Starting Sept. 30, all four major U.S. mobile phone service providers must immediately notify someone trying to text message a 9-1-1 center if the center is unable to process texted calls; the notification will inform the person that the written message did not go through and the sender should instead call 9-1-1.

The Federal Communications Commission (FCC) requirement is designed to help protect the public by substantially reducing the risk of consumers sending texts that dead end while the senders believe that 9-1-1 authorities have received them, commissioners said in a news release detailing the rule.

The so-called “bounce-back” alert is a heads-up public service announcement intended to counter a misperception that emergency telecommunication centers are as digitally sophisticated as the people they serve. Currently, a handful of centers can process texts, video, and all other types of digital data.

The rule is for telephone service carriers exclusively and doesn’t apply to social network service providers such as Facebook and video gaming communities that provide online messaging.

Providers of software applications that enable consumers to send text messages to and receive text messages from all, or substantially all, text-capable U.S. telephone numbers must implement the bounce-back capability no later than Sept. 30.

Panic button sends red alert to 9-1-1

Immediate help to intercept an intruder or other potential threat will be at the push of a button for public, parochial, and private schools and accredited kindergarten programs in Delaware County (Pa.).

A $188,600 grant from the Southeast Pennsylvania Regional Task Force will pay for the purchase and installation of 230 emergency buttons. Schools are responsible for providing a dedicated phone line and maintaining the line at their expense.

The silent alarm activated when the red panic button is pushed sends 9-1-1 a message that includes the school’s name, address, and device location. Police are immediately dispatched while the calltaker, receiving both a digital and audio message, stays on the line to listen to the sounds of the incident. The calltaker can use the Roam Secure Alert Network (RSAN) system to alert school leaders if and when police confirm an active incident.

Public safety apps keep coming

The American Red Cross has developed the official tornado app that provides interactive quizzes and step-by-step advice on preparations for a tornado. The app provides a list of nearby shelters and an audible siren that is sounded when the National Oceanic and Atmospheric Administration (NOAA) releases a warning.

New building for Harford County EOC

Harford County, Md., has a $23.5 million Emergency Operations Center (EOC) in the works and as anybody who’s dropped by lately can tell you, it’s about time.

The new 65,000-square-foot-center in Bel Air will replace the existing EOC in Hickory, which no longer accommodates the dispatch center and the associated command post during major civil defense and weather incidents. Construction started this past spring.

The county council allocated $26 million toward the EOC project in the county’s current capital budget, and public
works officials say they expect the remaining funds would be allocated during the county’s upcoming budget process for the 2014 fiscal year.

The remaining funds would cover expenses such as telecommunications equipment, furniture, and any other items needed to run the EOC.

The Harford County EOC was the first tri-Accredited Center of Excellence (ACE) in the United States.

### Different sort of response to 9-1-1

The Miami (Fla.) Police Department (MPD) comm. center might have a few more calls coming in, following a National Public Radio (NPR) broadcast in June.

The calls won’t be asking for response in an emergency but, rather, about the response the police department uses to handle non-urgent situations.

The MPD relies on 50 public services aides (PSAs) for non-emergency response. The PSAs are not armed, and while they drive marked cars to the scene, the cars have no sirens. Their uniforms are slightly different than those worn by the city’s 1,100 officers (light blue shirts rather than dark blue shirts). Most aspire to become police officers.

The way it works, calltakers at the 5,000-square-foot combined fire and police dispatch center forward caller information to dispatch, and the dispatcher has the discretion of sending a PSA to an incident based on the caller’s complaint.

“They are trained in the types of calls safe to dispatch to a PSA,” said Napier Velazquez, of the MPD public relations office. “These are the calls where the PSA is simply writing a report but will not be placed in any danger.”

The situations include minor traffic accidents and cold crime scenes. For example, a PSA could be dispatched to a burglary in which the offender is no longer present, but never to a situation in which the offender is still on the scene or might still be on the scene. A PSA could be dispatched to a hit-and-run where the offender has already fled the scene but not to a hit-and-run where the citizens at the scene are holding the offender.

If a situation escalates beyond the PSA’s control, police units are dispatched to the...
There's a fight for survival in progress over the building where the first 9-1-1 call was placed in 1968. The historic "for the call" city hall headquarters in Haleyville, Ala., could have demolition in its future, depending on whether city fathers accept an offer to sell the property to CVS/pharmacy.

A drugstore in the place of a building of local and national historic interest does not sit well with several residents, particularly a group led by Valerie Taylor. She doesn't go for the idea that selling makes sense because of the estimated $1 million it would take to keep the building serviceable for city business.

After all, the history behind the building is Haleyville's claim to fame; it's where Alabama Speaker of the House Rankin Fite placed the first 9-1-1 emergency call from city hall to U.S. Rep. Tom Bevill at the city's police station. Mementoes on display inside the building include the red rotary telephone Fite used in making the call.

Taylor's created a website to bring attention to the city's plans, declaring that the "building has a valuable place in our nation's history. Everyday there are millions of phone calls made to 9-1-1 in order to save lives, and the very thought of not being able to have a place to visit in the years to come is unreal."

Taylor has also spoken up against the sale at several city council meetings and she is circulating a petition asking Haleyville Mayor Ken Sunseri to stop the sale; that petition, along with a second petition circulated by Bob Smith, of Case Grande, have so far gathered 300 signatures (as of Aug. 9, 2013).

Similar to Taylor, Smith believes the building needs to stay for the sake of posterity and wonders what will happen to the annual 9-1-1 festival if the building is razed. The event scheduled for June 2014 will honor emergency personnel in a two-day extravaganza featuring music, antique car and tractor shows, a BBQ Cook-Off, parade, and crafts fair.

Haleyville stands to lose historic 9-1-1 site

New NENA president takes the helm

Bernard "Buster" Brown, ENP, was sworn in as president of the National Emergency Number Association (NENA) during the 2013 NENA Conference and Expo held in Charlotte, N.C. Christy Williams, ENP, became 1st Vice President and Cheri Lynn Rockwell, ENP, assumed the office of 2nd Vice President.

Brown addressed his goals at the conference, and, most notably, the critical role NENA plays in ensuring 9-1-1 professionals are equipped to meet the challenges presented in the 21st century communications environment.

"The work [of 9-1-1] is of critical importance—seconds count, accuracy is vital, and mistakes can cost lives," Brown said. "It's for
my family, your family, and families across North America that I’m in public safety. No matter where, no matter when, I want to make sure that every call for help is answered to the very best of our ability.”

Originally from Lancaster, N.Y., Brown has worked in public safety communications for almost 30 years and is currently the Virginia Information Technologies Agency (VITA) regional coordinator for Region 6, where he oversees multiple localities’ 9-1-1 training, grant management, and equipment upgrade and replacement programs. Before joining VITA, he was the director of Emergency Services for the City of Danville, Va.

Brown has spent the better part of the past decade involved in numerous association activities, serving on the NENA Executive Board for the past two years. Previously, he served as the program chair for the Virginia chapter’s annual conference and was later elected to the position of Virginia NENA president.

Six other Executive Board members were sworn in at the conference: Past President Barbara Jaeger, ENP; Northeastern Region Director Ed Marecki, ENP; North Central Region Director Rob McMullen, ENP; Southeastern Region Director Linda Draughn-Woloski, ENP; Canadian Region Director Nancy Banks, ENP; and Private Sector Director Ron Bloom, ENP.

Committee cites TTY limitations in NG9-1-1 readiness

A Federal Communications Commission (FCC) committee report examining procedures for calls between TTY users and NG9-1-1 Public Safety Answering Points (PSAPs) demonstrates limitations of TTY devices available to the hard of hearing and speech impaired in reaching emergency assistance.

According to the Emergency Access Advisory Committee (EAAC), limitations—such as slow transmission and a limited character set—intensify issues of equal access to the nation’s emergency reporting systems and the associated need for national standards. The committee also posted presentation materials providing timelines for implementing text-to-9-1-1 services in contrast to the complexity of the systems required to accept, process, and route SMS text messages to a PSAP.

There are currently eight jurisdictions now accepting SMS text messages from callers requiring emergency assistance or that are in the process of state trials: Black Hawk County, Iowa (deployed June 2009); Vermont (deployed April 2012); Durham, N.C. (deployed Aug. 2012); York County, Va. (deployed Dec. 2012); Frederick County, Md. (deployed May 2013); Maine (deployed June 2013); Collin County, Texas (deployed July 2013); and Tennessee (anticipated deployment fall 2013).

The EAAC primarily handles issues of equal access and has focused on SMS texting as a way to provide improved services to people with disabilities.

Last World Trade Center search dog dies

The last surviving 9/11 Search & Rescue dog, Porkchop, has died.

After the World Trade Center (WTC) attacks, 13 Search Dog Foundation teams were deployed by the Federal Emergency Management Agency (FEMA) to help search for survivors. Over the intervening dozen years, the dogs have passed away from old age. Porkchop was only one year old when he aided the search at Ground Zero and was the last of the dogs to die. Heroic dogs and their handlers that day include: Guide dog Roselle who led her owner Michael Hingson, who is blind, down 78 floors from the WTC; Appolo and his handler, Police K-9 officer Peter Davis, who received the Langden Sarter award from the American Kennel Club; several others—such as Trakr, Cowboy, and Jake—and their handlers helped search the rubble following the Sept. 11, 2001, attacks.

Heat kills

As of July 2, 2013, in the U.S. there were at least 15 deaths of children unattended in vehicles—seven confirmed as heatstroke and eight which, based upon the known circumstances, were most likely caused by heatstroke. In 2012, there were at least 32 deaths of children due to hyperthermia (heatstroke) after being left in or having gained access to hot cars, trucks, vans, and SUVs. Since 1998 there have been at least 575 documented cases of heatstroke deaths of children in vehicles.

Heat exhaustion and heatstroke can occur in a matter of minutes for young children and infants in enclosed vehicles. A recent General Motors and SAFE KIDS Coalition study found that children are more vulnerable to heat because a child’s body...
temperature increases three to five times faster than that of an adult.

A study of media reports by the Department of Geosciences, San Francisco State University came up with the following statistics in relation to the 560 child vehicular heatstroke deaths for a 13-year period (1998 through 2012):

- 52%—child “forgotten” by caregiver (288 children)
- 29%—child playing in unattended vehicle (163 children)
- 18%—child intentionally left in vehicle by adult (100 children)
- 2%—circumstances unknown (9 children)

According to the same study, these incidents can occur on days with relatively mild (i.e., ≈ 70 degrees Fahrenheit) temperatures and vehicles can reach life-threatening temperatures very rapidly. On an 85-degree day, the inside of a car can reach 100 degrees in seven minutes; on a 93-degree day, the inside of a car can exceed 125 degrees Fahrenheit in about 20 minutes. The temperature inside of a car is higher than outside temperatures and climbs rapidly.

Legally speaking, only 20 states have laws specifically addressing leaving a child unattended in a vehicle.

In a normal year, the demands of summer heat kill about 175 Americans. In the 40-year period from 1936 through 1975, nearly 20,000 people were killed in the United States by the effects of heat and solar radiation. In the disastrous heat wave of 1980, more than 1,250 people died.

**Emergency center design based on lessons learned from Katrina**

Jefferson Parish responders have a new $26 million central operations center in Metairie, La., built based on lessons learned from Hurricane Katrina and designed to provide self-sustaining base operations during a disaster.

Powered by a diesel generator that would be fueled by a tanker, the center could essentially operate indefinitely, providing food to about 800 emergency personnel each day and showers, beds, and medical facilities too. Officials are also installing a back up to the parish’s 9-1-1 system to ensure dispatchers can keep working even if the main communication center becomes unusable. The backup dispatch center cost about $400,000.

The center’s main function will be to serve as the middle level of operational decisions in a disaster, providing a link between the high-level decisions made by a regional joint command group and the deputies, EMS, and other first responders on the ground.

**Massachusetts resumes dispatch awards ceremony**

The year hiatus the Massachusetts State 911 Department took from the annual 911 Honors Ceremony simply meant that dispatchers from the state’s PSAPs shared recognition spread over two years when the event resumed in June 2013.

Springfield Police and Fire Communications received a department award for their response to a tornado that did plenty of damage when it touched down on June 1, 2011, and also for emergency operations following a gas explosion causing heavy damage in a several block area in the downtown entertainment district on Nov. 23, 2012. During the tornado, dispatchers took calls and helped coordinate response while working from temporary trailers in the police department’s parking lot because of ongoing headquarter renovations.

Monson Police Dispatcher William Chaiffre and State Police dispatcher in Northampton also received awards recognizing their work during the 2011 tornado. The Sturbridge Police Communications Center was honored for response efforts during the 2011 tornado, Hurricane Irene, and the October blizzard of 2011.

State Police Dispatchers Jason Connell and Cameron Dunbar in Shelburne Falls were recognized for their ability to help a caller provide CPR for seven minutes to a 46-year-old female who had stopped breathing. The patient was conscious and alert upon arrival at the hospital after a successful resuscitation.

The state’s award ceremony was not held in 2012.

**Maine going full text**

Text messaging in Maine won’t be limited to Verizon Wireless, AT&T, Sprint, and T-Mobile customers beginning next summer when the state expects to roll out an upgraded network in line with Next Generation 9-1-1 (NG9-1-1) initiatives.

The process, which started during the summer of 2013, will eventually result in a platform allowing the state’s 9-1-1 communication centers to receive video, images, and enhanced data. The first phase, however, concentrates on the texting feature now restricted to subscribers of carriers using the existing 9-1-1 network.

It could take several years before full capacity is realized, depending on the expediency of wireless carriers and others to develop standards on their end to transmit the multimedia data.

NG9-1-1 uses Internet Protocol (IP)-based technology to deliver and process 9-1-1 traffic and supports the transmission of voice, text, photos, videos, and data. It will replace a legacy system largely built using circuit-switched infrastructure that does not support newer communications technologies and applications increasingly common among the public, according to the Legal and Regulatory Framework for NG9-1-1 Services Report to Congress (Feb. 2013).
Yorkshire Ambulance Service bucks obstacles, achieves ACE

It was a triple celebration seven weeks apart for the Yorkshire Ambulance Service National Health Service (YAS NHS) Trust with Beverley Logan presenting an ACE award at each of the two YAS control centers covering a combined 6,000 square miles and serving more than 5 million people, and an award for a calltaker giving Pre-Arrival Instructions (PAIs) to help a baby survive complications at birth.

The Wakefield center was first in line, receiving its award on May 24, while the York center picked up its accolades on July 13.

“I am personally honored to be a part of the ACE achievement at YAS NHS Trust and wish to congratulate both my friends and colleagues there,” said Logan, IAED™ accreditation officer. “The high standard of excellence for emergency dispatch is a credit to everyone.”

While the number of meetings Logan and the YAS NHS staff logged together is too high to list them all, she does “fondly” recall the marathon sessions to address every step along the way, from overhauling local policies and practices, beginning in 2008, to the transition to v9 Performance Standards.

She also puts credit where credit is due. “Without the dedication of the EMDs to provide the best patient care and customer service and the support from their team leaders, supervisors, managers, audit team, and executive board this achievement would not have been possible,” she said. “It really has shown teamwork within this trust.”

While Logan was delivering the ACE award in York, she also caught this story about the YAS NHS Trust control center and call handler Jo Black published in The York Press (July 8, 2013):

Laura Fogg, 20, had little warning she was about to give birth to her daughter, Esme, and had no time to get to York Hospital from her home in Askham Bar.

Instead her partner, Alex Eadie, 24, talked to an ambulance call handler and passed the advice to Laura’s mum, Theresa, 42, who helped to deliver the baby. Tiny Esme Eadie was born “with the caul”—which happens in only one in 80,000 births when part of the amniotic membrane covers the baby’s face. Her dad helped to remove it and, as she did not appear to be breathing, Theresa very gently gave her mouth-to-mouth. Thanks to their painstaking efforts Esme began to breathe by herself moments before the ambulance crew arrived.

“I was crying my eyes out when we realized she was okay,” Theresa said. “When the ambulance crew ran in and gave her oxygen it was lovely, such a relief. It went from a bad situation to being so happy. I have never known a Monday like it in my life. When we realized everything was okay, we went from horror to being so happy.”

The family expressed their gratitude to the ambulance service, particularly to the ambulance crew and Black, who talked them through the birth.
Editor's Note: This is the first in a planned series of stories tracking Next Generation 9-1-1 readiness among states.

Eric Parry’s start to the day is fairly routine. The director of Utah’s 9-1-1 Program arrives at the office and pours a cup of coffee before sitting down in front of the computer on his desk. And once settling in, where does he go first? The Emergency Call Tracking System (ECaTS) report that provides a daily snapshot of 9-1-1 data, of course.

The scheduled report showing up in Parry’s e-mail inbox every morning allows him to analyze and compare data for all 38 Public Safety Answering Points (PSAPs) in Utah. While reviewing statistics related to call volume, talk time, transfer calls, and speed of answer might not sound as rousing as headline news, it’s a method Parry can use to troubleshoot issues in preparing the state’s transition to Next Generation 9-1-1 (NG9-1-1).

“We’re essentially at square one,” said Parry, who in July 2013 celebrated his first year in the position. “Like other states—and Utah’s not behind—NG9-1-1 has become the priority, but we have a long way to go.”

The program Parry directs was established in 2005 and although he is a relative newcomer to the state’s Department of Public Safety, he is certainly no Parry-come-lately to 9-1-1 communications. His 40+ years of experience in public safety includes expertise in law enforcement, 9-1-1 implementation, NG9-1-1 feasibility, and PSAP consolidation. As a former consultant for
“WE’RE A LEADER IN READINESS, BUT NOWHERE NEAR WHERE WE NEED TO BE ... ALTHOUGH I BELIEVE WE CAN BE AT THE END OF THE NEXT FIVE YEARS.” — Brad Dee

While Dee is pleased with the progress Utah has made, complacency is not a word in his 9-1-1 vocabulary. “We’re a leader in readiness, but nowhere near where we need to be,” he said. “We’re nowhere near where I’d like to be, although I believe we can be at the end of the next five years.”

In Feb. 2013, Utah awarded contracts to several qualified firms submitting bids to build and maintain delivery systems and equipment and to aid in bridging the transition. And while Utah’s E9-1-1 Committee has been able to upgrade most PSAPs to be “NG Ready,” the complete transition is expected to cost more than the anticipated revenues raised from the state’s two surcharges.

In other words, the state can only proceed as the money becomes available.

For example, Salt Lake County received a $37,000 state grant plus another $13,000 in state funding to build a pilot IP network that links landlines and wireless 9-1-1 trunks and creates a platform for NG9-1-1. Salt Lake County’s initiative was the first step in the state and federally funded Greater Wasatch Multi-Node Project to provide IP connectivity to four counties (Davis, Weber, Morgan, and Salt Lake).

Basically, Parry said, the project tested the concept of seamlessly answering calls anywhere on the network, no matter their origination. “It was a success,” he said. “We are getting through the layers of onion to advance NG9-1-1 statewide.”

The onion, however, could end up having many more layers than even the current host of agencies can predict, and continued advances in technology might make it impossible to ever keep up. At least, that’s one opinion when it comes to meeting the expectations of technology and the public.

There are also concerns connected to the whole concept of transition.

Dee acknowledges the apprehension but supports his convictions with the story of a 9-1-1 tape he heard more than a decade ago. “A woman calling 9-1-1 to get help for her husband couldn’t remember her phone number,” he said. “He was having a heart attack and she couldn’t say where they were. That’s when I realized we needed to do something. Nothing works unless we can deliver timely response to a person in an emergency.”

Parry is confident it will happen, and for good reason. “People will always have the ability to call 9-1-1, that will never change,” he said. “It’s time we catch up with a wireless society.”

Priority Dispatch Corp.™ (PDC™), based in Salt Lake City, he is a familiar name in the broader 9-1-1 community.

Parry was hired just two months from the date former Manager Bill Jensen retired. The expediency of the decision was exactly what Utah District 11 Rep. Brad Dee was hoping for.

Rep. Dee is in his fifth, two-year term representing Utah’s District 11 and a lifelong resident of Weber County at the northern end of the Wasatch Front. Prior to his election to the state legislature, he was mayor of Washington Terrace and a strong advocate for merging three dispatch centers in Weber and nearby Morgan Counties beneath one roof.

The Weber Area Consolidated Dispatch Center (WACDC) opened in July 2000 and in 2005, a special service district was created, which led to voter approval as a taxing entity.

“As we moved into the future of 9-1-1, I didn’t want to create a myriad of PSAPs, all demanding the same infrastructure,” said Dee, who was at that time chair of the Weber County Emergency Management committee. “I wanted one. We had our share of turf battles, but we were able to get it done.”

The Weber Area Dispatch 911 and Emergency Services District is supported through property taxes and 9-1-1 telephone surcharges, and because of the success of the consolidation, Dee was determined to do the same throughout the state’s system of 9-1-1 centers when elected to his first term in 2002.

In 2004, during that same term, Rep. Dee spearheaded the Utah 9-1-1 Committee—the forerunner of the 9-1-1 Program—as part of a larger package to align and equalize the state’s emergency communications system.

The 2004 legislation led to statewide Phase II infrastructure and, also, raised the existing Enhanced 9-1-1 (E9-1-1) telephone surcharge statewide and created a second, separate surcharge assessed every residential or commercial telephone line. Today, the surcharge is collected on every device that is capable of accessing 9-1-1.

The Utah Tax Commission distributes funds from the existing surcharge (61 cents) on a monthly basis to support PSAP operations. The second surcharge (8 cents) provides grants for PSAPs to update and maintain equipment capable of receiving what is commonly referred to as ‘Phase II’ caller location information from wireless devices (i.e. cell phones), as it was intended.

By 2007, the combined funding put Utah in the enviable position of nearly 100% Phase II compliance. Except for extremely remote areas of the state, PSAPs can identify a caller’s number along with the geographic coordinates of where the caller is located. The majority of 9-1-1 calls can now be directed to the appropriate PSAP, reducing the number of call transfers while, at the same time, coordinating the delivery of emergency services.

The next step is one the public might not notice although altogether vital in meeting public expectations. NG9-1-1 requires a complete infrastructure makeover. The legacy circuit-switched infrastructure in Utah—similar to the other 49 states—does not support newer technologies and applications, and even if it did, the legacy systems are far past their prime. NG9-1-1 will rely on Internet Protocol (IP)-based technology to deliver and process 9-1-1 traffic.

Dee is again taking the lead, chairing a 17-member NG9-1-1 taskforce that “will come up with recommendations” for moving Utah fully into the digital age for emergency communications. The taskforce—comprised of a cross section of law enforcement, communications, and elected officials—is funded for two years. The first meeting was held in June 2013. Recommendations the committee presents to the legislature will include a proposal for finances, he said.

The “big three” items to make the transition, and that’s for every entity, are: an Emergency Services IP network, customer premises equipment (CPE, a PSAP’s terminal end equipment), and NG9-1-1 hardware and software.

“That’s where the costs are,” Parry said. “That’s where the states are having the most trouble because of the amount of revenue needed. It’s a priority the 9-1-1 Program and taskforce are working on.”
They call themselves “life impactors,” not in the formal sense, but as the metaphor for the contributions they make to emergency medical services.

“We are always looking to help people in better ways,” said Chen Jie Lian, chief dispatcher, Wuxi (People’s Republic of China) Emergency Services Center communication center. “This is our goal.”

Wuxi calltakers/dispatchers lived up to the select title when, in April 2013, they became the first Accredited Center of Excellence (ACE) in the PRC. Located in the southern Jiangsu province, “Little Shanghai” as Wuxi is sometimes called, is a prospering megalopolis, ranking ninth in gross domestic product among 659 cities in China and an ultra-modern purveyor of emergency services.

“Being accredited assures that we can help people in a more accurate and efficient way,” said Ms. Chen (as she is referred to).

“The quality of emergency care improves and calltakers and dispatchers are fulfilled by what they can do.”

Wuxi is home to one of the country’s oldest EMS operations and Ms. Chen, a registered nurse who started at the communication center in the 1980s, has always been intent on providing callers something more than simply saying “help is on the way” after verifying the name and address.

“But we could do nothing,” she said. “The tools were not available.”

Save that date
The 1980s date is significant.

The country’s Ministry of Health inaugurated the practice of emergency medicine in 1986 as an official specialty, establishing the Chinese Association of Emergency Medicine. In 1996, the number “120” became the official three-digit number to call in a medical emergency. Six years later, in 2002, the Administrative Committee of the Emergency Medicine Center Branch of the Chinese Hospital Association was organized to develop a pre-hospital care system.

So, why is this important to our story? The International Academies of Emergency Dispatch® (IAED™) offers pre-hospital care from the get-go, although in 2002, China was at the start of designing a system with a view toward dispatch off into the future.

And developing a pre-hospital care system takes time, particularly in a country with such enormous healthcare demands: 1.3 billion people seek assistance from any one of 936,000 healthcare institutions.

Emergency communication was a major challenge compounded not only by the sheer size of the country but, also, competing EMS models, including private ambulance service, stand-alone emergency centers, stand-alone “120” centers, and hospital-based ambulance services. Receiving hospitals and the stand-alone centers received little or no notification that critically ill patients were in ambulances and on their way to the hospital.

In response to the disparity in EMS
models and to establish a network of quality care, the Ministry of Health set a goal to standardize and clarify practice guidelines and promote systems to emergency medical care. The Ministry’s consequent three-stage approach highlighted nationally applied accreditation and training programs culminating in outstanding centers of excellence. They wanted to “fill in the time gap” between emergency call and on-scene EMS arrival.

This is where we get back to our story.

Wuxi Emergency Center provides emergency care coverage to 3.6 million people in a predominantly urban province covering 1,643 square kilometers (1,021 square miles). Wuxi is the primary Public Safety Answering Point (PSAP) for a stand-alone ambulance service affiliated with the country’s Center for Disease Control (no relationship to the CDC in the United States) and receives an average of 23,000 calls per month, resulting in an average of 5,300 ambulance runs.

Like other communication centers serving major population areas, Wuxi had sophisticated technology in place, such as a global positioning system to monitor pre-hospital ground units and send the closest vehicle available.

Ms. Chen had other improvements in mind. She started exploring resources Wuxi could apply to make dispatch an even more important part of the envisioned emergency medical system. She had always believed dispatching could go beyond a phone connection to a vital link in the chain of response.

The protocol system had to meet China’s national goals for a well-designed system; she wanted dispatch-centered certification and training and a calltaking process with the proper instructions to fill “the time gap between the call and the arrival of the ambulance,” as mandated by the Ministry of Health.

Wuxi went live with the Medical Priority Dispatch System™ (MPDS™) on April 28, 2011. The 17 dispatchers/calltakers are EMD certified. The center uses ProQA® and is in the process of certifying instructors for future EMD and QA courses.

“Once you decide to do something, you must do it well,” Ms. Chen said.

While the story ends happily, there was conflict and, as in every good story, the characters involved were able to solve their problems and, in this story, it resulted in saving lives.

**Communication center**

The calltakers/dispatchers had their concerns once notified MPDS was on its way; why should they change the way they were doing dispatch?

That’s where PDC™ international Training Consultant Ken Hotaling stepped in.

“They had no idea what we were trying to accomplish,” he said. “They had lots and lots of questions and who could blame them? Wuxi was the third city in all of China to initiate the process. They wanted to know what they were getting into.”

Hotaling, through translators, emphasized the longevity of MPDS; its worldwide reception (now used in 43 countries and translated into 16 languages, with four more in progress); research into developing the protocol system; and an evolution that respects and accommodates cultural differences.

“We stressed the universality of protocol,” said Hotaling, who has visited the country several times for training at nine centers—in addition to Wuxi—that during the past three years have implemented the MPDS. “The process has proven correct.”

Hotaling answered questions about liability, best practices, Academy expectations, public reception, and the certification and training processes.

“They weren’t going to take anything at face value,” Hotaling said.

Ms. Chen asked calltakers and dispatchers to wear the shoes of the callers experiencing what might be the most harrowing moments of their lives.

“Wouldn’t they want someone who could give them instructions for helping their loved ones before the ambulance arrived?” Ms. Chen asked. “Before we could do nothing but wait. Now we had a tool to help and save lives.”

The local reality of emergency medical services, however, did require some cultural fine-tuning. For example, correct wording and terminology depends upon cultural interpretation, and when written/spoken improperly can convey the wrong message and provide unintended consequences. Proposals for Change (PFCs) involving these types of contextual issues were submitted to the Academy and, once approved, incorporated as part of the official Chinese version of the MPDS.

In addition, the Wuxi Dispatch Review Committee (DRC) reviewed proposals to modify local policy so that all policies would work in tandem with protocol.

**Public response**

At the start, less than 50% of the callers would cooperate with answering questions, inferring the process was troublesome and delayed the timely arrival of an ambulance.

Hotaling had heard that before and, in anticipation of public concern, he recommended the approach others have taken to sway opinion and establish the benefits of protocol and a standardized approach to medical dispatch.

Wuxi coordinated a public education initiative. The new way of responding to emergency calls answered at the communication center was added to an already existing summer program to educate youth about emergency medicine. There were radio and TV spots and local outreach.

The campaign worked. Within months, 95% of the callers seeking assistance said the instructions they received were both necessary and helpful.

**Happy ending**

IAED representatives traveled to Wuxi to present the ACE certificate in a ceremony held on May 22. Eighty local and national officials and representatives from the nine other centers in China using the MPDS were also in attendance. The spotlight on international collaboration in reaching national goals can only lead to more knocks on the Academy’s door.

“Agencies see what Wuxi was able to achieve,” Hotaling said. “They want the same. It’s about improving patient care and developing an emergency medicine system enhancing China’s international reputation for healthcare delivery.”

**Source:**
The Smaller The Better
Connecticut center puts stamp on ACE map

By James Thalman

Old Saybrook, Conn., is what you’d call a quiet town. What the 10,000 or so permanent residents like to call it is the only place on earth where the Connecticut River Meets the Sound. Phillip Coco, director of Emergency Medical Services for the Old Saybrook Department of Police Services, says it’s a great town with one of the most committed call center staffs that side of Boston.

And things aren’t all that quiet, Coco told The Journal in July during a telephone interview. “Our resident population triples over the summer because we’re a summer destination, and 9-1-1 calls go up by more than that because people come here to play, and when people play, accidents happen,” he said.

Handling a potential three-fold spike in phone traffic, which normally averages about five to seven medical emergency calls per day in the off-season, might drown other small centers. But the dispatchers have made it a daily goal to be a reliable beacon for improving public safety as lighthouses have been drawing modern high-season tourists and guiding ships safely around the ever-changing shoals just off the banks, bogs, salt marshes, swamps, meadows, and flats along the tideland stretch of Long Island Sound.

That abiding commitment to public safety shows, and it continues with the Old Saybrook Emergency Communications Center becoming an ACE. It is rippling even wider with a commitment from both the police and fire departments to do the same within the next three years.

“Everyone from the dispatchers, to government overseers, to the field responders has taken up the commitment to the protocols,” Coco said, noting that the fire department actually came to them about how to sign up. They didn’t need much coaxing and it wasn’t the usual territorial battle over shifting to a scripted call center. In the months since Medical Protocol implementation, utilization of the countywide hospital-based paramedics, who respond to provide advanced life support along with the local basic life support ambulance was reduced by 22% with no patient impact. This allows the paramedics to remain available to respond to patients who require their services.

“In a small place, that’s a huge number, and it speaks for itself,” Coco said. “This means we’re much more capable of evaluating and making the correct determinants on calls, including handling low codes or other nonemergency incidents. We used to overrespond frequently. Now we’re evaluating and responses are more appropriate. People are receiving the correct level of care, and our field response is at the proper scale.”

People might look at a catchment area with just 10,500 residents and ask how hard dispatch could be, Coco said. “It’s just as important to us to use our resources prudently here as it is in Boston or any big urban area. It’s the same level of commitment, and it requires everyone getting on board. That’s the key to becoming an ACE and more importantly, to having the best possible outcomes. Accidents and emergencies are the same everywhere, only the places and the people who are involved are different.”

For Saybrook, “it really became an accountability thing, which I guess all such
efforts start out as," Coco explained. "We were making sure that our citizens always had access to a paramedic by utilizing this limited resource much more efficiently."

Their efforts to become an ACE were hinged on increasing the time paramedics were available for traumatic injuries and critically-ill patients by 70 hours. "Gaining that 70 hours, again, is huge for us and one that we're just going to try to improve on."

Numbers—getting the right ones—are central to obtaining an ACE designation, he said. "But in the end, that's not what it's about at all," Coco said. "It gives a center something to shoot for, and there are results and data that can be analyzed. It takes a bit of extra work, but like we were more than pleasantly surprised to realize, we and other centers have more under our control than they think."

Having numbers gives you something to show executive leaders, he said, noting that numbers are central to governing boards that oversee dispatching or any other publicly or mostly publicly funded service.

In the digital age, no one's figured out a way to make accidents virtual or any less real or how to tend to them virtually, Coco pointed out. "What has helped is we can track exactly what we're doing, if we're getting close to those high marks you hope to achieve," he said. "Again, it's not the number, it's what the numbers mean and how you respond to them that counts."

A bit of advice for other centers considering getting on the ACE train is to make sure center leadership and veteran dispatchers, or even those who are rookies, take every opportunity to explain exactly what it is they do, why it matters, and who it helps.

"The more times you can tell that story, and do it in a way that the public and the supervisors all understand the program, the better," he said. "The protocol really streamlined all that for us, plus there's the usual reduction in liability with it because you've made the choices based on how a dispatcher is closely directed, not just by going with what they think is right again, all the information in making those decisions is in every call."

Coco noted that the attitude was rooted in a healthy skepticism before the center adopted the Medical Priority Dispatch System™ (MPDS®). Getting feedback won't be a problem, he said.

"If people remain committed to the notion that it's all about improving public safety, that's an idea everyone can get behind," Coco said. "Having the goal of achieving an ACE keeps people pretty focused. Triple ACE, here we come."

In A World ...
Where hearing is as hard as seeing

By James Thalman

SALT LAKE CITY—Dramatic call replays at the 2013 NAVIGATOR conference were a chilling reminder of how dispatchers never know how an event is going to play out and how stress can ripple through a calltaker's life long after the incident is over. The infamous Columbine shooting—a half-hour aural ordeal in real time was cut down to five minutes in Shawn Messinger's course, Active Assailant Incidents—The Telecommunicator's Role. The fraction of the call was more than enough for the veteran SWAT team members and calltakers on hand to discuss the new Active Assailant (Shooter) Protocol.

The replaying of part of the 9-1-1 call for the Aurora, Colo., movie theater shooting started with a confusing account about a kid with The Joker haircut and quickly turned into the surreal/all-too-real events happening inside. The review of this call immediately captivated those in attendance for the post-mortem Active Shooter Incidents for Telecommunicators taught by Melissa Alterio and Anthony Weed.

Almost the entire unedited version of that call was dissected again in a course that said it all in its title: MAYDAY, MAYDAY, MAYDAY!!! The Three Words You NEVER Want to Hear! The description was not an exaggeration as veteran dispatch supervisors Nancy Lockhart and Charlene Monges led a discussion on what happens when a call comes in as one thing and suddenly turns into another, altogether worse thing.

In the Aurora mass shooting, for example, responding police are initially as cool as snow cones over the radio. Within a few minutes field responders are yelling for "three more ambulances right now," and the trickle of information is suddenly coming through the headset like a flood and almost everybody at the scene is "overmodulating."

Except one group of people: the dispatchers.

In Aurora, dispatchers were in the hub of the incident wheel when suddenly rolling out of its center yet is the eye—or rather the ear—of the storm. The dispatchers are a model of how to deal with a suddenly turbo-charged incident, Lockhart notes several times to the group, pointing out that although on-scene personnel are asking essentially for the moon as the mayhem unfolds, they calmly repeat every
request and give every impression that they are fully in control no matter how things twist and turn.

“Our job is to be ready for things going every which way,” Lockhart said. “And no matter how much you practice mayday calls, it’s all academic until you’ve got one sitting in your lap.”

But what about after, when the high tide of violence of both man-made and natural disasters subsides, three attendees ask in succession, citing incidents when a lightning strike at an outdoor rock concert arcs into a fire that within five minutes is fully engulfing the stage and in another five is collapsing it as if it were made of toothpicks.

There are a hundred scenarios of how that could have been different, and far less deadly, Monges said. “We could have had a boom (fire truck) already on hand. We could have had more ambulances closer by; we could have had better exits. But that’s a bit like saying we should have also ordered better weather. That’s our job, to expect the unexpected, but you can’t plan for everything.”

The members of the class, which was standing room only, were most interested in the psychological trauma that tends to come after the physical incident and how having a debris of feelings and emotions that cannot be doused and hauled away can sometimes seem bigger than the incident itself.

While everyone else is being bucked off, the dispatcher has to stick with it. The point of reviewing the calls isn’t to stir up the long-settled emotional debris, Monges points out, but dispatchers are exquisitely adept at thinking that just because they hear an incident but don’t see it, the ripple effects of such dramatic events are somehow not quite as real for them as they are for folks in the field whose five senses are red-lining.

Dispatchers are the link to the course of any event, a new study presented at the conference pointed out. Dispatchers are routinely exposed to events that should be considered traumatic, it concludes: “People think of the job as stressful, but not really traumatic.”

Heather Pierce, a former 9-1-1 dispatcher married to a police officer, analyzed surveys completed by 171 emergency dispatchers who were friends and loved ones into harm’s way.

Michelle Lilly, a psychology professor at Northern Illinois University in DeKalb, Ill., who co-authored the study with Pierce assessing the psychological impact of the crises dispatchers experience from afar, told The Journal in July that she “was blown away” by how upsetting some of the incidents were, in particular, a dispatcher talking parents through CPR after they discovered their child has drowned in the pool.

A news media account of the research stated that Lilly was particularly shaken by a call involving two young siblings, one of whom had a mental health problem. The child without the mental health problem called 9-1-1 and locked himself in a room for protection, but the dispatcher could hear the sibling trying to take the hinges off the door and intending to attack.

All the dispatcher could say was, “Help is on the way. We’ll get there as fast as we can,” Lilly said.

Such situations can engender feelings of fear, helplessness, and horror which, when unaddressed, can set the stage for PTSD. Lilly and Pierce found that 3.5% of the survey respondents reported symptoms severe enough they probably would qualify for a diagnosis of PTSD,” Lilly said.

After these critical incidents it’s important for all of those involved with the incident to conduct an After Action Review (AAR) to learn what they can from the event, and a Critical Incident Stress Debriefing to provide full support when necessary, Messinger said.

“This process and continuing support can literally save lives in the emergency services ranks,” he said. “These debriefings and reviews are commonly done by field personnel, but they should include the calltakers and dispatchers as well. While not physically on the scene of the incident, the calltakers and dispatchers can be dramatically affected by critical incidents.

“They wouldn’t be human if they were not affected, and we want real people to help us through a crisis,” Messinger continued. “Get the call and the emotional aftermath out on the table, and take it down to the smallest detail and learn whatever you can from it. We can’t stop much of what goes on out there, but we can learn something almost every single time and be better for it.”

**FAQ**

**What Difference Does It Make?**

Certification seems redundant to longtime dispatchers

By Brett Patterson

**Question:**

I am a dispatcher for a large metro emergency communication center that recently introduced MPDS®. The protocol makes sense to me and I believe it will help us better serve the public. My issue is certification. Several of the dispatchers, including myself, have been here at least five years. Why should we have to certify?

**Answer:**

Certification goes beyond the experience and knowledge accumulated during your years spent in the profession. While that is certainly important, the experience does not address the overall benefits certification provides to agencies and the public. I will list a few, each applicable to the protocol you’re using—fire, police, or medical.

Certification provides validation of current skills necessary to use the protocol. Initial certification by Academy certified instructors provides a sound foundation for protocol use and continued certification ensures that EMDs are up to date with regard to protocol evolution and other areas of CDE necessary to function in the ever-evolving climate of DLS.

Certification also provides limited liability protection through standardization of care and due diligence on the part of the EMD and agency. There is a great deal of controversy surrounding minimal to non-existent standards in EMD and many states are in the process of passing bills to require minimum training and certification standards.

The Academy strives to meet all of those standards in its certification
process. It is far easier to defend a certified EMD in civil court because certification validates a minimum standard. While the Academy is not in a legal position to “require” certification for users of the protocol, it is highly recommended and the Academy is not able to back an EMD or agency in a court of law if the EMD in question is not currently certified.

The monetary argument is a reality but has proven to be a poor excuse in court and with the public. The cost of certification and 24 hours of CDE every two years is relatively low compared to other costs associated with communication center operations. As Dr. Jeff Clawson has been known to state, “The cost of EMD training is often less than the cost of the chair the EMD sits in.”

EMDs are a recognized part of the EMS response chain. Having EMDs practice without current certification is morally akin to sending out uncertified paramedics or EMTs. I would strongly advise current certification for all EMDs using the MPDS. To do otherwise is risky and seriously degrades any commitment to quality patient care and responder safety.

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

Brett:
From my experience, STEMI (ST-elevation myocardial infarction, or heart attack) and stroke patients may be sensitive to unusual sounds, flashing lights, loud radios, and sirens, sometimes to the point that they can jeopardize chances of survival. For that reason, is it better to forego the lights and siren? Thanks for your help.

Greg Natsch, Chief
Bureau of Emergency Medical Services
Missouri Department of Health & Senior Services

Greg:

The link between lights-and-siren response and patient survival is not direct. However, several studies have suggested that the use of lights-and-siren saves minimal time. An urban study in St. Petersburg, Fla., compared all lights-and-siren responses to the complaint of “Stroke—Not Alert or Not Breathing Normally” to the non-lights-and-siren responses to the complaint of “Stroke—Alert and Breathing Normally.” The difference was about 33 seconds. This was an internal study in Pinellas County, Fla., and was not published. A study out of North Carolina published in *Annals of Emergency Medicine* compared lights-and-siren transports to COLD duplicates of the transports during the same time and day of week. This study, conducted in a suburban setting, showed an average 42-second difference.

When discussing this issue with Dr. John Marler, associate director, Clinical Trials, National Institute of Neurological Disorders and Stroke (NINDS), he suggested that although stroke treatment is time-dependent, the risks associated with HOT responses (accident risk to responders and the public and anxiety risks to patients) did not justify the minimal gain associated with saving only a minute or so when the patient was not in need of time-critical, airway intervention.

The Academy believes that stroke is a pre-hospital emergency and should dictate an immediate, ALS-level response. However, since not all pre-hospital emergencies justify a lights-and-siren response, HOT responses should be reserved for those patients with minute- or second-critical emergencies (i.e., where the risk of arrest, airway problems, serious hemorrhage, or complicated childbirth are present).

With regard to STEMI patients, potential ACS patients are generally assigned a HOT response not necessarily because of the seconds saved for STEMI treatment, but because of the risk of arrest and second-critical advantages of CPR and defibrillation.

With that said, it is not the Academy’s position to dictate local responses; we make general recommendations. For instance, while a CHARLIE-level response is recommended as ALS, each agency is encouraged to study the outcomes of individual Determinant Descriptors (C-1, C-2, etc.) and allocate according to resource availability and outcomes. For example, an agency may choose to send an ALS unit COLD to a suspected stroke patient who is alert and breathing normally with speech or movement problems but send the same unit HOT for a like patient who is not alert or not breathing normally.

The Academy has a considerable amount of cardiac arrest outcome data to assist agencies with this response allocation process; send me an e-mail if you would like further information.

Brett A. Patterson
IAED Academics & Standards Associate
Medical Council of Standards Chair
Behind every great call center lurks a good amount of data that can provide an unseen yet revealing profile of who you are. Data about your center flows constantly and in sizeable streams that, for the most part, go untapped.

In other words, every center's got data. It's a matter of just reaching down and scooping it up, and it's not nearly as hard as you might think.

Some are already putting calltaker case review scores by the dozens into quality assurance/quality improvement plans. Others are tracking shift and other center operations data to get the most out of funding and other resources spent on emergency services in their catchment areas to ensure they are providing the best in public safety programs, at least as far as dispatching services.

Do supervisors tend to share a mistaken belief that conducting research is too daunting, immediately envisioning scads of measurable data that only adds to their already full schedules?

Turns out using data to find out how your center looks is easier than it looks.

Do you need a Ph.D. in order to do dispatch research right? “No, absolutely not,” says Isabel Gardett, an IAED™ instructional designer who just earned a Ph.D.

There are some guidelines for getting into peer-reviewed scientific research journals such as the new IAED Annals of Emergency Dispatch & Response (AEDR), Gardett explained, “But that’s what we’re here for; we’ll even help people come up with research questions, develop hypotheses and study designs, and write Institutional Review Board (IRB) proposals. Anybody can do research.”

When we investigate a problem and find solutions for our daily routines, we are doing research. Researching is actually a basic human activity. And finding out about how a center ticks is so easy that even an aging Journal editor, i.e., me, could take it on. Truth be told I had already gathered some data I was interested in through a short, completely random though thoroughly statistically insignificant survey of 43 dispatchers and center supervisors who attended the most recent U.S. NAVIGATOR conference this past April. I decided to plunge myself into the subject by jumping into various conversations with attendees, most in after-dinner chats in the hotel, at the Gala Reception, and during the Big Adventure, as well as button-holing folks after the Closing Lunch.

The question was multiple choice.

Choose from the terms below. Police, fire, medical, and nurse-triage emergency dispatching is ...

A. a science
B. an art
C. a craft
D. an academic discipline
E. a profession
Automobiles,” while Dispatch in Action front with his article “Planes, Trains, and review of response on the transportation least expect it, which is the nature of 9-1-1 .

As part of the feature, Rigden-Briscall will introduce readers to the work of Dr. Lori Gray, who is involved in acute psychological care for Toronto EMS. Dr. Gray has provided psychological assessment, psychotherapy, and crisis intervention to first responders. Her research has focused on organizational approaches to addressing traumatic stress in emergency services.

Among those other results was the rather startling discovery that a grand total of five people said emergency dispatch is a science, and none labeled it an art. When the group was asked to broaden their choices to two or more selections, more than half (53%) selected “most of the above.”

As always, our readers can look forward to timely news briefs about the industry as well as the latest information about advances in protocol and software. The Journal’s two continuing dispatch education (CDE) articles will move dispatchers and calltakers closer to the credits needed to fulfill the Academy’s EMD, EPD, and EFD certification requirements.

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Along with the events that come into centers every day, Journal contributors examine resilient people who come back from difficult situations and how they are able to connect with the right support to heal when confronted with crisis and exposure to traumatic events.

“This has nothing to do with pulling up boot straps at all, but focusing on wellness and balance and recognizing when it is absent,” according to Kimberly Rigden-Briscall, senior National Q, master ED-Q instructor, and EMD instructor. “Resiliency is the language surrounding the issue.”

E. an occupation
G. a preoccupation
H. a vocation
I. an avocation
J. a way to never take vacation
K. none of the above
L. a few of the above
M. most of the above
N. so varied it defies description
O. all of the above
P. all of the above and then some
Q. I would have bet my clipboard that the inherent bias in the above roster of answers would drive even the most quizzphobic responder to select P. However, choice J—a way to never take vacation—was decidedly (73%) No. 1.

There was a major flaw, however, even I could recognize. I talked to dispatchers at times of day in places and occasions when they’re relaxed and sensing a chance to have a joke. It’s a consideration to take into account next time I take a foray into whelms of research.

F. an occupation
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My mini-sojourn into the data stream, flawed though it was, emphasized how not to do a survey, Chris Olola, Ph.D. and AEDR Editor-in-Chief told me, trying his best to find encouraging words. (He got the joke about dispatch being a way to never take vacation, by the way. “Very interesting, and perhaps even more telling than we think,” he said.)

He hastened to point out that the goal is to find reasons to make every center a laboratory. They are already; the data stream is just flowing by every day—we just have to reach down and scoop some up.

Greg Scott, a veteran dispatch center supervisor and operations research analyst for the IAED, said the topics are endless, “and they can be as simple or as complex and as focused as a center wants them to be.”

Some of the topics can be arcane and have a sense of closed vocabulary for some folks, such as certain Journal writers he didn’t name. “But that’s why we’re here,” Scott said. “That’s what we do, and it’s not putting too fine a point on things to say research is the hinge to the protocols. The better we do it, the more we do it, and the more people who are involved, the more professional the profession becomes and the better we serve public health and public safety—the daily goal of everyone in dispatch.”

And here’s another reason to get involved. “The one big excuse for not conducting research—no one-stop peer-reviewed journal to publish research work in—has now been eliminated; the AEDR journal has been born,” Dr. Olola said. “Just like the protocols made dispatching the vital link in the course of an emergency, research has been the link to the protocols.”

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St. Joseph County Fire Dispatch, Ind., is featured as our ACE achiever, while our NAVIGATOR Rewind highlights will note long-time speaker Stephan Bunker, who discussed strategies for center management compliance to the Americans with Disabilities Act (ADA).

Be sure to check out www.aedjournal.org for more of what you enjoy about The Journal. If you’d like to submit an idea or an article, please contact The Journal’s Managing Editor Audrey Fraizer at audrey.fraizer@emergencydispatch.org or 800-960-6236 ext. 147.

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NWAS merger creates largest U.K. health trust

The consolidation of England's 33 National Health Service (NHS) ambulance services in 2006 wasn't so much of a shock, as much as it was a realization that any combination of circumstances could result in making contact with a hydroelectric powered oscillating air current distribution device.

That didn't happen, at least on the larger scale, although it certainly took a herculean effort to keep any of the million steps involved from bearing off in the wrong direction.

"There was a lot of work ahead of us," said Lisa Gibbons, acting Emergency Operations Centre (EOC) Business Support manager of the consolidated North West Ambulance Service (NWAS) NHS Trust, one of 13 trusts resulting from the mergers. "Everyone knew it was coming, but that didn't make it any easier."

The understatement is no more indubitable than the trust's current drive to become the world's largest ACE by the time UK NAVIGATOR 2014 rolls around or IAED™ Accreditation Officer Beverley Logan's complete confidence that NWAS will pull off the ACE with the clock still running.

"They certainly have had a lot in front of them," Logan said. "But the hard work will all be worth it when their names are attached to the ACE status of the trust. I truly believe that and keep convincing them of it."

Optimism remains the mantra during the seven years since consolidation efforts formally got under way in July 2006. NWAS is the outcome of four former independent ambulance services rolled into a singular oversight.

The four EOCs in the merger make NWAS the world's largest ambulance service; in terms of population served, NWAS surpasses the London Ambulance Service (LAS), the former frontrunner. Headquarters for the entire NWAS Trust is in Bolton.

The numbers, the almost seven million residents within the NWAS boundaries of the 5,500 square mile trust (roughly 1/10th of England's total area) rely on services provided by 114 ambulance stations and 4,700 employees. There are 222 calltakers.

The impact on 9-9-9 operations cannot be understated.

The three EOCs—located in Liverpool, Preston, and Manchester—are dedicated to 9-9-9 calls, while a former center in Cumbria handles all technical and administrative issues arising within the NWAS Trust. Each control center consists of a calltaking suite and a dispatch center.

Control center staff was under immense pressure to merge operations and meet performance standards for 9-9-9 calls the trust divides into two categories: red or green calls. Seventy-five percent of all red calls must have response on scene within eight minutes from time of first ring. Green calls have locally agreed performance standards.

To get an idea of how saturated the lines can get, NWAS received 2,265 calls from midnight on New Year's Eve until 7 a.m. on New Year's Day 2013, of which 546 calls represented serious and immediately life-threatening incidents. On an annual basis, call volume peaks near one million. The most recent figures, from 2011, show 426,365 emergency 9-9-9 calls and 618,312 non-emergency patient transports.

Kevin Mulcahy, sector manager at the Cheshire and Merseyside EOC in Liverpool, said the call numbers are climbing, as was expected.
Population growth will do that, along with public reaction to a change in emergency services. The transition of the Cumbria control center into a NWAS troubleshooting hub, for example, put people on edge until they realized that the 9-9-9 system was actually more efficient. Consolidation was also in line with fiscal demands. Similar to economic pressures in other parts of the world, healthcare expenses in the U.K. are increasing, requiring permanent fiscal tightening to help minimize future debt. According to the trust’s integrated business plan (2011-2016), NWAS was determined to deliver a 5% savings in 2013-2014, 5% in 2014-2015, and 4.2% in later years.

“A single, unified, integrated system could improve the quality of services and reduce costs,” Mulcahy said. “That made sense.”

And in the case of the U.K. ambulance service, at least this far into the merger, the success of fiscal consolidation and subsequent improvements to infrastructure and framework have gone hand in hand with reaching performance goals without jeopardizing patient care.

“It’s all been for the better, and we’re doing extremely well,” Mulcahy said. “Being performance driven, we hit all performance levels required. We’ve seen a huge improvement.”

It all adds up to the real reason behind the push to succeed, he said. “It’s for the benefit of the patient,” Mulcahy said. “That’s why we do things.”

**Driver’s seat**

Logan calls Gibbons “the driver” behind the multiple processes always going on simultaneously.

“She is very much involved with each center and approaches them with a team mindset,” said Logan, who is, much to her delight, welcomed as part of the team. “She involves as many people as possible, and once they recognize the need and see something as a priority, the drive is set in motion.”

Gibbons regularly visits each emergency control center because best practices take focusing on the project at hand and relevant staff. “It’s been a team effort,” Gibbons said. “We had to build buy-in. That was probably the most important factor in this entire process.”

The consolidation, of course, has meant considerably more than shifts in boundaries and buildings. Focus groups were organized to analyze and develop the implementation plan. The broader team created teams within each center to pull their people into the process and encourage “buy-in.” They merged policies and procedures from four centers into single plans to uniformly cover the entire trust, and, once that was done, set about the job of incorporating local control policies. Staff traded places temporarily to become more familiar with areas added to their circuit.

They rewrote job descriptions to match across the centers, corrected policies and procedures for the quality assurance process, and organized the regional team dedicated to auditing calls from the three centers; once the program is fully in place, all audits will go to Gibbons for final review. Her position as trust Business Support manager discourages favoritism and encourages transparency. The principal work remaining involves meshing local policies.

“It’s been a lot of work, a lot of pain, but as a whole, we’re doing well in the process,” Gibbons said.

**Elbow grease required**

Consolidation and recent efforts to organize a single QA/QI process place Gibbons in a constant travel mode to maintain contact with managers, supervisors, team leaders, and ED-Qs at each of the control centers. Although the list is long, they include Peter Ballan (Cumbria & Lancashire EOC, in Preston), Mulcahy and John Kilroe (Cheshire & Merseyside EOC, in Liverpool), and Vicky Worral and Nick Sutton (Greater Manchester EOC, in Manchester).
Cumbria and Lancashire

Ballan, sector manager for the consolidated Cumbria and Lancashire ECC, has felt the pain in a journey he said has been everything but easy.

“Changes like this take a long, long time and, at the very least, you can say it has been interesting, full of challenges,” he said.

Ballan transferred to the Lancashire Control Room in 2001 following 10 years as a paramedic for the same ambulance service. He was a supervisor at the official start of the consolidation in 2006 and has since been promoted to sector manager; he oversees operations at the control center in Preston and the support calls managed by calltakers in Cumbria. Requests for North West Air Ambulance services are also managed from the Preston center.

While the transition affected everyone on staff, the Cumbria team probably underwent the greatest impact. The center was slated for closure. The trust offered transfer options; however, the 80-mile distance between the two buildings and their familiarity with Cumbria limited the number of volunteers.

“There were no takers,” Mulcahy said.

Mulcahy was basically “on loan” to Cumbria/Lancashire, while, at the same time, accountable for Cheshire/Merseyside operations. The dual role was pragmatic: Mulcahy was involved in the 1991 merger of Cheshire and Merseyside, the first regional ambulance center in the U.K.; his responsibilities included moving former Cheshire staff to the control center in Liverpool (the Cheshire/Mersey EOC).

From that experience, he understood the impact the merger could have on staff, coupled with the empathy he felt for staff trying to secure alternative employment in the largely rural Cumbria.

“We needed to look after the entire trust and find a solution for them,” he said. “We didn’t want anyone losing a job.”

The solution kept Cumbria’s doors open and rerouted staff responsibilities. Cumbria no longer answers 9-9-9 calls; rather, the calltakers resolve non-patient issues such as vehicle defects, radio faults, and sick leave for the entire NWAS Trust. They also refer suspected cases of domestic violence and child abuse to the proper authorities. Their jobs are guaranteed.

The switch to channel all 9-9-9 calls to the EOC in Preston, Lancashire, was made in one fell swoop.

“We went live in covering both areas at the same time,” Mulcahy said.

To assist Lancashire staff in taking over Cumbria’s emergency calls, Mulcahy invited Cumbria staff to work alongside staff in Lancashire, and also sent Lancashire staff into the Cumbria community. The introduction acquainted staff with Cumbria’s distinctive geography (to expedite response) and quelled public unease over losing their local 9-9-9 control center.

Ballan said Cumbria staff initially took the transition hard.

“[The profession] takes a special breed of people,” he said. “They like making a difference in someone’s life and to lose the 9-9-9 calls was difficult. Fortunately, their responsibilities are increasing and that’s making it better for them.”

Cheshire & Merseyside

Kilroe, EOC Training and Development manager, was well familiar with the consolidation drill. He was emergency medical duty control (EMDC) manager for Merseyside Regional Ambulance Service prior to its merger with Cheshire and held that position under that combined trust until transitioning to his current position in 2005. He works under the direction of Mulcahy.

“It [the earlier merger] wasn’t too bad, in comparison,” said Kil-
ro, who started his career in 1985 as the leading ambulance man at Mersey Metropolitan Ambulance Service. “Merging into three centers for the larger trust was a lot more difficult.”

Kilroe points to the complexity of merging the unique qualification of each region into the one-size-fits-all policies and procedures manual. Similar to QA/QI, the trust is also considering a merger of training into one dedicated team.

“It’s more about formalizing what I already do now,” he said.

Technical demands in changing and upgrading the computer-aided dispatch (CAD) system across the trust were mind-boggling. But NWAS IT was certainly up for the task.

The first challenge was to review existing CAD systems and develop it into one system that could deliver high performance and increasing demand capacity. Failure to do so could cost lives.

“Downtime was not an option,” Kilroe said.

Each center had a different CAD system and its own records management system (RMS). The single CAD system had to be capable of transferring all data to the single RMS, and the virtual PSAP envisioned meant that the systems must operate remotely without loss of functionality.

In this virtual world, each center acts as a backup facility to take over phones and dispatching during overflow situations and has the capability to transmit on any of the other transmitters. The overflow call still appears on the CAD screen of original destination no matter which center picks it up.

“We’ve done a lot of good work and continue to do so,” Kilroe said. “But it does make for a few sleepless nights.”

Kilroe harbors no illusions for an end to changes in 9-9-9.

“Give it another 10 years and something else major will happen,” he said. “Nothing ever stands still.”

Greater Manchester

Sutton is the training manager at the Greater Manchester EOC. His list of credentials includes securing an ACE reaccreditation prior to consolidation and he has been determinedly active in coordinating technology and training components over the past seven years. For example, he developed a user-interfaced system to provide key performance indicators for control room staff and was a member of the project team implementing the new CAD system across the three control centers. He took a lead role in relocating the Manchester EOC to a new facility.

There’s no doubt he’s sincere in his claim to thrive under pressure.

“I particularly enjoy dealing with spontaneous situations requiring quick thinking and problem solving skills,” quotes his online professional vita. “I am highly motivated to succeed.”

Where it all started

Similar to the U.S., the U.K. structure of emergency response is decentralized and maintained at the local level, contrary to what the term consolidation might imply on both sides of the Atlantic. Central government gives collaborative support, and increasingly so—again similar to the role of federal government in the U.S. when requiring collective action for the states—but the emphasis lies in local efficiency in managing response.

The proposal to reduce the number of ambulance services came to a head in the June 2005 report “Taking healthcare to the Patient” by Peter Bradley, former chief executive director of the London Ambulance Service NHS Trust.

“It had been talked about for quite a long time,” Mulcahy said. “So, it was no great surprise when it actually happened. But as happens with change, everyone was wary.”

The “Bradley” report recommended reducing the number of local ambulance services by at least 50% “to ensure they have the capacity, leadership, and resources available for the delivery of effective patient care.” Clock time for response was set from the time the call connected to the control room and answered within five seconds at least 95% of the time.

A list of suggested consolidations—or, as also called, reconfigurations—released within the same year represented more of a total 66% reduction, and it was accompanied with a plan for rapid implementation of the new trust boundaries.

Aside from administrative, technological, and demographic challenges, there were also the very real piques of human nature. How do you explain to dedicated and hard working EMDs that they’re good but not quite good enough?

“This blinkered images of believing their center was the best,” Logan said. “It took a lot for the barriers to come down and work together. The larger the center, the more difficult it is because of the number of people involved.”

The challenges are far from over.

The U.K. celebrated its 75th anniversary of the 9-9-9 emergency telephone number in 2012, and you can be sure that BT Wholesale, which contracts 9-9-9 services for the U.K., will be closely monitoring the U.S. in its development of Next Generation 9-1-1 (NG9-1-1). NHS is also developing a single point of access and a single number for urgent care to use alongside 9-9-9.

The recently introduced NHS Trust Development Authority advocates locally-focused delivery and development tools for all trusts, which might seem contrary to the consolidation process.

There are also the same concerns facing emergency services internationally—changing demographics (e.g., an aging population), financial strain, and the constant pressure of a performance-driven service.

Gibbons is optimistic, even with the prospect of not quite knowing the direction healthcare delivery will take next.

“We’ve been able to get our people onboard, and that’s the most important factor in all of this,” she said. “With that in place, we can achieve whatever is in front of us.”

Logan said she keeps her eye on the receiving end.

“That’s why we do this,” she said. “It’s not about consolidation; it’s not about accreditation. It’s really lovely when you can achieve all of this but, in the end, we’re here for one reason, the ultimate receiver. Whoever rings for service, no matter where they are, will receive the best service possible.”

Improvements to infrastructure and framework have gone hand in hand with reaching performance goals without jeopardizing patient care.

Source

The Funk family was on a picnic not far from their Salt Lake City home on June 10, 1986, when two-year-old Michelle fell and was carried downstream in the icy, runoff waters of Dry Creek Canyon.

Michelle’s four-year-old brother, who had accompanied his sister across the street to throw rocks into the stream, alerted their mother, who searched for Michelle for several minutes before calling 9-1-1.

Within eight minutes from the time the call was made, rescue workers were on scene, and when unable to find the child, they reduced the outflow from a reservoir feeding the creek. As the water level dropped, rescuers saw Michelle’s arm sticking out of the water. She was wedged against a rock, and there was no evidence of an air pocket.

Rescuers pulled Michelle from the water 62 minutes after receiving the first call. Her pupils were fixed and widely dilated, as they would be with severe brain damage or death. She had no pulse and she was not breathing. A monitor detected no heartbeat.

Rescue workers began CPR, continuing it in the helicopter ambulance that flew her to Primary Children’s Hospital where Pediatric

Troubled Waters
Drowning can happen in an instant

By AudreyFraizer

The Funk family was on a picnic not far from their Salt Lake City home on June 10, 1986, when two-year-old Michelle fell and was carried downstream in the icy, runoff waters of Dry Creek Canyon.

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there was no evidence of an air pocket.

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Rescue workers began CPR, continuing it in the helicopter ambulance that flew her to Primary Children’s Hospital where Pediatric
Cardiologist Robert Bolte, M.D., was waiting to initiate treatment using a heart-lung machine. In severe cases of hypothermia, the heart-lung machine is effective in correcting body temperature by extracorporeal circulation. Using this technique, blood warms as it passes over the heat exchanger and then returns to the body, gradually increasing the patient’s body temperature to normal.

Several months before the accident, Dr. Bolte had the notion to try the technique when he became fascinated by accounts of extracorporeal warming in adult victims of hypothermia. He made plans with heart surgeons to use the bypass machine if he had to treat a child with severe hypothermia.

The treatment was successful.

By the time she left the hospital, more than two months after the accident, Michelle was talking and her motor skills were normal for her age. Twenty years later, she was serving a church mission in Massachusetts, “grateful that she had the opportunity “to tell people and teach people that life is a huge gift.”

According to an article in the July 15, 1989, issue of JAMA, the 66 minutes Michelle spent in the creek was “the longest documented submersion with an intact neurological outcome.”

And although the incident offered a new protocol for treating drowning victims in the emergency room, it is an outcome that will never be considered routine. This is in part because the sophisticated techniques and procedures don’t help if a near-drowning victim hasn’t received basic lifesaving help at the scene of an accident, according to Dean Shelton, M.D., assistant director of the emergency center at American Fork Hospital, Utah. “I tell people just do something, just breathe in their mouths and push on their chests. Just don’t stand there and watch these little ones die.”

**Drowning statistics**

At the 2002 World Congress on Drowning, a group of experts suggested a consensus definition for drowning in order to decrease the confusion over the number of terms and definitions. According to their new definition: “Drowning is a process resulting in primary respiratory impairment from submersion in a liquid medium.”

The liquid blocks the victim’s airway, preventing the individual from breathing in oxygen. Technically, drowning is when the person dies from suffocating in the liquid environment. Near drowning is when a person begins to drown but is rescued and revived. The risk of drowning increases in relation to the lack of precautions: the inability to swim, little or no supervision, failure to wear life jackets, alcohol use, and seizure disorders.

According to the Centers for Disease Control and Prevention:

- In 2007, there were 3,443 fatal unintentional drownings (non-boating related) and an additional 496 fatal drownings in boating-related incidents in the United States.
- Drowning is the sixth leading cause of accidental death for people of all ages and the second leading cause of death for children ages 1–14 years, after motor vehicle collisions.

**Stages of drowning**

There are typically five stages to a drowning, of which the bystander making the call to 9-1-1 may report any:

- **Surprise:** In this stage, the victim recognizes danger and becomes afraid. The victim assumes a near-vertical position in the water, with little or no leg movement. The arms will be at or near the water’s surface, making random grasping or flipping motions. The head will be tilted back with the face turned up. Victims rarely make any sounds; they are struggling just to breathe.

- **Involuntary breath holding:** The victim has now dropped below the static water line and water entering the mouth causes the epiglottis to close over the airway. Though a victim may continue to struggle, he or she will not usually make any sound as he or she cannot breathe.

- **Unconsciousness:** In this stage, the victim will be motionless. Because breathing has stopped, he or she is in respiratory arrest. There is no chest movement or breathing sounds. At this point, the victim sinks to the bottom of the water. The victim will remain unconscious (and die) unless breathing is re-established.

- **Hypoxic convulsions:** Due to the lack of oxygen in the brain, the victim may look as if he or she is having a convulsion. The victim’s skin turns blue, especially in the lips and fingernail beds, and the body may appear rigid.

- **Clinical death:** Clinical death occurs when both breathing and circulation stop. The victim is in cardiac arrest. The heart stops pumping blood. The vital organs are no longer receiving oxygen-rich blood.

**No one knows how long a patient can be submerged and still survive.**

- For every child who dies from drowning, another five receive emergency care for nonfatal submersion injuries.
- Between May and August, drowning deaths among children increase 89% over the rest of the year.
- Pediatric studies indicate that the mortality rate is at least 30% in child drowning victims who require specialized treatment in the pediatric intensive care unit (PICU). Severe brain damage occurs in an additional 10–30%.

**Survival chances**

No one knows how long a patient can be submerged and still survive. What is known for a drowning victim in cardiac arrest, however, is that the earlier CPR is started or defibrillation is provided, the better the victim’s chance of surviving the incident.

Survival has been attributed to both on-scene intervention (CPR) and a natural physiological response experts call the “mammalian diving reflex”: “The reflex is triggered by splashes of cold water on the face or submersion of the face. Once the body detects an impending cold-water immersion, it attempts to thwart the cold and preserve blood flow to the brain and internal organs. The heart rate slows down, decreasing oxygen demand. And capillaries in the hands and feet begin to tighten, squeezing blood to the core of the body and brain, where it’s needed most.”

**Protocol to the rescue**

MPDS’ version 13.0 adds two ECHO-level determinants on Protocol 14: Drowning Near Drowning/Diving/SCUBA Accident. The first ECHO Determinant 14-E-1 “Arrest (out of water)” addresses drowning victims pulled out of the water and in cardiac arrest, while the second ECHO Determinant 14-E-2 “Underwater (DOMESTIC rescue)” addresses a patient still underwater in a
DOMESTIC rescue setting. This is defined as "a person underwater in a man-made structure intended for domestic use (e.g., swimming pool, hot tub, or bathtub)."

For either of these situations, the EMD will immediately initiate a response when prompted on Case Entry and briefly provide Case Entry Post-Dispatch Instructions before proceeding to Protocol A, B, or C for Airway/Airway Arrest Pre-Arrival Instructions.

If the drowning victim is still underwater, the EMD should provide Case Entry PDI-c: "(Underwater) Do not go in the water unless it’s safe to do so" to prevent would-be-rescuers from endangering themselves. As outlined in Rule 3 of Protocol 14, “Each year potential rescuers drown themselves attempting to rescue drowning people.”

Two DELTA-level determinants have also been added to Protocol 14: 14-D-2 “Underwater (SPECIALIZED rescue)” and 14-D-3 “Just resuscitated and/or defibrillated (external).”

A SPECIALIZED Rescue is defined as a person underwater in a natural setting or a man-made structure not intended for domestic use (e.g., lake, river, sea, canal, or water tank). Though it is still a dire circumstance to rescue the patient underwater, this situation is not coded as an ECHO response because the appropriate resources must be arranged to successfully rescue an individual in a natural or specialized setting.

A patient who has been recently resuscitated or defibrillated requires an Advanced Life Support crew equipped to handle some of the consequences of near-drowning and resuscitation, which may include infection or other physical reactions from foreign material in the lungs, among other priority conditions.

The EMD should also be familiar with his/her local policy on the new BRAVO-level Determinant 14-B-2 “OBVIOUS DEATH (submersion > 6hrs).” Local Medical Control must first define and authorize this code before the determinant can be used.

Even if a near-drowning victim is alert, breathing normally, and has no apparent injuries, the caller should be warned that breathing problems may be delayed and can develop relatively quickly.

If the patient is not breathing, the EMD should prepare the caller to begin mouth-to-mouth ventilations. If the patient is not breathing, the EMD should instruct the caller to stabilize and support the patient so the fluid can drain away from the lungs.

In any case, near drowning involves gulping water into the stomach. If large amounts of fluid begin to drain from the mouth or the patient begins to vomit, the EMD should instruct the caller to position the patient so the fluid can drain away from the lungs.

Sources
2 See note 1
8 See note 7.
9 See note 6.
11 Erik McLaughlin, M.D. “They’re Not Dead Until They’re Warm and Dead.” My Family Doctor, 2010; Nov. 16. momrsabode.blogspot.com/2010/11/this-was-living-news-she-had_16.html (accessed July 15, 2013)
13 See note 12.
14 See note 12.
15 See note 12.
16 See note 12.
1. In severe cases of hypothermia, the heart-lung machine is effective in:
   a. correcting body temperature by extracorporeal circulation.
   b. refreshing the body’s supply of potassium and sodium.
   c. flushing the system of waste products.
   d. cooling the victim’s core temperature.

2. Near drowning is when a person begins to drown but is rescued and revived.
   a. true
   b. false

3. Drowning is the second leading cause of death for:
   a. people of all ages.
   b. males ages 18–24.
   c. children ages 1–14 years.
   d. young adults (male and female).

4. Drowning deaths among children increase 89%:
   a. between January and March.
   b. between May and August.
   c. between September and December.
   d. in July and September.

5. Hypoxic drowning stage is identified by:
   a. victim moving arms in random grasping or flipping motions.
   b. victim may look as if he/she is having a convulsion.
   c. victim will be motionless.
   d. victim sinks to the bottom of the water, either slowly or rapidly, depending on factors such as the amount of air trapped in the lungs, body weight, and muscle mass.

6. MPDS Version 13.0 adds two ECHO-level determinants in Protocol 14: Drowning/Near Drowning/Diving/SCUBA Accident to address drowning victims:
   a. pulled out of the water and in cardiac arrest.
   b. still underwater in a DOMESTIC rescue setting.
   c. both a & b.

7. A DOMESTIC Rescue is defined as a person underwater in a:
   a. swimming pool, hot tub, or bathtub.
   b. lake, river, sea, canal, or water tank.

8. If the drowning victim is still underwater, the EMD should provide:
   b. Case Entry PDI-b.
   c. Case Entry PDI-c.
   d. Case Entry PDI-e.

9. Local Medical Control must first define and authorize new BRAVO-level Determinant 14-B-2 "OBVIOUS DEATH (submersion > 6hrs) before the determinant can be used.
   a. true
   b. false

10. The only recognized method of airway control in the Pre-Arrival Instruction dispatch environment is:
    a. head-tilt.
    b. jaw thrust.
    c. oropharyngeal airway.
    d. nasopharyngeal airway.
A 55-year-old rancher was driving a pickup along a gravel road west of Minto, N.D., on April 29, 2013, when floodwaters washed the vehicle off the road, about two miles from the family farm. Witnesses saw him on the truck and talked with him by phone, but they could not reach him in the rushing water. After a friend left the scene to get help, the victim was apparently swept away. The vehicle, which got hung up on a bank and partially submerged in the coulee, has since been recovered, but the rancher's body was never found.

The Kern County (Calif.) Sheriff’s Office (KCSO) used a helicopter hoist removal technique to rescue a victim trapped inside a vehicle from rising floodwaters. The victim was in one of multiple vehicles cut off by water from the fast-moving storm in July 2013, although the only one requiring an emergency response.

In Oklahoma, Kimberlyn Kendrick drowned in her car after it sunk in floodwaters on May 2, 2009. Over the course of her haunting 10-minute telephone call to 9-1-1, she repeatedly asked the emergency dispatchers for instructions on what to do. Aside from telling her to stay in the car, the calltaker focused on identifying Kendrick's location, which she tried to provide multiple times.

These three examples aren't as rare as one might think. A person may be trapped inside a vehicle submerged following an accidental plunge into a standing body of water; for example, a driver might plunge over a guardrail and into a highway water retention pond when negotiating the steep curve of an on-ramp. A person may also be trapped inside a vehicle engulfed by rapidly rising floodwaters.

Whether it's a vehicle submerged in standing water or floodwater, the latest revisions to the Sinking Vehicle/Vehicle in Floodwater PAI Protocol provide critical instructions to assist in the victim's survival.

Submersion or flooding

Submersion

Vehicle submersion is international in scope, with geography a major factor in the causes and number of accidents and fatalities. For example, in the Netherlands, crashes in which cars are submerged in water are not rare—due to the country's numerous bodies of water—and are often severe. Of these incidents, 70% of the vehicles involved are passenger cars (sedans).
Literature and crash data from eight other European countries (Germany, France, Belgium, the United Kingdom, Austria, Finland, Denmark, and Sweden) show that the frequency of cars being submerged in water is lower there. A study by the National Highway Traffic Safety Administration (NHTSA) showed that in the United States the percentage of drownings in vehicle crashes accounts for about 1% of all road deaths.4

Flooding

More deaths occur as a result of flooding than from any other severe weather-related hazard. The Centers for Disease Control and Prevention (CDC) report that more than 50% of all flood-related drownings occur when a vehicle is driven into hazardous floodwaters. The next (second) highest percentage of flood-related deaths is due to walking into or near floodwaters.3

Some of the problem can be blamed on the tendency of pedestrians and drivers to misjudge the power of water. People don’t understand how dangerous fast-moving water can be, and drivers often ignore road barriers warning of a potential hazard. Yet, it takes only six inches of fast-moving floodwater to knock over an adult, and it takes only two feet of rushing water to carry away most vehicles, including pickups and SUVs.6

Predictable and preventable

Since many of these vehicle submersion incidents are the result of human error, it can be said that the accidents are both predictable and preventable.

Is it predictable that people will drive their cars into floodwaters? Yes, that’s why signs are put up in hopes of preventing these events.

Is it predictable that drivers who circumvent these barriers will grab their cell phones afterward to call 9-1-1? Yes, that’s a reason behind the push for latitude/longitude information on wireless devices.

Is it predictable that the caller will ask calltakers for instructions before the responders get there? Yes, that’s why pre-planned protocol must exist; why Pre-Arrival Instructions are there for EPDs, EFDs, and EMDs; and why protocol must not only be used, but used correctly—the first time, every time—with prior know-how before the call comes in.

Are these incidents completely preventable? Not in the context of human nature and that’s why protocols, instructions, and comprehensive and consistent feedback become entirely necessary.

Protocol systems

Each of the three protocol systems—PPDS®, FPDS®, and MPDS®—contains the Sinking Vehicle (1st Party) Protocol, with the FPDS being the forerunner in presenting the latest improvements to the Sinking Vehicle/Vehicle In Floodwater (1st Party) Protocol. The latest revision includes instructions to the first-party caller about what to do when the vehicle is approaching or stalled in floodwaters and the action to take if the swift current begins to move the vehicle farther downstream. These same instructions will be included in the coming versions of the MPDS and PPDS.

The protocol is written in first-party language, as the calltaker will be talking to a person trapped in the vehicle.

As with any emergency call, the calltaker must obtain and verify the location and the caller’s phone number. This may be challenging as a disoriented driver in a sinking vehicle may be unable to provide the location; however, at this point and when it’s clear the vehicle is in the water, the dispatcher should change the approach from repeatedly asking the driver to clarify the location to getting the driver and passengers outside the car.

When it comes to water exits, there’s an ongoing debate on whether the time frame depends on the size of the vehicle—lighter cars able to stay afloat longer than an SUV—or the vehicle’s vacuum seal capability (watertight). Generally, regardless of other factors, vehicles sink completely in as little as one to two minutes.

Instructions within the protocol vary depending on whether the caller is inside a sinking vehicle (Panels 1 through 1d) or inside a vehicle caught in floodwater (Panels 2 through 2e).

It is very important to deliver all of these instructions as written in the protocol, although the calltaker should be aware of changing circumstances and adapt to the caller’s needs.

According to the Law of Concurrent Priorities stated in the MPDS: Calltakers “must weigh the facts of each situation, as conditions may change rapidly.” The vehicle could sink at any time or move in the current and a vehicle moving in current could rollover upon impact with another moving or stationary object. In addition, water could damage the caller’s cell phone, precluding further contact.

Pre-Arrival Instructions

In the MPDS, the calltaker moves to Protocol 29: Traffic/Transportation Incidents from Case Entry but does not ask any Key Questions. The call is coded a 29-D-2S, and then s/he links to the Sinking Vehicle/Vehicle In Floodwater (1st Party) PAI Protocol.

Panel 1 and Panel 2 both open with a calming statement: “Stay calm and listen carefully so that I can help you get out. I will tell you exactly what to do next.” The calltaker tells the caller to “Have everyone release their seat belts and unlock the doors.”

Instructing someone to release a seat belt and unlock a door may seem rudimentary to the calltaker, but the caller is under a great deal of stress that can easily impede rational thinking. It is important to deliver these instructions early in the process in anticipation of potential escape problems. These instructions are intended to help the caller increase his or her chances of survival.

For a caller caught in floodwater, Panel 2 proceeds with instructions to “…get out of the vehicle and on top of the roof,” an instruction that for obvious reasons is not part of the Sinking Vehicle (Caller Inside) pathway. If the caller and occupants are unable to exit the vehicle, the next panel in each sequence provides instructions for using a heavy object to “hit a side window near the bottom corner, closest to the front of the vehicle.”

If these first attempts fail, the sequence moves to “Try Again to Break Window” instructions (Panels 1b and 2b), which include taking a second hard smash at the window and, if still ineffective, lying down and forcefully kicking both feet against a (rear) side window.

Panels 1c and 2c provide “Exit Vehicle” instructions, provided the caller is able to exit through the open/broken window or, in the case of floodwaters, a door the caller can safely open. After exiting, the occupants of a sinking vehicle are told to swim to the nearest shore, while the occupants of a vehicle trapped in floodwater are told to climb to...
the roof of the vehicle to wait for rescue. If the vehicle begins
to move in floodwater, the calltaker then instructs the caller to
wade or swim to the nearest shore or fixed object (Panel 2d).

If the caller is still trapped inside the vehicle, the final Panel
in both sets of instructions (1d and 2e) directs the caller to take
a deep breath before he or she is submerged and to open the
doors and follow the bubbles to the surface.

In addition to the forces of water, callers can encounter
other problems when trying to escape, which these instruc-
tions are designed to anticipate as much as possible. For exam-
ple, the calltaker may have to remind the caller to make sure
the key is on for vehicles equipped with electric windows. It
is also possible the caller may be very young, injured, sick, or
disabled and not have the strength needed to break the win-
dow or open the door. In these cases, calltakers can only deliver
the instructions and encourage them to keep trying. Those
trapped in the vehicle may not have enough time to wait for
responders to find and rescue them.

Agencies must individually plan the most appropri-
ate response configuration for a sinking vehicle or a vehicle
trapped in a floodwater emergency based on the resources
within their jurisdiction.

Training and quality improvement

“What can I do right now?” is often the caller’s ominous plea.
“What can I do to help myself before help arrives?” While pro-
tocol can’t save every victim caught in these types of situations,
it does make a difference when the 9-1-1 calltaker can provide
expert-based advice to improve chances of survival. There have
been incidents in which the protocol was available, but the call-
taker—for whatever reason—deviated from the PAIs.

High-risk, low-frequency events like these point to the
absolute necessity of training and participation in quality
improvement processes providing comprehensive and specific
calltaker feedback on performance and pre-planned responses.

For those using protocol and quality improvement measures,
continue to do so with excellence. The public, the calltakers, the
dispatchers, and the responders deserve nothing less. For those
not yet using protocol and quality improvement measures, start
doing so immediately. Again, we deserve nothing less.

Sources

1 Kevin Bonham. “There is no closure 3 months after Guy Miller disappeared.” The

2 “Kern County crews free motorist from desert flood water.” Bakersfield Now. 2013;
July 23. www.bakersfieldnow.com/news/local/Kern-County-crews-free-motorist-

3 “Cars submerged in water.” Institute for Road Safety Research, SWOV, Leidschen-
dam, the Netherlands, April 2012 http://www.swov.nl/rapport/Factsheets/UK/
FS_Cars_in_water.pdf (accessed July 31, 2013)

4 See note 3.

5 “Turn Around Don’t Drown®.” National Weather Service, Office of Climate, Water,
(accessed July 30, 2013).

6 See note 5.
Answers to the CDE quiz are found in the article “Sink Or Survive” which starts on page 36.

Take this quiz for 1.0 CDE unit.

1. Whether it’s a vehicle submerged in standing water or floodwater, the latest revisions to the Sinking Vehicle/Vehicle in Floodwater PAI Protocol provide critical instructions to assist in the victim’s survival.
   a. true
   b. false

2. In the Netherlands, what percentage of vehicle submersion incidents involve passenger cars (sedans)?
   a. 55%
   b. 47%
   c. 70%
   d. 83%

3. The second highest percentage of flood-related deaths is due to:
   a. walking into or near floodwaters.
   b. swimming in floodwaters.
   c. paddling a kayak in floodwaters.
   d. trying to rescue someone trapped in floodwaters.

4. What amount of rushing water does it take to carry away most vehicles, including pickups and SUVs?
   a. eight inches
   b. one foot
   c. two feet
   d. four feet

5. The Sinking Vehicle/Vehicle in Floodwater (1st Party) Protocol is written in first-party language, meaning:
   a. the calltaker will be talking to a bystander, outside the vehicle.
   b. the calltaker will be speaking only to responders.
   c. the calltaker will be talking to a person trapped in the vehicle.

6. Generally, regardless of other factors, vehicles sink completely in as little time as:
   a. 30 seconds max.
   b. one to two minutes.
   c. five minutes.

7. The calltaker should be aware of changing circumstances and adapt to the caller’s current needs.
   a. true
   b. false

8. According to the Law of Concurrent Priorities stated in the MPDS, the calltaker must:
   a. ignore the caller’s complaint until response verifies dangerous water conditions in the area reported.
   b. weigh the facts of each situation, as conditions may change rapidly.
   c. establish the severity of fear in relation to the seriousness of the problem.
   d. understand predictable is preventable and chastise the caller for ignoring signs indicating potential water danger.

9. In the MPDS, the calltaker moves to Protocol 29: Traffic/Transportation Incidents from Case Entry but does not ask any Key Questions.
   a. true
   b. false

10. Occupants of a sinking vehicle are told to swim to the nearest shore, while the occupants of a vehicle trapped in floodwater are told to:
    a. wait in the vehicle.
    b. climb to the roof of the vehicle to wait for rescue.

YOU MUST BE CERTIFIED TO TAKE THIS QUIZ.

CDE-Quiz ★ ★ ★

To be considered for CDE credit, this answer sheet must be received no later than 10/31/14. 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.
The caller wants a "cop" sent over, and fast. She is scared, and understandably so. A young man she doesn’t recognize has knocked on her door, but instead of answering, she calls 9-1-1.

She hangs up after the first 13 seconds, prompting Manatee County (Fla.) 9-1-1 Emergency Communications Center (ECC) EPD Melinda Calvert to call her back.

“He left, and now he’s back,” the nearly hysterical woman says to Calvert. “Get someone down here fast.”

Calvert launches into Case Entry of the Police Priority Dispatch System™ (PPDS®), and segues into Protocol 110: Burglary (Break and Enter)/Home Invasion.

Calvert asks the first Key Question. “Were weapons involved or mentioned?”

“No. No. No,” replies the caller. “I didn’t open the door because I was scared, and then he left, and now he’s back and just standing there.”

As almost an afterthought the caller adds, “I have my husband’s gun in my hand, but I don’t know how to use it.”

The early morning attempted break-in at 9:53 a.m. on May 28 in Manatee County persuades the caller to hide in a bedroom closet and there, huddled with her two-year-old son, listens as the man pries open the garage door and goes inside the house.

Calvert reassures her, and tells her to stay on the line. Sixteen seconds into the call, a sheriff’s deputy is on the way. The suspect, however, is gone by the time the deputy arrives, assumingly leaving the house at the sound of approaching sirens. His description is relayed to sheriff’s deputies, and the suspect is soon apprehended in the vicinity of the victim’s home. He is later identified and booked into Manatee County jail on a burglary charge.

While 9-1-1 calls reporting break-ins are not unusual, Calvert said the media picked up on this call because of the speed in the suspect’s arrest. And, according to Priority Dispatch Corp.™ PPDS Consultant Dave Warner, there’s the element of a gun involved.

It wasn’t the suspect’s gun, but a gun the woman holds and does not know how to use, as heard in the call.

“I’m not so sure the caller would have volunteered that information without being asked the question, and that’s certainly something arriving officers would want to know about,” Warner said. “They know the woman is frightened; she is upset, and she is in the closet with a gun.”

Calvert—a certified EPD, EFD, and EMD—said she simply followed the script as she was trained to do, asking about weapons, the suspect’s description, and where the suspect was located at the time of the call. She said questions asked in the order specified is critical for response and they also aid in keeping the caller’s attention.

“She was scared during the whole call,” Calvert said. “Answering what I asked helped her to remain focused.”

The ECC is the 9-1-1 dispatch center for Manatee County EMS (Bradenton, Fla.) and 11 local fire agencies. It is a dual-certified Accredited Center of Excellence (ACE) (fire and medical), and the center implemented the PPDS 18 months ago. Calvert has been with the ECC for six years, during which time she has had the opportunity to use a majority of the protocols’ Chief Complaints.

“I’ve done most of them at least once,” said Calvert, a staff sergeant in the U.S. Air Force Reserves assigned to the F-16 maintenance crew. “There are very few types of calls we don’t answer.”

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Gone Much Too Soon
Sunstar EMS loses two paramedics within nine days

Sunstar EMS first responders donned black mourning bands twice in nine days for two paramedics signing out from the job much too early.

Thomas W. Oliver, 29, died June 28, 2013, from a brain aneurysm. Oliver was transitioning from EMT to paramedic with Sunstar in Pinellas County, Fla., and he was scheduled for his first ride in that role that following Monday.

Christopher “CJ” Jennings, 33, was killed July 8, 2013, in a motorcycle–car collision minutes after leaving a training class at Sunstar headquarters. Jennings had been with Sunstar for three years working as an assistant supervisor paramedic. He was also a SWAT paramedic for the Pinellas County Sheriff’s Office.

“They were dedicated to what they did,” said Rob Smith, Sunstar EMS director of communications and emergency management. “It was a terrible loss for us, their families, and our community.”

Oliver was relatively new to EMS, having joined Sunstar in September 2011 after spending several years working for PricewaterhouseCoopers, an international company focused on auditing, tax, and consulting services.

Smith said Oliver had found his ideal niche in EMS.

“You couldn’t miss the guy,” Smith said. “He had a great attitude and was really looking forward to becoming a paramedic. This was so unexpected.”

A tribute organized by Oliver’s family featured the launch of 100 colored lanterns, bagpipes, and a last call.

Jennings’ death came nearly two weeks after he and two other members of the Sunstar Paramedics SWAT team took three of the top four places in the “Intubation Rodeo” of an inaugural EMS competition held in Inverness, Fla. Each participant—and they came from more than 30 area agencies—were given three minutes or less to assess an emergency scenario and intubate the accident victim, or establish an airway, at each challenge site. Jennings took third place.

In April 2013, Jennings was one of the first paramedics on the scene of the amputation of a 2-year-old girl, who lost part of both of her legs when her father accidentally ran over her with a lawn mower.

Smith noted Jennings’ genuine enthusiasm during his years at Sunstar EMS and the 10 years he worked in EMS at a fire department in his home state of Georgia. The last picture posted on his Facebook page shows family, friends, and his fellow paramedics at a memorial held to celebrate his life.

“'He had a smile that never left his face; it was always there,'” Smith said. “He loved being a part of EMS.”

Sunstar is the 9-1-1 ambulance transport service for all Pinellas County residents, employing 500-plus local residents and responding to around 500 calls a day. The Sunstar Emergency Communications Center was the 34th dispatch center in the world to be recognized as an IAED™ Accredited Center of Excellence (ACE).
On the day most families were packing picnics or visiting cemeteries to lay flowers in remembrance of military veterans, the Kearneys of Boston, Mass., would instead gather garden sheers, clippers, and elbow grease to clean gravesites bearing the remains of a daughter, her husband, and their three children.

Tending the graves was a tradition the Kearneys observed in memory of the young family killed in a fire caused by a smoldering cigarette accidentally dropped between couch cushions in the wee hours of the Memorial Day weekend in 1990. One family member, a sister of the woman killed, escaped by jumping out of a second-story window.

Shortly after the deadly fire, a team of lawyers approached the surviving family members—a mother and her remaining four children (three brothers and the sister who jumped). While sympathetic to their terrible loss, these lawyers were not there to give condolences. They were not ambulance chasers. With the surviving Kearneys, attorneys had found the perfect case to push the manufacture of “fire-safe cigarettes” and state laws forbidding the sale of cigarettes that keep burning after a long break from puffing.

The Kearneys weren’t about becoming celebrities or the money they could gain from a successful lawsuit against deep-pocketed big tobacco. It was more about the opportunity to save others from a similar tragedy, and an opportunity that had the Kearney family repeating the same message for untold years before the Massachusetts Legislature.

“My children, my grandchildren, didn’t smoke. And to see three little white coffins and two others laid out in front of you . . . I would hope this would never have to happen to anyone ever again,” Mary Kearney repeated over and over again.

The young family could have had such great lives, just like the other 1,000 people killed each year in fires caused by lit cigarettes. Cigarettes are the leading cause of fire-related deaths in the United States. Approximately one-third of those killed are the smoker’s children, and another 14% are spouses. The smoking-related fire death rate for ages 65 and older is three to four times greater than the death rate for those ages 18-64, despite a higher proportion of smoking among the younger set.

Most of the fatalities in home fires start by smoking materials smoldering in upholstered furniture (39%) or mattresses and bedding (27%). The cigarette heats materials to the point of smoldering combustion and, if left burning, eventually transitions to flaming combustion. A lit cigarette dropped or discarded onto soft goods, such as a mattress or couch, can smolder for an hour or two, during which occupants may fall asleep, leaving them more vulnerable to fatal injury when fires transition to flaming.

In 2010, U.S. fire departments responded to an estimated 90,800 smoking-material fires. These fires resulted in an estimated 610 deaths, 1,570 injuries, and $663 million in direct property damage. Fire deaths peak in the late evening and early morning hours (10 p.m. to 5:59 a.m.).

In 2003, the state of New York passed the first fire-safe cigarettes (FSC) law, prohibiting the sale of cigarettes that do not comply with the self-extinguishing standards set out by the statute. The list of states with laws on the books expanded to 32 in 2009, nearly tripling the number extinguishing the leisurely smoke in 2007 (the year the legislation passed in Massachusetts). The cigarettes, banded to slow the burn within seconds of not puffing, forced a constant “Flick [of] the Bic,” as cigarette ads used innuendo.

It’s hard to see the difference between the FSC and traditional cigarette, except on the carton or individual pack where the letters FSC denote fire-safe cigarettes, or in some states, the letters RIP for Reduced Ignition Propensity. A closer look at the cigarette reveals the circular speed bumps at regular intervals.

Smokers declared they’d “rather fight than switch” to the banded cigarettes. It’s aggravating having to reignite. They cite the metal taste in their mouths from chemicals used in banding and the added dangers to health from the side-seam adhesive. In November 2008, Citizens Against Fire-Safe Cigarettes started an online petition citing many of the risks of these cigarettes and advocating individual responsibility in preference to federal regulation.

During the past decade, states fell in line and there was little empathy for
smoker inconvenience or real or perceived added health concerns.

As of 2012, the FSC law was in all states and the District of Columbia. To maintain regulatory uniformity, all states are using the "model" regulatory bill based on the New York fire-safe cigarette law.

The laws basically require cigarette manufacturers to certify that a cigarette variety has been tested and meets the fire safety standard as having reduced ignition propensity—a greater likelihood of self-extinguishing—using a prescribed laboratory test method, E2187, developed by ASTM International.

The standard measures the ignition strength of a cigarette placed on a material and whether the ignition strength can generate enough heat to maintain burning of the cigarette. The test also compares the relative strength of different cigarette designs.6

Manufacturers must submit certification that the cigarette brand was tested and met safety performance standards. There are generally steep fines for selling cigarettes in violation of any state’s law.

When the laws in each state are fully implemented, the National Fire Protection Association (NFPA), Fire Analysis and Research Division, projects that smoking-material fire deaths will be down by 30% from 2003, the last year before any state implemented the law.7

The Coalition of Fire-Safe Cigarettes, coordinated by the NFPA, is working to support the development of strategies to implement and enforce FSC laws.

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Sources
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5 See Note 4.
6 See Note 4.
7 See Note 3.
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