Hair-Raising Problems with theme park rides

Lost in a Haystack When a center can’t locate a 9-1-1 cellphone caller

Man Down Handling the shooting of a police officer

The International Academies of Emergency Dispatch

September | October 2014

THE JOURNAL OF EMERGENCY DISPATCH

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“I want challenges that make me uncomfortable, pushes me out of my comfort zone,” she said. “That’s how I can reach the next levels of my profession.”

—Laura Lee Cody,
communications supervisor
Richmond Ambulance Authority, Va., USA

Presented by:
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THE JOURNAL
of emergency dispatch

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Cover Shot: Amanda Harper

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TAKE THE NEXT STEP

Contributors

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Ronald Richard
Ronald is from Cambridge, Mass., and has been a fire dispatcher for over 27 years. He is an active regional EFD instructor and serves on the IAED Fire Council of Standards. Ronald recently taught his 200th EFD course.

Kory Sandoz
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Salt Lake City is ranked first among the top 10 most stressed out cities in the United States, according to the results of a study posted by CNN Wire.

I don’t know who conducted the study or who did the voting. I don’t know if the study is scientifically valid or just someone’s opinion. The article doesn’t say. All I know is that Salt Lake City was at the top due to variables—cost of living, employment, and healthy lifestyles—that, according to the article, give Salt Lake City residents minimal stuff to stress about.

The one contrary that the article cites is the city’s high property crime rate. Further research (quick Google search) paints a fairly dismal picture: property crime (burglary, larceny-theft, motor vehicle theft, and arson) in Salt Lake City is 167 percent higher than the state’s average and 156 percent higher than the national average; statistically, anyone living in Salt Lake City has a one in 15 chance of falling victim to property crime.

Our city mayor attributes the higher-than-average property crimes to their relation to drug offenses.

Unfortunately, a few people I know have been in that slot more than once. My own fairly minor brushes with property crime include a road bike stolen from a rack where it had been locked for two years, and a rack where it had been locked for three years. Non-member subscriptions are available for $36 annually, for two years, $66, and for three years, $96.

All I know is that Salt Lake City was at the top due to variables—cost of living, employment, and healthy lifestyles—that, according to the article, give Salt Lake City residents minimal stuff to stress about.

So, if you’re the person responsible for me, give Salt Lake City a miss when considering less stressed out cities. I don’t know who conducted the study or who did the voting. I don’t know if the study is scientifically valid or just someone’s opinion. The article doesn’t say. All I know is that Salt Lake City was at the top due to variables—cost of living, employment, and healthy lifestyles—that, according to the article, give Salt Lake City residents minimal stuff to stress about.

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Our city mayor attributes the higher-than-average property crimes to their relation to drug offenses.

Unfortunately, a few people I know have been in that slot more than once. My own fairly minor brushes with property crime include a road bike stolen from a rack where it had been locked outside the downtown city library and a metal garden gnome holding a desecrated pink flamingo stolen from our vegetable patch. Metal garden gnomes, fashioned by a local artist, are apparently hot items in Salt Lake City.

On the upside, which isn’t even noted in the article, Salt Lake City boasts amazing scenery and almost immediate access to incredible outdoor recreation.

I don’t mean to diminish the property crime rate, but like many cities, Salt Lake City has its share of good and bad. It’s a matter of perspective based on the quality of life a city affords despite the drawbacks. There are many things worse than a missing garden gnome, such as the “more time [spent daily] on the job” in Raleigh, N.C., which is ranked third on the least stressed city list. This is compared to most other major metro areas as a whole.

Of course, no city fits all, and stress—which is the indicator in this selection—depends on the individual. If you’re the person dispatching response to 9-1-1 calls, there might be very few days that any city makes the cut.

The cities, according to ranking 1–10:

- Salt Lake City, Utah
- Rochester, N.Y.
- Raleigh, N.C.
- Minneapolis, Minn.
- Richmond, Va.
- Buffalo, N.Y.
- Hartford, Conn.
- Pittsburgh, Pa.
- San Jose, Calif.
- Sacramento, Calif.
Is Anybody out There?

Cellphone callers get lost in the locating

Scott Freitag, IAED President

A fast-moving blizzard last winter in rural Wisconsin caught residents by surprise, including two individuals in a car who decided it was safer to walk home through a field than continue driving in zero visibility.

They were without adequate winter wear, maybe figuring it would be a short trip, but they were carrying cellphones and called 9-1-1 when they lost their way.

I don't know if you've ever experienced a winter whiteout, but that's what they were battling. There was no visible horizon; they couldn't see which way was forward to home or their way back to the car. They risked losing sight of one another, even when walking side-by-side.

The responder sent to find them had no less trouble, although he was better dressed. He stayed in contact with the dispatcher and eventually found the two stranded in the field—and it wasn't any time too soon. They were dangerously close to hypothermia and frostbite.

In Florida, responders spent 45 minutes looking for a hunter who was critically injured in a fall from a tree. Another search in Florida to find a man suffering serious injuries in an ATV accident consumed nearly an hour of response time.

What is the piece tying these incidents together or, more aptly, causing difficulties in the chain starting from the point when the call was placed?

Yes, each occurred outdoors and despite rural or relatively remote locations, callers were able to connect with 9-1-1 but without the satisfaction of moving EMS straightaway to the scene because of the disconnect between wireless carriers and the public safety community.

The issue has received national press.

Data recently released by the Federal Communications Commission (FCC)—and analyzed by the Find Me 911 coalition—shows that more than one-third of all calls received by 9-1-1 centers in Utah from wireless phones in June 2013 did not include the accurate location information necessary to find a caller in crisis.

The survey does not single out Utah. For example, more than two-thirds of the calls to 9-1-1 communication centers in Texas from wireless phones do not include accurate location information.

Public Safety Answering Points (PSAPs) are not receiving accurate caller location information, despite FCC Phase II rules requiring wireless providers to provide the latitude and longitude of a caller within 50 to 300 meters—depending on the technology used. The FCC standards apply to outdoor measurements.

A ruling, as we know, doesn’t automatically solve a problem.

You can’t find the needles lost in the haystack when the center is getting Phase I location data—the location of the caller’s cell tower—rather than Phase II data that provides the caller’s location within the FCC outdoor measurements rule.

That’s the issue facing Utah. The communication centers receive Phase I data showing the location of the cell tower from which the call originated, and the large area covered makes it difficult for responders to find them. But the blame doesn’t rest within the respective states.

There’s also a kink in the system.

PSAPs can query their Automatic Location Information (ALI) to pull the Phase II location information from a carrier’s Global Mobile Location Center (GMLC). Sometimes the Phase II location data isn’t readily available and, when that happens, dispatchers can refresh (called a rebid) the location data to get the desired results.

Dispatchers don’t always have the time to refresh the data while juggling everything else. So, it is a matter of multiple and conflicting responsibilities on the dispatcher’s side or the carrier’s failure to grasp the urgency of confirming location to the benefit of the caller and responders?

And what happens when the caller can’t give a location?

According to a Find Me 911 survey of dispatchers and PSAP managers (April 2014), 97 percent reported that they had answered at least one wireless 9-1-1 call within the last year from someone who could not designate his or her whereabouts. Maybe the caller is lost (whiteout conditions), critically injured and incoherent (falling from tree), or disoriented due to confusion or age-related illness.

The outdoor 9-1-1 locator difficulties, however, are the proverbial tip of the iceberg. Indoor location accuracy is a major public safety concern and in February, when the FCC released a proposal pushing location accuracy, FCC Chairman Tom Wheeler reminded wireless carriers that the goal is necessary—and realistic—considering “the safety of the American people” in emergency situations is at stake.

It’s imperative this happens—indoors and outdoors—and it’s a goal that we should never consider out of our reach.

Editor’s Note: For a discussion on the indoor 9-1-1 locator issue, turn to the article by Michael Rigert beginning on page 20 in this issue of The Journal.
Studying Relevance to Dispatch
Bariatric research demonstrates protocol development

Tracey Barron

A presentation at the Research Forum power session held at NAVIGATOR 2014 demonstrated a forward-thinking principle behind protocol development.

The topic—one of five briefly discussed in the two-hour session moderated by IAED™ Director of Biomedical Informatics & Research Chris Olola, Ph.D.—was one near but-not-so-dear to an increasingly larger segment of the world’s population. The magnitude of the problem has been described by the World Health Organization (WHO) as one of the most significant health problems and, consequently, directly affects the delivery of emergency medical services.

I’m talking about the bariatric (morbidly obese) patient.

Greg Scott, Brett Patterson, and Dr. Jeff Clawson gave the presentation, “Challenges with Bariatric Patients in Dispatch,” during the Research Forum power session.

Measure of obesity

Body mass index (BMI) is a simple index of weight-to-height that is commonly used to classify overweight and obesity in adults. It is defined as a person’s weight divided by the square of his height. According to WHO:

- Worldwide obesity has nearly doubled since 1980
- In 2008, more than 1.4 billion adults, 20 and older, were overweight. Of these, over 200 million men and nearly 300 million women were obese
- 35 percent of adults ages 20 and older were overweight in 2008, and 11 percent were obese

The increasing number of bariatric patients admitted to health care facilities for chronic illnesses—cardiac disease (mainly heart disease and stroke, the leading cause of death globally in 2012)—are tending to be more common among the obese patient, presenting a direct challenge to responders striving to give dignified care that is safe and effective for both the patient and the responder.

The more mobility-dependent the patient is, the greater the risk for injury for those providing the care, which in ambulance transport can lead to strains, sprains, and musculoskeletal injuries.

Bariatrics and the Medical Priority Dispatch System™ (MPDS®)

Bariatrics is the science of providing health care for those who have extreme obesity and, as you know, the MPDS is a product dependent on validated scientific research evidence.

Nothing is added to the MPDS without rigorous research, including case studies, and that often begins at the level of a Proposal for Change (PFC) prompted by a user’s request and moved higher on the list of Council of Standards priorities depending on the prevalence—the number recommending the PFC—and the impact on dispatch.

The Council of Standards sends select PFCs to the IAED Council of Research to identify the core of the concerns and provide any cogent scientific evidence supporting an addition to the MPDS. In the case of the bariatric patient, the Council of Research sent out a survey with questions that included frequency (number of bariatric patients handled each month); tracking (does EMS agency track injuries that are due to at-risk patients?); what is currently available (special equipment such as higher weight-bearing beds and stretchers); and, without a scripted question in protocol, is there a method used in dispatch to identify the bariatric patient (such as family providing information at the time of the call).

The survey produced mixed results. Yes, the frequency of calls involving an obese patient does seem to be increasing and so has the frequency of injuries among responders due to these at-risk patients. The need for universal protocol questions specifically targeted to the patient’s weight, however, was not substantiated. Dispatchers provide PAs related to the condition that might be related to the patient’s weight—such as CPR for the patient in cardiac arrest—but, at this time, survey results did not indicate the urgency of a specific question that takes into consideration the extra response manpower or equipment that might be necessary.

Patterson, IAED Academics & Standards associate and Medical Council of Standards chair, said the survey also raised concerns about sensitivity.

How do you address issues of weight and at what section of protocol do you inquire? If dispatchers are wary about sometimes asking a patient’s age, would they be keen asking what some consider a much more intrusive/personal question? Would the question be asked no matter the situation or reserved for medical conditions correlated to obesity?

Clawson said survey results showed the issue was “much more diffuse than we anticipated” in contrast to the pervasiveness of obesity and the potential and real impact on EMS.

If the issue does trend to suggest further study, a subsequent survey would be in order. If results warrant a change in protocol, the weight question could take any number of forms, such as protocol-specific filtering through a turn on/off feature in ProQA® software.

Sources

1 World Health Organization, Obesity and overweight, Fact Sheet No. 311, Reviewed May 2014 (accessed June 26, 2014); http://www.who.int/mediacentre/factsheets/fs311/en/

2 Marylou Muir, RN, Gail Archer-Heese, BEd, O.T.Reg (MB) BMR, Essentials of a Bariatric Handling Program, The Online Journal of Issues in Nursing, 10.3882/journals/05-1Man05 (accessed June 26, 2014)
‘CPR Blitz’
The dispatcher’s role in high performance resuscitation

Jeff Clawson, M.D., & Brett Patterson

Doc:
We have been hearing through the grapevine that MPDS’ v13.0 will have some very important changes that should significantly improve the time to start PAI chest compressions in cases of sudden cardiac arrest. Versions 12.1 and 12.2 contained some specific revisions in this regard, but we are not aware of what the next changes might be, especially given the more recent emphasis on this part of modified CPR mechanics often called “compressions only.”

Eric Fayad
Lead Communications Trainer
IAEMD™ Instructor
SUNSTAR EMS
Pinellas County, Fla., USA

Eric:
This is absolutely correct, and very important to the future of improving CPR applied by EMDs. I can provide some specific details into these changes. First, there is a basic misnomer that needs to be clarified. There is a very important distinction between what is sometimes incorrectly called “Compressions Only,” and the other process first pioneered by the Academy 10 years ago that we called “Compressions 1st.” The commonly heard term in EMS is Compressions Only, which is more understandable clinically if we call it “compressions forever,” since pre-arrival breaths are never advised, regardless of the response time. For example, if a delay in responder arrival occurs due to unit unavailability, extended distance, or any other factor, whether in rural, suburban, or even urban locations, no breaths are ever provided, no matter how long the response.

From what the Academy can determine from the available scientific literature, or from recommendations provided by the American Heart Association (AHA) or other Resuscitation Councils, there is no specific evidence that in extended resuscitation attempts (even 10 minutes or longer), giving any breaths helps or hurts the outcome. It can be argued that by this time, the patient’s “oxygen tank” (whether blood, or more importantly, tissue oxygen levels) should be replenished. But another argument has some credible substantiation (although not at these extended time periods). This being that any gap in compressions results in lost cardiac vessel and/or brain blood pressure and may, in and of itself, be the final blow ensuring the patient’s non-resuscitability. Additionally, there is a strong argument that artificial ventilations not precisely provided by advanced technologies (mouth-to-mouth) causes an increase in intrathoracic pressure that is detrimental to the resuscitation effort, and that these risks associated with artificial ventilations may actually outweigh any benefit, regardless of the response time.

In our ongoing efforts to reduce the time it takes to get hands-on-chest and minimize compression interruptions, we made several changes in v12.2, in anticipation of the 2010 AHA guidelines, and several more changes are now being beta tested in v13.0, in anticipation of the 2015 guidelines. As you may know, v12.2 contains a new “DLS Link” section in the Case Entry Protocol so that Protocol 9 can be completely bypassed in the cardset when ineffective breathing is discovered at Case Entry (this is done automatically in the software). Additionally, several other enhancements were made to reduce the time necessary to start CPR, including a direct link to compressions instructions for INEFFECTIVE BREATHING patients (airway maneuver and mouth check removed), and new instructions for multiple rescuers were added so that compressions can be started while instructions are continued with the second rescuer. Also, the patient age group 8 to 18 years was moved from the Ventilations 1st pathway (30 compressions to 2 breaths) to the Compressions 1st pathway (600 initial compressions) due to the disturbing prevalence of
sudden cardiac arrest among young athletes.

In addition to changes aimed at reducing the time to compressions, the use of the AGONAL BREATHING Detector was mandated in three places where research revealed that some patients were reported to be breathing effectively but actually were not. One of these situations is on the Chief Complaint of Unconsciousness (Protocol 31), where the patient is reported to be breathing at Case Entry. This was implemented as a safety net to ensure that these high-risk patients (about 15 percent of the total volume), were “double checked” before a dispatch code was assigned.

Version 13.0 of the MPDS is currently being beta tested at 15 sites and is slated for release in the next few months. This version features comprehensive changes, most notably to the recognition of agonal respirations and the use of the AGONAL BREATHING Detector. The changes include:

- A new DLS definition for UNCERTAIN BREATHING:
  “A situation where a 2nd party caller who has seen the patient and is still unsure. This is considered NOT BREATHING until proven otherwise.”

- A new Axiom for UNCERTAIN BREATHING:
  “UNCERTAIN BREATHING status indicates a 2nd party caller who has seen the patient and is still unsure. This is considered NOT BREATHING until proven otherwise.”

- A new Axiom regarding the recognition of AGONAL BREATHING:
  “Prompt recognition of AGONAL BREATHING is critical to the treatment of cardiac arrest because it reduces time to compressions. PALS should be instituted immediately after ECHO coding when an unconscious patient’s breathing status is INEFFECTIVE or UNCERTAIN (AGONAL BREATHING Detector use is not necessary).”

- And a new Rule regarding AGONAL BREATHING Detector use:
  “Use of the AGONAL BREATHING Detector is not necessary when UNCERTAIN BREATHING or INEFFECTIVE BREATHING is associated with unconsciousness.

- The AGONAL BREATHING Detector Tool has also been modified to make interpretation of its results more clear and applicable to protocol navigation.

Specific to your question, v13.0 also contains a new option for a “Compressions Only” pathway that must be authorized by local medical control. This will provide agencies a choice between the current Compressions 1st pathway and the new Compressions Only pathway. We suspect that rural systems with longer response times may elect to continue with the Compressions 1st pathway that provides ventilations at approximately 10 minutes and beyond after arrest, while urban systems with shorter response times may elect to eliminate ventilations altogether and use the new Compressions Only pathway. As mentioned previously, the evidence is still inconclusive with regard to the benefit of ventilations late in the cardiac arrest scenario.

Perhaps the single most impactful change to v13.0 is the addition of a new “Fast Track” for patients who are initially and obviously described as being in cardiac arrest (non-traumatic) early in the Case Entry sequence. In many situations, callers report what appears to be someone who is obviously not breathing. The IAED™ has created a special fast track feature that requires simply typing in an “o” (for “obvious”) in the “Tell me exactly...” field that bypasses ALL remaining Case Entry questions and immediately recommends a 9-ECHO-1 response requiring a single click to activate. This is then followed by one question regarding availability of an AED (automatic external defibrillator), and making sure he is flat on his back, followed by chest compressions.

This new Fast Track has been called the “CPR Blitzkrieg” by one of our beta test comm. centers and its very rapid process is clearly demonstrated in the v13.0 sequence specific audio case file on the Academy website.

The ProQA time to getting hands-on-chest is 20 seconds. It simply cannot get shorter than this, unless the EMD is clairvoyant.

In addition to these protocol changes, a concerted effort has been launched by the Academy to educate Emergency Medical Dispatchers (EMDs) with regard to prompt recognition of agonal breathing and the impact of prompt and uninterrupted chest compressions. We have incorporated elements of this education into the initial and continuing education curriculums, trained all of our instructors during their mandated updates, and are publishing related articles in our Journal. This effort will continue. Additionally, we are actively researching protocol outcomes between versions in accredited communication centers so that we can measure the impact of these changes and further our improvement efforts.

You can help in this effort by educating your EMDs with regard to the importance of identifying cardiac arrest early, most importantly through the recognition of agonal respirations, and getting hands-on-chest as soon as possible. It is important that EMDs not be hesitant to start CPR when the status of breathing is questionable at all; it is much better to start CPR and find out it is not needed than not to start CPR and find out it was needed. This is a cultural change that needs to take place in communication centers worldwide and the Academy relies on people like you who are patient-care oriented and interested in the evolution of the MPDS to “spread the word.”

Thank you so much for your insightful inquiry and for providing us with the opportunity to respond in this forum.

Doc and Brett
Communication Center Manager (CCM) Course creates leaders

The line seems to get longer each year CCM graduates cross the stage at NAVIGATOR. From beginnings in 2002 that attracted many fewer than the course could accommodate, enrollment now reaches maximum capacity within weeks of opening registration. In the past 12 years, including 2014, the list of graduates has grown to 336 alumni.

The reasons are simple: the caliber of instruction, curriculum that stays current with the 9-1-1 issues and environment, and the all-inclusive atmosphere that fosters a lifelong network of colleagues. Tracey Ertl summed it up accordingly at the CCM graduation held during the Closing Luncheon at NAVIGATOR.

“We came together as strangers, but left as brothers and sisters,” she said. “We are the next generation in yet a greater time in communications.”

Alumni have been the top recruiters for the course, said Carlynn Page, IAED™ associate director. They are brought together under a common banner—emergency communications management—and that provides an instant introduction for the exchange of ideas and strategies. They take back to their centers the knowledge gained, inspiring others to follow in their path.

“It’s not unusual to have other people from the same center attend in consecutive years,” Page said. “In fact, that’s becoming the norm, and then they spread the word to 9-1-1 professionals outside their agencies. The course has really proven itself beneficial to the rising stars of our industry.”

CCM is offered in a combination of online and on-site sessions, and both are required to successfully complete the course. Group projects highlighting issues relevant to emergency communications—including leadership, strategic planning, and customer focus—are presented during the second on-site session.

The 2014 online session begins Sept. 22. The two scheduled on-site sessions will be held during the weeks of Oct. 19–24 and Dec. 7–12. Registration is available online via the Academy or Fitch & Associates websites.

Foundation continues to thrive and drive change

Denise’s husband, Nathan Lee, and her father and father-in-law, Rick Goff and Mark Lee, respectively, continue to fly across the country from their home base in Florida, often with a host of volunteers supporting their cause.

Nathan Lee has told the tragic story innumerable times in front of audiences at state and national 9-1-1 conferences; the foundation’s booth has had a continuing NAVIGATOR presence. The National 9-1-1 Program office invited the foundation to assist on a committee tasked with developing a minimum set of national training requirements. They are working with 9-1-1 advocates from several states to pass 9-1-1 training legislation.

“Denise has become the face for change,” said Mark Lee, Nathan’s father. “The tragedy has put us in a position to do things, and we’re trying to go about it in the most positive way we can.”

The foundation’s seed money to conduct a survey identifying potential gaps in 9-1-1 came from the Gulf Coast Community Foundation. Foundation Chairman Dave Dignam knew the family. Denise had worked part time in his real estate office, and her father, Goff, was a sergeant in the Charlotte County Sheriff’s Office.

Dignam, who is also chairman of the Denise Amber Lee Foundation, said they are neither adversaries of 9-1-1 nor lobbyists.

“Her death was such a senseless crime, and it’s our goal to promote ways to make sure it doesn’t happen to anyone else,” he said.

Denise was abducted from her Florida home on Jan. 17, 2008, and murdered the same day, despite five calls made to 9-1-1, including one Denise made from inside the car of her captor. The failure of the 9-1-1 system led to the creation of the foundation in her name and the founders’ laser focus to promote dispatcher training and public awareness of 9-1-1.

America’s PrepareAthon! slots two days to get ready for anything

America’s PrepareAthon! National Days of Action was officially underway this year on April 30 and Sept. 30.

The national community-based campaign calls on communities to increase preparedness for natural hazards through drills, group discussions, and exercises. The April 30 action day concentrates on actions to prepare for tornadoes, wildfires, floods, and hurricanes. The second day of action (Sept. 30) focuses on earthquakes, hazardous materials, pandemic flu, and winter weather.

America’s PrepareAthon! is modeled on the success of The Great ShakeOut Earthquake Drills, which have inspired millions of people to practice what to do during an earthquake and improve preparedness. The Great ShakeOut will continue to be the day of action for earthquake preparedness associated with America’s PrepareAthon!

Participation guides for individuals and families, workplaces, K–12 schools, institutions of higher education, houses of worship, and

Denise Amber Lee Foundation will never cease their efforts.

Founders of the Denise Amber Lee Foundation will never cease their efforts.

Participation guides can be found at www.ready.gov/prepare

AMERICA’S PREPAREATHON!

Be SMART. TAKE PART, PREPARE.

AMERICA’S PREPAREATHON!
Nearly 100 percent of snakebite victims received antivenin (antivenom) during the first six months of 2014, well ahead of last year’s pace, according to doctors with the California Poison Control Center.

As of June 12, 128 people were admitted to a hospital for a snakebite, and of those, 93 received doses of antivenin. In 2013, 269 Californians went to a hospital for snakebites, and of those, 166 received antivenin.

A higher number of rattlesnakes in the urban setting has been attributed to warmer temperatures jostling snakes from hibernation sooner than normal, sending them scattering for food, and, consequently, increasing the likelihood of encounters with humans. Wildfires in January, February, March, and April also increased the potential for snakebites by driving them from scorched habitat.

Rattlesnake species in Northern California include the northern Pacific rattlesnake, and in Southern California the western diamondback, sidewinder, speckled rattlesnake, red diamond rattlesnake, southern Pacific rattlesnake, Great Basin rattlesnake, and the Mojave rattlesnake.

The California Poison Control Center notes that rattlesnakes account for more than 800 bites each year within the state with one or two deaths. Most bites occur between the months of April and October when snakes and humans are most active outdoors. About 25 percent of the bites are “dry,” meaning no venom was injected, but the bites still require medical treatment.
Emergency call takers and dispatchers have a new opportunity for education and professional development through the National Emergency Number Association (NENA) Friends of 9-1-1 initiative.

NENA established Friends of 9-1-1 in 2013 to foster education and training programs that would better equip 9-1-1 professionals with the tools necessary to serve their communities. Through donations, Friends of 9-1-1 offers:

- 9-1-1 career training programs, including special outreach to military service veterans and high school, junior college, and vocational students
- scholarships, continuing education, and career advancement opportunities for current 9-1-1 professionals
- public awareness campaigns designed to educate and inform consumers about the various human resource and other issues affecting the 9-1-1 system

During its first year, Friends of 9-1-1 awarded five $1,600 continuing education scholarships that covered registration to the NENA 2014 Conference and one-day pre-conference workshops, plus a travel stipend.

In June, Friends of 9-1-1 sponsored its first-ever “Run for 9-1-1” charity 5k (3.1 miles) in Nashville, Tenn., in support of 9-1-1 training and wellness programs.

**Car crashes are leading cause of death among teens**

Sometime during your career you will likely answer a call involving teen fatalities due to a traffic accident. Car crashes are the leading cause of death for teens in the United States and more teens die in traffic accidents than from suicides and homicides combined.

According to statistics from the Centers for Disease Control and Prevention (CDC), in 2010, about 2,700 teens in the United States ages 16–19 were killed and almost 282,000 were treated and released from emergency departments for injuries sustained in motor-vehicle crashes. The higher risk categories include: male drivers and passengers ages 16–19, the presence of teen passengers—the risk increases with the number of teen passengers—and newly licensed teen drivers.

There are several reasons teens are more likely to be involved in serious and fatal traffic accidents:

- Teens are more likely than older drivers to underestimate dangerous situations or not be able to recognize hazardous situations
- Among male drivers between 15 and 20 years of age who were involved in fatal crashes in 2010, 39 percent were speeding at the time of the crash and 25 percent had been drinking
- Compared with other age groups, teens have the lowest rate of seat belt use; in 2011, only 54 percent of high school students reported they always wear seat belts when riding with someone else

According to the CDC article, proven methods to help teens become safer drivers include graduated drivers licensing (GDL) programs; statistically, the most comprehensive have shown reductions of 38–40 percent in fatal and injury crashes among 16-year-old drivers. GDL systems are designed to delay full licensure while allowing initial driving under low-risk conditions.

**Cellphone scam directs calls to 9-1-1 centers**

A new 9-1-1 phone scam rerouting calls to communication centers is making the rounds in Washington County, Wis.

According to scam information provided by the Washington County Sheriff’s Department, cellphone users receive a phone message or text stating that there is a problem with their financial account, such as a credit or debit card. The message tells the person that more information is available by pressing 1 or dialing 1-1-2. When people follow those instructions, their cellphone actually dials 9-1-1 and the call is routed to the local 9-1-1 center.

In one day alone, the sheriff’s office reported receiving more than 40 of the bogus calls through the 9-1-1 system; there had been no impact on 9-1-1 service or responses in the county, although there is potential for the false 9-1-1 calls to interfere with a caller trying to place a legitimate 9-1-1 call.

The same scam caused dozens of unintended 9-1-1 calls to Milwaukee, Wis., police and other law enforcement agencies. The Waukesha County Communications Center received about 150 of those calls during one afternoon, but the agency’s system was not overwhelmed and calls for real emergencies did get through.
Agency receives top communications award

The agency coordinating multi-agency response to a call reporting three people trapped in a corn syrup tank and overcome by fumes was honored for its actions with the APCO Australasia 2014 Communications Award.

The award presented to the Emergency Services Telecommunications Authority (ESTA) in Victoria, in southeast Australia, recognized the “direct and positive impact on the resolution of an incident through effective communications,” and “improved or encouraged multi-agency communications and collaboration.”

This incident in Cloverlea—a region in rural Victoria—involved a number of ESTA staff representing three Emergency Service Organizations (ESOs) across two different locations. It received national news coverage and was exemplary of the professional communications staff making a positive contribution to the community they serve. The chief operations officer presented each staff member with a letter of commendation.

According to the incident report, the calltaker processed the call using ProQA®, which simultaneously presented the information to ambulance, fire, and police dispatchers at the Ballarat State Emergency Communication Center (SECC) to “ensure speedy allocation of emergency resources.”

The actual sequence:

- ProQA assigned the event type as “Inaccessible Incident/Entrapment: Confined Space with Multiple Victims” and this information was presented to the ESTA dispatcher. The event was immediately dispatched to the nearest available ambulance.

- The event was “aliased” (i.e., a “copy” of the event with an updated event type relevant to the other agency) to a police dispatcher with the event type of “Confined Space Rescue.” The event was immediately dispatched to the nearest available police unit.

- At the same time, the event was “aliased” to a fire dispatcher with the event type of “Confined Space Rescue.” The event was immediately dispatched to the nearest available fire unit.

Any updates to the event that were entered into CAD by the calltaker were immediately visible to all three dispatchers. Accordingly, responding units received almost real-time updates as they progressed to the scene. Meanwhile, the ProQA software had generated a set of Pre-Arrival Instructions (PAIs) based upon answers provided by the caller.

On arrival, police discovered three patients; two were unconscious.

In attempting to rescue and assist the patients, two police officers and two paramedics were overcome with fumes. The patient count had doubled in a matter of minutes and the event escalated into a major incident.

A total of nine patients were transported to the hospital, and three were judged critical and flown by ambulance helicopter to Melbourne hospitals.

Significant incident communications received by emergency personnel were recorded in CAD by the dispatcher responsible for that agency. These updates were instantly available to all other communications personnel, ensuring all involved remained informed and up-to-date with the latest reports from the field.

This expedited the broadcast of critical information such as not to enter the scene without breathing apparatus and where the incident staging points were.

Dog called Lucky is true to name

A woman walking her dog on the grounds of the Ambulance Service of New South Wales (NSW), Australia, headquarters down a drain hole, according to the agency’s Facebook page.

Any paramedics keen to help got the necessary equipment and went about extricating Lucky.

For safety reasons, they had to test the hole for gas levels, while one of the paramedics, Andy, wearing an oxygen mask, retrieved Lucky.

Lucky, living up to his name, was brought to the surface with no injuries other than a few bruises.

AED campaign is ‘shocking’ success

London Ambulance Service (LAS), NHS Trust, is running a campaign to get defibrillators in public places across the capital.

The ‘shockingly easy’ campaign aims to get 1,000 extra defibrillators in shops, businesses, and gyms across the capital. As part of the campaign, LAS offers an accreditation program that includes advice, automatic alerts, and debriefings to those involved in using the AED in a cardiac emergency.

The automatic alerting system informs the accredited organization when there is a medical emergency nearby, as well as ensures that someone with lifesupport skills is informed; the call also alerts the organization to the arrival of ambulance crews.

There is no cost for the accreditation; however, to become accredited, the organization must have a semi- or fully-automatic defibrillator operating according to the latest U.K. Resuscitation Council guidelines, which include items such as battery or pads within the expiration date, storing the defibrillator in a location that is easily accessible and highly visible, and showing proof of staff training in using the AED.

The organization must also record periodic checks and provide phone numbers to call in the event of an emergency near the site.
Laura Jewell is more comfortable in her role behind the scenes than a role that recently found her in front of the lens of a camera. “The camera was much more nerve-wracking,” she said. “I felt awkward. I prefer staying in the background.”

Jewell, EMD, East Texas Medical Center – Emergency Medical Services (ETMC EMS) communication center, made her film debut in a five-minute broadcast on CBS channel 19 in Tyler, Texas, during the April 24–May 1 “sweeps” week. The second of several Nielsen sweeps months planned in 2014 featured Jewell and fellow 9-1-1 EMD Jessica Stanley in a behind-the-scenes look at the job of emergency dispatchers.

Sweeps week is a big deal. The rating process captures the viewing habits of “Nielsen families” across the country that, in turn, sets advertising rates and decides program scheduling. Most of the time, sweeps weeks tease viewers (and advertisers) with spectacular promotions to sweep in the numbers to support higher ad rates.

So, why did CBS 19 News Reporter Courtney Friedman choose a story about 9-1-1? “I have been wanting to go behind-the-scenes at the call center for a while, and ETMC EMS was extremely helpful and willing to give me the time and resources to make it happen,” said Friedman, who covers a general assignment beat in East Texas. “This call center takes many of our local viewers’ emergency calls, so it really does pertain directly to them.”

Friedman said the center reaches a “huge chunk of the state” and that’s probably an understatement.

ETMC EMS is one of the largest ambulance providers in Texas, covering 15 counties and more than 15,000 square miles from a central headquarters in Tyler and a smaller center that provides emergency response for the city of Pasadena, near Houston, Texas. The two communication centers—one at each location—have an annual combined call volume of more than 150,000 requests, resulting in nearly 130,000 transports.

Both centers are also medical Accredited Centers of Excellence (ACE), which might be the reason Friedman was so taken by their operations. Although she was unaware of the international standing of the Medical Prior-
ity Dispatch System™ (MPDS™) and accreditation through the IAED™, the protocol’s significance figures predominantly in the sweeps reporting.

The ProQA® medical screens were also center stage.

Friedman wasn’t led to a CAD and encouraged to highlight the MPDS, said Chad Richey, communications manager.

“She caught on quickly,” he said. “She realized it was the protocol that helped our EMDs work so well with our callers.”

Jewell and Stanley are shown asking Key Questions and giving Pre-Arrival Instructions (PAIs) from calls they took for a cardiac arrest and a child delivery, respectively. Although the scenes have been recreated for filming, the two calls are the actual audio recordings.

In the call involving a cardiac arrest, Jewell counts out loud over the phone to maintain the caller’s speed and rhythm during compressions. She is on the line for nearly 20 minutes. The patient survived. Stanley’s PAIs help a father safely deliver the baby, from the “baby’s head is showing,” to the infant’s entry cry into the world.

“You can hear the excitement in their voices,” Stanley said during the news interview. But even when the calls don’t go the way she or Jewell would prefer, they agree that the process assures them of providing the best possible help for each situation.

That’s one of the reasons Jewell aspires to a dispatch position in training. She started her 9-1-1 career in 2009 and has been with ETMC EMS for the past two years. Her prior job precluded the use of the MPDS, and Jewell was delighted when she began working at a center that uses the protocol.

“I was familiar with protocol and find it very thorough,” she said. “It makes more sense to learn the process than to be thrown in without any guidance. As a trainer, I can teach how important it is for everyone to do it right.”

Richey spent plenty of time personally brainstorming ideas to get the same message across during what turned out to be a double accreditation. Richey led the ACE drive at the center in Tyler—with accreditation achieved in April 2012. Quality Assurance (QA) Supervisor Michael Smith assisted, having arrived two months before the Tyler center ACE application was finalized and submitted. Smith carried the ACE project solo at the Pasadena comm. center—with accreditation achieved in May 2013.

“DISPATCHERS WERE STARTING TO QUOTE THE PAIs … WE SCORED THE JACKPOT. WE WERE READY TO PROCEED WITH THE ACE.”

— Chad Richey

The MPDS was introduced to ETMC EMS years before Richey took over as manager, and he was instantly taken by the process.

“I’ve never seen a program better than the MPDS,” Richey said. “The protocols give our personnel peace of mind.”

ACE was a goal he assumed to support continued service contracts and sustain the same high level of performance at both centers.

“The hard part wasn’t bringing everyone on-board to achieve ACE,” Richey said. “It was getting everyone consistent in call processing, especially when giving Pre-Arrival Instructions. I needed to get us over that one big hurdle. We had to do something more in our training.”

Richey put the issue in front of the dispatchers. Literally.

He created PowerPoint presentations that were displayed 24/7 over a large projection screen typically reserved to display a map of the ETMC EMS system in real-time. PAIs for child delivery, choking, and stroke were shown repeatedly in three separate productions spread over three months.

The approach was on the order of subliminal messaging—the PowerPoint presentations placed the information strategically, infusing the data into the daily experience of dispatchers. The presentation changed screens every two to three minutes and looped to begin again once the end of the presentation was reached.

“Dispatchers were starting to quote the PAIs,” Richey said. “And that was great to hear.”

Apparently, the strategy worked. By the end of the three-month period, perfor-

mance was exceeding even his expectations.

“We scored the jackpot,” Richey said. “We were ready to proceed with the ACE.”

Smith, a former ETMC EMS paramedic supervisor, keeps performance levels on track through “training, training, and more training.” He works closely with four communications training officers and four shift supervisors. While the 11 ED-Qs™ mostly wear headsets to take calls, the high number assures that a Q is on shift to assist when questions arise.

Call reviews are processed through AQUA™ and the results are sent directly to the respective dispatchers. Exceptionally good calls and non-compliant calls receive immediate attention.

“We go for real-time feedback,” Smith said. Dispatch candidates are put through a battery of interviews and tests. New hires are required to take the ETC and EMD courses; they work one week on ProQA simulation and spend four to six weeks under the wings of a training officer before processing calls on their own.

Ultimately, the training officer is disconnected once comfortable with the dispatcher’s progress and ability,” Smith said.

Ten percent of their calls are evaluated during the first solo month.

“We don’t allow the time for bad habits to form,” Smith said.

Stanley had been on her own for five months at the center when the PAIs she provided over-the-phone led to welcoming an infant into the world.

The timing of the call and Stanley’s “very good” handling of the call put her on Richey’s short list for the CBS 19 news program alongside Jewell.

Jewell and Stanley agreed to go on camera with one requirement. They did not want to be the focus of attention.

“They wanted the audience to understand what happens when you call 9-1-1 and the reasons we do the emergency medical dispatch,” Richey said. “We give a lot of tours, but no one sits down to chat with the dispatchers, and they didn’t want to be singled out. They’re part of a team.”

Jewell applauds the TV station’s spotlight on 9-1-1.

“I’m really glad they decided to go this route,” she said. “Courtney did a great job at explaining what we do, and I’ve heard it was eye-opening.”

Friedman seconded Jewell’s confidence.

“People in the community loved the story, and responded well to it,” she said.
Hands-On Fast Track
Immediate compressions increase chance of survival

Brett Patterson

Brett:
We are currently beta testing MPDS® v13.0 and have a question regarding the new cardiac arrest “Fast Track” option. When the calltaker arrives at the complaint description they [now] have the option to choose “Obviously NOT Breathing and Unconscious.” The question from my calltakers is: What constitutes obviously not breathing? In the past, the caller must explicitly state not breathing and unconscious for Case Entry Questions 5 and 6 to be considered obvious. So what happens if the caller states: “I came home from work and found my husband on the floor; I think he is dead.” Does dead mean obviously not breathing?

Thank you,
Lois Lindgren Clancy
QA/QI Supervisor
Montgomery County Hospital District-EMS
Conroe, Texas, USA

Hello, Lois:
In short, yes.

This new Fast Track was developed in an effort to get hands-on-chest as fast as possible in standard, medical, Out-Of-Hospital Cardiac Arrest (OOHCA) cases. As you point out, this will require a bit of a cultural/attitude change among both EMDs and ED-Qs™ simply because the stringent verifications of consciousness and breathing will not be required when the caller provides information consistent with OOHCA. It should be made clear to EMDs that guessing wrong is
not a bad thing because doing chest compressions on a patient that does not need them carries very little risk, while any delay in compressions in the cardiac arrest patient drastically reduces the chance of survival.

In fact, it is recommended that as many as possible (100 percent in centers with low volumes) cardiac arrest cases reported from the field be reviewed at dispatch ASAP to look at hands-on-chest times and see if the cardiac arrest could have been identified sooner. Essentially, this changes the EMD’s and ED-Q’s focus a bit in these cases from verification to rapid OOHCA recognition, i.e., not using the AGONAL BREATHING Diagnostic Tool when the caller is unsure about breathing but rather following the UNCERTAIN BREATHING link directly into PAIs or, in more obvious cases, taking the Fast Track to PAIs. You will also note the new reporting feature in ProQA® for MPDS v13.0 that provides the EMD with her/his hands-on-chest time after each cardiac arrest case, which was implemented to give EMDs feedback as soon as possible after every cardiac arrest call.

Not unlike INEFFECTIVE BREATHING, there are many scenarios/choice of words that may be considered Obviously NOT Breathing and Unconscious, making a strict definition in the protocol both unrealistic and impractical. Therefore, as mentioned, ED-Qs should be encouraging, rather than discouraging, the use of this new Fast Track when the Chief Complaint Description is consistent with OOHCA. Common examples may include: “My wife was having chest pain and she fell in the kitchen; now I can’t wake her up.” “My husband was taking a nap and now he won’t respond to me. I don’t think he’s breathing.” “My friend passed out, and he’s making funny noises.”

Again, while all such descriptions will not turn out to be cardiac arrest cases, EMDs should be applauded for being aggressive with regard to getting hands-on-chest ASAP in suspected cases of OOHCA, and not be penalized for occasionally getting it wrong. It’s far better to stop CPR and start over when the patient objects to compressions than to delay compressions when they are needed. All EMDs need to be educated and encouraged with regard to this clinical reality and change their approach to these cases accordingly.

Your question provides us with another opportunity to share this very important message with other EMDs and ED-Qs.

ED-Qs SHOULD BE ENCOURAGING THE USE OF THIS NEW FAST TRACK WHEN THE CHIEF COMPLAINT IS CONSISTENT WITH OOHCA.

Let me know if my response answers your question sufficiently and please do not hesitate to contact me directly with any additional protocol questions or concerns.

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

Good morning Brett:

Your answer is so good I am going to forward this to all of my calltakers, and then I can sit down and have a one-on-one with each shift. If any additional questions arise after I meet with each shift I will get back with you. I think the calltakers are going to like this, they always felt held back before. Please feel free to use any of our questions as a learning experience for others.

Lois

Brett:

My question is regarding Protocol 26: Sick Person (Specific Diagnosis). The first Key Question is “Is s/he completely alert?”

If the answer is NO, it codes it as 26-D-1 with the symbol telling us to Send and go to PDIs; there is also “ALTERED LEVEL OF CONSCIOUSNESS” highlighted under the NO and the symbol. My question is if the answer is NO, not completely alert but they are not unconscious, just altered does it mean that we go directly to Send and PDIs also without returning to the remaining three questions and use final coding of 26-C-1; or do we return to the final three questions for altered after sending?

Thank you,
Traci Gagnon
Senior Dispatcher
Eureka Police and Fire Department
Communications
Eureka, Calif., USA

Traci:

To directly answer your question, no—continue with questioning. ALTERED LEVEL OF CONSCIOUSNESS, as it appears under Key Question 1, is an answer choice, not a link (like Sickle cell crisis is to Chest pain under question 3).

The ALTERED LEVEL OF CONSCIOUSNESS definition is a little confusing to some because it appears nowhere else in protocol and it is not a completely different state than “not alert.” The following history of the definition should help you understand its meaning and placement.

While reviewing a sample of calls in consideration of moving some 26-ALPHA codes to the OMEGA level, we discovered a disturbing trend, seeming related to Protocol 26 exclusively. There seemed to be an unconscious effort on the part of EMDs to prevent overtriage by “encouraging” a “yes” answer to the question, “Is s/he completely alert?” If a caller hesitated when asked the question, EMDs would quickly use the clarifier in a tone of voice suggesting frustration and the caller would often reply with something akin to, “Well, I guess so.” We also noticed that callers were using the terms now listed in the ALTERED LEVEL OF CONSCIOUSNESS definition to describe the patient, even while answering “yes” to the completely alert question.

We knew at this point that we were not comfortable moving the ALPHA codes to OMEGA because we knew that at least some of these patients had a questionable state of consciousness, but we didn’t really know just how sick they were. What we decided to do was create a safety net, a fail-safe if you will, to capture those patients who were reported to be “alert,” but were described previously with a term that suggested an altered level of consciousness. In this way we could code these patients separately and look at their outcomes when we could obtain a sufficient sample size.

So ... if the caller answers “no” to, “Is s/he completely alert?” the EMD should code and send the call as 26-D-1, then proceed directly to PDIs. If the caller answers “yes” to this question, but uses one of the terms listed in the ALTERED LEVEL OF CONSCIOUSNESS definition to describe the patient at any previous point in the interrogation, the EMD should continue the Key Questioning and code the call 26-C-1 (unless another CHARLIE-level code applies and has a higher, locally assigned response).

I hope I have answered your question, Traci. If not, please contact me directly.

Thank you for your interest in the MPDS, Brett
The words of Dave Barry, American writer and humorist, rang true to Brian Dale, so he began his NAVIGATOR session about committees with those words.

“If you had to identify, in one word, the reason why the human race has not achieved, and never will achieve, its full potential, that word would be ‘meetings,’” Dale quoted Barry as saying.

Everyone grumbles about having to attend meetings, particularly in organizations where the only thing better than a meeting is more meetings.

However, in some organizations, particularly in public safety and emergency communications fields, meetings—especially oversight committee meetings that have a place when discussions lead to potential improvements between life and death in 9-1-1—are necessary.

Dale, Salt Lake City Fire Department (SLCFD) deputy chief, Administrative Services Bureau, and the Academy’s Accreditation Board chair, recently presented a leadership session May 2 at NAVIGATOR 2014 in Orlando, Fla., entitled, “Group Think—The Down and Dirty of Oversight Committees.”

Oversight committees are vital to International Academies of Emergency Dispatch® (IAED™) member agencies’ ability to use the protocols correctly based on the quality improvement process and case review from each organization’s Q or Qs. Also, newer members or recently accredited/re-accred-
ited agencies may still be getting up to speed in organizing committees primary to the IAED goal, Dale said.

Two Academy-identified committees—the Dispatch Review Committee (DRC) and Dispatch Steering Committee (DSC)—and one group—the Quality Improvement Unit (QIU)—work synergistically to help line call-takers use the protocols appropriately and “to give everyone with the agency the right voice in the process, at the right level, at the right time,” he said.

“It’s kind of hard to make committee work really exciting and jazzy, but I started looking at it,” Dale said, regarding preparation for his presentation.

His workshop identified optimal committee participation and makeup, how to pick the right people to sit on committees, potential potholes in the committee process, and strategies to avoid them.

To define terms, the QIU is comprised of an agency’s Q or Qs that perform case review and discusses current trends, and answers to the DRC. The DRC, comprised primarily of line call-takers and middle-level managers, discusses and reviews general compliance, assists in forming Continuing Dispatch Education (CDE), produces and revises policy review, identifies and produces Proposals for Change (PFCs), and addresses QIU process concerns. The DSC is comprised of upper management and its sole purpose is to approve policy drafted with a yes, no, or approve with modification.

But at the heart of the process is the DRC, and its composition can have a substantial impact on its success, Dale said. Assign someone to chair the committee and invite key individuals (none higher than captain-level) to sit on it.

“If you put the wrong type of person on the DRC, you can actually shut it down,” he said, about placing a fire chief, police chief, or medical director on the DRC. “You just threw a hand grenade into the room. People are not going to be who they need to be to get things done with a bunch of brass sitting around the table. Those individuals are used to getting their way. So when someone disagrees with them, their first response is to bow their neck and show you their bars (on their collar).”

The chair should also ensure that there is a diversified group on the DRC and that each call-taker shift at the center has call-taker representation so that everyone with the agency feels like he or she has a voice.

The biggest mistake Dale ever made was in choosing the wrong mix of members for his first DRC.

“The natural tendency is to find people within the organization who think like you think, who are onboard; I found the Mini Me’s,” he said. “That’s failure. ... Meaningful conflict is a healthy thing. It takes time to get the right mix.”

Committee members should receive a meeting agenda at least a week in advance, and meetings should begin on time and be kept to less than one hour. Official minutes should be taken and published to achieve a high degree of agency transparency. Specific time frames should be set for project completions and updates.

“The DRC is designed to drive, assist, and manage, to some extent, the QIU,” Dale said. That way the agency’s Q or Qs know that the DRC is assisting them in managing the quantity and type of cases they’re reviewing, “and not just looking for bad stuff,” he said.

Compliance, he said, is a process not a starting point.

“Don’t try to go from 50 percent compliance to 95 percent in two months,” Dale said. “It’s not going to happen. Identify what you can do, pick those things out, get them done, and move on.”

How does it all fit together? The Qs that are part of the QIU also report to and sit on the DRC. The DRC chair will typically sit on the DSC as a nonvoting member to provide background information about proposed policies.

But the biggest key to running a successful DRC, which Dale learned through the school of hard knocks from Dr. Jeff Clawson, the founder of the protocols, was that the process has to be institutionalized. In other words, it takes delegating DRC responsibilities to a team of center representatives with varying viewpoints and perspectives to create a lasting culture of continual improvement in the center. One person can’t carry it all on his or her back.

“The idea of all of this is that we all have accountability, we all know our place in that system, and we also know that there’s a way to get things improved, fixed, or altered,” Dale said. “Anyone who knows my feelings on the DRC, this is the most important group on the planet.”
‘A Serious Public Safety Problem’
Improving 9-1-1 indoor caller location

Take your pick of the many tragic individual anecdotes but the problem remains the same.

On Jan. 17, 2008, Denise Amber Lee, 21, a wife and mother of two young boys, was abducted from her home. Lee made a desperate call to 9-1-1 from her abductor’s car using her abductor’s cellphone. Four other 9-1-1 calls—including one in which an eyewitness provided police with an exact location as the crime unfolded before her in real time—were also made on Lee’s behalf. And though police quickly traced Lee’s 9-1-1 call to the suspect’s cellphone, they could not locate her. Lee was brutally murdered. Two days later her body, with a single gunshot wound to the head, was found in a shallow grave in a remote, swampy area near Toledo Blade, Fla.

Fast-forward to June 16, 2013, when Joann Hillman-Payne, an EMT with the New York City Fire Department, took a 9-1-1 cellphone call from Mary Thomas. But because Thomas was suffering from a stroke, Hillman-Payne could not understand Thomas’ badly slurred speech. Rescuers struggled to locate the patient as Hillman-Payne continued a nearly eight-hour phone conversation with Thomas to reassure her and try to keep her conscious. Though first responders ultimately found and transported her to a nearby hospital, part of the confusion in locating Thomas, a housekeeper, was that she calling from an Upper Manhattan high-rise apartment that she was working in, and thus the location information—the physical address of the cell tower—was woefully inaccurate.

The current inability of Public Safety Answering Points (PSAPs) to accurately locate 9-1-1 cellphone callers indoors and vertically in multi-story buildings has been called “a serious public safety problem” by Danita Crombach, a communications manager at the Ventura (Calif.) County Sheriff’s Office call center. Because available technology doesn’t allow GPS signals from cell towers to penetrate most structures, callers dialing 9-1-1, who, for a variety of reasons may not be able to verbally provide their location (e.g., lost or unfamiliar with location; hearing impaired; can’t speak due to having a stroke or other medical condition; don’t speak English; experiencing a domestic violence situation), may or may not be located by first responders.

In an increasingly mobile phone-based society in which cellphone use is skyrocketing, the FCC estimates that upward of 76 percent of 9-1-1 calls now come from wireless phones rather than landlines. If identifying a 9-1-1 cellphone location wasn’t problematic enough (more about that later), finding the caller is severely compromised when he or she cannot verbally give the calltaker a current address for a variety of reasons.

Though daunting, the problem is far from unsolvable. A handful of technologies are currently being evaluated that may allow cellphone carriers to provide PSAPs not only with more accurate latitude and longitude coordinates (x- and y-axis), but also with the vital z-axis (vertical) that would enable call centers to locate callers vertically inside skyscrapers and other tall structures.

Moreover, the FCC has heard the outcry from both the public and the U.S. public safety community. On Feb. 20, the commission introduced proposed rules that would require cellphone carriers to provide hori-
horizontal indoor location of a caller to within 50 meters (164 feet) for 67 percent of 9-1-1 calls within two years (80 percent within five years) of the rules’ adoption.6 Within three years of the rules’ adoption, cellphone carriers would be required to provide vertical indoor location (z-axis) within 3 meters (roughly 10 feet) of the caller for 67 percent of calls, and for 80 percent of cellphone calls within five years.

Yet the burden would not only be upon cellphone carriers. To allow the improved caller location function, PSAPs would be required to update their communications systems and infrastructure to receive the more accurate location data from cellphone providers.

In the absence of a crystal ball to know if the FCC will adopt the proposed rules, we can delve further into the problem of 9-1-1 cellphone caller location accuracy, its causes and impacts, the first-hand experiences and perspectives of emergency dispatch professionals and their supporters, and at the pending regulations themselves.

The problem

In 1997, an FCC ruling set several deadlines and reporting dates for cellphone carriers implementing wireless 9-1-1 or wireless Enhanced 9-1-1 (E9-1-1) services.7 The basic rules require providers to transmit all 9-1-1 calls to a PSAP regardless of whether the caller subscribes to the provider’s service or not.

- **Phase I** E9-1-1 rules require cellphone carriers to provide PSAPs with the phone number of the originator of a 9-1-1 call and location of the cell tower transmitting the call within six minutes.

- **Phase II** E9-1-1 rules specify that by 2012, cellphone carriers must provide emergency responders with x- and y-axis coordinates accurate to 50 to 300 meters (164 feet to 984 feet) of a 9-1-1 caller, depending on the technology used.

However, both Phase I and Phase II E9-1-1 rules apply to outdoor use only despite industry estimates that at least 50 percent of wireless 9-1-1 calls originate from indoors. And beginning in 2011, cellphone carriers could file with the FCC a list of counties or portions of counties that they opt to exclude from the location accuracy requirements for technical reasons (i.e., rural areas with limited or no cellphone coverage) that might hamper locating a caller.

But just because a PSAP is Phase II capable doesn’t mean the communication center is getting accurate or reliable Phase II caller site data. For a prime example, look no further than Crombach, who is also president of California’s chapter of the National Emergency Number Association (CALNENA). In her Aug. 12, 2013, letter to the FCC detailing the alarming caller location problem and expressing support for new 9-1-1 location accuracy rules, she states that Ventura County 911 (which serves nearly one million residents) has been receiving Phase II location data for years. However, in 2011 she and other officials began noticing “a significant decrease in the percentage of wireless 9-1-1 calls that delivered Phase II location information.”

Without the Phase II data, dispatchers are unable to locate 9-1-1 callers in need, particularly if they are unable to verbalize their current address.

“In Ventura County, the problem is urgent,” Crombach said. “Of the 87,000 wireless calls we received over the past 18 months, over one-half did not have Phase II location information delivered with the call as required by FCC regulations.”

And the Phase II problem is not isolated to Ventura County 911. PSAPs throughout the state have told her that they are experiencing the same decline in wireless 9-1-1 accuracy as the Phase II data they used to receive is no longer delivered with the call. Statistical reports from around the state indicate the phenomenon is widespread, Crombach said, including in San Francisco, San Jose, Pasadena, Bakersfield, and Ventura County.

“According to the California State 9-1-1 Office, of the 1,589,580 wireless 9-1-1 calls received statewide in March 2013, more than 55 percent did not have Phase II location information delivered with the call,” Crombach said.

One cellphone carrier’s delivery of Phase II location information in Ventura County dropped from the 90th percentile in 2008 to less than 35 percent at the end of 2012, she states in her letter. Even the best performing provider delivered accurate location information to the PSAP on only 64 percent of calls in December 2012.

Crombach suspects that since the problem is much worse in urban areas, the carriers’ assisted global positioning system (AGPS) technology “may be a significant factor” as GPS signals typically cannot go
“THIS SURVEY, AND THE POWERFUL PERSONAL STORIES OF 9-1-1 EMPLOYEES FROM AROUND THE COUNTRY, REMOVES ANY DOUBT ABOUT THE LIFE-AND-DEATH URGENCY OF THE FCC’S RULEMAKING ON THIS ISSUE.”

— Jamie Barnett

The survey

In the spring of 2014, Find Me 911 commissioned a survey among 1,014 PSAP managers and employees representing 880 individual PSAPs from all 50 states, or approximately 15 percent of all PSAPs. Barnett said one of the most illuminating finds was that 82 percent of 9-1-1 personnel surveyed have little confidence in the location data provided to their PSAPs by wireless carriers. It also showed that 54 percent said the latitude and longitude (Phase II) data provided by carriers is “regularly” inaccurate, and that 97 percent of 9-1-1 call centers have received a wireless 9-1-1 call within the last year from a caller who could not tell the dispatcher his or her location.

“The results are truly staggering,” Barnett said. “It’s time to move past Phase I and Phase II and improve our indoor wireless caller capabilities. It’s solvable and the technology does exist. … Not only are we not finding people but we’re misdirecting valuable first responder assets.”

In seeking the professional opinion of people “on the front lines,” the survey was formulated to complement FCC’s questions so that results could be submitted as part of public comment to the proposed rules, Barnett said.

But perhaps the most powerful, and at the same time disturbing, realization to come out of the survey’s results were respondents’ 200 personal stories describing the challenges associated with locating wireless callers. The following are some examples (responses are excerpted and edited by Find Me 911 for grammar and spelling):

- “Received a 9-1-1 from a cellphone with an open line. It was a female that sounded as if she had her mouth gagged. She was getting beat [and] even her dog was being hurt. The lat/long came to an abandoned building in St. Louis City … Could not pinpoint her location, and her phone died. She was never found.” —Missouri 9-1-1 employee

- “We had a caller with Lou Gehrig’s disease. He called 9-1-1 for an ambulance but was unable to speak, and the 9-1-1 information would not zero in on his location. … [The] caller was in physical distress, but we would have never found him based on the 9-1-1 info.” —California 9-1-1 employee

- “A call was received from a young child indicating that her mother was unresponsive. It took nearly 45 minutes to ascertain the correct address and even then the location provided by Phase II rebidding put the location of the caller to only within a 1,000-yard radius.” —New Hampshire 9-1-1 employee

- “This survey, and the powerful personal stories of 9-1-1 employees from around the country, removes any doubt about the life-and-death urgency of the FCC’s rulemaking on this issue,” Barnett said.

The proposed rules

The FCC offered two public comment periods following publication of the proposal in February; the second and final period closed mid-July 2014.

As one might imagine, the pending regulations have been met with their share of proponents and detractors, including members of the FCC.

FCC Commission Chairman Thomas Wheeler cited a disconnect between the rules and the realities of the always-connected mobile world, a perspective he gained when visiting with staff at PSAPs urging the advance of 9-1-1 caller location capability. For example, dispatchers spoke to him about the Sept. 15, 2013, Washington Navy Yard shooting during which a lone gunman fatally shot 12 people and injured three others. A significant number of employees used their cellphones to dial 9-1-1 rather than their office phones. He also mentioned an anecdote about a stolen iPad in which the location information delivered to a PSAP for the caller reporting the theft was “off by almost three miles,” while the data provided to the device’s location app “provided pinpoint accuracy.”

…”This data drives home the risk we are facing today as a large and growing percentage of those callers have their location unavailable to dispatchers and emergency responders,” Crombach said. “Now is the time for action on existing rule compliance and on establishing indoor accuracy requirements before more lives are put at risk.”

Jamie Barnett is director of the Find Me 911 Coalition (www.findme911.org), an effort of more than 200,000 individuals comprised primarily of local and national public safety organizations dedicated to bringing about improvements to emergency caller location. He said a key catalyst to the group’s founding was the news out of California from Crombach. The organization estimates that upward of 60 to 80 million wireless 9-1-1 calls per year are not being accurately located. He said just getting the FCC to initiate the proposed indoor caller location rules was “a tremendous victory.”

“Millions of Americans each year rely on their mobile phones to place emergency calls to 9-1-1, not realizing that if they place that call from many indoor locations there is no ability to determine their location and there is (currently) no FCC requirement that wireless carriers be able to do so,” Barnett said.
Similarly, Commissioner Jessica Rosenworcel delineated the stark contrast in accurate location information options for the public when dialing 9-1-1 from a mobile phone.

“If you call 9-1-1 from a wireless phone outdoors, the commission has standards that help ensure first responders can locate you and send assistance,” she said. “But if you call 9-1-1 from a wireless phone indoors, you should cross your fingers and hope and pray, because no location accuracy standards apply.”

Commissioner Ajit Pai said the FCC should approve rules that are both “aggressive and achievable.” “Unfortunately, I am skeptical that the time frames (two and five years for indoor vertical) proposed in today’s item are realistic... The commission’s rules should be more than inspirational.”

Pai added that the date of compliance should not be the effective date of the rules’ adoption but rather when the FCC’s Communications Security, Reliability, and Interoperability Council (CSRIC) certifies that a technology vendor has demonstrated through an independently administered test program that a solution meets the horizontal and vertical location accuracy benchmarks for those rules.

“Judging from our experience with Phase II, which the FCC mandated in 1996 but will not be fully implemented until 2019, I am skeptical that this deployment can be completed in two to three years (for the first phase of proposed indoor location),” Pai said.

Barnett countered that the technologies for indoor, vertical location do exist and said the time frames suggested in the FCC’s proposed rules are manageable. He said it’s entirely feasible for PSAPs that aren’t Phase II capable to be up to speed within two years.

“More rural areas with fewer cell towers linked to a network’s systems are not as accurate with Phase II location,” Barnett said. “That’s where GPS, in tandem with triangulation of cell towers, works best.”

He said that’s why it’s really going to take a combination of technologies for improved 9-1-1 wireless caller location to operate at the highest levels.

Possible technology candidates for z-axis location information that are fully operational or under development, according to Find Me 911 include:

- Uplink Time Difference of Arrival (U-TDOA), which computes location by measuring the time it takes cell-phone transmissions to reach multiple cell towers.
- Advanced Forward Link Trilateration (AFLT), which computes location by measuring the time it takes multiple cell tower transmissions to reach the cellphone.
- RF pattern matching, which computes location by measuring the power levels received by the handset from multiple cell towers.
- Terrestrial beacon transmitters, which compute location by measuring the time it takes signals to arrive at the handset from multiple beacons.
- Digital television signals, which compute location by measuring the time it takes multiple cell tower transmissions to reach the cellphone.
- Observed Time Difference of Arrival (O-TDOA), which computes location by measuring the time it takes signals to arrive at the handset from multiple digital TV transmitters.

“Improvements to 9-1-1 caller location in public safety will lead to saving lives,” Barnett said. “I hope the FCC will adopt the rules soon, maybe as early as October.”

**Meeting the objective**

Mark Rector, a member of Priority Dispatch Corp.’s Implementation Department, said it’s been his experience in the industry that FCC rules often take more than the allotted time to get all parties involved onboard. Another issue from the public safety side is cost-related; FCC regulations are essentially unfunded mandates. But generally, he said, involved parties and organizations tend to take proactive steps and make a good faith effort to comply with rules, particularly when public safety is an issue.

“There’s a collegial patience factor, but nonetheless, a commitment to carriers and public safety to make (improved indoor location) happen,” Rector said.

Still, he understands Commissioner Pai’s call for cooler heads to prevail on the commission when it comes to setting more reasonable time frames for implementing the proposed rules and also the requisite technology development.

“It’s going to be an enormous challenge, in my opinion, to drill down to satisfactory technology capable of finding a cellphone in the basement corner of a massive industrial warehouse that covers four acres, or a bathroom of a 25-story office complex,” Rector said. “That’s going to be interesting.”

The key, he said, will be getting realistic input from all stakeholders and then incorporating that into the rules in order to get the maximum cooperation and collaboration out of PSAPs, cellphone carriers, technology research and design providers, etc.

“Let’s have a reasonably achievable goal with a plan on how to get there,” Rector said. “What’s good for this is that Phase II is well underway, and the indoor, vertical location efforts can piggyback on its solutions and ride the coattails of that. Find Me 911 is very fortunate in that the work has begun.”

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**Sources**

Seriously injured patients rely on you to give the best medical attention and care. To do that, you need knowledge, experience and the proper tools. That’s why the Centers for Disease Control and Prevention (CDC) has released the widely endorsed *Field Triage Decision Scheme: The National Trauma Triage Protocol* to help EMTs and paramedics choose the best transport destination for trauma patients. Designed in partnership with other leading organizations and experts in injury care, the Decision Scheme has been published in the prestigious *MMWR Report & Recommendations*. It’s a valuable tool that can help your EMS system save lives.

Get a free copy of the Field Triage Decision Scheme: *The National Trauma Triage Protocol*, the MMWR and other free resources at [www.cdc.gov/FieldTriage](http://www.cdc.gov/FieldTriage)
Neighbors

Saving Neighbors

‘Heart-friendly’ community rushes
AEDs and CPR to the rescue

Audrey Fraizer

Going about daily business in a golf cart is just one plus of spending your golden years in The Villages retirement community in central Florida.

And the carts are also a particularly efficient mode of travel when seconds used effectively result in years added to the life of a person experiencing cardiac arrest.

“Five people on three golf carts, with one AED [automated external defibrillator], arrived in less than a minute,” said Lew Simon, a retired financial consultant and resident in one of the many gated communities making up “Florida’s Friendliest Hometown.”

“She was 91, and went into cardiac arrest related to heat stroke while she was gardening,” he continued. “She was out of the hospital the next day.”

The neighbors were volunteers in the Neighbors Saving Neighbors program that Simon introduced in 2003 to his gated community (53 homes) within The Villages, located in the Orlando area.

Neighbors Saving Neighbors places AEDs on resident properties throughout their community and trains residents on how to use the devices, along with how to perform hands-only (compressions) CPR.

The number trained is up in the thousands, although it would be impossible to give an exact figure because of demographics. The Villages is for residents 55 and older and is made up of smaller neighborhoods, e.g., The Village of Sunbury, totaling a population of about 110,000.

Capt. Gail Lazenby, The Villages District Public Safety EMS training and quality assurance officer, who oversees The Villages program, said a better indicator is the number of neighborhoods involved and the number of households registered in each of these neighborhoods.

According to Lazenby’s records, as of June 1, 2014, there were 12,118 homes in 140 neighborhoods registered. Two or more AEDs are strategically placed in each neighborhood—usually on the outside of residential homes—and additional AEDs are available at community gathering centers, such as recreation centers, churches, and softball complexes.

Prior to any AED installation, neighborhoods must agree to a one-time start-up fee to purchase the AEDs and accessory items—waterproof case, cabinet, and the first set of replacement batteries. Exact figures vary according to the number in each neighborhood signing up to participate and many communities share future expenses—batteries and extending the notification contract—through fundraisers, such as raffles.

But the “dues,” which for the start up generally run between $100 and $175 per contributing household, don’t determine who is eligible for the lifesaving measures in cases of cardiac arrest.

“We’re certainly not going to ignore someone in trouble,” said Simon, who lives in The Village of Sunbury. “No matter who pays, everyone in a designated community is covered.”

Simon believes the potential and actual results of the initial investment far outweigh the cost; those initially hesitating to chip in usually climb on board once witnessing or hearing a success story.

“What this program can do is mind-boggling,” Simon said. “You’d be amazed at the number of people we’ve saved.”

“Saves” are defined by the ability to walk out of the hospital, Lazenby said. And the statistics, according to a district public safety report, show The Villages occupies an enviable position.

Overall, The Villages’ survival rate for cardiac arrest went from 16.75 percent in 2004–2005 to more than 40 percent in just four years.

In fiscal year 2012–2013, the district fire department handled 68 cardiac arrests and saved 28 patients. The 41.2 percent survival rate dwarfs the national estimated average of 9.5 percent in reported cases in 2013, as documented by the American Heart Association (AHA).

By all indications, things are only getting better, according to a story published in the March 30, 2014, edition of The Villages Daily Sun.

From March 1, 2013, through Oct. 30, 2014, the department worked 37 cardiac arrests and saved 17 patients—a 46 percent survival rate.

Lazenby likes to say he lives in a “heart-friendly community.”

“We are without a doubt more successful than the national average,” he said. “And the crazy part is that there’s nothing magic about this. It just takes the right people to get it started and keep it going.”

How it works

When the call comes into the communication center, and the symptoms correspond to a suspected cardiac arrest, the EMD assigns the case an ECHO Determinant Code (or in a few cases, a DELTA Determinant Code), dispatches ambulance and fire, and assigns the AED unit in the computer-aided dispatch (CAD) terminal.

The action of entering the AED unit in the CAD activates a Web-based emergency notification system—ReadyAlert™—that transmits the alert to each address in a neighborhood coded to receive the notification via cellphone, PDA, and all email and text accounts. The recipi-
ents have volunteered their information for this specific use.

Volunteers arrive on foot, by golf cart, or through whatever means available to assist, with the tasks performed specific to the order of their arrival.

For example, the first volunteer on the scene would begin hands-only CPR and the second person might stand at the curb waving a flashlight to direct the ambulance to the proper location. The third volunteer might be carrying the AED and hand it over to a fourth volunteer who will use the device to determine if and when a shock should be delivered to restore the heart’s normal rhythm.

Simon had his first save four years into the program. On Nov. 14, 2008, his neighbor, Dr. David Rowland, collapsed in the kitchen, slamming his head against the dishwasher and falling unconscious to the floor. Rowland’s wife, Donna, called 9-1-1.

After dispatching paramedics, the EMD at the Lake-Sumter Emergency Medical Services communication center sent out alerts to Rowland’s neighbors’ pagers. The neighbors rushed to the Rowland home and unable to find a pulse, one of the neighbors started Compressions-Only CPR. Simon’s wife, Sherrill, arrived with the AED. While one neighbor continued to pump Rowland’s chest, another set up the AED and placed the paddles. The two jolts delivered by the neighbors were followed by two more from EMS responders arriving several minutes after the call was placed.

Simon was in Sarasota, Fla., teaching CPR at the time, but he had trained everyone in the group who rushed to the Rowland home, using the AHA-approved method of hands-only CPR.

“I received the page and called my son, who was living at home,” Simon said. “He told me mom was already on her way with the AED.”

Rowland was wheeled into the ambulance and transported to The Villages Regional Hospital. He survived, despite the 10 minutes without a heartbeat, and underwent a quadruple bypass three days later.

“He’s still playing golf three times a week at age 76,” Simon said. “You’re right, I am proud of this program.”

“HE’S STILL PLAYING GOLF THREE TIMES A WEEK AT AGE 76. YOU’RE RIGHT, I AM PROUD OF THIS PROGRAM.”

—Lew Simon

First responders

The dispatch component is integral, and it’s a process that does not interfere with either providing Pre-Arrival Instructions or sending ambulance response.

“There’s no disruption in service,” said EMD Cynde Earls, Lake EMS CAD/GIS administrator. “The volunteers are notified, and they respond while the dispatcher continues the protocol and the ambulance is on its way.”

Lake EMS was the first communication center to go with the program and Earls built a data set to correspond with the communities. Through the years, she has worked closely with Simon and Lazenby to operate the program.

“We’re the bridge,” explained Earls, who has been with Lake-Sumter and Lake EMS for 12 years (Rural/Metro Ambulance now provides 9-1-1 emergency medical services in Sumter County). “We had to be involved for the program to be effective.”

Simon was able to get his foot in the door after approaching Mike Tucker, fire chief of The Villages Public Safety Department, and convincing him of the win-win in training residents to provide CPR and AED assistance while waiting for EMS crews to arrive. The two of them arranged a meeting with Lake EMS Communication Center Chief Kimberly Stephens. Simon wasn’t optimistic.

“I thought she would give the bureaucratic excuse like, ‘If we do it for one, we have to do it for the others’ or ‘We don’t have the technical capabilities,’” Simon said. “I was wrong. She was all for it. Kimberly agreed
that saving even one life would make the program worthwhile.”

Stephens said Simon almost instantly sold her on the concept. “Everything he was saying made sense,” she said. “While he was talking, the wheels were spinning. Before he left I had some ideas of how this could work.”

Stephens guided the reins into the operative mode, with Earls coming on board when she was hired. Earls ran the dispatch side of the program from 2007 until last year, when the program was passed to Sumter County EMS for reasons related to consolidation.

Despite the change, Earls and Stephens remain strong advocates and talk up the program’s benefits in front of any audience that will listen. Both were among six speakers at the Neighbors Saving Neighbors session offered at NAVIGATOR 2014.

“I firmly believe in this,” Earls said. “It’s very satisfying to know that we have yet another resource arriving at the scene. We’re able to get people there as fast as humanly possible.”

Stephens admits that she misses the direct connection.

“But at the end of the day, it’s about the person benefiting from Neighbors Saving Neighbors, no matter who’s pushing the button,” she said.

The zeal is making contact in other centers.

The Villages program is 11 years in the making—and still growing—and two other counties in Florida have adopted the effort, although their programs are less concentrated, which can be attributed at least in part to the unique environment offered in The Villages.

Simon travels the country giving talks and rendering suggestions for getting at the heart of acceptance and implementation.

“You have to motivate the fire chiefs,” he said. “If the fire chief says he wants it done, and assigns someone to the project, it will get done.”

Lazenby believes the program will continue to spread, although he admits the dedication demanded can appear overwhelming to public service officials and community residents.

“They might like the idea, but it does take a lot of time to get it going and to monitor,” said Lazenby, who regularly conducts mannequin drops to test the time sequences—call to dispatch, alert to residents on the scene and commencing CPR, and when the ambulance arrives on scene. “Not everyone has the time to make that sort of commitment.”

Lazenby’s commitment is telling in his retirement, effective June 6, 2014, which doesn’t really mean an end to his 46 years in EMS and firefighting, with the last 11 years spent with The Villages Public Safety Department.

In fact, it’s the second time that Lazenby has retired since 2003, which is the year he left the Grand Island Fire Department in New York to invest his golden years at The Villages. He heard about the opening in training and, as the saying goes, that’s all she wrote.

His first date to retire—Feb. 28, 2014—was met with a request to stay on and that’s what he did, putting in long hours to keep his training programs on track.

He didn’t take the retirement. His second retirement met similar resistance, and this time he has agreed to work eight to 10 hours per week exclusively devoted to Neighbors Saving Neighbors. Someday, he might even actually retire.

“This program is definitely my baby and without a doubt, I wasn’t going to walk away until the right person is ready to take it over,” Lazenby said. “It wasn’t my idea but I am the one to run with it at The Villages for now.”

Simon said the program is his opportunity to give back.

“It’s a great feeling every time I hear of a life saved because of the program,” he said.

Note: For more information about using Neighbors Saving Neighbors in your community, contact Simon at AVLINE@aol.com.

ECHO and Neighbors program are an ethical call to make
Greg Scott, IAED Operations Research Analyst

Neighbors Saving Neighbors demonstrates a pragmatic use of the ECHO Determinant in the Medical Priority Dispatch System™ (MPDS®).

ECHO—the highest priority level in all three Priority Dispatch Systems™ (MPDS, FPDS®, PPDS)—was first added to MPDS v11.0 in 2000 (and shortly after to the FPDS and PPDS). It provides for early notification of, and rapid response to, the most critical of life-threatening conditions—typically for cases of ineffective breathing or confirmed sudden cardiac arrest, or respiratory arrest in the MPDS.

If you’ve been an MPDS user for some years, you might recall that in MPDS versions prior to v11.0, the EMD always assigned the Determinant Code after completing all Key Questions.

In more recent versions, the ECHO coding is assigned during Case Entry, either after the caller’s initial description of the problem is provided, or after the final Case Entry question is answered. In addition to creating an early notification process for the professional responders, ECHO provides a simple and easy to understand method for mobilizing non-traditional responders—those that would not go to more routine EMS calls but can help save a life by providing early CPR and/or defibrillation in those few cases where the absolute closest available trained hands and equipment are needed.

Since ECHO responses are few in number, typically between 1 percent to 2 percent of total cases handled using the MPDS, those non-traditional responders are used judiciously, and, therefore, unlikely to be exhausted at any given time of day. This makes ECHO responses even more valuable during peak call-load hours for paramedic ambulances and first responder crews.

The ECHO code also optimizes the concept of sending a special response based on locally defined and available resources, with Neighbors Saving Neighbors serving as an example of community-based assistance that can be provided while waiting for EMS to arrive on scene.

As with all MPDS codes, the ECHO response does not require a response that is different from DELTA, nor does it prevent the correct use of Case Entry. The ECHO level is simply one more tool to give local medical control authorities the ability to do what is clinically and ethically sound.
On Track

Not Always so Amusing
Thrills can turn to chills on amusement park rides
Each summer, an estimated 300 million people enter the front gates of the more than 400 amusement parks in the United States, anticipating a carefree and thrilling day riding roller coasters and low-key merry-go-rounds.

It’s all fun and games until something bad happens, which fortunately, isn’t often; however, be warned that safe returns aren’t always part of the amusement park package. The Consumer Product Safety Commission (CPSC) estimates that in 2011, amusement attractions injured 37,154 park-goers:

- 5,139 visitors were between the ages of 0 and 4
- 17,889 visitors were between the ages of 5 and 14
- 6,536 visitors were between the ages of 15 and 24
- 8,097 visitors were between the ages of 25 and 64
- 193 visitors were 65 or older

Accidents occur for many reasons—mechanical, operator, and passenger related. Likewise, the injuries come in many forms, but some involve roller coasters stopping in mid-run because of an electrical or mechanical failure, maintenance workers trapped during ride repair or inspection, and visitors failing to follow the park’s safety precautions.

Despite the potential risks, amusement parks have a comparatively good safety record, considering the 300 million people who enjoyed the more than 18 billion rides in 2007. Based on data summarized by the National Safety Council in the Fixed-Site Amusement Ride Injury Survey, 2007 Update, less than one injury occurred out of every one million rides taken in the United States. The chance of being seriously injured on a ride in a fixed-site amusement park in the U.S. is one in nine million. Sixty-one of the 1,415 ride-related injuries reported in 2011, or less than five percent of all ride injuries, were considered serious, meaning they required some form of overnight treatment at a hospital.

Another survey/retrospective study conducted at two Pennsylvania emergency departments during the summer of 2006 shed light on the severity of the majority of amusement park injuries brought to the hospital. There were a total of 325 discharge diagnoses for the 296 Emergency department visits identified; 74 percent of discharge diagnoses were trauma related. The most common traumatic diagnoses were laceration (27 percent) and head injury or concussion (14 percent). The most common non-traumatic diagnosis was heat-related illness (24 percent). Twenty-nine percent of discharge diagnoses were directly associated with amusement park rides. Eighty-nine percent of patients were discharged home. There were no mortalities reported.

**They’re not all alike**

Rides can be fixed or mobile. Fixed-site rides are rides that are permanently affixed to the ground and open year-round or seasonally; mobile rides are moved from location to location as part of fairs, carnivals, or other events. Most parks post warnings to caution riders who have pre-existing back or neck conditions. Pregnant women are often discouraged from thrill rides. Age and height limits are posted. But not everyone plays by the rules. People let go of handrails or stand up during the ride. They ignore the “three Bs” of the safe park experience: butt on the seat, both feet on the floor, and both hands holding on. People wanting to be first in line fall while running down ramps or drown in wave pools.

Of course, accidents and malfunctions do happen even when all the rules are followed, and neither inspection nor statistical review is a fixed process.

The CPSC Office of Compliance’s Division of Recalls and Compliance plays a limited part in amusement ride regulation. The agency has jurisdiction over mobile rides, but does not have jurisdiction over fixed-site rides. The CPSC also serves as a clearinghouse for safety information on ride incidents identified by commission investigators and state and local ride officials.

General industry standards regulated by the Occupational Safety and Health Administration (OSHA) apply to occupational safety and health for employees working at amusement parks. However, OSHA does not regulate the public visiting these facilities, nor does it track accidents. Such facilities are generally state-regulated, and the applicable regulations vary by state. While authority under each individual state’s legislation differs, regulations tend to focus on preventing ride incidents through the early identification of unsafe and defective rides.

Currently, 44 of 50 states regulate amusement parks. The six without state oversight are Alabama, Mississippi, Nevada, South Dakota, Wyoming, and Utah. However, all states are subject to other layers of independent examination, including insurance companies, and most amusement parks require examinations on a daily, weekly, monthly, and yearly basis.

Aside from injury related to ridership, other minor medical problems regularly occur at amusement parks, including heat exhaustion, sunburn, stress, dehydration, motion sickness, and burns to the skin from sitting/leaning on metal objects and sitting on hot surfaces. Medical emergencies can also flare up from a pre-existing medical condition.

But no matter the accident or illness, the Medical Priority Dispatch System (MPDS) and the Fire Priority Dispatch System (FPDS) are there to help a 9-1-1 caller.

**Coming through with protocol**

EFD Case Entry Rule 10: An incident involving a person needing rescue and emergency medical treatment is a fire incident until the person has been rescued. If the person only needs medical treatment, it is an EMS incident. When an amusement park injury has occurred, the first Case Entry Question, “What’s the address of the emergency?,” should elicit the name and location of the park as well as the particular ride and/or section in the park where the accident occurred. Of course, if the caller doesn’t initially provide these details, the EFD should clarify and pursue a more exact location for responders.

Incidents that may require a tactical rescue—such as mechanical failure requiring rescue from a point of the ride or an entrapment situation—may require both fire and EMS response. In any case, the calltaker should be prepared to fill the role of a first responder and assess which Pre-Arrival Instructions (PAIs) are most appropriate to provide to the caller before responders arrive.

If an incident requires a high-angle or technical rescue, the EFD should refer to FPDS Protocol 62: High Angle Rescue (Above or Below Grade) and, in situations involving entrapment, Protocol 58: Extrication/Entrapped (Machinery, Vehicle – Non-MVA).

Independent of protocol selection, the most important task is to maintain order on
the scene prior to field unit arrival, and that starts with the EFD giving instructions to prevent further risk or injury, according to Brian Dale, deputy chief, Administrative Services Bureau, Salt Lake City Fire Department. “The EFD can do this by stopping the bystander from doing something that turns an already bad situation into a fatal one for either the bystander or an already trapped victim, who might still be alive,” he said.

In other words, he said, the EFD should be mindful of the first law of responders: “Don’t take more victims to the scene.”

The Key Questions on FPDS Protocol 62 determine the type of structure (ride) and the patient’s distance from the bottom/top to help responders arrange appropriate resources and effect the rescue of the injured/stranded individual.

High-angle rescue is a subset of technical rescue that involves specialized skills and equipment to reach victims above or below grade—where conventional interior rescue is not possible—extricate them, and bring them to safety. Either suffix “A=Above grade” or “B=Below grade” would be used to delineate the type of problem for specific response and safety purposes. Remember, some fixed rides are underground. The remaining Key Questions address whether other individuals are in immediate danger and whether anyone else is injured.

If an individual is entrapped, extrication is best handled on FPDS Protocol 58. Key Questions determine the variables involved: what is trapping the individual(s), the part of the body trapped, and whether the machinery (ride) has been turned off. All calls involving entrapments are considered extrication situations until responding units arrive and assess the circumstances.

A person trapped in a ride requires a maximal response, including the appropriate extrication team; however, the source of entrapment in an amusement park may not always be a ride. At times it may be a small child trying to squeeze through a narrow opening to get ahead in a line or even an adult attempting to retrieve a child after a ride ends. Entrapment can lead to serious consequences, such as strangulation and death, particularly when the individual’s head becomes entrapped while entering an opening.

As with other protocols, the EFD should provide Post-Dispatch Instructions (PDIs) after completing the Key Questions and initiating the response. However, as described in the blue CEI section, the EFD may sus-

Sources

6 See note 5.
7 See note 3.
YOU MUST BE FIRE CERTIFIED TO TAKE THIS QUIZ.

CDE Quiz Mail-In Answer Sheet

Answer the test questions on this form. (A photocopied answer sheet is acceptable, but your answers must be original.)

WE WILL NOT PROCESS ALTERED SIZES.

A CDE acknowledgement will be sent to you. (You must answer 8 of the 10 questions correctly to receive credit.)

Clip and mail your completed answer sheet along with the $5 USD (must be U.S. currency) NON-REFUNDABLE processing fee to:

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110 South Regent Street, 8th Floor
Salt Lake City, UT 84111 USA
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(800) 960-6236 US; (801) 359-6916 Intl.

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☐ Comm. Center Director/Chief
☐ Medical Director
☐ Commercial Vendor/Consultant
☐ Other

ANSWER SHEET FIRE
September/October 2014 Journal “Not Always so Amusing”

Please mark your answers in the appropriate box below.

1. ☐ A  ☐ B  ☐ C  ☐ D
2. ☐ A  ☐ B  ☐ C  ☐ D
3. ☐ A  ☐ B  ☐ C  ☐ D
4. ☐ A  ☐ B  ☐ C  ☐ D
5. ☐ A  ☐ B  ☐ C  ☐ D
6. ☐ A  ☐ B
7. ☐ A  ☐ B  ☐ C  ☐ D
8. ☐ A  ☐ B  ☐ C  ☐ D
9. ☐ A  ☐ B  ☐ C  ☐ D
10. ☐ A  ☐ B

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Expires 10/31/15

THE JOURNAL | September/October 2014 33
There really isn’t any question of whether or not we will have another pandemic. The only questions are when it will occur and how severe it will be.

A pandemic is a disease that occurs over a wide geographic area and affects a high proportion of the population because they have little or no natural immunity. Influenza (the flu) is a contagious respiratory infection and an example of a pandemic infection. The flu can be serious and sometimes even fatal for certain groups (e.g., people with asthma, diabetes, compromised immune systems).

History shows at least 10 flu pandemics in the last 300 years. The largest outbreak was the Spanish flu pandemic in 1918–1919. The worldwide death toll is thought to be in the millions—an estimated 675,000 people died in the U.S. More recently, the swine flu, or H1N1 virus, caused a small scale pandemic in 2009. H1N1 was thought to have made 61 million people ill worldwide, but only 274,000 of those required hospitalization. It is estimated that 18,300 died from H1N1.

Currently, in an average year the seasonal flu will hospitalize 114,000 people and cause about 36,000 fatalities in the U.S.

Pandemic planning
Planning is essential, and must be done well in advance. Sit down with a few key people and play out a scenario, such as an avian flu epidemic. What challenges will your organization face? How will you maintain staffing? What must be done at the center to accommodate staff? The best advice I can offer is planning to do more with less.

Transportation
Since public transportation might be shut down—or endanger your staff’s health through exposure—consider creating solutions like using a shuttle bus or unused SWAT van to transport staff to work.

Staffing
It is estimated that during a serious pandemic, 30 percent of your staff will be too
ill to report for work and at its peak, absenteeism rates could be closer to 40 percent. Other local fire and medical agencies might request transfer of dispatch staff with EMT, paramedic, and LPN licenses to assisting with hands-on patient care.

Consider the best use of your resources. While you may not want someone from accounting or warrants answering your 9-1-1 lines, they may be able to answer and redirect administration or business office phone calls.

A social distancing (limiting exposure) aspect helps keep people healthy, so you might want to ask in advance which of your staff members would accept longer shifts or other alternatives. For example, your comm. center might normally have two dispatchers on duty per shift. Under the contingency 24-hour plan, the two dispatchers take turns resting while both are available if things get too busy. If you have three dispatchers on duty, rotate one out for a rest period every six or eight hours.

Keeping your dispatch staff on-site 24/7 requires some logistical considerations. Staff in close quarters should wear a mask and gloves for protection. Food preparation and storage areas need to be available, and food should be stocked in advance. Gloves and disinfecting wipes should be on hand to decontaminate desk surfaces, radio microphones, telephones, keyboards, doorknobs, and any other commonly used surfaces.

Recovery

As the pandemic subsides and daily life slowly returns to normal, several other issues will emerge, such as additional staffing, overtime costs, and expenses related to food, transportation, and other logistics. To help control costs, your comm. center might consider purchasing non-perishable and non-time sensitive supplies ahead of time.

Post-traumatic stress

A 24-hour employee assistance line and access to some kind of peer and professional counseling is important. Your staff may have been touched by the death of patients, friends, and family members during a pandemic crisis.

Protocol 36

The IAED™ initially released Protocol 36: Pandemic/Epidemic/Outbreak (Surveillance or Triage) in 2009 in the event of an official pandemic flu outbreak; it was updated in 2010 in MPDS® v12.1 to reflect the expanded use of this protocol in earlier non-triage situations.

SURVEILLANCE ACTIVITY IS DONE IN ADVANCE OF AN OFFICIALLY ANNOUNCED OUTBREAK AND PRIOR TO AN OFFICIALLY DECLARED PANDEMIC.

Since Protocol 36 is not used during normal (non-outbreak) operations, it requires advanced planning and setup, with “just-in-time” training and orientation for EMDs, as well as EMS administrators and responders. Most importantly, surveillance activity is done in advance of an officially announced outbreak and prior to an officially declared pandemic; emergency comm. centers may be engaged in public health authority requested or required surveillance activities to identify patterns, trends, and geographical clusters of symptoms.

Surveillance (done prior to Protocol 36 implementation)

ProQA® contains a flu surveillance tool: the Severe Respiratory Infection (Swine Flu) Symptoms screen. Click on the “Severe Respiratory Infection (Swine Flu) Symptoms” (V) button on the ProQA toolbar to access it.

The screen—designed and activated by the IAED CBRN (Chemical, Biological, Radiological, Nuclear) Committee—provides a set of flu symptoms that the EMD can record for patients suspected of having the flu. Since specific symptoms may change as a particular outbreak spreads and more information is known about the disease, the EMD may rapidly update this screen incorporating data from public health organizations.

Surveillance is done in advance of an officially announced outbreak and does not call for the use of Protocol 36 at this point. Protocol 36 is activated only when the proper public health and governmental authorities announce a pandemic or an epidemic outbreak. This includes Level 0 (surveillance only), which can be implemented only when local concern of flu arrives. Level 0 allows for assessment of the extent of flu case penetration in real time and lets the EMDs become familiar with the protocol’s usage before patient triage is actually implemented.

Furthermore, each agency must develop a pre-approved response for every Protocol 36 Determinant Code, including all suffixes, based on the current pandemic level.

Implementing Protocol 36 for a declared pandemic/epidemic

Protocol 36 will identify potentially selected patients and assign a Determinant Code that accounts for both the patient condition and the degree of system depletion during an escalating crisis. ALPHA codes may be used to define non-EMS response and referrals only in Levels 1, 2, and 3 and only upon authorization of local medical control.

Level 1 (low triage) should be considered for ALPHA cases only; this maintains clinical response integrity while keeping triage risk low because patients with priority symptoms or conditions are not affected. The priority symptoms as defined in the protocol are:

- Abnormal breathing
- Chest pain/discomfort (any)
- Decreased level of consciousness
- SERIOUS hemorrhage

Level 2 (moderate triage) should be considered reduced response for CHARLIE cases and used to further lower or eliminate EMS responses for cases where priority symptoms or HIGH RISK conditions are identified.

Level 3 (high triage) should be considered referral of some CHARLIE cases and reduced response for DELTA cases and used to further lower or eliminate EMS responses for cases that contain priority symptoms (CHARLIE level) and reduce response in the DELTA level where normally the highest acuity patients occur.

Selection of Protocol 36

Rule 1 means: During an outbreak, Protocol 36 will sort out suspected flu patients from those who have other non-flu related conditions, such as asthma. Therefore, after a pandemic/epidemic is officially announced, the EMD must always select Protocol 36 when any of the complaints listed in Rule 1 are present. Cases not exhibiting any flu symptoms will be shunted to the correct Chief Complaint through the MPDS interrogation process and assigned a Determinant
A flu pandemic is estimated to result in a 40 percent absentee rate from work in the U.S.

Pandemic flu has occurred four times in the last 100 years.

Seasonal flu affects up to 10 percent of the population.

In a typical year, more than 200,000 Americans are hospitalized for flu-related complications.

More than 12,000 Americans died during the H1N1 (or “swine flu”) pandemic that occurred from 2009 to 2010.

Code consistent with the patient's condition.

Rule 2 means: A patient with the flu will almost always have at least one of the flu symptoms defined on this protocol. During a declared outbreak, one flu symptom present is an indicator the patient is a true flu case. With two flu symptoms present, the EMD may reasonably conclude that the patient has the flu; hence, there is no need to continue the remainder of the specific flu questions. The EMD will move directly to Key Question 11 once two flu symptoms have been identified.

Rule 3 means: Some patients with a Chief Complaint that is a potential flu symptom (due to their description of the complaint) will not have the flu. Instead, they may have other serious underlying conditions, such as asthma. When no additional flu symptoms are identified in the Key Questions, the EMD must shunt to the correct Chief Complaint Protocol using the original complaint description given so that these conditions can be properly prioritized and treated.

Rule 4 means: Sometimes patients will take anti-inflammatory drugs such as aspirin to reduce flu symptoms. If the patient reports a recent fever that was relieved by such a drug, it is still important to record the existence of the fever (at the time the drug was taken). Always answer the fever question “yes” when the caller reports a recent fever relieved by medication.

Rule 5 means: If the complaint is Chest Pain (> 35), and additional symptoms of sweats, vomiting, or a history of heart attack or angina are later identified, go to Protocol 10 and complete the call. While sweats and vomiting are symptoms of flu, they may also be present in heart attacks.

Rule 6 directs the EMD NOT to use Protocol 36 for any patient 65 years old or older. A specific Determinant Code (36-C-5) is used for the HIGH RISK category with patient conditions known to have shown significantly poorer outcomes—diabetes, sickle cell disease, neurological diseases (affecting swallowing or breathing), pregnancy, or age 12 or younger.

The vertical ordering of Determinant Codes within any specific Determinant Level does not necessarily represent ascending or descending patient acuity; they are arranged to make it easier for EMDs to visualize and select the specific patient descriptions in Protocol 36, especially in the CHARLIE level.

Suffix codes

Suffix codes reflect the degree of outbreak severity (and subsequent resource depletion) your system is experiencing at any given time.

There are three suffixes used for determinant coding: A, B, and C.

The suffixes correspond with the announced numeric severity level of the pandemic outbreak in your system and region. The assigned severity level will depend on several factors, including the lethality of the flu virus, the increase in EMS calls, and the degree of EMS responder workforce depletion.

ProQA will automatically assign the correct suffix (severity level) to the case once the EMD enters the current severity level during the Key Questions. The Key Question that prompts the locally designated flu level will be displayed as a blue operator question in ProQA.

The current severity level suffix is always attached to a Determinant Code so that a unique response can be assigned for each severity level within that code. For example, the coding of 36-C-1C could receive a different (and even more reduced) response than a code of 36-C-1B to reflect the current, increasing degree of system depletion and, therefore, diminishing the actual level of response.

Conclusion

Protocol 36 can only work effectively with precise and complete information; 100 percent compliance to Case Entry and Key Questions is imperative in arriving at the correct Determinant Code and response. Cutting corners to save time actually makes the process less effective and may place certain patients at increased risk.

Sources

NEW YORK, NY (September 26, 2014) - The International Academies of Emergency Dispatch (IAED) has launched the 2014 Academy Conference and Expo, October 20-23, 2014 at the Javits Convention Center in New York City. The 2014 Academy Conference and Expo offers emergency dispatchers, public safety organizations and commercial vendors an opportunity to network, collaborate and gain insight on the latest trends impacting the field of emergency dispatch.

The 2014 Academy Conference and Expo is co-located with the 2014 IAED Home of the Badge® Conference & Expo administered by the IAED, and the 2014 National Highway Traffic Safety Administration (NHTSA) National Center for Automotive Safety (NCAS) annual conference and expo.

The 2014 Academy Conference and Expo features more than 120 sessions and nearly 200 speakers, providing attendees with the opportunity to learn about the industry’s most pressing issues, industry leaders, and best practices.


Additional details about the 2014 Academy Conference and Expo can be found at www.2014academyconference.org.

To receive credit please answer the following quiz.

### CDE Quiz Mail-In Answer Sheet

TO BE CONSIDERED FOR CDE CREDIT, YOU MUST MARK EACH RESPONSE ON THIS CDE QUIZ ON THE ANSWER SHEET PROVIDED AND MAIL IT IN WITH YOUR PROCESSING FEE TO RECEIVE CREDIT. A PASSING SCORE IS WORTH 1.0 CDE UNIT TOWARD THE INCREASED CERTIFICATION FEES ONCE THE ACADEMY'S CDE REQUIREMENTS HAVE BEEN MET.

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Daytime Phone ( ) _______________________
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☐ Public Safety Dispatcher (check all that apply)
☐ Paramedic/EMT/Firefighter
☐ Comm. Center Supervisor/Manager
☐ Training/QI Coordinator
☐ Instructor
☐ Comm. Center Director/Chief
☐ Medical Director
☐ Commercial Vendor/Consultant
☐ Other

**ANSWER SHEET**

September/October 2014 Journal “Outbreak” Please mark your answers in the appropriate box below.

1. ☐ A ☐ B  
2. ☐ A ☐ B ☐ C ☐ D  
3. ☐ A ☐ B ☐ C ☐ D  
4. ☐ A ☐ B  
5. ☐ A ☐ B ☐ C ☐ D  
6. ☐ A ☐ B ☐ C ☐ D  
7. ☐ A ☐ B ☐ C ☐ D  
8. ☐ A ☐ B ☐ C ☐ D  
9. ☐ A ☐ B ☐ C ☐ D  
10. ☐ A ☐ B ☐ C ☐ D

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We’ve added a new and exciting way to earn Universal CDE credit.

Reading research papers can help you keep abreast of the cutting-edge information in emergency dispatching. This month, you can earn CDE credit as well! Read the papers in the Annals of Emergency Dispatch (attached to the back of The Journal) and answer the questions to the right, or complete the quiz on our website at aedrjournal.org to earn an extra one hour of CDE credit. The answers are spread throughout the various articles, so you will need to at least skim each article to complete the quiz. The quiz covers all disciplines, and you may request CDE credit in any single discipline for passing the quiz.
YOU MUST BE CERTIFIED TO TAKE THIS QUIZ.

AEDR CDE-Quiz ★ ★ ★

Answers to the CDE quiz are found in this issue of Annals, which begins at the end of The Journal. Take this quiz for 1.0 CDE unit.

1. Call prioritization time is:
   a. the time elapsed between picking up the call and selection of the dispatch code.
   b. the time elapsed between picking up the call and responder arrival on scene.
   c. the time elapsed between opening ProQA and selection of the dispatch code.
   d. the time elapsed between opening ProQA and responder arrival on scene.

2. Females are users of the ECNS™ in higher numbers than males.
   a. true
   b. false

3. In the Addison’s disease case study, the caller asked whether he should administer the patient’s hydrocortisone medication. The EMD:
   a. correctly tells the patient to administer the medication.
   b. incorrectly tells the patient to administer the medication.
   c. correctly tells the patient to do what the doctor has advised.
   d. incorrectly tells the patient to do what the doctor has advised.

4. Some ways to reduce or prevent potentially-dangerous convergence behavior at emergency incident sites include all of the following except:
   a. waiting to see what kinds of convergence behaviors occur following an incident.
   b. providing suggested actions for citizens who want to help.
   c. establishing a staging area for family members, friends, and others.
   d. having an organized, coordinated plan in place.

5. In the Fall Protocol case study, the caller was asked what caused the patient’s fall, and he replied, “Don’t really know.” The EMD then moved to the next Key Question. This was:
   a. incorrect because the EMD should have repeated the question.
   b. incorrect because the EMD should have rephrased or clarified.
   c. correct because the caller clearly didn’t know the answer.
   d. correct because the caller was a third party.

6. Immersion in hot water is one type of appropriate self-care therapy for stingray stings.
   a. true
   b. false

7. In the EMD Resource Paper, Position Statement 3 notes, “The provision of Pre-Arrival Instructions should be a mandatory function of every EMD in a center that interrogates callers and prioritizes medical calls.” According to the supporting information for that statement, the first successful provision of Pre-Arrival Instructions was for callers attending which of the following types of cases?
   a. Pregnancy (Childbirth instructions)
   b. Choking (Heimlich instructions)
   c. Trauma (Control Bleeding instructions)
   d. Drowning (Cardiopulmonary Arrest/CPR Instructions)

8. Overall, what percentage of PPDS calls studied had call prioritization times of less than 120 seconds?
   a. 67.5%
   b. 72.7%
   c. 86%
   d. 93.3%

9. After Alarms, the overall most commonly-used FPDS® Chief Complaint Protocol was which of the following?
   a. 53 (Citizen Assist/Service Call)
   b. 67 (Outside Fire)
   c. 69 (Structure Fire)
   d. 71 (Vehicle Fire)

10. As described in the paper “The Distribution of 911 Triaged Call Incident Types within the Emergency Communication Nurse System,” calls are sent by the EMD to be handled by the Emergency Communication Nurse System. Overall, on which of the following MPDS® Chief Complaint Protocols was most commonly used for calls then sent to the ECNS?
    a. 1 (Abdominal Pain)
    b. 5 (Back Pain)
    c. 17 (Falls)
    d. 26 (Sick Person)

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YourSpace

Something in the Water?
Dispatchers use PAIs to deliver four babies in five months

Left to right: Amber Church, Allie Foley, Alaina Anderson (supervisor), Jenna Blaszak, and Myra Lanthier.
“It’s about my team; it’s about my dispatchers,” Alaina Anderson repeats several times during the phone conversation. “Whatever you do, don’t make this about me. I’m just here to keep everything running smoothly and make sure the equipment works.”

Anderson is dispatch supervisor at the 9-1-1 comm. center at the Palmer Police Department in Palmer, Alaska. Palmer serves as the Public Safety Answering Point (PSAP) for roughly 25,250 square miles in the area known as Matanuska Susitna Borough (referred to as the Mat-Su Borough).

The center’s 11 dispatchers—plus Anderson and two on-call dispatchers—provide over-the-phone assistance and send response for all fire/EMS calls for the borough in addition to Palmer Police within the city’s limits. A population of 95,192 (in 2013) translates into about four people living in every one square mile.

Cellphone reception is not a guarantee and sometimes involves going to a home that has a cellphone booster or a satellite phone system. Sometimes, it takes more than a single point of departure. For example, a CPR call was recently relayed through a chain of bystanders, telephones, and two-way radios.

The vast stretches between hospital/medical clinic and non-city residents might explain the recent explosion in the number of babies delivered without the direct assistance of anyone outside the homes.

And having the Medical Priority Dispatch System” (MPDS’) Pre-Arrival Instructions (Protocol F: Childbirth – Delivery) was particularly advantageous for the four births occurring over five months (from November 2013 to April 2014).

The first in the string of births happened on Nov. 30, 2013. EMD Jeri Wallin was on the line for 11 minutes providing childbirth PAIs and reassurance to a woman whose daughter was in labor. When paramedics arrived, there were three generations at the home to greet them.

The third delivery on Jan. 29, 2014, was the most complicated of the four, requiring instructions for a footling breech delivery. Wallin wished the father luck and the phone call ended. Two minutes and 20 seconds later, a message from the medics came over the radio: It’s a baby. Mom and the healthy baby were en route to the hospital.

EMD Sarah Beranek immediately went to Panel 20 after Case Entry in response to the male caller reporting, “My wife’s in labor, and I see a foot.”

Nine minutes into the delivery, the baby’s lower torso was out but the arms, shoulders, and head were not. It took another excruciating six minutes before the baby girl was fully delivered. She was not breathing and dad was on his hands and knees performing CPR when the medics arrived and took over, performing CPR for more than 10 minutes before picking up signs of pulse and respirations. Paramedics transported the baby to the hospital where she was then transferred to the Neonatal Intensive Care Unit. Baby Pearl went home to mom and dad in mid-March.

EMD Allie Foley was on the line for 12 minutes on April 9 providing childbirth PAIs and reassurance to a woman whose daughter was in labor. When paramedics arrived, there were three generations at the home to greet them.

Foley compared the experience to a roller coaster.

“It was nerve-wracking, scary, and exciting all at the same time,” she said. “I thought my voice was shaky but when she went back to listen, I sounded just fine.”

The birth of four babies broke an eight-year drought since the last dispatch delivery in 2006, and each of the four EMDs who handled the calls qualified, according to Anderson’s “rule,” for stork pins.

“I determined the criteria was going to be Panel 5 (Start Delivery) of the Childbirth DLS Link,” she said. “Reading this panel, the baby is beginning to deliver and the dispatcher is right there with the caller experiencing childbirth.”

But communication center staff members weren’t the only ones participating in the celebration. Anderson’s “Labor and Delivery” sign posted over the dispatch entry doors in May brought in a truckload of diaper donations that Heart Reach—a local charitable baby diaper bank—picked up after the 10-day drive.

—Alaina Anderson

“IT WAS SCARY AT FIRST FOR AMBER. HER FINGERS WERE SHAKING WHILE SHE WAS TYPING BUT AFTER SHE KNEW EVERYTHING WAS GOING TO BE OK, SHE GOT A LITTLE CHOKED UP.”
Cool Under Pressure
Dispatcher assists police officer with GSW to the head

On April 29, 2013, Staci Uhl, a lead operator with the Woodbury (Iowa) County Communications Center, heard a radio transmission that no emergency dispatcher ever wants to get—shots fired, officer down.

On that day, Sioux City police officer Kevin McCormick attempted to pull over a vehicle for a traffic stop, but the driver had refused and a short chase ensued. Minutes later, the driver pulled over, and when McCormick exited his vehicle, he was immediately struck in the head by a round fired by a rifle-wielding individual who had jumped out of the suspect’s vehicle.

“Shots fires, black male, he’s in the passenger seat, I think I’ve been shot in the @#$% head,” McCormick said in a transcription of the radio call. “Get me uh, I’m out here behind the Plaza Latina, yeah, I’m bleeding.”

Despite feeling alarmed, Uhl continued to speak with McCormick in a calm, even tone.

“I was shocked,” said Uhl, a 23-year veteran dispatcher with Woodbury County 911. “You can’t print what I said (to myself). But you can’t lock up; you’ve still got your job to do. You just take a deep breath and go.”

Ratcheting up the stress and pressure that Uhl faced at that moment was the fact that an active shooter drill was then underway at the comm. center in cooperation with the local school district and law enforcement. Simulated 9-1-1 calls were simultaneously ringing in to calltakers from a nearby middle school participating in the drill.

But within seconds of the call, Uhl was sending an ambulance to McCormick, keeping track of every police officer that was self-dispatching to the scene, updating law enforcement about events at the scene, and fielding a storm of questions from colleagues in the center.

“Every officer within earshot of Sioux City was headed that way,” said Wendi Hess, the comm. center’s operations supervisor.

She said 9-1-1 telecommunicators train and go through numerous scenarios and drills to prepare them for the most stressful situations.

“Staci was calm and she kept it together,” Hess said. “She performed her job in textbook form and way beyond what I would ever expect or hope for.”

Despite a gunshot wound to the head, McCormick, miraculously, remained coherent, stayed in radio contact with Uhl, and provided a description of the suspect vehicle and its direction of travel departing the scene. He was transported to Mercy Medical Center within 15 minutes. To the collective sigh of everyone, McCormick’s injury required only six stitches to the forehead; within days he was back on the job.

With the violent suspect, Jamal Dean, still at large following the shooting, Hess said the comm. center and the local law enforcement community remained vigilant for days as an intensive manhunt for the fugitive ensued and touched off a nationwide search. The shooting of McCormick was the first involving a police officer in Sioux City since 1982, according to the Sioux City Journal.

Five days later, Dean was apprehended without incident in Riveria, Texas. In August, he pleaded guilty to attempted murder and was sentenced to 25 years in prison.

As a result of Uhl’s commendable handling of the shooting of McCormick and her excellent performance over her lengthy career as a Woodbury County 911 lead operator, on April 9, 2014, she was named Iowa’s 2014 Telecommunicator of the Year by the Association of Public Safety Communications Officials.

“Thankfully, veteran dispatcher Staci Uhl was my lifeline that day,” McCormick stated in the nomination materials. “Staci and I worked together in the seconds and minutes surrounding the incident and both of us were able to remain calm and move forward in a necessary manner.”

Later, at a debriefing for police officers and dispatchers following the shooting, McCormick and Uhl were able to meet and talk about the near tragedy.

“Staci exhibited her usual kindness and professionalism that has come to be expected and deserves exceptional recognition,” McCormick stated in his nomination letter.

Uhl said few words were needed.

“(McCormick) came up and gave everyone from the comm. center a hug,” she said. As for the accolade, Uhl said she is grateful whenever dispatchers get recognized for their considerable role in the 9-1-1 process but shrugs off any personal heroics.

“I take it humbly,” Uhl said. “I think of it more as just doing what we are trained to do.”

A silver lining as a result of the incident was that it brought the Woodbury County comm. center and local law enforcement closer together and has given both a better understanding and appreciation of one another.

“I just hope it shows their trust in us,” Uhl said.

The Woodbury County comm. center is a consolidated center that serves a population of about 100,000 in the county and also two agencies across the border in South Dakota. It annually receives about 36,000 9-1-1 calls and about 200,000 calls for service.
Looking Ahead

In the last issue of 2014, readers will take a virtual tour of the 310,000-acre Grand Teton National Park in northwestern Wyoming led by *Journal* reporter Michael Rigert. The communication center is responsible for handling radio traffic on six different channels, answering multiple phone lines, monitoring activity of all patrol units, communicating with other communication centers around the state, entering and confirming warrants, and other tasks in a park ranked No. 7 of the top 10 most visited national parks in the United States. The upcoming issue will also include regularly featured articles, such as continuing dispatch education articles (to earn qualifying credits toward recertification), industry news, stories about dispatchers in action, FAQs, and columns from peers in the profession. We are eager to introduce our newest columnist, Sheri Stigler, training and operations manager at the Waukesha County (Wis.) Communications Center. See you next time!
If you believe the folk tales, it was Mrs. O'Leary's cow that kicked over the lamp on the night of Oct. 8, 1871, that started one of the most well-known fires in American history, the Great Chicago Fire.¹

*Late one night, when we were all in bed, Mrs. O'Leary lit a lantern in the shed. Her cow kicked it over, then winked her eye and said, “There’ll be a hot time in the old town tonight!”* —popular song lyric, author unknown

But historians and journalists over the years have steered away from the myth about Catherine O'Leary's cow and instead leaned more toward other theories—some more plausible than others—that might explain what started the devastating conflagration. The fire leveled the entire business district and one-third of the booming Midwestern megalopolis that in 1871 had a population of about 300,000. The fire killed about 300, destroyed 3.3 miles of the city, and left more than 100,000 homeless, marking it as one of the worst disasters of 19th century America.

In 1893, Michael Ahern, the Chicago Republican reporter who wrote the O'Leary account, admitted that he had fabricated the story.² O'Leary claimed she and her husband were already in bed when the fire started; she was later exonerated of all wrongdoing.³ Other possible candidates for the fire's ignition were two boys lighting cigarettes near O'Leary's barn, a group of men secretly gambling in the barn, and a particularly heavy meteor shower.

One aspect of the story that experts agree on was that the fire started in or near O'Leary's barn at approximately 9 p.m. that night and burned well into the next day.

In 1871, the Chicago Fire Department had 185 firefighters and 17 horse-drawn steam engines to protect the entire city. Though the department's initial response to the fire was speedy, a fatal error took place.⁴ The watchman, Matthias Schaffer, directed firefighters to the wrong location, allowing a manageable fire to grow out of control.

Firefighters had hoped that the south branch of the Chicago River would act as a natural firebreak but the combination of incredibly high temperatures and unusually strong winds out of the southwest that day enabled the fire, in the form of embers and burning debris, to jump the gap. After jumping the river a second time, the fire progressed north where it grazed the roof of the city's waterworks, and the building burst into flames. At that point, the city's water mains ceased to function, leaving firefighters with nothing to extinguish the blaze.
Other circumstances contributed to the unprecedented burning, including drought and the building materials of the era. The city had only totaled one inch of rain since July 4 of that year (10 inches is the average), leaving it a virtual tinderbox as more than two-thirds of Chicago’s structures of the period were constructed of wood.

Oddly enough, it wasn't the worst fire that day in the U.S. or even the Midwest. Tragically, a fire in the lumber town of Peshtigo—due north about 250 miles in rural Wisconsin—was one of three other major fires on Oct. 8 along the shores of Lake Michigan. An obscure footnote in history compared to the Great Chicago Fire, the Peshtigo Fire was much more lethal, killing an estimated 1,200 to 2,500 residents and burning roughly 1.5 million acres of the area.

In 1925, President Calvin Coolidge proclaimed the week of Oct. 9 as the nation’s first Fire Prevention Week in commemoration of the Great Chicago Fire. Since then, National Fire Prevention Week continues to be observed every year by the National Fire Protection Association (NFPA), including Oct. 5–11 of this year with the theme “Smoke Alarms Save Lives: Test Yours Every Month.”

Perhaps the silver, flame-retardant lining of the Great Chicago Fire was the progress it prompted on several fronts. Americans reflected on the rapid, sky-is-the-limit expansion of their major cities. Some in the religious community also said the disaster was a clarion call to live by simpler, more old-fashioned means rather than in highly populated, captivating metropolises. Many, including famed Chicago architect Frederick Law Olmstead, said the building techniques needed to be improved in response to the fire that preyed on the city’s appetite for splendor.

“Chicago had a weakness for ‘big things,’ and liked to think that it was outbuilding New York,” he said. “It did a great deal of commercial advertising in its house-tops. The faults of construction as well as of art in its great showy buildings must have been numerous. Their walls were thin, and were overweighted with gross and coarse misornamentation.”

Olmstead was among those that argued that brick structures and more professional municipal fire and police services could have mitigated much of the calamity’s destruction. Urged forward by insurance executives and fire prevention reformers, the city established new high fire standards and assembled one of the country’s leading fire departments. Investors leapt at the opportunity to play a role in rebuilding Chicago to its previous majesty.

Most telling of the city’s phoenix-like resurgence was the fact that a mere 22 years after the fire, Chicago played host to the grandiose World’s Fair Columbian Exposition that celebrated the 400th anniversary of Christopher Columbus’ discovery of the New World. The city hosted more than 21 million global visitors during the event.

One of the few structures that survived the fire is the landmark, castle-like Chicago Water Tower that can still be seen today next to the modern downtown shopping mall, Water Tower Place.

And though O’Leary’s barn is long gone, today on its exact site sits the Chicago Fire Academy, and just outside it, a bronze sculpture of leaping flames and an inscription commemorating the terrible event that woke up America to the importance of fire prevention.

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