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RESEARCH WORKSHOP IN LAS VEGAS?

No really.

The IAED™, in collaboration with the UCLA Prehospital Care Research Forum and FirstWatch, will be conducting a two-day Research Workshop at NAVIGATOR 2018.

Learn how to generate a question, gather and analyze data, and publish research. This workshop is open to anyone interested in dispatch research.

“I discovered that I would actually be conducting research on an idea of my own from start to finish ... Meeting everyone and developing the research process was more than I had anticipated and I’m very glad I said ‘Yes.’”

-Dawn Faudere

“You can expect to learn a systematic approach to research in a judgment free arena, the tools and experience needed to complete it, and a support system that is unparalleled.”

-Rich Lindfors

Questions? Email Isabel Gardett at isabel.gardett@emergencydispatch.org or David Page at dpage@emsed.net.
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The Academy’s recent course for instructors provides a timely reinforcement of instructor troops for a course expected to explode with the release of ETC version 4.0.
Ron is from Cambridge, Massachusetts, USA, and has been a fire dispatcher for over 30 years. He is an active regional EFD instructor and serves on the IAED™ Fire Council of Standards. Ron has taught more than 200 EFD courses.

Kimberly is the communication manager at the San Bernardino County Sheriff’s Department (California, USA). She is a California POST master instructor and holds a Master of Arts in Public Administration and a Master of Science in Justice Studies. She is the owner of Kim Turner, LLC, a corporation that provides 911 training and consulting.

Mary is deputy director of MACECOM, the 911 center for Mason County, Washington, USA. She previously worked with the Washington State Patrol for 10-plus years as a dispatcher, chief training officer, supervisor, and training program supervisor. She is certified by the International Association of Chiefs of Police as a Leadership in Police Organizations instructor.

Art is a software instructor and IAED-certified EMD-Q® instructor for Priority Dispatch Corp.™ He has been a fire and EMS dispatcher for 20 years and is a former air medical dispatcher. He currently works at Union County Regional Communications in Westfield, New Jersey, USA.

Keith is president of the RedFlash Group, a national consulting firm that specializes in education, outreach, and communications for public safety and health care. In 1979 Keith co-founded JEMS, the Journal of Emergency Medical Services, with the late Jim Page. Keith serves as the chair of the Liaison Committee for the IAED.
I'm going to be honest, I'm not a fan of Utah winters. I've lived here my whole life, and every winter is a test of my endurance. To those of you who live in even colder climes, I salute you. I hope your nose doesn't get frozen off. To those in the Southern Hemisphere who are experiencing summer right now, I salute you, too. I hope your nose doesn't get melted off.

I'm not a fan of summer either. Come to think of it, I'm not a fan of weather in general. I'm ready to live in one of those climate-controlled bubbles you see in science fiction.

I am, however, a fan of this issue of the Journal. We've got content that will help you up your dispatch game in Best Practices and articles that will remind you why you got into dispatch in the first place in Your Space.

The FAQ, written as always by Brett Patterson, deals with the intersection of seizures and sudden cardiac arrests. There's a Center Piece about Vail Public Safety Communications Center in Colorado, USA, and how they've adjusted to keep up with the needs of their community. (As a ski town, they probably appreciate the snow more than I do.) We also celebrate the countrywide accreditation status of both New Zealand and Ireland in ACE Achievers.

Are you interested in doing research? Maybe you want to use it to increase efficiency at your center, or maybe you're just curious about how often people call in with a specific Chief Complaint. Either way, our feature about humanizing data will make research seem less scary and more accessible.

To help keep you On Track, we have a Fire CDE that deals with all things related to train protocols and a Medical CDE that will help you with the when, the how, and the why of using the “BREATHING VERIFICATION Diagnostic” in MPDS® version 13.1). Dr. Jeff Clawson's Blast From the Past takes on the myth that keeping someone awake will help you with the when, the how, and the why of using the Agonal Breathing Diagnostic Tool (which will be called “Breathing Verification Diagnostic” in MPDS® version 13.1).

Finally, our Case Exit features a TV dispatcher whose other articles await, put on your boots (or your flip-flops) and come on in!
As a dispatcher, I bet there have been times where you wished you could have seen the outcome of the call—what happened at the scene after you disconnected. Maybe you think that most calls to the non-emergency line really don’t matter in the scheme of things. Well, let me share my experience to remind you how important you are to those calling in for help.

I had just pulled into my complex one late summer evening when something stood out to me. Something seemed off about a particular person walking through the parking lot. I pulled over and watched where he went. He stepped into one of the shared garages near mine. As a few minutes passed, he didn’t come back out, and yet I didn’t think he lived in that building—he definitely didn’t look familiar to me. I decided a phone call to the non-emergency number would alleviate my growing concern.

It took me a minute to find the number since I had recently lost all of my saved contacts when my old phone had died. I soon called while keeping an eye on the garage he had entered, which was hard to see into because it was mostly dark—the lights hadn’t kicked on yet, as sunset was still approaching.

When the dispatcher came on the line I told her I had noticed a suspicious person in my complex. To my best recollection, I gave her a description and told her where I had last seen him. She told me to call back if something changed.

I decided that I really wanted to get home and proceeded to pull into my shared garage hesitantly. I parked and looked around. I didn’t see anyone, so I decided to climb up the stairs leading out of the garage. I then noticed the person I had been watching leave the garage I had watched him walk into and head toward mine—taking a different path than the one I was on. I went back down in my garage and stood there for a minute, listening for movement. I turned and looked back up the stairs I had just come back down and was startled to see a flashlight shining in my eyes. A police officer stood at the top of the stairs asking if I had noticed a guy in the garage.

Immediately after asking the question, she saw him near where I had been standing and called out to him. I took my exit, not wanting to be caught up in the aftermath. A while later, we learned more of what had happened. Turns out the police officer I saw had been quite close to my complex when I had called the non-emergency number. I was amazed she had arrived on the scene so quickly. The suspicious person was believed to have been looking in car windows for items to steal. He was startled out of the garage—presumably when the police arrived on scene. He had even dropped his own cellphone in the first garage he had gone into.

I was grateful the police arrived when they did, and I know that’s because the dispatcher took the information I gave her and passed it on to the responders quickly and efficiently.

If you ever wonder if what you do makes a difference, I can tell you firsthand that it does. I don’t know what might have happened that night—but I know what didn’t.
Dear Kasey,

I have referred the question to Brian Dale, the Academy’s Associate Director of Medical Control and Quality Processes, and former Chief of the Salt Lake City Fire Department. ...Doc

Dear Kasey,

I have been asked to respond to your inquiries about Protocol 7 and pediatric patients. Regarding your email question, we do get periodic questions about this, particularly regarding burns to the face. The background on the latest version is that we reached out to a number of pediatric trauma/burn centers including Primary Children’s and the U of U Trauma Center here in SLC (Utah, USA). We were unable to find any quantifiable data to suggest a non-inhalation burn to the face—in adult or peds—altered the patient’s outcome or prehospital mortality. We do agree that burns to areas of the body such as the face, fingers, toes, head, and other areas do necessitate transport to a burn center for specific management, but the data does not support sending ALS units simply due to the area burned. Obviously, when there are inhalation burns, this alters the patient acuity and thereby the determinant coding within the MPDS (Medical Priority Dispatch System”). We know that it is very difficult to manage pain in burn patients, as they are bad candidates for sedation or paralytics, so this usually rules out upgrading the response for pain management. In addition, burns of this size do not necessitate fluid replacement unless the patient is already fluid compromised for some reason.

As a 33-year paramedic, I know the stress that a burned child places on the responders, but the IAED tries to focus on the clinical acuity of the patient, especially on known outcome data, and what prehospital interventions did to alter or impact that outcome. We believe the current data supports the current coding matrix found in the MPDS relating to size and location of the insult. We do know that explosions and burns to the face that result in inhalation injuries create much sicker patients, but with scalding burns as described in your email, this risk is extremely low.

If you have access to any data or research that contradicts our position on burn patients, please send us a link or the research itself so that we can review the updated information or treatment protocols. It is important to remember that burns such as this can be life-altering and can lead to significant scarring and a protracted recovery period, but there is little that we know of that a paramedic can do to alter this unless there is airway compromise, real or suspected, or significant volume deficiencies.

I hope this answers some of your questions, and I would be willing to have a conference call if you think that would assist in improving the answers I have given.

Regards,
Brian Dale
Associate Director of Medical Control and Quality Processes, IAED 

Dr. Clawson:

We were hoping you could help us out with some questions and issues we are experiencing with MPDS’ Protocol 7: Burns (Scalds)/Explosion (Blast).

Our agency has recently experienced a number of calls involving pediatric burn patients where the body area was less than 18%, but the injuries were quite significant. For example, one of the most recent calls was reported as a pediatric scald to the face, which coded to a 7-A-1. However, it was also reported that the skin was peeling from her face. The fire department arrived first on scene, upgraded the ambulance response, and the patient was flown to the nearest burn center. Our EMS agency and other cooperating agencies are looking for a way to upgrade any pediatric burn patient. Protocol 7 does not assign determinants based on the age or severity of the burn (3rd degree, 2nd degree, 1st degree). The only determinant that we identified as relating to severity is the Significant Facial Burns (7-C-4), but by definition this would not apply to a patient who was scalded.

Currently, we prioritize an ALPHA as a code 2 response, and a BLS crew could be sent. EMS has assigned different response priorities to each determinant in the protocols. We are wondering if anyone else has experienced this issue. Is there a good way to upgrade a pediatric response from initial dispatch without lumping in all 7-A-1 patients? Or can you provide us with the reasoning behind Protocol 7 and why it does not address burns by age or severity so we could present this to our cooperating agencies? We have researched the “Principles of EMD,” reached out to other agencies, and tried to solve the problem internally, but we are at a loss. Any assistance would be appreciated.

Thank you so much,
Kasey S. Young
EMD Quality Assurance Coordinator
Alameda County Regional Emergency Communications Center
Livermore, California, USA
DETERMINANT CODES
Part 1: Explore the possibilities

Art Braunschweiger

In my travels for Priority Dispatch®, “We don’t use Determinant Codes” is something I’ve heard more than once. This is especially true in areas with single-tier EMS systems, where every ambulance is staffed with ALS (advanced life support) providers. If that’s your world, read on—you might not be taking advantage of some good information.

Among other things, ProQA® acts as a resource calculator. The appropriate resources are dispatched based on the Key Question answers you select. There’s a little more to it than that, but it’s essentially what happens. The dispatcher doesn’t need to memorize the response criteria for every conceivable situation.

A well-thought-out agency policy could allow a dispatcher to send the only available transport unit to the patient with the greatest clinical need.

In version 13.0 of the Medical Priority Dispatch System™ (MPDS®) there are 1,828 possible Determinant Codes. Each can be associated with a specific response assignment: the resources that an agency deems appropriate and—if an agency chooses—whether it should respond “HOT” (lights-and-siren) or “COLD” (no lights-and-siren). Typically, ALPHA, BRAVO, and OMEGA-level codes are associated with calls requiring basic life support (BLS) and CHARLIE, DELTA, and ECHO-level codes with advanced life support. OMEGA-level codes reflect patient conditions that may not require an EMS response. Accredited Centers of Excellence (ACE) have the option of utilizing a nurse triage system to discuss non-EMS options with the patient before sending an ambulance.

Even in single-tier systems, sooner or later the number of calls in progress will exceed the number of ambulances available. A well-thought-out agency policy could allow a dispatcher to send the only available transport unit to the patient with the greatest clinical need, with first responders sent to the others. ALPHA- and BRAVO-level responses usually require only a BLS level of care, with BRAVO being more urgent. CHARLIE- and DELTA-level resources usually require an ALS level of care, with DELTA being more urgent. As noted above, the Determinant Level can also be used to decide which patients merit a HOT response and which do not. The Determinant Level can also help the calltaker make the decision of whether to stay on the line, as DELTA-level codes generally indicate unstable or potentially unstable patients whose conditions can suddenly worsen.

Responders can also benefit from the information contained within the Determinant Code. For example, on a fall injury coding as a 17-D-5, the Determinant Descriptor is “Chest or Neck injury (with difficulty breathing.)” I don’t know of any responder who wouldn’t want to know that.

Some CADs are capable of accepting the Determinant Descriptor and passing it to mobile devices in responder vehicles. For responders without that technology, a Field Responder Guide, which is available in pocket-sized, spiral-bound flipbook form and as an app for smartphones, allows a responder to look up the Determinant Code. Even for a dispatch center that doesn’t have CAD and uses manual cardsets instead of ProQA, the Determinant Code can be given over the air.

Determinant Codes can also drive notifications to stroke centers. A patient with CLEAR evidence of stroke and a time of onset less than the window set by local Medical Control will be identified by the suffix “J.” For many stroke centers around the country, early notification is the key to mobilizing a stroke team prior to the patient’s arrival. (This is the primary reason why the Stroke Diagnostic Tool is included in ProQA medical and is not optional.)

Calltakers and dispatchers are information processors, and ProQA is a superb information-gathering tool. Sometimes we don’t realize how much we can do with that information. Making good use of that information benefits everyone, especially the patient.
Does your center contribute to well-being?

Kimberly D. Turner

It takes about 35 seconds in a communication center to realize it is a stressful career. The reporting parties, officers, and firefighters we support are often the least of our stressors. As with any profession under the sun, our immediate supervisor may be the primary source of workplace stress.

Snap. That could be you.

In a dispatch environment, an untitled supervisor could be a training officer or lead in addition to the supervisor, manager, or director. Yes, that includes sworn personnel assigned to dispatch. Empowering employees in their work environment plays an integral role in their well-being (Kanter, 1977, 1993), and it is the availability and access to reliable resources, support mechanisms, and training that define empowerment. The other side of well-being at work is having work that challenges us as well as being given opportunities for growth and/or promotion.

Many of the components that comprise a healthy workplace are markedly absent in most dispatch centers. This is alarming, but it is not surprising.

Resources may be as simple as a pen or pencil to write with, an actual map that is current, a comfortable chair, a computer-aided dispatch (CAD) system that actually works, or alternatively having thorough policy and training manuals. Unfortunately, many dispatch centers are replete with missing resources. Our support mechanisms include constructive feedback that is often packaged as a work performance evaluation. When was the last time you received an annual appraisal on time that was not a boilerplate—or worse an exact copy—of last year’s appraisal with the dates changed?

As supervisors, we often do not assign value to resources or support mechanisms because we did not receive those things before being promoted. You know the old saying: You parent as you were parented, which is also true with leadership. We lead as we were led.

Until we get serious about leadership, training, and true empowerment we will continue to have toxic and detrimental workplace environments for the first of our first responders. We will continue having difficulties recruiting, training, and retaining our staff. These difficulties are exacerbated by organizational structures that do not provide opportunities for promotional growth. Imagine being a patrol cop and working the same beat for 30 years without an opportunity for advancement or lateral assignment despite your talent, competency, or likability. How long would that last before you were frustrated, bitter, resentful, or angry?

We, as industry leaders, must realize that traditional paradigms built a strong foundation that have carried us this far, but we must envision and create new paradigms if we are serious about public safety in which our 911 dispatchers and telecommunicators play a vital role. They deserve better. They have earned better … and so have you.

Sources

Vail ski resort has had its bumpy years. Poor snow conditions coupled with the relatively small pool of Americans who skied were known to trigger tremor-like impulses along the nerve lines of all area operators. About the only place seeing a lot of winter action—and this was 30 years ago—was the switchboard at the emergency communication center that blinked like an “arcade game”1 whenever snow or the threat of snow closed Vail Pass.

Those days are history. The Town of Vail in Eagle County, Colorado (USA), is now a four-season tourist destination, with snow being only one of the factors (albeit a big one) attracting more visitors than there are residents to a town founded for the adventurous.

And the switchboard? That’s long gone, replaced by modern technology in the Vail Municipal Building that has been home to 911 since 1988. The room is spacious. A full remodel in 2017 included ergonomic consoles and an updated break room. Windows show off the abundant sunlight and a view to the north that celebrates the beauty of the ski mountain. Folks in Vail admire skyscrapers of the rugged sort, a skyline of incredible powder bowls that can be accessed from chairs and gondolas sweeping the vistas of Vail and neighboring Lionshead.

In the off-season from snow, the mountains reign supreme for hikers, bikers, climbers, and anyone willing to enjoy the scenery at 9,000 feet above sea level. Vail Town Square, styled in an urban mix of Swiss chalet hotels, restaurants, and shops, plays host to year-round festivals.

It’s a perfect place for all sorts of things to happen.

In 911 terms, “People can injure themselves in any number of ways,” according to Vail Public Safety Communications Center (VPSCC) Director Marc Wentworth.

VPSCC is the PSAP for all 911 calls originating in Eagle County. It dispatches for 13 public safety agencies, and the 24 EMDs handle 125,000 emergency and non-emergency calls each year. In 2014, the center purchased a Mobile Communications Unit (MCU) that is staffed by specially-trained incident dispatchers and houses three dispatch consoles and a conference area. The vehicle is deployed during major incidents, such as the Red Table Fire in July 2016 and the Gutzler Fire in July 2017, and events attracting a huge global audience, such as the 2015 Alpine World Ski Championships.

The 2015 Alpine World Ski Championships wrote its own chapter in communications. Four years of planning
preceded the event, with training that covered the “what-if’s” of nearly 221,000 spectators—plus 500 athletes and their support teams and 2,200 volunteers—gathered for the 14-day (Feb. 2–15) mega ski-racing competition.\(^2\) During the championships, VPSCC partnered with Colorado State Patrol (CSP) Dispatch. CSP dispatchers, working from a remote station set up inside the normal communication center, dispatched the troopers assigned to the event. In addition to event staffing in the communication center, the Event Command Post was staffed daily with two dispatchers per shift, two shifts each day.\(^3\)

The event went off without a hitch. Public safety never put practice into action for mass casualties, mass evacuations, or any other potential crisis situations even remotely tied to an unplanned disruption to the games.

“What everything we trained for never came to pass,” said EMD-Q Jennifer Kirkland, 911 Operations Administrator.

At the same time, VPSCC EMDs continued their daily routine of giving PAIs and sending responses to the normal emergencies called in by Eagle County residents, assisting animal control, monitoring fire and burglary alarms, updating the travelers’ radio station and Vail Cable TV, and coordinating response with other agencies at the private, local, state, and federal level. Since the resort wasn’t shut down to local and visitor skiers during the games, an injury on the slopes still required coordination with ski patrol for an ambulance dispatch to a pickup point at the base.

In 1990, dispatch applicants were monitored before hiring for unsuitable personality quirks.\(^4\) Claustrophobics and complainers were always cut from the running. Today, there are still tests, interviews, and background checks, but the former 9 to 10 weeks of training has morphed into an intensive 6 months.

New hires accompany police and fire personnel on rides through the county, acquainting them with landmarks, streets, and popular attractions. The Town of Vail provides benefits to keep people in public sector employment, such as ski passes, housing down payments, and flex scheduling. They also work in partnerships. For example, VPSCC partnered with Starting Hearts to launch the PulsePoint CPR/AED mobile app to help increase sudden cardiac arrest survival rates in Eagle County. PulsePoint is tied to the county’s computer-aided dispatch (CAD) system and notifies users and sends them a map to the location of the person in need of CPR and the nearest public access location for an automated external defibrillator. Since its launch, more than 500 people have signed up to receive the alerts. In another partnership, for the past five years Vail Police Department’s Ragnar running team has donated funds in honor of a former police sergeant, who died in 2011. The money goes to a college scholarship program for the daughter.

Who would want to work anyplace else? They care for one another and, according to Kirkland, “There’s a high level of professionalism. They’re very dedicated to their work and the people they serve.”

Kirkland was a recent college graduate (majored in English and theater) when she moved to Vail along with her former boyfriend, and now husband, Justin, who was intent on returning to the place he grew up after finishing his degree at the same college. He started as a volunteer firefighter and in 2014 became Chief of the Gypsum Fire Protection District (an estimated 41-minute driving time west of Vail).

Kirkland applied in emergency dispatch and has never looked back. Not only is she drawn to the outdoors (she’s a runner) but also a super advocate of a career that always throws something new in her direction. Even without the perks, people tend to stay in dispatch. Kirkland is going on 16 years; Wentworth recently reached his 14th year; CAD/Map Administrator Rebecca Pacheco has worked 28 years in the center.

Sure, it’s the camaraderie, exceptional outdoors, and small town atmosphere (once you lift the layer of tourism) that keeps people here. And where else would you get the variety of calls they receive? Where else would you remind tourists that a moose is not trying to initiate play if it approaches you, or that a homemade flying machine might not make it across the Eagle River? In late May, a bear broke into a home in Vail and was caught by a security camera balancing on a piano bench and plunking a few notes on the keyboard.

Can it get any better than that? “Vail’s a great place,” Kirkland said. “We have it all here, and I can’t imagine living anyplace else.”

Sources

1. Flanagan T. “Keeping cool: Work is seldom the same old thing at the Vail Communications Center.” The Vail Trail. 1990; Jan. 19.
4. See note 1.
Good things happen in threes, and as the “rule of three” (in Latin “omne trium perfectum”) principle suggests, things that come in threes are perfect.

Why? Because that’s how the mind works. We look for patterns and trends, and three is the number we’ve assigned since the third century.

Groupings of three are inherently more humorous (three little pigs), satisfying (bacon, lettuce, and tomato sandwich), rewarding (a genie grants three wishes), and effective when it comes to remembering something important (stop, drop, and roll).

In the case of three communication centers in New Zealand and the Republic of Ireland, two is not without the third.

**New Zealand**

The rule of three was in full force on July 7, 2017, when New Zealand’s three communication centers were approved for accreditation.

“This was always part of their plan,” said Louise Todd, Clinical Support Officer, Priority Dispatch Corp.™ (PDC™). “They’re under an umbrella of one agency, so they are working toward the same standards [represented by the ACE].”

It was the practical approach, said Laura McConchie, CCS Training & Quality Manager, National Headquarters, St John, New Zealand. They hadn’t actually considered going ACE separately, and it was time, she said, to finish a project that required an extra push in one of the Twenty Points of Accreditation.

“All the parts were met except for compliance in our PAIs,” she said. “We don’t get a lot of calls requiring them.”

The opportunity to provide PAIs was similar in all three centers. EMDs needed practice and coaching, but how could McConchie support staff at three centers, in a consistent way, and at the same time?

McConchie had an idea. She went to the PDC National Q to have them evaluate their QA process objectively and provide unbiased suggestions for improvement through their observations and discussion of current practices. National Q’s worked with in-house Q’s, offering pointers for call review and following performance standards, offering direct coaching, and giving constructive feedback.

The approach supported what McConchie knew they could achieve. They were working toward the same ACE goal in tandem despite being in separate locations. She submitted all three applications through the online accreditation portal.

“I was incredibly nervous,” she said. “I was incredibly proud of staff and what
they could do, but that didn’t make the wait any easier.”

Todd was in charge of reviewing the applications, which included uploading 25 calls from each center recorded the prior month. She completed a checklist of the Twenty Points of Accreditation and rated the calls according to the Academy’s performance standards. Although time-consuming, particularly the call review, she turned the applications over as quickly as possible.

“I know how anxious agencies can get,” she said.

Todd approved each application, making the next step on-site visits, and, in the last stage, submitted the complete package to the Academy’s Board of Accreditation. McConchie answered the phone call she had been anticipating.

“I was thrilled,” she said. “After the call I was speechless. This was a huge project. Everyone did such an incredible job.”

Virtual single system

The three communication centers—St John Ambulance Service with locations in Auckland and Christchurch and the Wellington Free Ambulance (WFA)—merged in 2007 to provide a virtual single system of emergency communication to 4 million residents and millions of vacation and business travelers visiting the country each year (estimated 3.6 million in 2017).

Nearly three-quarters of the population live in urban areas, leaving large rural areas characterized by dramatic topography and relatively small populations.

The merger created a national ambulance communication service, similar in concept to the country’s national fire service created in 1975, which—in each case—provides advantages in cooperative training, purchasing, maintenance, and other support. A single network connects the centers, and each center has remained in its pre-merger location. Each manager reports to the centralized Operating Board.

The joint structure in communication also increases the ability of standardized call handling through shared technology that includes a prioritized dispatch system (Medical Priority Dispatch System™), geographic information systems, and incident data transmission to ambulances.

“We’re a team,” McConchie said. “The next available calltaker at any of the centers takes the call. If a computer goes down, or if something else happens, we can still handle the call.”

WFA celebrated its 90-year anniversary in 2017, having been founded by the late Sir Charles John Boyd Norwood on Nov. 9, 1927. It remains the only completely free ambulance service in the country.²

Way it works

When an emergency call (111) comes in, the Emergency Ambulance Communications Centres (EACCs) provide the connection between caller and Emergency Ambulance Service providers. Calls from the North Island and the South Island are answered at centers in Auckland and Christchurch, respectively. Calls made in central New Zealand are answered by EMDs at Wellington Free Ambulance Headquarters in Wellington at North Island’s southern tip.

If all calltakers are busy at any one of the centers, the system redirects the call into the national queue for either of the two other centers. The EACC CAD system also maintains real-time information on the majority of ambulance resources available for deployment.

Nationally, there are more than 445,000 111 calls for ambulances each year, and the number continues to grow about 3 percent each year. They dispatch a fleet of more than 600 ambulances, 250 rural doctors and nurses, 40 emergency helicopters, and the Coast Guard. They also coordinate patient transfer services for district health boards.

Prime example

During the noon hour on Feb. 22, 2011, South Island was struck by a 6.3 magnitude earthquake. Within minutes, the number of incoming calls tripled, with geographic distribution confirming that the Christchurch Metropolitan District was hardest hit.

Due to the quake, the local ambulance service lost its CAD, and the New Zealand Civil Defense Agency lost its ability to communicate with police and fire in Christchurch.

All rural and suburban calltaking and dispatching duties were shifted to the Wellington and Auckland centers, giving EACC dispatchers in Christchurch the ability to focus on emergency response within the Christchurch Metropolitan District. With its communications facilities fully functional, the Christchurch center became the hub of response activities in the city.

Even with suburban and rural calls diverted, however, the Christchurch EACC workload was significant. Dispatchers triaged calls and assigned them to police and fire crews, tracked ambulance requests manually, and used runners to communicate with Civil Defense.

In the hours after the earthquake, police and fire in the metropolitan area had from six to 24 calltakers and dispatchers in Christchurch triaging about 1,200 emergency calls and deploying personnel through the nationalized system. Within 18 hours, rescue crews from other districts arrived in Christchurch to assist with event response.

Republic of Ireland

The Republic of Ireland’s three communication centers achieved...
accreditation singly, although they do share a history of using the Medical Priority Dispatch System (MPDS®).

The National Emergency Operations Centre (NEOC)—with centers in Tallaght, Dublin, and Ballyshannon, Co. Donegal—was accredited in 2015. The Eastern Regional Control Centre (ERCC), which works with the Dublin Fire Brigade (DFB), was accredited in 2006. All three centers have been using the MPDS for more than a decade.

The NEOC works in conjunction with the National Ambulance Service (NAS), with the two centers serving all 4.7 million residents of the Republic of Ireland (excluding the area served by the ERCC). Calls to the two emergency lines, 999 and 112, are connected to an emergency service operator who directs the call to the appropriate emergency service.

Two operate as one
Similar to New Zealand’s network, the NEOC operates across two sites on a singular Information and Communications Technology (ICT) platform. The two centers—working as one—were created as part of the NAS Control Centre Reconfiguration Project to centralize operations.

The NEOC is partnered with the NAS, and together they serve all 26 counties of the Republic of Ireland, an area of 27,133 mi² (43,666 km²). According to NEOC Manager Kathrina Murray, the center dispatches around 320,000 calls per year, everything from cardiac arrests to traffic collisions.

The center, which is staffed by 155 personnel, dispatches medical calls to 92 ambulance stations. In addition to calltakers and Emergency Dispatchers (EDs), the NEOC also has Aero Medical Dispatchers—dispatchers who coordinate helicopters for both the Irish Air Corps and the Irish Coast Guard.

Motivated for ACE
Murray said the NEOC promised the public the best possible over-the-phone care it can offer and, by aiming for accreditation, staff members allowed themselves to reach the highest standard possible and maintain professionalism.

According to Murray, the ACE process went without a hitch. The staff was proactive, and when they first achieved compliance scores over a three-month period, they never looked back. She advises other centers to remember that accreditation belongs to the entire staff; no single person can take the credit.

Individual steps

Nestled on the banks of the River Liffey, the city of Dublin has been around for more than 1,000 years. English and Irish are the main languages, but there are significant parts of the population that speak Chinese, Polish, Russian, and French.

The Kilmainham Gaol, Trinity College, Saint Patrick’s Cathedral, and, of course, the world-famous Guinness Storehouse are among the well-known sites. The ERCC, in conjunction with the DFB, protects these important landmarks and more from the threat of fire.

The service area of the ERCC and DFB is 571 mi² (920 km²), and they dispatch for 17 fire authorities and four EMS authorities. They field 40,000 fire and special service-related calls and 90,000 EMS-related calls annually. According to John Moody, Third Officer at ERCC, they typically handle calls about small outdoor fires and traffic accidents.

The center itself is staffed by 65 dispatchers, and Moody said they don’t experience high employee turnover. In fact, the ERCC has a zero percent rate of staff attrition, which Moody ascribes to a mixed staffing model designed to avoid burnout and other issues that may contribute to staff loss.

International standards
The ERCC has been an ACE since 2006—the first center to become accredited in the Republic of Ireland—and re-accredited in May 2017.

“The decision was based on the desire to show we followed internationally-recognized standards, thereby improving the service offered to our city and county,” Moody said.

There was a transitional period when progress was slow, but they worked through it with detailed training and continued support from both inside the center and the Academy.

For those considering ACE status, Moody advises taking the Twenty Points of Accreditation as 20 individual steps. He also said as an agency, they believe in two distinct practices: learning as much as they can by study and research and then asking for help with implementation.

Both centers are grateful for the help of Beverley Logan, Accreditation Officer, IAED™; Kim Rigden, Associate Director of Accreditation, IAED; and Todd, who reviewed the center’s ACE application.

Sources
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**WHAT IS AN EMD TO DO?**

Discerning generalized seizure from hypoxic seizure activity

Brett Patterson

**Brett:**

Do you have a good article on seizure versus cardiac arrest (the logic of Rule 3 on Protocol 12: Convulsions/Seizures)? We’re seeing a small trend with folks going to Protocol 9: Cardiac or Respiratory Arrest/Death when the Chief Complaint describes seizure-like activity. But what if it’s someone having convulsions as part of their sudden cardiac arrest (SCA)?

*Thanks,*

Doug Smith-Lee
Project & Grants Manager
Clark Regional Emergency Services Agency (CRESA)
Vancouver, Washington, USA

**Doug:**

I don’t have any Academy articles specifically addressing the discernment of hypoxic versus generalized seizures, but I do have quite a few thoughts on the matter. Please bear with me; the issue is bigger than a breadbox.

The Rule you are referring to relates to dispatch priority. Its wording was revised in MPDS® v13.0 to clarify its meaning. It states: “When effective breathing cannot be physically verified by the caller, a seizure in a person ≥ 35 is coded DELTA due to an increased probability of cardiac arrest.” This Rule simply explains the rationale for coding patients in cardiac age range higher than younger patients when breathing cannot be physically verified and the complaint is seizure.

But more to the point of your question: How does the EMD discern the typical, and usually benign, generalized seizure from the hypoxic seizure activity that sometimes accompanies SCA?

First, understand that Protocol 12 is designed to do this through questioning, coding, instruction, and monitoring.

However, is it sometimes possible to make a sound decision earlier, in Case Entry, in the interest of identifying SCA earlier? I think so, if the EMD considers the following important factors: initial scenario and clinical presentation. And, importantly, if the Seizure Protocol is selected, follow-up is essential to rule out SCA.

Extremely key to the rapid identification of SCA, which we know is so critical to the patient’s chance of survival, is the caller’s initial description of what happened, i.e., the presenting scenario or recent history.

We know that cardiac arrest outcomes exist in Medical Priority Dispatch System™ (MPDS®) codes other than those of Protocol 9. And we know what percent of cardiac arrest outcomes reside in these other codes. For instance, we know the D-1 and D-3 codes of Protocol 12, Not breathing after Key Questioning...
and AGONAL/INEFFECTIVE BREATHING, contain a relatively high number of cardiac arrest outcomes. We also know that the D-2 and D-3 codes of Protocol 17: Falls, Unconscious or Arrest and Not alert, are atypically high in cardiac arrest outcomes, as well as the E-1, all DELTA, and C-2 codes of Protocol 31: Unconscious/Fainting (Near). (Please note that I am referencing MPDS v13.0 here). Also note that these codes prompt our PDI to retrieve an AED (the percent of cardiac arrest outcomes in a particular code drive these instructions).

The scenario provided by the caller can contain some important clues regarding SCA. For instance, the sudden collapse of a person is often seen and reported as a fall. However, sudden collapse is the key to SCA identification, not the reported fall. With regard to seizures, the vast majority of generalized seizure outcomes are reported as “seizure,” not as a sudden collapse with a mention of spasm, twitching, or jerking, and a history of seizures is often mentioned. History is important, too, because our data shows that the complaint of seizure is 75 times less likely to be associated with cardiac arrest outcome when a history of seizures is known. With regard to Protocol 31, which acts as a failsafe for SCA, the “mistake” is most often made at Case Entry when the complaint is unconsciousness and breathing is UNCERTAIN, which should equate to SCA rather than unconsciousness.

The first step to rapid recognition of SCA is to listen very carefully to the complaint described, but the scenario’s description strongly suggests SCA as the Chief Complaint? Case Entry Rule 7 states “When the complaint description is seizure, go to Protocol 12 regardless of consciousness and breathing status.”

Consider our earlier fall example, which is even more common. The caller sees and reports the fall, or perhaps just mentions the fall, but the complete description involves a sudden collapse of a previously normal patient who is now unconscious. Case Entry Rule 7 states: “If the complaint description involves TRAUMA, choose the Chief Complaint Protocol that best addresses the mechanism of injury.”

What is an EMD to do?

I believe the key to these apparent dilemmas is the application of the Chief Complaint Selection Rules, specifically, the literal interpretation of the wording versus the intent.

The EMD should listen carefully to, and clarify when necessary, the answer to Case Entry Question 3, and then formulate that Chief Complaint Description into a Chief Complaint.

The intent of these Rules was to guide EMDs with regard to their interpretation of a caller’s complaint, not to literally take a caller’s words or impression and translate that into a complaint. In other words, the EMD should listen carefully to, and clarify when necessary, the answer to Case Entry Question 3, and then formulate that Chief Complaint Description into a Chief Complaint. From that, the EMD considers the Rules and chooses a Chief Complaint Protocol.

Brett Patterson provides yet another example:
If a caller reports her 70-year-old father is complaining of severe, ripping back pain between the shoulder blades, so bad that he nearly fainted, the EMD may key in on the words “nearly fainted” and select Protocol 31, based on Case Entry Rule 5, even though it is clear that the patient’s primary complaint is classic AAA [abdominal aortic aneurysm] back pain. This is because the Chief Complaint description “involves” a priority symptom, or rather “mentions” a priority symptom, not because near fainting is the Chief Complaint. What is the actual Chief Complaint based on this description? This is not for the caller to decide; the caller simply provides the description. The EMD must formulate the complaint based on the description, and this complaint is medical back pain, likely associated with AAA.

Our SCA example is similar. The caller sees seizure-like activity, but the caller’s description is not consistent with a generalized seizure. However, it is very consistent with SCA. The EMD listens to the description and formulates the SCA complaint.

It’s the same with falls. The caller sees the fall and mentions the word fall in the Chief Complaint description, but the scenario strongly indicates SCA. The trauma Rule was never meant to steer the EMD toward a mechanism of injury protocol when the actual Chief Complaint is medical, simply because trauma was mentioned.

Visit the Journal online at iaedjournal.org for further explanation and examples.
LEVEL OF ABSTRACTION
Technology could take away self protection

Mary Ransier Garrett, RPL

While in a meeting on a Friday, I saw one of the MACECOM (Shelton, Washington, USA) dispatchers frantically waving at me through the window of the dispatch center. They knew I was in a meeting—yet the fact that they were trying to get my attention meant it was something important. The dispatcher told me there was a boy on the phone located in the police department lobby saying his mom wouldn’t wake up, and not much else. Our agency is housed in the same building as the PD, so I walked up front and entered the lobby. Standing there was an 8-year-old boy in his pajamas, barefoot, clutching the phone to dispatch as if it were a lifeline. He handed me the phone, and I told the dispatcher we were coming back there.

While walking through the PD back to dispatch he told me his name, Tommy*, and that he lived in the apartments behind our building. He had walked over to the police department for help. Tommy and I went into my office where I keep a box of toys for when my kids, or someone else’s, come visit me. While we played, I asked questions trying to get more information from him about the situation at home. What school did he go to? Who was his teacher? How long had mom been sick?

While answering my questions we played with Hot Wheels cars. Aid and police officers arrived, and we fed what info Tommy would give us to them. A few minutes later my boss, the executive director, came out of dispatch and mouthed to me that Tommy’s mom was DOA. I was mid-race with a silver race car in my hand. It took all my willpower to not cry and instead paste a smile on my face.

Tommy told me he hadn’t eaten breakfast and only had a piece of cake and candy the day before because his mom had been sick. Our IT tech went to the store and got Lucky Charms and milk, and we had breakfast together. Tommy told me his birthday was the next day and he was going to be 9 years old and what presents he hoped to get for his birthday. We watched cartoons on my laptop.

I asked how he knew to come to the police department, and he said his mom had told him to do that if there was ever an emergency. I told him he was very brave and did the right thing that day. The detectives came to interview him in my office. His mom had been sick for a few days and fell that morning, hitting her head. She also suffered from a GI bleed.
When the chief of police came to get Tommy from my office and take him up front to his grandparents, he thanked me for the cereal and play. I was heartbroken. The school brought counselors down to help break the news to him that his mom was dead. I went outside and cried. I couldn’t imagine how my kids would feel. I wept for that boy and will never forget him.

Coming face-to-face with the RP [Reporting Party] was not only hard on me, but our team as well. It’s not every day we have to “see” the tragedies we deal with. As one of the supervisors working that morning pointed out, “Because we got to see the RP here in dispatch, this call had an emotional effect on all of us. Generally, these calls are sad, but never do we get the opportunity to meet face-to-face the RP of a tragedy.”

It has made me assess and re-evaluate the preparation, or lack thereof, of our employees when it comes to NG911. Organizations in the industry have focused intently on the technology and interoperability components relating to Next Generation; it’s a good thing, the future of public safety. Yet have we thought through the impact to the human element?

When 911 was born, the intent was to have a single number to report emergencies and improve public safety. The important component of who would answer those calls (human element) wasn’t readily addressed, which is arguably part of our uphill struggle for classification and certification today. Could we be setting our people up for failure by not taking into consideration who will be answering NG911 calls? Are our organizations doing everything they can do to ready telecommunicators for “seeing” it versus “hearing” it?

In his book, “Leaders Eat Last,” Simon Sinek discusses the idea of abstraction and how it can play a huge role in how we operate in organizations and society. Sinek illustrates this idea by examining the Milgram experiment from the 1960s, having to do with the conflict between obedience to authority and personal conscience. The conclusion being the more abstract people are, the easier it is to do harm to them.

Telecommunicators function in an abstraction vacuum wherein we may hear someone die, but we don’t have to put on gloves and touch them. It’s easier to fall into the trap of complacency when you don’t have to SEE that DV victim’s bruises, just hear she hasn’t left her boyfriend yet.

Telecommunicators function in an abstraction vacuum wherein we may hear someone die, but we don’t have to put on gloves and touch them. It’s easier to fall into the trap of complacency when you don’t have to SEE that DV victim’s bruises, just hear she hasn’t left her boyfriend yet. It’s easier to blow off that chronic runaway juvenile call when it’s not your kid. Sinek states, “Just like the conditions Milgram set in his experiment, the physical separation between us and those on the receiving end of our decisions can have a dramatic impact on lives…” (pg. 101)

Does the current level of abstraction make it easier or harder to do what we do? Statistically telecommunicators have “contact” with more people via phone than officers do face-to-face. If the call volumes were face-to-face contacts, would telecommunicators still be able to do it? Or is the level of abstraction what protects telecommunicators and makes them so capable? It can be hard enough remaining emotionally detached with just a voice on the other end of the phone. Adding the emotions of visual human contact could make the job that much more dramatic and distracting.

Several employees in the industry and labor unions have voiced that “seeing” emergencies aren’t what they signed up to do. I can relate in that I can talk to a child on the phone all day long (and would prefer to)—but you put him in my office eating cereal and the rules of the game have changed dramatically.

As professionals in the industry, it is important to keep the human element—both employees and the public—in the forefront of our decisions. Technology and advances in our service capabilities will only continue, as change is constant. Making sure our telecommunicators are ready and prepared for these changes is quite the undertaking but worth the time and effort. Because what would you do if you were face-to-face with the RP?

*Editor’s Note: Juvenile’s name changed to protect identity.

The quilt MACECOM is making from agency patches for Tommy*
Data collection streams agencies into the future

Becca Barrus and Audrey Fraizer

People connect through data. It’s generated everywhere by everyone, in the private and non-profit organization sectors, by state and federal government agencies, and on an individual basis to plan, evaluate, and monitor—for example, to track spending and establish a budget. At this stage of an international preoccupation with quality improvement and...
customer satisfaction, it would be difficult if not impossible to operate without quantifiable evidence. The world can no longer spin on best guesses and gut feelings.

Data collection is also the expected building foundation in public services. Agencies rely on data collection to drive policy-making decisions, justify budget proposals, and generate cost-effective operations. For EMS, devising strategies for optimizing patient care through selective data gathering is a departure from past reliance on military-based trauma care models for the general public and a “what’s always worked” philosophy.

As prehospital medicine has evolved, so has the recognition of data as a quantitative source for making a difference, particularly in areas of EMS education, outcomes, research, and reimbursement.

Collection of 911 data complements EMS goals, not only to assess the current state of emergency communications, but also to help measure and improve performance and reach people in ways unique to technology. For the Priority Dispatch Systems, data can validate a change that was made to any of the systems based on internal data collection done at the International Academies of Emergency Dispatch® (IAED®). Finding the same or similar results across agencies speaks to the consistency of the protocols, regardless of where they are used.

Data builds better interpersonal connections when we put it into human context: What type of data do I need to influence actions of the people I want to reach? What approach for collecting data will meet my goal?

As every good quality assurance program recognizes, paying close attention to day-to-day operating data leads to discovering new insights about the agency and personnel. Once discovered, these insights can result in actions that can improve working relationships and customer satisfaction. As pointed out in Beyond EMS data collection: Envisioning an information-driven future for Emergency Medical Services: “Decisions are more likely to be effective and efficient when they are based on data.”

And the sky’s the limit as long as you know what you’re looking for, where to find it, and how to apply it.

Data and algorithm

An algorithm is an approach to building a model from data. It is a series of steps designed to solve a problem. In computer science applications, an algorithm is a sequence of actions designed to show us how to perform a task. In daily life, this can be as simple as a cake recipe or assembling a bookshelf. In computer science, Pedro Domingos offers this definition in his book “The Master Algorithm”: “An algorithm is a sequence of instructions telling a computer what to do.” Algorithms, he explains, are reducible to three logical operations: AND, OR, and
NOT. At the core, algorithms are built out of simple rational associations.

**Data and text messaging save teens on the brink**

Crisis Text Line (CTL) is a confidential text message service for helping teens and young adults experiencing a mental health-related problem. It’s available nationwide. How does CTL find people in crisis, or how do people find CTL? The developers created an algorithm. Text messages sent to the around-the-clock crisis counseling hotline (741741) are assessed based on messages received over the service’s history (these are the parameters in the algorithm and they could, conceivably, expand with time). The texts are routed automatically to a three-tier queue according to severity, with the highest priority given to messages that use specific words such as “cut,” “hurt,” or “kill,” indicating the sender is actively suicidal.

Trained crisis counselors available on the tier one queue connect with all potential suicidal texters in 13 seconds on average, according to Baylee Greenberg, CTL’s Director of Operations. Counselors further evaluate the situation through direct texting, and if there is clear indication the person is pursuing a plan to cause personal harm, Crisis Text Line will initiate an active rescue.

“Texting is very effective in reaching people in a moment of crisis,” Greenberg said. “The word ‘today’ is the most often used word, according to our database, and it doesn’t take more than three messages for the counselor to know the issue at hand.”

CTL was piloted in 2013 to address gaps in crisis communication for individuals uncomfortable with making calls to other hotlines or calling 911. Apparently, the hotline hit a nerve; so far, 45 million text messages have been exchanged in 259 area codes.

The hotline has also opened a window into the possibilities of NG911.

In 2015, five text specialist Public Safety Answering Points (PSAPs) partnered with CTL for location support on Active Rescues, and several more PSAPs have since joined the community. Counselors refer to their PSAPs’ contact lists when circumstances indicate immediate action is necessary and the PSAP, in turn, can request a ping on a cellphone. Major mobile carriers have agreed to remove the hotline’s short code from user records to ensure privacy and waive text message charges for the hotline.

The joint venture reduced the time for Active Rescue by nearly 50 percent.

In the first few months of operations, the joint venture reduced the time for Active Rescue by nearly 50 percent, from an average 60 minutes to 27.7 minutes.

“The partnership proved the value in creating relationships using an increasingly popular means of communication,” said Michael Spath, Manager, Sunnyvale (California, USA) Communication Center, who first heard about the hotline in a TED talk podcast (April 2016). “Technology gives us the ability to reach people in the moment of crisis, and that’s powerful.”

**Data-based decision-making**

Data-based decision-making is an essential element in quality improvement, helping to assess the efficiency and effectiveness of current processes and modify the processes according to findings. Numerous methods exist for collecting data, including focus groups, surveys, reviews of internal records, and numerical tracking of events.

**Survey: Data promotes mentoring relationships**

Northwell Health Center is a “data-driven organization”—an understatement for every department in the New York (USA) state-based mega health complex boasting 22 hospitals, more than 550 outpatient facilities, and a single secondary PSAP keeping the Northwell Center for Emergency Medical Services (CEMS) in orbit.

Staffed by Emergency Medical Technicians (EMTs) and paramedics trained in Emergency Medical Dispatch (EMD), the CEMS communication center emergency dispatchers handle nearly 850 calls each day for intrafacility transport among the system’s huge network of hospitals and continually track nearly 35 ambulances handling close to 150 assignments each day. The center also initiates EMS care for patients arriving to any Northwell hospital from local municipalities. In times of disaster, the center doubles as Northwell’s Emergency Operations Center.

“It’s no wonder that data collection figures prominently in not only improving use of the Medical Priority Dispatch System” (MPDS) in relation to prehospital patient care and response but also the efficiency of the EMD trained Emergency Medical Technicians and paramedics.

“We’re running data all the time,” said Anthony Guido, EMT, former Performance Improvement Coordinator, Communications, Northwell Health CEMS. “The same goes for all high-performing centers. We are always looking at ways to improve what we do.”

New hire training was an area Guido turned his attention to in 2016, but not because he had heard any particular complaints about the program. It was a matter, he said, of staying ahead of their needs. To assess current practice as the starting point for development, Guido decided on a survey format in which students rate various aspects of the program—such as ProQA® training and quality improvement processes—and comment on what worked and what didn’t work in learning about how the center operates. Did they understand what was expected of them? Did they understand the standards set by Northwell CEMS? For example, the results of the first survey showed that nearly 65 percent were
uneasy with ProQA after completing their training time.

“This told me to bring back the software instructors to address these concerns,” he said. “Since the survey is anonymous, no one feels intimidated by admitting something needs more explaining.”

The survey also pointed out the importance of trending across multiple classes, said Venessa Vangroski, Northwell CEMS Trainer. For example, survey results strongly favored a structure offering greater hands-on training following each module and less book and lecture time. Learners want an instant pairing of seat time in class to seat time at the dispatch console.

“They want a live environment up front,” Vangroski said. “They want live calls once they certify to get the experience of working with the Medical Protocol and ProQA.”

This survey, while in its infancy, is gaining support among the administrative team and, in addition, connecting new hires to longer-term EDs through a mentoring program.

Data collection boils down to identifying what needs fixing and what doesn’t and quantifying the effect of a resolution designed to fix a problem. It’s that simple.

“We feel more accomplished at the end of the day,” Guido said. “It’s all about communicating and making those connections.”

Review of internal records:
When EMS isn’t the answer

Lt. Jamie Baltrotsky’s 17 years as a paramedic with Montgomery County Fire & Rescue Service, Gaithersburg, Maryland (USA), drew attention to an issue troubling communication centers everywhere: EMS super-users, the relatively small group of people within an EMS service region accounting for a disproportionate number of EMS resource use, beginning at the dispatch center.

“It’s not only a matter of time and wear and tear on our resources, but also the help they need, EMS can’t provide,” she said. “We didn’t have the ability to sit down with them for a few hours to figure out exactly what they did need. We simply didn’t know what we could do for them.”

In 2013, Baltrotsky left the streets for an inside job as an executive officer. The issue stayed with her and, as she learned, it was also a concern of the agency’s EMS Medical Director, Roger Stone, M.D. He gave her the go-ahead to collect data and pilot efforts for appropriate referral within the community. She created an EMS partnership with the county’s Health and Human Services Agency (HHS).

Working with the communication center, Baltrotsky identified the top EMS super-users during the first quarter of 2015 (January through March), finding that the group had generated 128 total calls. The individual super-users identified were referred to HHS (at the time of the next call to 911) and, as the source of quantifiable comparison, Baltrotsky retrospectively reviewed the call volume before and after HHS intervention. Their call volume decreased to 64 percent (from 128 calls the first quarter to 47 calls the next quarter). A second phase conducted over a 14-month period (April 2015 to July 2016) evaluated the potential effect of referral to HHS on EMS services. Using electronic patient care reporting (ePCR) records, the study identified 265 super-users accounting for 4,393 ePCR records and of those, the top super-users accounted for 797 responses.

The study indicated vulnerable adults as a prominent group among super-users.

“They don’t know what to do, so they call EMS,” she said.

Baltrotsky is optimistic about the possibility of decreasing super-user reliance on EMS through community partnerships and referral. She is confident about the application of similar studies and consequent referral programs beyond Montgomery County.

“This is something any community can do,” she said. “The data is relatively simple to collect and the agencies set up for referral are genuinely interested in participating.”

Baltrotsky submitted a poster abstract of the research for NAVIGATOR 2017.

CAD review: Extrication research in Butler County

Chris Davis, the 911 director for Butler County Emergency Communications in El Dorado, Kansas, USA, has been thinking about his current research project for going on 20 years.

For as long as Davis has been with Butler County, the fire departments they dispatch for have been asking for more
complete information regarding traffic incidents that require extrication.

The information the fire departments want specifically is whether or not a semi-truck or tractor-trailer was involved and whether or not the incident was a head-on collision. The MPDS Protocol 29: Traffic/Transportation Incidents is intended primarily to identify possible medical response needs, and its focus is on mechanism of injury and symptoms such as unconsciousness and injuries.

The Protocol does identify whether any person is reported as pinned or trapped, but the fire department uses different criteria, such as the involvement of a semi-truck or the report of a head-on collision, to decide whether to bring extrication equipment to the scene. The presence of these conditions may make it more likely that they’ll need the equipment, but they don’t get that information until they get to the scene.

Audio call transcription was used as a novel approach to analyze interactions and identify factors affecting the likelihood and success of bystanders performing dispatch-guided CPR.

According to results, Stage 9 (determining if the patient is breathing by giving airway instructions) took the longest time to complete. Stage 11 (giving CPR instructions) also took a relatively longer time to complete compared to the other stages. Stage 5 (establishing the patient’s age) took the shortest time to complete.

Results showed a high degree of accuracy using transcription for data analysis, with subsequent comparison to scripted protocols (MPDS) providing factors that might delay bystander CPR. Stages in which holdups occurred could be targeted during dispatcher training and become the focus of future dispatch research.

The IAED Research Division welcomed the study and in a Letter to the Editor piece published in the same journal [Resuscitation] they wrote that [the IAED] “is always interested in reviewing and advocating for high-quality research that will help to improve any of the various aspects of our system, and in particular those process elements that involve dispatcher-caller interactions during time critical emergencies, such as cardiac arrest.”

Interestingly enough, the Academy’s own unpublished data analysis discovered exactly the same results through a somewhat similar audit of CPR audio cases from multiple centers. “Since the completion of the study done by Clegg, et al. in May of 2011, the IAED Medical Council of Standards approved and released version 12.2 of the MPDS in June of 2012. This newer version eliminates the instruction steps for opening the airway and checking breathing in cases where the patient is not breathing, breathing ineffectively, breathing agonal, or where breathing is uncertain, as determined in the initial patient description and assessment stage, known as Case Entry. As Clegg, et al. point out,
eliminating these steps saves nearly 1 minute of elapsed time and prevents the caller from experiencing the frustration of attempting to find respirations in a patient who is likely to be in a cardiac arrest state already and may be gasping agonally only—if presenting with any respiratory activity at all.  

Wide-open playing field  

Miyoshi Carstaffin caught the data collection bug as a natural extension of her work at Fulton County EMS, Douglasville, Georgia (USA). She is the agency’s Quality Assurance Officer and, among other responsibilities, she reviews calls and develops continuing dispatch education training.

MPDS Protocol 26: Sick Person (Specific Diagnosis) was a nemesis to Fulton County EMDs and similar to many centers shared the dubious reputation as the most used and most misused protocol. Carstaffin couldn’t help but ask: When an EMD coded the call as a 26, was it a 26 according to response? Did the EMD miss a stroke or a heart attack? How far were they from the real medical problem? “I wanted to learn how to collect data,” she said.

A brochure advertising a three-day pre-conference research course at NAVIGATOR 2017 seemed like the place to start. Carstaffin registered and scheduled her trip. She took a seat close to the podium, but after a few minutes of listening to preliminary remarks, she figured she had made a mistake.

“I thought I was in the wrong class,” she said. “I had no idea what I had walked into.”

The speaker, David Page, Director, Prehospital Care Research Forum, University of California, Los Angeles (UCLA), was used to that sort of hesitation. He is a disciple of research.

“I was a curious paramedic, and research developed into a passion,” said Page, field paramedic with Allina Health EMS in Minneapolis/St. Paul, Minnesota, USA. “Research is what I do when I want to know more about what I’m doing and why.”

Page floods a room with resources whenever teaching an introductory course to research and, in the class Carstaffin was attending, the mentors were impressive Prehospital Care Research forum representatives, the IAED Research Division, and a team from FirstWatch, a company that turns raw data into information agencies can use for situational awareness, operational performance, and clinical patient outcomes. For the next three days, the relative newcomers to EMS research partnered in groups to design a research project, analyze relevant data, review associated scientific literature, and present their initial findings to the class as a whole.

Carstaffin worked within a group studying the Protocol 26 question, led by Isabel Gardett, IAED Director of Academics. FirstWatch provided the data (provided by agency permission and cleansed of identifiers), and by the end of course—by the beginning of NAVIGATOR—Carstaffin was ready to conquer the world of EMS research and Protocol 26.

Well, that may be an exaggeration. The course, however, gave her confidence. “I can do this,” she said. “I know how the process works.”

Page said it was the same with him when designing his first research project looking at the relevance of required paramedic training in reaching a minimum level of competence.

“Once you’re connected with the right resources and the right people, you learn how to move forward,” he said. “There’s inspiration in knowing you can make an impact on people’s lives.”

IAED research possibilities

Watch for an announcement of the next IAED Research Forum at NAVIGATOR 2018. In the meantime, start getting your ideas together for the IAED’s Annual Poster Contest.

The IAED is accepting research abstracts through Feb. 23, 2018, for the annual poster presentation at NAVIGATOR 2018. This year’s conference is scheduled from April 24-26 in Las Vegas, Nevada (USA). Topics must relate to dispatch in any discipline (police, fire, ambulance, nurse triage), published or unpublished.

“Once you’re connected with the right resources and the right people, you learn how to move forward.”

The IAED Research Division will review all abstracts and, no later than March 9, announce the abstracts accepted for presentation. Posters are due by March 23. All posters will be displayed at NAVIGATOR. The author of the winning poster will be invited to the conference’s Closing Luncheon, and the poster will be published in the Annals of Emergency Dispatch & Response, the Academy’s peer-reviewed research journal. Visit aedjournal.org to learn more about AEDR. Go to aedjournal.org/cfpp for more information about the contest.

Sources

PERFECT STORM
Factors converge to create data surge

Keith Griffiths

Journal Editorial Board Member and RedFlash Group President Keith Griffiths interviewed Todd Stout, CEO of FirstWatch, a Priority Dispatch® and IAED™ partner that helps public safety agencies improve by turning raw data into actionable information. Their focus: Why data matters.

Q. Why do you think there is such a surge of interest in using data?

A. I believe there are several things coming together at the same time for kind of a “perfect storm.” EMS in general is moving toward evidence-based practices and decision-making. Public safety, and by that I mean 911, EMS, fire, and police, doesn’t have enough resources. Many are even having to cut costs while their call volume grows. So, they need to do more with less. You can’t really optimize the use of the resources without good data.

At the same time, elected officials are having to make tough decisions about where to spend their budget. Citizens are holding them accountable for results, and that means using data to justify what they’re doing.

Finally, a new generation of leaders are just more comfortable with technology and data.

Q. What is the value of CAD data vs. what you can get from ProQA® Paramount?

A. There are actually a variety of data sources in public safety, and their components can be misunderstood.

Phone data provides real-time data that gives a good idea of just how busy the communication center is because they often handle administrative and other phone calls that aren’t entered into the CAD. It also helps track the total time a caller is waiting before their call is picked up, and whether the phone data includes information from the primary PSAP and the beginning of the 911 call process from the caller’s point of view.

CAD data provides great real-time information about the call, including the exact location and the history of call information. This includes time stamps, address changes or corrections, upgrades or downgrades from other responders on the scene, the units available and assigned at the time of the call, the number of times we’ve been to this address before, whether a patient or suspect was transported, the
state of the rest of the system, and even how long the unit and crew has been on duty and how busy they were prior to the call. And actually, there’s a lot more.

ProQA Paramount data provides a clear, real-time, standardized view of what the center knew about the patient or call before any responders arrived, what instructions for treatment or medication were given to the caller, what priority for the call was recommended vs. what was used, and what resources were recommended.

ePCR and RMS data provides slightly delayed data, which is typically not available until the responder finishes completing the chart, with much more detailed and specific information about the call from a trained responder’s perspective on the scene.

Q. What are some examples of how 911 centers are using data in innovative ways?

A. Oh gosh, this is a hard question to do justice to because there are so many ways that folks are using their center’s data, and even when they are working on the same problems, they may take different approaches. What’s new or innovative to one agency may be similar to what another agency has done for years.

That said, some of the cool ways agencies are using dispatch data include reducing the time police officers spend at hospitals with psychiatric patients so they can be back on the street. Some places are balancing crew workload to manage fatigue and reduce stress to improve the safety and well-being of our crews and patients.

Another trend with our customers is to measure and improve what’s called “population health equity.” A hot topic in public health is working to ensure that all folks in all areas and of all means receive the same high-quality care and service. That concept is also making its way into EMS. In many communities, response time equity for all has been a requirement, but now we’re measuring other qualitative measures, for everything from no-transport rates to clinical quality.

Leaders often work to make “decisions” when they should be thinking of making “improvements.”

I find it interesting how fire departments are using data to identify and target areas to reduce community risk, like areas with high fire loss for smoke detector distribution programs, illegal burning, fall prevention, and other cool stuff.

Q. The opioid crisis is officially a national emergency. What is the role of public safety agencies in using data to aid in preventing deaths?

A. Opioid overdoses are responsible for over 30,000 deaths per year and hurt many more people directly and indirectly, as most addictions do. We are helping two different research teams who are using 911 and EMS data to learn more about the problem and find ways to help sooner.

Public safety agencies around the country are helping in the fight in many different ways, but the most successful seem to be using data to drive not only their own efforts, but many joint task forces where EMS, fire, and law enforcement are working with public health and social services. They are not only using data to look at statistical and geographical trends, but also notifying teams in real time so they can try to connect with the patient while they may be most receptive to interventions.

We are starting to compile some best practices from our customers around the U.S. and Canada. The variations and similarities are fascinating. The information at www.firstwatch.net/opioid will be available soon.

Q. What are the biggest mistakes people make when trying to use data to make decisions?

A. Well, there are a few big ones. Perhaps the most common is to identify a problem with a single or only a few data points and act on it, as if it were really a trend. Quite often, the supposed problem is really just a normal change in whatever is being measured, and when looked at over time, it’s clear that it’s really an insignificant change, and the time spent on it was wasted.

Another big mistake is implementing a change throughout an organization without testing it on a small scale first. Leaders get an idea, read some research, or even want to implement best practices from another organization, and create a policy and roll it out organization-wide. My experience is that even great ideas or projects almost inevitably need small or large tweaks to work well in that specific organization, and other ideas or changes just don’t work in some places.

If you start small and tweak the change as you increase the scope, projects are almost always more successful. You also have the added benefit of being able to abandon what turned out to be a bad idea.

The third thing that I see a lot is using old data to try to effect change. By that I mean waiting until the end of the month, quarter, or—heaven forbid—the end of the year in those annual evaluations to talk with folks about what they need to improve. For a lot of us who started in the public safety trenches, even a week from an event to constructive feedback is a long time. Research shows that the closer the feedback—positive or negative—is to the event the feedback is about, the greater the likelihood of change and improvement, and the faster the change takes place.

The last thing that comes to mind is kind of subtle. Leaders often work to make “decisions” when they should be thinking of making “improvements.” It may just be me, but I think a “decision” tends to be thought of as final, something that needs to be perfect, and sometimes is thought of as an isolated choice, rather than as part of an overall approach. But when people think about making “improvements,” they seem to tend to be a little more creative and flexible and are less invested in their “decision.” That translates to being able to admit a mistake, adjust, and move on.
ETC instructor pool goes exponential

Audrey Fraizer

The 12 Emergency Telecommunicator Course (ETC™) instructors selected to attend a premier course in teaching practices reflect yet another step in the evolution of emergency communications.

“Emergency communications is an accepted career path,” said ETC Board of Curriculum Chair Susi Marsan, who led the 40-hour course in August at IAED™ headquarters in Salt Lake City, Utah, USA. “ETC is growing right with it. It’s a good way for students to get their foot in the door, and it provides a background for new hires unfamiliar with public safety.”

Marsan has been one of three ETC instructors certified to train and certify instructors, along with:

• Dave Massengale, retired, EMS Coordinator, Sacramento Metro Fire District (California, USA), IAED associate director, and current IAED instructor; and

• Larry Latimer, retired, PDC™ instructional designer and IAED director of curriculum design, and current IAED instructor.

They’ve certified hundreds of instructors during the years since ETC’s introduction to dispatch education in 2000. The Academy’s recent course will farm that number exponentially and provides a timely reinforcement of instructor troops for a course expected to explode with the release of ETC version 4.0.
“It’s a huge relief,” said Marsan, training coordinator, Grady EMS communications, Atlanta, Georgia, USA. “We were watching the numbers and knew we had to certify instructors to meet the demand.”

ETC was developed as a forerunner in a communication career for both new hires and high school and college students pursuing public safety education.

The first version, released in 2000, has expanded to a 40-hour certification course covering technology, best practice standards, interpersonal communication, legal issues, quality improvement, an introduction to protocol, and stress management.

ETC version 4.0 incorporates the national Recommended Minimum Training Guidelines that identify the minimum requirements for a state telecommunicator program. The guidelines are not federally mandated. They are optional although strongly recommended since being released in 2016 following months of collaboration among 18 representative members, including the IAED, National Emergency Number Association, National Fire Protection Association, National Association of State 911 Administrators, and the Denise Amber Lee Foundation.

Marsan said ETC meets or exceeds every standard set by the minimum guidelines and provides certification; ETC certification, however, does not include the Academy EMD/EPD/EFD certification. Those certifications are taught in separate 24-hour courses. “ETC plants a seed,” Marsan said.

**High school career path**

Valgene Holmes was given a choice. He could choose either corrections or telecommunications as a career path program for high school seniors aspiring to law enforcement with or without a college education.

Holmes chose the latter and now nearly 17 years into the program he can take credit for giving a professional boost to hundreds of students and supplying 911 centers with employees qualified to do the job. Of the 500 students successfully completing the course, 175 have been hired in Houston, Texas, USA, metropolitan area dispatch centers.

Holmes was surprised by the program’s success. Not that he developed the program on a lark, but he just wasn’t sure how it would take.

“I didn’t know where it would go, and I’m very pleased with how well it’s worked for the students,” said Holmes, who had a long career in law enforcement prior to teaching at the High School for Law Enforcement and Criminal Justice in Houston. “I see students make life changes.”

The High School for Law and Justice (HSLJ) (originally the High School for Law Enforcement and Criminal Justice) opened its doors in 1981 to encourage minority interest in law enforcement careers. In 2000, Holmes introduced calltaking and dispatching to the curriculum through a partnership with Greater Harris County 911 Emergency Network.

Holmes started from scratch. His experience in communications was limited to talking over the radio to dispatch when he was a police officer and detective. His first step inside a center happened while he was on the road, learning about 911 communications, and was invited into the Fulton County E911 Center in Atlanta, Georgia, USA.
“I was amazed,” he said. “I had no idea about all they did. I had no idea how hard they worked to protect guys like me [police officers] in the field.”

Holmes’ program debuted the same year IAED released ETC version 1.0. Just as Holmes had discovered, the Academy noted a void in basic telecommunications education. EMD training and certification was available but solely to agencies implementing the Medical Priority Dispatch System™ (MPDS®). EFD and EPD were still under development.

HSLJ provides 135 hours of instruction over two semesters and includes lessons on CAD, VESTA/MapStar, TTY/TDD, and texting, and the 40-hour ETC Course. Students train at HSLJ and the Houston Emergency Center (HEC) and earn ETC certification from the IAED and Texas Crime Information Center/National Crime Information Center (TCIC/NCIC) certification from the Texas Department of Public Safety. Upon graduation, a Texas Commission on Law Enforcement (TCOLE) Telecommunicator License is required within one year of hire by a PSAP.

Holmes said students are employed at HEC during their senior year and many are offered full-time positions upon graduation.

The students call HEC “the land of opportunity” because of what it provides them while in high school and college. The good news has spread, which is one reason Holmes was eager to attend the ETC instructor course.

“Others have heard about the numbers of students hired and about the agencies that are looking to hire them,” he said, “They want to know how to do the same at their schools.”

Jump-start for recruits

Information overload without learning core communication principles was a definite concern at the Winnipeg Fire Paramedic Service, Winnipeg, Manitoba, Canada. Communication center recruits must earn a paramedic technician’s license and certify in EMD (since 2000) and EFD (2008). While Manitoba EMS acknowledges EMD as a key service, training and education in the public sector focuses on primary and advanced care for paramedics.

An in-house training program covered the basics, such as policy and procedures beyond using the protocols, but it wasn’t enough to build the confidence needed to answer calls and dispatch response. New recruits struggled, and who could blame them?

“We were left with having to start from the ground up,” said Ronald Williscroft, QI/Training Officer, Winnipeg Fire Paramedic Service. “We couldn’t expect them to jump into EMD and EPD without any background.”

The concern led to investigating what was available to fill the gap or, as Williscroft explained, give recruits the knowledge they needed to get going. Through their association from using the MPDS and later the Fire Priority Dispatch System™ (FPDS®), they discovered ETC and for the past five years, it’s been the sustenance behind telecommunication training.

“ETC solved a lot of issues for us,” Williscroft said. “With the recruits, we saw the light bulb go on.”

ETC is where training begins. Recruits spend six to eight months in training before they are allowed to handle the phones and radios independently. The first 10 weeks is classroom, which includes practice through simulated calls, followed by working alongside experienced staff. The result is a very low turnover, both among recruits who have applied without experience to the seasoned EMS staff transitioning into communications from the field.

“People stay,” he said. “They love the environment.”

The “environment” the Academy establishes in the classroom convinced Williscroft that the ETC instructor course would be a great fit for him. Teaching ETC is top among his duties at the Winnipeg Fire Paramedic Service, and his specialty in radio communications lends to a welcomed avenue of discussion wherever he goes. The props he brings (antennas and radios, for example) convey information that dispatchers can use to troubleshoot their equipment, and the method he incorporates in his training resonated at ETC.

“Everyone had their specialty area, and you could see the passion we all bring to
the profession,” he said. “I like learning ways to incorporate pieces into my global knowledge.”

**College and center**

Calvyn Swigart is part of his future unfolding. While in his junior year of high school, Swigart took a class in public safety through an Early College Academy course at Butler Community College and discovered that emergency communications is a profession he might want to pursue for a career.

Now into his senior year, he is an intern at Butler County Emergency Communications Center (ECC), El Dorado, Kansas, USA, and thinks it’s likely he’ll apply for a full-time position when he graduates and turns 18 (state mandated minimum age limit to work in emergency dispatch).

“I’m definitely interested,” said Swigart, who provides administrative assistance at the EMD accredited center. “There’s a lot more going on behind the scenes than I thought.”

That’s the same thought Jody Mader had when she started at the Allen County 911 Communications Center, Iola, Kansas, nearly 10 years ago. It’s also the reaction she hears during the ETC class she teaches to new hires at Butler County ECC and from the students enrolled in the same program Swigart attended.

“This is more than answering phones,” said Mader, supervisor, Butler County ECC, where she has worked for the past nearly five years. “We impact people’s lives.”

New hires at Butler County ECC go through five months of training before answering calls and dispatching independently. The 40-hour ETC course comes first, followed by in-house policies and procedures review and EMD certification. They train with experienced staff on the floor for several weeks. Mader and Butler County ECC Director Chris Davis are the two certified ETC instructors, and ETC has been part of the new hire training since 2005.

Mader also teaches a one-semester ETC course through the Early College Fire Science Academy at Butler Community College. The course she helped design teaches categorization of agency-specific response, familiarizes students with CAD operations, and offers experience in a simulated PSAP center and tours of the Butler County ECC. The Fire Science Academy is an option for students attending the Early College Academy.

Mader said the Academy’s Instructor the Instructor ETC course provided “tips and tricks” she can incorporate in teaching and curriculum development. Advanced training and education are part of the evolution Mader has seen during the past 10 years.

“Emergency dispatch is no longer considered just a job,” she said. “We are part of a profession and that requires professional level education and training.”

The Butler County ECC is the primary answering point for 18 emergency response departments throughout Butler County and dispatches more than 50,000 calls for service each year.
TO USE OR NOT TO USE
When, how, and why to use the Agonal Breathing Diagnostic Tool

Becca Barrus

Editor's Note: The Agonal Breathing Diagnostic Tool’s name is changing to Breathing Verification Diagnostic in MPDS® version 13.1.

The caller is frantic; there’s something wrong with his mother. She’s on the ground, unconscious, and she needs help immediately. After asking the other Case Entry Questions, you ask, “Is she breathing?” There is a pause. The response you get could be anything from “Yes” or “Uh, yeah, I think so” to “I’m not sure” or “No.”

In which situation should you use the Agonal Breathing Diagnostic Tool? If you aren’t sure, you aren’t alone. The name itself makes it sound like you should use it to confirm the presence of AGONAL BREATHING. However, Emergency Medical Dispatchers (EMDs) should only use it to confirm that a patient is breathing effectively. If there is any doubt as to the patient’s breathing status, you, the EMD, should supply hands-on-chest CPR instructions immediately.

What is AGONAL BREATHING?
AGONAL BREATHING (sometimes called agonal respirations) falls under INEFFECTIVE BREATHING in the Case Entry Protocol. It is the result of a signal sent from lower brainstem neurons as higher centers become hypoxic (lacking in oxygen) during cardiac arrest.1 It’s a sign that the brain isn’t getting enough oxygen, and unless there’s external intervention, the patient will die.

To the layperson, AGONAL BREATHING can look and sound like effective breathing; the patient’s chest still moves up and down, and the patient makes gasping noises that can be interpreted as breathing. The main difference between effective breathing and AGONAL BREATHING is that AGONAL BREATHING is slow and irregular. The Agonal Breathing Diagnostic Tool in the Medical Priority Dispatch System™ (MPDS) is designed to help you, the EMD, distinguish between effective and AGONAL BREATHING.

All about the breathing
Breathing diagnostics are relatively new to PAIs.

Pulse checks used to be part of CPR instructions and trainings—including those in the MPDS—until the American Heart Association (AHA) discovered in 2000 that laypersons were getting false positives; they were reporting their own pulse rate, not the patient’s.

In addition, Emergency Cardiovascular Care (ECC) Guidelines published by the AHA in 2000 stated that layperson rescuers were taking “far too much time” to perform a pulse check and that their results were “extremely inaccurate.”2
A new measure was necessary, and the AHA decided on “signs of circulation,” which comprise purposeful movement (goal-oriented activity, such as avoiding painful external stimuli) and breathing. In turn, the International Academies of Emergency Dispatch® (IAED™) developed a methodology focused on distinguishing between effective and INEFFECTIVE BREATHING in an unresponsive patient.

**Agonal Breathing Diagnostic Tool**

The definition of INEFFECTIVE BREATHING first appeared in MPDS version 11.0, released in 2000. It was attached to Case Entry and Protocol 9: Cardiac or Respiratory Arrest/Death, and the definition was essentially the same as the current one. AGONAL BREATHING was mentioned on the Additional Information section of Protocol 9, but it was not defined there, and there was no tool to help EMDs distinguish between agonal and effective breathing.

The Agonal Breathing Diagnostic Tool was introduced in MPDS version 11.2, released in 2005, in conjunction with Case Entry, Protocol 9, and Protocol 31: Unconscious/Fainting (Near). Today, Agonal Breathing Diagnostic Tool instructions are available both on the MPDS cardset and in ProQA®.

In the cardset, the instructions can be found on Case Entry, Protocol 9, Protocol 12: Convulsions/Seizures, and Protocol 31 in the Additional Information section. In ProQA, the instructions can be accessed by clicking on the red question mark icon. You can use the Agonal Breathing Diagnostic Tool at any point during questioning if you have reason to doubt the effectiveness of the patient’s breathing. When the tool is pulled up, you are told to read the instructions verbatim: “Okay. I want you to say ‘now’ every single time s/he takes a breath in, starting immediately.”

For both ProQA and the cardset you will check a maximum of four breaths so that three intervals are tested. The reason that three intervals between breaths are tested is because the Academy wants you to get the information (whether or not the patient is breathing effectively) as quickly as possible, but they also want enough data points to ensure that the data collected is valid. Any interval equal to or greater than eight seconds qualifies as AGONAL BREATHING, and you should begin CPR instructions immediately.

It cannot be overstated that the tool should be used to confirm that breathing is truly present rather than confirm ineffectiveness of breathing. Don’t waste valuable time second-guessing the caller’s report that the patient isn’t breathing effectively—get to hands-on-chest as soon as possible.

**When to use it**

The Agonal Breathing Diagnostic Tool is provided as a safety net on Protocol 12. This is because some people in cardiac arrest experience seizures or convulsions, so some cardiac arrests may be reported by the caller as seizures. According to Rule 1 on Protocol 12, use of the detector is mandatory “after the jerking/twitching has stopped for all generalized (non-focal) seizure patients who are breathing or whose breathing is questionable.” Typical seizure patients will begin breathing normally after the convulsions stop, whereas patients in cardiac arrest will not: Their breathing will continue to get worse.

The following are other instances in which the Agonal Breathing Diagnostic Tool should be used outside of mandated use with Protocol 12.

The first is when you, the EMD, have reason to believe that the caller may be mistaken in reporting that the patient’s breathing is effective. Secondly, you should use the tool when the caller answers Case Entry Question “Is s/he breathing?” with “Yes, but …” (“Yes, but it sounds funny” or “Yes, but it sounds like they’re struggling”).

Usually the caller will say if an unresponsive patient is breathing ineffectively during Case Entry, in which case you would go to Protocol 9 (after dispatching the appropriate ECHO code).

The Agonal Breathing Diagnostic Tool will also be used on Protocol 31 if the patient is unconscious and if the caller answers “No” to Key Question 1 (“Is her/his breathing completely normal?”).
Scenario as a whole

Emergencies don’t happen in a vacuum, and to ignore the surrounding circumstances of a call is a grave error. EMDs need to be mindful of the situation as a whole. As Brett Patterson, IAED Chair of the Medical Council of Standards and Academics & Standards Associate, puts it, “EMDs are often so focused on protocol that they sometimes forget the scenario surrounding it.”

For example, as Patterson believes, it’s one thing if a patient gets hit on the head and goes unconscious; it’s another thing altogether if the patient appears to be fine one minute and then is unconscious the next, especially if the patient is elderly. In those situations, it’s much more likely to be a cardiac arrest case than not. In this case, even if the caller reports the patient is breathing effectively, you are justified in using the Agonal Breathing Diagnostic Tool to confirm.

It bears noting that the name of the Agonal Breathing Diagnostic Tool is changing in MPDS version 13.1 to “Breathing Verification Diagnostic.” Patterson believes that the current name might be partly to blame for the tool’s misuse: “The name ‘diagnostic tool’ implies that it should be used to diagnose agonal breathing rather than confirm that effective breathing is present.”

Risks

What happens if the caller reports the patient is breathing effectively, you provide CPR instructions, and it turns out that the patient was actually breathing effectively?

According to Greg Scott, IAED Operations Research Analyst, a patient’s rib could crack or break during chest compressions, but the risk is very low. The risk of the broken rib puncturing an internal organ, such as the spleen, and causing fatal internal bleeding is even lower than that. Err on the side of providing CPR instructions when the caller reports INEFFECTIVE BREATHING; don’t second-guess the caller.

To ignore the surrounding circumstances of a call is a grave error.

Failing to maintain proper airway control is the main risk in performing CPR on an unresponsive but non-arrested patient. If the caller is too engrossed in giving chest compressions, the caller might neglect to make certain that the patient’s airway is clear. In an unconscious patient whose heart is beating, the airway is flaccid (weak and soft), which can cut off the flow of oxygen if not properly maintained by the caller.

What are the risks of using the Agonal Breathing Diagnostic Tool when the caller reports the patient is breathing effectively? The worst-case scenario would be if you used the Agonal Breathing Diagnostic Tool and discovered that the patient really is breathing effectively, which is pretty good as far as worst-case scenarios in dispatch go. The patient may still be unresponsive, but at least you know that she is getting oxygen.

“It’s OK to be wrong,” Patterson said. “It’s OK to assume they’re not breathing when they really are.”

If the caller begins chest compressions on a patient who is unconscious but actually has a pulse, the patient will react to the pressure by either moaning or moving, which will let the caller know that he is alive.

Patterson said, in this case, it’s better to believe that the caller’s report of INEFFECTIVE BREATHING is accurate and immediately proceed to CPR instructions.

Why use it?

Why is checking for AGONAL BREATHING important? What’s wrong with applying hands-on-chest as soon as any abnormal breathing is reported in an unresponsive patient?

There is some debate as to the necessity of determining whether or not a patient is actually in cardiac arrest before giving her CPR. A study conducted between 2004 and 2007 in King County, Washington, USA, analyzed the number of people receiving CPR to assess the risks of giving CPR to patients who are not in cardiac arrest.3 Of the 1,700 patients for whom dispatcher CPR instructions were initiated, 55 percent were in arrest, but 45 percent were not in arrest and did not require CPR. Of the 247 patients assessed in the study, 5 (2 percent) suffered a fracture due to compressions.

Scott said even though a very low percentage of the people who received CPR despite not needing it were actually injured by the chest compressions, that is not the aim of the Academy.

“Our goal is to be as accurate as we can,” he said. The MPDS strives to get the right help to the right people at the right time; giving CPR to someone who is unresponsive but not actually in arrest, while not deadly, is not ideal.

Dr. Jeff Clawson, the inventor of the MPDS, addressed the risk of fracture cited in the King County, Washington, study in an Ask Doc column in the Journal4:

On the surface, this seems an insignificant number, unless you are one of the five. However, the MPDS is used in over 3,500 communication centers worldwide and literally affects millions of patients. A standard practice of performing unnecessary compressions on roughly 50% of unconscious, abnormally breathing patients has the potential to cause tens of thousands of fractures, and millions over a relatively short period of time. This hardly equates to “Do no harm.”

Sources

YOU MUST BE MEDICAL CERTIFIED TO TAKE THIS QUIZ

Answers to this quiz are found in the article “To Use or Not To Use,” which starts on page 32. Take this quiz for 1.0 CDE unit.

1. Emergency Medical Dispatchers should only use the Agonal Breathing Diagnostic Tool to confirm that a patient is breathing effectively.
   a. true
   b. false

2. AGONAL BREATHING is a sign that the brain is:
   a. getting too much carbon dioxide.
   b. suffering from internal bleeding.
   c. not getting enough oxygen.
   d. not processing external stimuli.

3. Which of the following is NOT a sign of circulation as outlined by the American Heart Association in 2000?
   a. breathing
   b. pulse
   c. purposeful movement

4. In which version of MPDS was the Agonal Breathing Diagnostic Tool introduced?
   a. 11.1
   b. 11.2
   c. 12.0
   d. 12.2

5. In the MPDS cardset, the instructions for the Agonal Breathing Diagnostic Tool can be found on Case Entry and which of the following protocols?
   a. Protocol 9: Cardiac or Respiratory Arrest/Death
   b. Protocol 12: Convulsions/Seizures
   c. Protocol 31: Unconscious/Fainting (Near)
   d. All of the above

6. Any interval equal to or greater than ____ seconds qualifies as AGONAL BREATHING.
   a. five
   b. six
   c. seven
   d. eight

7. You should use the Agonal Breathing Diagnostic Tool when the caller reports that the patient is “barely breathing.”
   a. true
   b. false

8. The name of the Agonal Breathing Diagnostic Tool is changing in MPDS version 13.1 to
   a. Breathing Verification Diagnostic
   b. Breathing Diagnostic Tool
   c. Confirm Effective Breathing
   d. Ineffective Breathing Tool

9. What is the main risk of performing CPR on an unresponsive but non-arrested patient?
   a. breaking a rib
   b. failing to maintain proper airway control
   c. causing a cardiac arrest
   d. rupturing internal organs

10. In the King County, Washington, study, what percentage of the 1,700 patients for whom dispatcher CPR instructions were initiated were not actually in cardiac arrest and did not require CPR?
   a. 35 percent
   b. 40 percent
   c. 45 percent
   d. 50 percent

To be considered for CDE credit, this answer sheet must be received no later than 12/31/18. A passing score is worth 1.0 CDE unit toward fulfillment of the Academy’s CDE requirements. Please mark your responses on the answer sheet located at right and mail it in with your processing fee to receive credit. Please retain your CDE letter for future reference.
A TALE OF TWO PROTOCOLS
Protocols 70 and 75 handle some scary issues

Ron Richard and Josh McFadden

Trains have moved across this country for about 200 years. The concept has not changed much in all that time; it’s still a heavy steel vehicle on wheels, moving along steel tracks. In 1840, 3,000 miles of railroad track had been built in the U.S. By 2016, that number had increased to 93,000.1

The next time you’re waiting at a railroad crossing and counting the rail cars going by, just think of all the pollution not being created by this conga line of cars. One hundred rail cars cause fewer pollutants than the equivalent of 200 tractor-trailer trucks driving the highway. That’s two or three locomotive engines compared to the exhaust from two hundred diesel engine tractor-trailers and their refrigeration units.

By the late 1960s, people were choosing passenger planes and airports with air traffic control systems. Rail travel started to lose its ridership. In 2016, Amtrak moved over 31 million passengers, on more than 300 train routes—an average of over 84,700 people per day.2 With all these people and products moving about, public safety agencies should be aware of other hazards related to the railroad industry.

Rail speed ranges from 62 to 86 mph, with a projected goal of reaching 140 mph. (European trains already reach speeds of 165 mph.) These greater speeds could cause a potential for more devastating accidents.

Amtrak was formed in 1971. Airports and airlines, as well as highways with their improvements, have changed the way people travel. But train lines have pretty much gone unchanged. The latest project is to increase the height in tunnels so double-decker passenger cars can pass.

Remember that freight trains can pull well over 100 cars, and passenger trains usually pull a lot fewer.

Two train protocols

The Fire Priority Dispatch System™ (FPDS™) had just one train-related Chief Complaint until 2009. Starting with FPDS version 5.0, the Chief Complaint was split using data and research obtained through input from protocol users and submissions through Proposals for Change.

Protocol 70 addresses Train and Rail Collision/Derailment. Example situations for this protocol would be any train collision/derailment accident on tracks or at railroad crossings. Also, as Rule 5 states, “If a train incident involves both a collision/derailment and a fire, use Protocol 70.”

Protocol 75 is used to handle a Train and Rail Fire. This would be for any reported fire to the locomotive engine, passenger cars, or any freight compartment rail cars whether stationary or moving. The Determinant Codes
on both protocols address the exact location of the train including whether it’s above ground level, below ground level, in a tunnel, over water, etc. Suffixes identify the type of train, and the caller’s answers to Key Questions can uncover any hazards.

**Protocol 70**

Protocol 70 has DELTA- and CHARLIE-level Determinant Codes. If a person is trapped by the train without collision or derailment, the call is coded as 70-D-1 “Person trapped by train (no collision/derailment).” All collision/derailment incidents are assigned a DELTA-level Determinant Code. These are all determined by asking the first three Key Questions: What type of train is involved? Where exactly is the train? Are there any buildings/structures or vehicles involved?

It’s important for the dispatcher to understand some key definitions in this protocol. One of the Determinant Codes is 70-D-8 “Collision/Derailment on BRIDGE/TRESTLE.” A bridge/trestle is defined as “a structure spanning and providing passage over a gap or barrier such as a river or roadway.”

There are four CHARLIE-level Determinant Codes on Protocol 70: 70-C-1 “LARGE FUEL/FIRE LOAD vehicle on tracks,” 70-C-2 “COMMERCIAL vehicle on tracks,” 70-C-3 “Other vehicle on tracks,” and 70-C-4 “Unknown situation (investigation).” The protocol defines LARGE FUEL/FIRE LOAD vehicles as “Vehicles, usually large in size, that can carry large amounts of combustible materials. These may pose additional threats during firefighting operations and require additional resources.” A bus, camper, or motor home may be considered to be a LARGE FUEL/FIRE LOAD vehicle.

A COMMERCIAL vehicle, meanwhile, is defined as “Any vehicle that transports products related to business or trade. The products can be dangerous or hazardous.” Example of these types of vehicles may be a tanker or a tractor-trailer (semi).

Remember, also, that Rule 2 states, “All derailments are considered to have electrical hazards until proven otherwise.” Similarly, according to Rule 4, “All incidents involving trains, subways, or commuter rails are considered HAZMAT incidents until proven otherwise.” A HAZMAT incident is “an incident involving a gas, liquid, or solid that, in any quantity, poses a threat to life, health, or property.” All HAZMAT calls have a DLS link to Panel B-4.

**Train on fire**

One of the challenges for public safety dispatchers is a moving train fire. The locomotive engineer may not even know that part of the train is on fire. The dry vegetation of summer causes many railside brush fires that could span over a mile or more. Getting these trains to stop could take longer as dispatchers make proper notification to rail officials.

Protocol 75 has nine Determinant Suffixes to differentiate the type of train involved: C = Cable car, F = Freight train, L = Light rail, M = Monorail, O = Other, P = Passenger (commuter) train, S = Subway, T = Trolley, and U = Unknown.

There are no BRAVO-level Determinant Codes for this Protocol. Instead, there are eight DELTA-level Determinant Codes, one CHARLIE-level Determinant Code, and one OMEGA-level Determinant Code. The dispatcher will select the Determinant Code based on where the train in question is located or whether the incident involves buildings/structures (75-D-1) or vehicles (75-D-2). Key Question 3, “Where exactly is the train?” and Key Question 4, “Are there any buildings/structures or vehicles on fire?” will provide this information. After Key Question 4, the dispatcher can dispatch the appropriate response and then return to Key Questions.

For a private caller, Key Questions 5–8 will help the dispatcher determine which DLS Links to choose. If these questions reveal Caller Danger – Not Trapped, Person on Fire, Danger Present – HAZMAT, or Tunnel Fire situations, the link will be to something other than Panel X-1.

If the train and rail fire concerns a moving train, this situation should be
assigned the OMEGA-level Determinant Code, 75-O-1 “Moving train.” Unknown situations requiring an investigation are coded as 75-C-1.

Train problems—out of the box

Besides situations involving collisions or train fires, there are other emergencies that happen involving train properties. Emergencies associated with fixed train equipment and properties can be handled using other protocols within the FPDS. At train stations, you could receive calls reporting people stuck in elevators or entrapped by escalators. You could also receive calls reporting electrocutions because unauthorized personnel walked along track lines or tunnels with electrified third rails (an additional rail placed alongside or between the rails or a railway track designed to supply power to a train).

Passengers slipping or falling from platforms could indirectly include train interaction. Police may also need to be dispatched if the injury was from a push (assault). Each jurisdiction should have procedures in place to stop inbound trains and make a safety zone for responders to operate.

How about a reported rail car leaking a toxic solution? Maybe a vapor or cloud from a train storage yard? Both are HAZMAT situations.

One could receive calls reporting accidents in rail yards. Injuries from workers could include getting their feet stuck in switching equipment as well as other heavy equipment injuries.

These are just a few examples of situations that can happen within any train/rail property.

Railroad crossings and derailments

In the United States, there are about 5,800 train–car collisions each year. One is almost 20 times more likely to die in a crash with a train than with another motor vehicle. Each year, approximately 600 people are killed and 2,300 injured in these accidents. Railroad guards are used to signal that a train is approaching. People should never park their vehicles on the tracks at a gated crossing. One should never drive or walk around gates that are in the closed position, especially with red lights flashing.

In February 2015, in Valhalla, New York, USA, a commuter train carrying 650 passengers crashed into an SUV stuck between the two gates at a railroad crossing. The eight-car passenger train struck the vehicle, and both ended up 650 feet from the point of the collision. This caused a flash fire that destroyed the lead car. The SUV driver and five train passengers died in the crash, and there was $3.7 million in damage.

Getting an exact location for these types of accidents helps the responders gain a closer access point to set up a command point. Not all of these situations happen at railroad crossings. Sometimes the best path is bringing equipment through backyards or business parking lots.

Train tunnel accidents

Most major cities have subway systems. Problems can develop from stalled trains forcing evacuations, smoke in tunnels, and/or train fires or collisions.

Many operations in these environments cause responders to use the utmost caution. Examples of these types of environments include dark tunnels, rodent-infested areas, areas with high-voltage power equipment, and limited egress points, to name a few.

Trains and rail yards are all around us. If everyone uses caution around these areas, everyone can enjoy the memories of being a little kid and being in awe of these magnificent machines.

Sources

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

Answers to this quiz are found in the article “A Tale of Two Protocols,” which starts on page 36. Take this quiz for 1.0 CDE unit.

1. How many miles of track were there in the United States in 2016?
   a. 3,000
   b. 9,700
   c. 50,000
   d. 93,000

2. How many passengers rode Amtrak trains in 2016?
   a. 300
   b. 84,700
   c. 31 million
   d. 300 million

3. Trains in Europe can reach speeds of up to _______ mph.
   a. 140
   b. 165
   c. 200
   d. 250

4. Rule 5 on Protocol 70 states that if the train incident involves both a collision/derailment and a fire, you should use Protocol 75.
   a. true
   b. false

5. All collision/derailment incidents on Protocol 70 are assigned a ______-level Determinant Code.
   a. OMEGA
   b. BRAVO
   c. CHARLIE
   d. DELTA

6. On Protocol 70, what DLS Link should you use for HAZMAT issues?
   a. Panel B-4
   b. Panel C-1
   c. Panel X-1
   d. Panel X-2

7. How many Determinant Suffixes are there in Protocol 75?
   a. 5
   b. 7
   c. 9
   d. 11

8. On Protocol 75, you should always link to Panel X-1.
   a. true
   b. false

9. Which of the following is true?
   a. A person is 20 times more likely to die in a crash with another vehicle than in a crash with a train.
   b. A person is 20 times more likely to die in a crash with a train than in a crash with another vehicle.
   c. A person is equally as likely to die in a crash with a train as with another vehicle.
   d. There are no available statistics regarding automobile–train collisions.

10. Why is it important to get an exact location of a train accident?
    a. So responders can gain a closer access point to set up command.
    b. So fewer bystanders will be affected.
    c. It’s not important; you only need to know the approximate location.
    d. So authorities can take measures to prevent accidents from occurring there in the future.

To be considered for CDE credit, this answer sheet must be received no later than 12/31/18. A passing score is worth 1.0 CDE unit toward fulfillment of the Academy’s CDE requirements. Please mark your responses on the answer sheet located at right and mail it in with your processing fee to receive credit. Please retain your CDE letter for future reference.
EVER since we started watching movies, at least of the “talkie” kind, we have heard cowboy, after soldier, after cop, after ambulance driver, after bystander make the common statement about a victim, “Don’t let them go to sleep!” or they’ll die. Everything from slapping, to smelling salts, to cold water, to just plain cajoling them has been tried with some success on the silver screen. However, the fact that nobody “really” dies in the movies or television, doesn’t mean that it works. All the while this recurrent moment has simply created a monstrous urban and rural myth: Keeping a dying patient awake will prolong or prevent their death. In a letter to the IAED’s local newspaper the Salt Lake Tribune, Dr. Clawson “saves the truth” while putting this notion to a proper, and needed, death—all within the 200-word “Letter to the Editor” limit.

Editor’s Note: This column was originally printed in the Letters to the Editor section of the Salt Lake Tribune on June 7, 2016.
Letter: Keep them awake? No, keep them breathing

Let’s set a ubiquitous, medical legend to rest (“City worker to the rescue,” June 3). Time and time again, a lay helper or reporter mentions that an injured patient was “kept alive/saved” by keeping them awake—based on the myth that if the patient goes to sleep, they’ll die.

As an emergency EMS and 911 physician, I can unequivocally state that this just isn’t so. Whatever is going to kill the patient, happening inside their body, is not changed by urging them not to go to sleep.

With external or internal bleeding, shaking or urging the patient to “stay awake” can actually make the problem worse by increasing blood pressure, thereby pumping out more blood, which their body is working to preserve.

To help with “passing out,” the best help is keeping their airway open—no pillows behind their head, simply keeping their head tilted back—not forward. “Helping” grandpa with a pillow just hastens suffocating when he needs oxygen the most.

This happens all the time and is a common, silent killer happening well before the EMTs or paramedics arrive. Every 911 dispatcher knows this and will so advise when needed. It’s not “going to sleep” but what’s causing your unconsciousness that kills you.

Jeff Clawson, M.D.
Salt Lake City
"We got a baby" were probably the best four words EMD Matthew Gaines heard, at least in the course of the nearly three minutes he was providing childbirth PAIs to the caller, the baby’s grandmother.

And for the next 14 minutes while waiting for the ambulance to arrive, Gaines was connected to the sweet sounds of a baby crying and three adults fussing over the newborn girl.

“I was very relieved,” Gaines said. “It was one of those calls we don’t deal with often, and I had to get everything right.”

And that’s exactly what Gaines did. Before we go any further, however, we need to get something straight.

“This was a county call, not inside the city limits,” said Communications Coordinator Vicki Atchley, Rogers Police Department, Arkansas, USA.

The area from where the call was made does not have a dedicated ambulance response. This section of the county relies on a volunteer fire department. Response time in Rogers city proper is generally less than five minutes.

Despite the wait, unusual even among volunteers rousted from the sack, no one seemed rattled. Gaines kept them on the line. He was there with them. Mom and grandmother were altogether calm and collected. Dad followed the PAIs that his mother-in-law repeated to him from her station at the phone.

The baby let out the first wail seconds after her introduction to the world. The cord was not wrapped around her neck, and for the next little while, the new baby and mom stayed warm courtesy of dad.

“I think we’ve used about every towel we have,” dad can be heard commenting in the background. Gaines was confident and the perfect textbook example for giving step-by-step pre- and post-delivery instructions.

It was a delivery without complications and a great first child delivery call for Gaines. “No one was impatient at all,” he said.

Atchley credited Gaines' approach to the job. "Matthew is very low-key and competent," Atchley said.

Gaines started in emergency dispatch in 2013, fresh out of college with a bachelor’s degree in sociology and criminal justice. He said it’s a great place to work, even when it is nearly 2 a.m., and the call comes in two minutes before your shift ends.

“I like it,” Gaines said. “I like getting up in the morning knowing I’m going to be helping people. I like being able to calm people down.”

Rogers Police Department 911 center handles radio traffic for police, fire, and EMS units and all incoming 911 and non-emergency calls for the City of Rogers. The center is staffed by 1 communications coordinator, 3 supervisors, and 18 dispatchers, and they are going on their ninth year using the Medical Priority Dispatch System™ (MPDS™).

The city, located in the northwest portion of the state in the Fayetteville-Springdale-Rogers area, is one of the fastest growing areas in the nation, and emergency communications is growing right alongside projections.

“Our call volume has gone up by about 20 percent for each of the last three years,” Atchley said. “Our plan is keeping current on all technologies, offering comprehensive training, and having a strong quality assurance program.”

The 911 center also uses the Fire Priority Dispatch System™. The CAD, 911 telephony, and radio consoles were all updated in the past 18 months, and the radio system is scheduled for an upgrade next year. A new fire station is slated for opening in 2019. In July, the fire department added an additional peak hour ambulance.

Atchley credits the motivation of public service employees: “We’re professionals, and it shows.”
It was a perfect storm of EMD training for Audrey Michie, calltaker from the Scottish Ambulance Service (SAS) communication center.

On June 13, the center went live with ProQA® and the Medical Priority Dispatch System™ (MPDS®) version 13.0. The new version includes instructions for administering epinephrine (Protocol P) and Narcan/naloxone in both nasal and injectable forms.

Prior to implementing the new software, the SAS EMDs had received training in naloxone administration for callers reporting a patient who is unconscious, not alert, or changing color due to a suspected drug overdose. Training complements Scotland’s National Naloxone Program (NNP), established in 2010 to reduce the number of drug-related deaths through distribution of the drug.

But is anyone really ready once the life-or-death call comes in? What if you’re the first to receive the call, meaning you have no one’s experience to guide you?

Michie was ready. Less than 24 hours after going live with v13.0, Michie answered a call describing a female patient who was unconscious and “barely breathing,” following a reported drug overdose. The patient had already been given one dosage of naloxone, available through NNP. The single dose, however, proved ineffective, prompting the call to 999.

“I instituted the second dose, and the patient came to in seconds,” Michie said. “From barely breathing to snorting and her color coming back and talking, she was coming back.” Michie disconnected once an ambulance was on scene and with the patient.

On a call the day before going live with ProQA, Michie relied on the MPDS cardset [which SAS had been using since version 11.1] to provide instructions for auto-injecting epinephrine. The caller, she said, was experiencing the first stages of an allergic reaction after returning home from a run, and the medication on hand showed a past expiration date.

Michie referred to Expired Injector Kit instructions, citing studies that showed kits 5 to 7 years past their expiration date still had more than 70 percent of epinephrine left, and kits 2 to 3 years past still had 90 percent left.

The caller injected the medication. Michie started in the SAS communication center nearly three years ago after 12 years in police dispatch. She’s always been in emergency services for one simple reason. “I love it,” she said. “We can make a difference in someone’s life.”

And as far as being the first in her center to answer a call requiring naloxone administration? “We get calls for CPR every day,” she said. “We’re used to it. All the instructions are there for us to follow.”

During the past six years, the NNP in Scotland had distributed more than 20,000 take-home naloxone (THN) kits.1

The SAS sends an ambulance for a patient symptomatic of an overdose to reduce the potential of a toxic relapse and provide access to emergency care.2

The SAS operates with three Ambulance Control Centres (ACC) in Inverness, Cardonald, and South Queensferry. The three ACCs handle over 800,000 calls every year and dispatch ambulances to over 650,000 emergencies and requests from doctors to transfer patients to the hospital. Michie works out of the South Queensferry center.

Sources
THE EXTRA MILE
Dispatcher puts heart into everything she does

Heather Darata

Amber Giles is passionate about everything she does. When she’s not working as a dispatcher at the Utah Valley Dispatch Special Service District in Spanish Fork, Utah, USA, she spends most of her time with her four children (8, 10, 11, 14).

But she also loves her alone time. Where does she look forward to going once or twice a week? Giles loves trail running in Provo Canyon (especially Bridal Veil Falls) and in the Canyon Glen Park area. She has been running for 10 years, but she switched to trails after hurting her knee running on hard pavement. Trail running lets her keep going.

“I think it’s a source for me to get out and be free from stress,” she said. “Therapeutic I guess.”

While she has run quite a few half marathons (13.1 miles), she knows that running a full marathon (26.2 miles) takes more intense training—about 2 hours every other day. Giles’ running dreams include training for the 50-mile Lake to Lake Relay from Gunlock Reservoir to Sand Hollow Reservoir in Utah in March 2018 and the St. George Marathon in October 2018. She also wants to continue training for a fitness competition that includes lifting weights and running. After training for four months for this competition, she had to postpone her training because of a family situation.

“From there it [the number of requests] just kind of blew up,” Giles said. “It’s always of a loved one.”

Some of those requests come from those in the public safety community. A fellow dispatcher asked Giles to sketch her father and his three brothers. One of the brothers had been murdered at 15 years old. All three of the living brothers went on to serve in law enforcement and wanted a sketch to show the four of them together.

Other sketches are for family. One of Giles’ cousins experienced a bad reaction on her way home from a dental procedure. The cousin’s heart stopped and her dad performed CPR. She recovered and her parents wanted a sketch to reflect the feeling that a higher presence was with them during that tense situation.

Besides the challenge of capturing a moment in a sketch that people can’t get from a photograph, what keeps her going?

“I try to embrace this crazy life and make every day an exciting adventure,” Giles said.

And then there is the best of both worlds—sharing her hobbies with her children.

“They love seeing [sketching] projects that I’m working on,” Giles said. “I encourage them, especially with that.”
HIGH KICKS AND HIKING
Karate, skiing, and ... Antarctica?

Becca Barrus

Katie Lenhart’s uncle enrolled her in karate as soon as she could walk, and she hasn’t stopped moving since.

“He taught me, ‘You can do more than you think you can,’” said Lenhart, a dispatcher at Salt Lake Valley Emergency Communications Center (VECC), West Valley City, Utah, USA.

This mantra, originally used to motivate her to do difficult high kicks, has served her well in both her professional and personal life. Lenhart achieved her black belt 10 years ago and still practices karate in her day-to-day life. She’s also an avid skier, averaging about 50 days of skiing in Utah per season.

Lenhart doesn’t just ski on days that are clear; she loves going out on storm days, which she likens to dispatching—you have to stick to the basics and trust your instincts. Even if you can only see a few feet in front of you, you have to keep moving ahead, staying centered and not panicking. You can’t stay at the top of the mountain; you have to go down. Difficult calls are the same way—you have to plow forward, trusting your instincts and relying on the protocol.

When it isn’t ski season, Lenhart stays in shape by hiking and training her lungs to handle strenuous workouts at high elevations. This kind of exercise, however, isn’t only getting her ready for ski season. “I want to be a dispatcher in Antarctica,” she said, her excitement infectious.

There are many qualifications for being a dispatcher in Antarctica, from needing at least two years of dispatch experience to passing a physical exam. She and her husband, Sean Murphy, a firefighter with Unified Fire Authority, Salt Lake City, Utah, USA, plan to go together. Ideally, they’d land a six-month contract, her as a dispatcher and him as a firefighter, and go backcountry skiing on their days off.

Lenhart said Murphy encouraged her to switch from a career in hotel management to dispatch when he changed careers to firefighting. She said the change improved their relationship, making them better problem solvers and teaching them to keep calm under stress.

“When working as a first responder really puts things in perspective,” Lenhart said. “When you’re talking with someone whose child is choking, losing your keys isn’t as big of a disaster as you once thought it was.”

Although you couldn’t tell by simply talking to Lenhart, who is bubbly and optimistic, she has had her share of hard calls. In July 2017, she was on the phone for two hours with a suicidal caller while they tried to ping his location. She ended up losing him over the phone. That really shook her; she sobbed at her desk and her supervisors sent her home, but when she got home, she couldn’t bring herself to get out of her car. Thankfully, she doesn’t get calls like that every day, but the impact of similar calls is unavoidable.

Lenhart stressed the importance of hobbies and goals outside of work. Going out on the slopes before heading into the communication center helps keep her personal and professional life separate. She doesn’t internalize all the pain she hears over the phone.

“You’re there to help,” Lenhart said, “but the grief is not yours to carry.”

Off hours
VOICE OF ‘EMERGENCY!’
TV dispatcher goes without a name

Audrey Fraizer

Do you happen to have an Old Pal Model PF-3300 tackle box lying around substituting for a spool and thread sewing kit or, maybe, buried under a heap of waders, fishing poles, and the fish locator you might have received as a gift but never got around to using? You know the kind I’m talking about, especially if you’ve been around as long as I have and are a fan of the TV show “Emergency!” (1972–1977). The Old Pal Model PF-3300 tackle box made by the still-in-existence Woodstream Corporation was the black box that Los Angeles County Fire Department (LACoFD) paramedics Johnny Gage (Randolph Mantooth) and Roy DeSoto (Kevin Tighe) were sure to bring to emergencies. The tough and durable box—actually used at the time by LACoFD—carried in the utility cabinet on the back of their Squad 51 truck contained their medications, while a wood-panel box labeled “IV” contained IV bags and equipment.

Squad 51 was dispatched—or, at least, dispatch was filmed—at the Keith E. Klinger dispatch center in East Los Angeles, California, USA. The dispatcher pinpointed locations using street maps from a Kodak Carousel slide projector built into the console. To page either one station or multiple stations, depending on the severity of the incident, the dispatcher would depress buttons on a signaling system preset to activate each station.

Supporting crew of Station 51 included professional firefighters. LACoFD Firefighter Mike Stoker, who played himself, as did LACoFD Captain Dick Hammer were often featured on set and so was the voice of the LACoFD dispatcher. Although rarely seen on camera (it only happened twice), the dispatcher was heard in virtually every episode.

He was always there, sending out responders and tackle boxes without so much as a line in the show’s lists of credits. The star without a name to his credit bothered “Emergency!” fan Eric D. Ruggeri, sending him on a quest to find the voice that could be heard in “each of the 120-plus regular episodes” during the six seasons the series aired. Following an extensive search enlisting the LACoFD PIO County’s Retirement Association, he found the guy he was after. His name was Sam Lanier.

Lanier was recommended for the show by James O. Page (1936–2004), who is considered by many as the “father of modern emergency medical services.” Page was a LACoFD battalion chief at the time and was contracted as a technical advisor and writer for “Emergency!” Page’s book, “The Emergency Companion,” provides a history of the TV series and includes the inside scoop of several episodes and several of the show’s characters.

In the book, Page said Lanier was every bit the professional on screen as off:

“He had a great voice and an even cadence while broadcasting … over the years I never heard him lose his composure or confuse his role with that of a field commander.”

Lanier appeared briefly in two episodes of the show: “Stewardess” (Season 5, Episode 1) and “Equipment” (Season 5, Episode 4). Interestingly, Lanier was also the (uncredited) dispatcher for one episode of “The Hardy Boys/Nancy Drew Mysteries” (1977–1979). He worked as a dispatcher from 1958 to 1977 and then as a fire safety adviser to film production companies in the Los Angeles area until his sudden death in 1997. He was 65 years old. Ruggeri credits Lanier with sparking his career in EMS and police work, including fire dispatch.

You can read more about Lanier and hear an audio clip of his famous baritone voice at emergencyfans.com/people/sam_lanier.htm.

By the way, if you happen to have an Old Pal Model PF-3300 tackle box available, the National EMS Museum (emsmuseum.org) would be interested in taking it off your hands. The same goes for a Motorola Quik Call I, just like the one used back in the day of “Emergency!”

Source
2. See note 1.
50%+ of Americans were within 10 minutes of an ambulance by 1977 thanks to the influence of the television drama.

12 paramedic units in North America when the series made its debut in 1972.

42 countries televised Emergency!

1995 Universal Studios California dubbed its fire station “Station 51” in honor of Emergency!

6 Emergency! ran six seasons (129 episodes & six TV movies)

Authentic fire department badges were used on the show.

Sources: