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immediately after returning to the office from another successful NAVIGATOR conference in April, Academy staff members and contributors went right to work putting together an informative, meaningful issue of the Journal.

July/August hits a number of topics. Audrey Fraizer’s feature story about China focuses on the growth and development of the protocols in the most populous nation on Earth. The MPDS® was introduced in the 2010, and results were immediate. This story underscores just how far emergency response has come in China.

I tackled another feature story in this issue—one that looks at recent and distant cruise ship disasters, namely the famous Titanic incident of 1912. In the story I wrote about incidents and tragedies that have occurred throughout history on these vessels and how emergency response would have dealt with the issues.

Be sure to keep your eyes peeled for our centerfold spread in this issue. “Dispatch Man” makes an appearance in the features section. It’s all part of a comic strip known as “Rhymes With Orange.” Read all about the author and get your first look at this humorous character.

As always, we have two CDE articles complete with quizzes you can take for continuing dispatch education credit. In this issue, we have a Universal CDE from Audrey that discusses how to address sinking vehicles. The other CDE is appropriate for this time of year. Summertime is prime for wildfires, and I’ve written a piece that walks dispatchers through the critical components of Protocol 67: Outside Fire, which includes wildland fires. You may be surprised, too, by some of the statistics presented in this article.

The Your Space section highlights dispatchers’ interesting hobbies and achievements from around the world. Read about a dispatcher from the Corona (California, USA) Police Department Communications Center and how she met a man she helped save through over-the-phone instructions on early CPR. Also, our Off Hours story reveals the hobbies and home responsibilities of an already busy dispatcher in Maine.

Southeast Emergency Communications (SEECOM) in Crystal Lake, Illinois, USA, is the subject of this issue’s ACE article. As our Center Piece, we highlight Brevard County (Florida, USA) Fire Dispatch, which has the challenge of contending with hurricanes and other severe weather. Our regular columns make their appearance as well. Enjoy another issue of reading!
I’d like to think of myself as a smart 911 caller. I’m not sure if there’s even such a label.

When I started working here, I didn’t know anything beyond the basics of calling 911—what number to dial was pretty much it. I imagine most members of the public start out that way.

Some may never have the opportunity to learn more about what really happens on the other end of the call. Thankfully, I have. I’ve learned about protocol, including Chief Complaints and Pre-Arrival Instructions, when to call the non-emergency line, and what information to be prepared to give the dispatcher.

This information has changed the way I call for help. I’ve dialed 911 or the non-emergency line more times in the past 10 years than I ever did before. I think it’s the knowledge of how my calls will be handled that prompts me to pick up the phone and dial. I know what to expect, whether that’s help over the phone and/or in person.

There was the time my boyfriend (now husband) and I came across the man on our light-rail train who needed help. Just after boarding the train, he told us that we had narrowly missed seeing him get beat up and falsely accused of robbery by another man. All three of us got off the train a short ride later at the next stop, and I called 911. We waited until officers showed up to make sure we were no longer needed. My boyfriend and I felt like we left the man in better hands than when we met him.

More recently, it was a man who had seemingly taken up temporary residence in our building’s shared garage. My husband had talked to him when arriving home from work. The man still had his van running in the garage a considerable time later when I got home. I felt uncomfortable with the situation, so I pulled out my trusty phone to call the non-emergency line to report a suspicious person. On our way to the gym a short while later, my husband and I stopped to thank the police officer waiting for his partner to arrive. I’m not sure what was said to the man in our garage, but when we came home two hours later, there was no trace of him or his van.

Thinking back on the incidents mentioned, I should have thanked the dispatcher involved. I probably didn’t. Maybe I did. The point is, I’m not sure. I bet that’s something you (unfortunately) get used to. It takes a certain type of person to continually take calls from people not at their best and move on with only an occasional thank you. But you do it.

I’ve heard that you love serving, and that’s what makes it worthwhile. I truly admire and appreciate those who keep answering phone calls only to rarely, if ever, hear how they turned out. Keep doing that amazing thing you do.
Two articles in JEMS (February 2017) sum up dangers associated with the overuse of Red-Lights-and-Siren (RLS) in one clear and concise message: Few medical emergencies require the need for speed. The practice, long permeating EMS, must be used judiciously.

The reason?
Modern prehospital care has largely supplanted RLS through technology, priority-driven response starting at the comm. center, and evidence-based data. And driving RLS can be downright dangerous. Look at the statistics (ambulance):

- There are 6,500 crashes each year nationwide (18/day)
- These crashes kill more EMS providers than all other causes combined (74 percent motor vehicle collision deaths)
- Ambulance crashes seriously injure an average of 10 people/day

When RLS is appropriate
This article highlights ambulance response time data gathered during a two-year period. The analysis supporting response calibrated to the specific medical event correlates to the goals of responsible EMS: fiscal accountability and optimal prehospital care that ethically protects the public, patients, and EMS professionals.

When RLS is not necessary
The second article stresses the community role at the onset of a medical emergency. Citizen responders, layperson training, the availability of AEDs, and pre-arrival instructions provided by the emergency call center are interventions overriding RLS and affiliated response time requirements.

The alternatives
The conclusions reinforce the philosophy of Protocol Inventor Jeff Clawson, M.D., who has been an outspoken critic of the excessive use of RLS. Consider this excerpt published 20 years ago in the Cincinnati Enquirer (Feb. 4, 1997):

“One of the pioneers in a trend toward medical priority dispatch response has been the Salt Lake City Fire Department, which changed its operations 15 years ago. In fact, the Salt Lake department rarely uses lights and sirens to take a patient to the hospital. Lights and sirens are reserved for severe trauma, shock, cardiac arrest, and other life-threatening situations, which account for less than 10 percent of all runs.

“I don’t think the public wants us going like hell on calls that don’t need it. You probably aren’t saving a lot of lives by running HOT to the hospital, and you’re endangering a lot of civilians along the way,” said Capt. Rein Kauffmann, EMS director for the Salt Lake City Fire Department. “In these newer soundproof cars, people can’t hear the sirens.”

The 15 years referred to in the story coincides with the city’s use of the Medical Priority Dispatch System™ (MPDS”). In 1983, Salt Lake City’s Fleet Management department reported that the emergency medical vehicle accident (EMVA) rate had dropped 78 percent in that city as a result of the MPDS, and it was estimated that the number of EMS vehicles traveling Salt Lake City streets with RLS was safely reduced by 50 percent through the use of the system.

Similarly, the entire state of Maine uses Determinant Codes in its dispatch plan as the basis for determining the level of EMS response, along with the response mode to be used (i.e., “COLD” or “HOT” Response). The code provides a clear link to the response assignment for the type of call being dispatched. Maine is also the first state to require the use of both the MPDS and the Fire Priority Dispatch System™ (FPDS”) in all its PSAPs.

Dispatch prioritization is an essential element in any EMS system.

Dispatch and transport policies, however, are not close to universal. On the plus side, recognition of Dr. Clawson’s protocol-driven process has fostered methods of triaging low-acuity calls and directing resources between calls to affect the best possible response for subsequent EMS calls. On the negative side, a high percentage of the largest U.S. cities respond to all calls RLS.

The all is disconcerting. Dispatch prioritization is an essential element in any EMS system because it establishes the appropriate level of care including the urgency and type of response.

As Dr. Clawson has long opined, “The medically unjustified, arbitrary, or blanket use of RLS is a negligent process that runs contrary to the medical dispatch standard of care.”

Source
TAKE A BREATH
Removing the uncertainty in non-breathing situations

Art Braunschweiger

Is (s)he breathing? This is perhaps a more pivotal question than any other in the Medical Protocol. From here the calltaker can proceed to a Chief Complaint Protocol or enter the Pre-Arrival Instruction (PAI) pathway for cardiac arrest. But just as calltakers are frequently uncertain whether patients are breathing, calltakers are often unsure whether to use the AGONAL BREATHING Detector to find out.

In version 13.0 of the Medical Protocol in ProQA®, a key addition to the ECHO dropdown menu for immediate dispatch scenarios was “Obviously NOT BREATHING and Unconscious (non-traumatic).” This can reduce hands-on-chest time to as little as 20 seconds from ProQA launch. But CPR survival takes more than well-designed software: It requires the user to understand the critical importance of initiating CPR as fast as possible.

Many calltakers are understandably apprehensive about directing the caller to start compressions when the patient might actually be breathing. When presented with an unconscious patient and the caller says “I’m not sure if he’s breathing,” the tendency is to turn to the AGONAL BREATHING Detector. That’s understandable but wrong. The purpose of the breathing diagnostic is not—and never has been—to confirm that the patient isn’t breathing. Its purpose is exactly the opposite: to confirm that the patient is breathing. This is reinforced by a rule in Case Entry that states “Use of the AGONAL BREATHING Detector is not necessary when UNCERTAIN BREATHING or INEFFECTIVE BREATHING is associated with unconsciousness.” Case Entry Axiom 1 reinforces this by stating “UNCERTAIN BREATHING status indicates a 2nd party caller who has seen the patient and is still unsure. This is considered NOT BREATHING until proven otherwise.”

The clock is ticking from the moment the heart stops. Brain death starts within five minutes. To the 20 seconds to hands-on-chest from time of ProQA launch, we have to add the caller’s reaction time, the time to place the call, and the time to obtain and verify the address and callback number in CAD. That brings our compressions start time closer to a full minute under the best of circumstances. Inappropriate use of the AGONAL BREATHING Detector simply delays compressions further.

Recognizing when a caller describes INEFFECTIVE or AGONAL BREATHING is also vital to patient survival. The Protocol defines eight different descriptors of INEFFECTIVE and/or AGONAL BREATHING (see image above). What that means is this: If you have a patient who’s not awake, and you ask “Is she breathing?” and the caller replies “barely,” the definition of INEFFECTIVE BREATHING has been met and no further assessment or clarification is necessary. Select “INEFFECTIVE/AGONAL” in ProQA and move on. It takes courage to immediately and decisively initiate CPR with so little information, but that’s exactly what you have to do. As new EMDs are taught in response to the breathing question, “If they don’t say ‘yes’ you must compress!”

At times you may unknowingly direct a caller to perform CPR on a patient who is breathing and has a pulse. One possible scenario is an unwitnessed seizure. If

The patient was found after the seizure ended, her breathing in the postictal (recovery) period can be very slow, and the caller might be unsure whether she’s breathing. Starting compressions won’t do irreparable harm, but withholding or delaying CPR can result in death. You can’t afford the time to ask “did anyone see what happened” or any other questions. Act fast and save a life.

Note that “snoring” is not considered INEFFECTIVE/AGONAL within this definition. Although agonal respirations are frequently described sounding like snoring, a patient with effective breathing can make snoring sounds from partial airway obstruction. Typically the snoring sound stops when the patient is positioned flat on the back with the head tilted back.
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SPIRIT VS. LETTER OF THE LAW
Addressing the new ED-Q Standards v9B and v4B announcement

Jeff Clawson, M.D.

Question:
Awhile back, I was asked to address a group of ED-Qs meeting here in Salt Lake about my take regarding what constitutes “MINOR” or “INSIGNIFICANT” deviations from scripted interrogation. This issue had become an increasingly more common topic for internal discussion at IAED™, specifically about scoring emergency dispatcher compliance deviation, which can often become a fuzzy line during verbal interaction with callers. Essentially, where can we draw the line between what word changes are significant and which are not? And how should we apply this in our ED-Q™ activities? There is a good example (that is part of the protocol used on every single call) we can use to aid in our understanding and application of this concept. This is certainly an area begging for the application of common sense.

Note: Since that time the ED-Q Council of Standards has recently issued an interim clarification document shown on page 11, which certainly constitutes movement in this direction.

Answer:
We all, in QA, need some better-defined rules for the application of the MINOR deviation label to better guide our direction when these “issues” are encountered in case review processes.

I personally believe there is a best, right way to do things in asking most questions and providing most instructions. However, this does not mean the best way is the only correct way.

There is a little-discussed concept I have referred to before as “learned phrasing.” This has been seminal in the process of having precise scripts applied for virtually everything involving caller/calltaker interaction throughout the MPDS. The concept is this: If there were a correct way to say something, it would be best to create a mental and muscle memory of its use, so that when application decision-making is encountered, this version of the “script” comes out first. This, I believe, helps to ensure that the best thing is used most of the time, especially when the “chips are down” and/or chaos or something unexpected occurs.

There should be a rational reason for doing a thing a certain way. For example, Case Entry Question 3 (CEQ3) starts with the word “Okay...” Is this an essential word in the clinical structure of the protocol—no. Will choking babies die if it is not said or substituted with something else—no. Does it have a reason for being there—yes. In case review, it appeared to be a very commonly used, natural segue from CEQ2 wherein we end the verification of the phone number, and therefore, by saying “Okay,” we acknowledge what was just said, and then flow more smoothly into, “Tell me exactly what happened.” It could just have easily been, “Okay now...” or “All right...” or “Good, tell me...” In the case of this sentence query, we chose “Okay” as the written, first-applied wording, not because it was absolutely necessary, but because it was commonly used, seemed very natural, and was easily remembered. Are there occasional times when this CE question segue is better without it? I suppose so, but I have not heard anything better specifically occur, and if so, for any apparently better reason.

It is hard to teach how the correct way of a MINOR or INSIGNIFICANT deviation can be allowed. The only exact way is to be the Gestapo of case review—wherein we commit ourselves to being not only “right,” but often “dead right,” and incur the unnecessary wrath of our emergency dispatchers by adhering blindly to exact wording, always. This is not the best course to take.

I feel the ED-Q Council of Standards can start to address these issues a few at a time, and has as of the May release of INTERIM CHANGE TO UNIVERSAL PROTOCOL STANDARD 1 (UPS 1 AS WRITTEN), so that we can more consistently follow the spirit, not just the letter, of the law. Whether we can easily identify every case of where things like “Okay” exist at this end of the spectrum of case review remains to be seen, as there will always be some subjectivity involved, no matter how much we would like to define things in black and white. However, deviation, simply for deviation’s sake (without any evident or persuasive rationale), is just that—blind deviation from what we initially thought was the best way to do it, as far as we can understand at this time. Case review, QA, and the quality improvement that should result from it are essential elements of doing what we are initially trained and expected to do—at the highest possible level. Without robust QA, we are like helicopter pilots flying in a snowstorm without instruments (the protocols) or air traffic control (ED-Q feedback) trying blindly not to crash or hit anything. To that I say, “Good luck!”

J. Clawson
INTERIM CHANGE TO UNIVERSAL PROTOCOL STANDARD 1 (UPS 1 AS WRITTEN)

The IAED™ is working to improve both the standards and software tools for ED-Qs by mid-year 2018. In the interim, the ED-Q™ Council of Standards has approved a change in how ED-Qs evaluate small parts of speech such as transitions, contractions, and other variations of the verbiage used when interrogating callers. The performance standards for all three disciplines (EMD-Q®, EFD-Q™, and EPD-Q™) have been updated electronically, but the new printed books will not be available until the Academy releases Edition 10 of the performance standards. The updated PDFs for all three disciplines are now available on our website at: http://edq.emergencydispatch.org/QMain/QDownloads.aspx

To ensure that everyone understands the exact intent of the change to Universal Protocol Standard 1, it will apply only in the following situations:

1. If a calltaker switches one transition or contraction for another (okay vs. alright or does not vs. doesn’t).

2. If a calltaker alters a small part of speech that clearly does not change the meaning or intent of the question (any vs. a, anyone vs. anybody).

If a calltaker alters the question or instruction by adding a word or deleting a word in the scripted text, it is to be evaluated as an insignificant error (MINOR deviation). This is unchanged from the previous version of the standards (9a/4a).

UPDATE TO UNIVERSAL PROTOCOL STANDARD 1

Substitute the paragraph starting with “The following description and examples best illustrate this type of deviation ...” on page 3 and the subsequent examples on page 4 with this text:

The performance standards were never designed to evaluate small variations or parts of speech such as transitions (okay, all right), contractions (does not vs. doesn’t), or other trivial alterations (any vs. a, anyone vs. anybody). These kinds of deviations do not impact the use, design, or intent of the protocols, and as such should not be considered insignificant errors. They should not be evaluated or scored, nor should they count toward receiving a MINOR deviation. If a calltaker uses transitional words to the extent it irritates or confuses the caller, this may be addressed within the customer service review.

The following examples illustrate when a calltaker changes the meaning of a question. These types of errors should be recorded as deviations:

**Example 1:** On Protocol 6 in the MPDS®, the calltaker said, “Does s/he have an unused inhaler?” but should have said, “Does s/he have a prescribed inhaler?”

**Example 2:** On Protocol 123 in the PPDS®, the calltaker said, “Did s/he take any travel items with her/him?” but should have said, “Did s/he take any personal items with her/him?”

**Example 3:** On Protocol 54 in the FPDS®, the calltaker said, “Are there any dangerous items involved?” but should have said, “Are there any hazardous materials involved?”
A help wanted ad posted for dispatch at Southeast Emergency Communications (SEECOM) in Crystal Lake, Illinois, USA, states the job requires little endurance. A misnomer? Perhaps it’s the way you define endurance.

Dispatching doesn’t take a lot of direct physical endurance, such as moving heavy furniture or lifting oversized boxes, but it certainly takes plenty of stamina to survive a high-volume, fast-paced environment dealing with life-threatening situations without conceding. It also takes the ability to go the distance when you can’t predict the outcome.

Rob Pierson is a former patrol officer who transferred into 911 communications after falling from a 33-foot ladder while off duty. He said it was difficult initially adapting to a behind-the-scenes approach to law enforcement.

“It was really great to have the job,” said Pierson, who was paralyzed from the waist down in the accident. “I was in the same place but not doing the same thing.” Pierson’s adjustment didn’t take long, particularly once he realized he was still in the position to help save lives and protect field response and bystanders. A sudden cardiac arrest save that memorialized his name on the SEECOM “Wall of Life” is a perfect example of why Pierson’s proud to say he’s an EMD.

Pierson works days, and on the afternoon of Aug. 15, 2016, he took a call from a woman reporting her husband had collapsed in the front yard while gardening. Her voice sounded calm at first, Pierson said. Her tone changed when she noted he had stopped breathing. She sounded scared.

A bystander saved the day. “He was walking by and stopped to ask if he could help,” Pierson said. “He put her phone on speaker and gave CPR until the ambulance got there. It took about three minutes, and by then he had a pulse.”

Two days later, SEECOM Deputy Director Donald Burr pulled Pierson aside. The patient was alive. “I was hoping I had saved someone’s life,” said Pierson, who has been in emergency communications for nine years, with the past three years at
SEECOM. “Most of the time we don’t find out. The fact that a person is breathing when we get off the phone is usually all we know, and that’s good enough for me.”

The ability to intervene gives acknowledgement to an EMD, Pierson said.

Burr said DLS is a major reason SEECOM implemented the Medical Priority Dispatch System™ (MPDS®) cardset in November 2014, followed by medical ProQA® in January 2015. On Dec. 6, 2016, SEECOM was the first 911 center in McHenry County to achieve ACE. Burr said the designation is an honor, a prestigious award recognized internationally and based on the hard work of staff.

“We wanted to be known as a quality operation,” Burr said. “ACE is a step in that direction, and it’s a good feeling to be able to do this.”

Burr was determined to achieve ACE from the start, and he knew it would be better to give staff the time to adjust before diving into the Twenty Points of Accreditation.

“We had talked about this, so staff was well aware of what we wanted to do,” said Burr, formerly deputy director of an E9-1-1 center about 20 miles northeast in neighboring Lake County. “But first, we wanted to make sure everyone was comfortable.”

The use of MPDS was almost second nature at SEECOM; staff was accustomed to a call handling system. The transition to ProQA was straightforward and fast.

“Moving from cardset to software was the easy part,” said Communication Supervisor Nicholas Garvey. “The technology is in front of their fingertips. All it takes is a click of a button.”

The hard part was breaking old habits. Although staff was proficient at following a call handling system, MPDS is drastically different from its predecessor. They were advancing to an entirely new process that complemented and fortified the use of protocol. A major ingredient, quality assurance, would take precedence and involve complete focus on the part of dispatch staff and the center’s five supervisors.

Each week, supervisors reviewed a minimum of two calls per dispatcher, which meant at least 15 calls per supervisor over the course of seven days. They met one-on-one with staff, easing into a feedback process that evaluated what they had done well and what wasn’t done so well.

Performance improved and so did dispatchers’ acknowledgement of trouble spots.

“We sat down and walked through the calls,” said Communication Supervisor Peter Sohe, who is also the SEECOM training coordinator. “It wasn’t long before they instantly recognized what they had done incorrectly and how they would do it the next time.”

In the meantime, emergency calls coming into SEECOM increasingly demonstrated staff’s proficiency in an area generally creating the greatest obstacle for centers working toward ACE: deviations in PAIs. PAIs read incorrectly (not verbatim) or out of order count against EMD performance and can jeopardize the situation.

“Our supervisors worked very hard with staff,” Burr said. “Our staff recognized the effectiveness of the Protocols when done exactly as scripted.”

Just how good they could be also showed in better identifying the patient’s foremost symptom in choosing the Chief Complaint. In March 2015, shortly after installing ProQA, a SEECOM EMD made a potentially lifesaving decision for a boy telling his mom that he had a bad headache. She called 911, and the EMD immediately shunted to the Stroke Diagnostic Tool after hearing her answer to Key Question 5 in Protocol 18: Headache. When asked

“Was there a sudden onset of severe pain?” the mother answered “yes.”

The boy was 6 years old.

“He had a brain hemorrhage,” Burr said. “The EMD was able to catch that using ProQA. He received the help he needed and made a full recovery.”

Because of the rare occurrence of a brain hemorrhage in children, the condition is not always recognized at onset, often resulting in diagnostic delay and some degree of neurologic damage.

“ProQA guided her [the EMD’s] choice,” Garvey said.

Burr has always credited dispatchers for the vital part they play in the survival chain, and now he’s promoting that same message to the cities their center serves.

“We’re reaching out,” he said. “The public has to understand why we ask questions. This is what we do to help them.”

SEECOM is a consolidated emergency 911 communication center created in 2005 by the Village of Algonquin, Village of Cary, and City of Crystal Lake. SEECOM serves 15 agencies and a combined residential population of over 201,000 in McHenry County.
The ceiling of Brevard County Fire Dispatch in southern coastal Florida is a panorama of tropical fish, a sea turtle, a shark, trees, and, most impressively, abundant sunshine.

Strips of sunlight filter the ocean water, and skies are bright blue, with powder puffs of white clouds. Each panel overhead presents a day perfect for sailing, swimming, hiking, or any of the hundreds of outdoor adventures accessible to residents and tourists.

But it’s not always like that, the weather. Hurricanes are no stranger to Brevard County and before, during, and after the heavy rains and storm surge comprise the busiest times in the dispatch center. Residents watch, wait, and are sometimes ordered to evacuate.

“We watched [Hurricane] Matthew coming in over the Sebastian Inlet,” said Raymond Macht, who moved to Florida in 1977 from the Panama Canal Zone.

Macht owns the 2002 Restaurant in Barefoot Bay, a large and spacious manufactured home community in a section of Brevard County along the Intracoastal Waterway. While his business stands on solid ground, he followed the queue of others on Thursday, Oct. 6, 2016, shuttering his windows and getting the heck out.

“You say you’re never going through this again, but you do,” he said.

Brevard County Emergency Management organizes evacuations, directing Barefoot Bay residents to pack overnight bags prior to boarding buses for designated community shelters. They watched, waited, and sheltered in high-wind resistant shelters. This time, they were lucky. Unlike Hurricanes Frances in 2004, which destroyed hundreds of homes fronting the Sebastian Inlet, Matthew skipped off shore. Others along the coast were not so fortunate. Wind speeds up to 120 miles per hour in adjacent sections of Brevard County destroyed homes and businesses, damaged thousands of structures, and uprooted acres of trees and foliage.

The EMDs at Brevard County Fire Dispatch did not see any of this, at least not directly. While in lockdown for a 24-hour period during the storm, their viewing was limited to wall-mounted TV monitors. They did not hear the wind,
disaster. Wildfires could decimate land space necessary during a major crisis.

six inbound 911 trunks provide the extra EMS calls. Seven answering positions and in 2015–2016 exceeded 90,000 fire and All are EMD/EFD certified. Call volume always on duty working eight-hour shifts.

along the Atlantic Coast. Four dispatchers stretching 78 miles long and 30 miles wide unincorporated sections of a county contact for 32 fire departments serving in Rockledge, it is the communication center of Rockledge, where the center is located.

“We have a very secure building,” said Ryan Lugo, Brevard County Fire Dispatch Shift Supervisor and CAD System Administrator.

That’s probably an understatement. Brevard County Fire Dispatch is housed in a Cold War bunker, circa 1957. Walls are cinder block. Floors are cement. It is a closed environment, partially underground. There is one door and no windows. Ceiling panels are their simulated sky and ocean.

“We don’t know if it’s hot or cold,” Lugo said. “We don’t know what’s happening out there.”

Maybe that’s a good thing. The National Weather Service in Melbourne reported Hurricane Frances winds in 2004 gusted at 63 miles per hour with almost 8 inches of rain. Merritt Island Airport recorded sustained winds of 64 mph with a 78-mph maximum gust. The wind was so strong that dispatchers couldn’t have walked across the street to a local diner if they had wanted to. The fully activated staff (28 EMDs and two supervisors) was working 12-hour shifts, taking turns sleeping and relying on public service agencies, including the American Red Cross next door, to bring in food and beverages. Dispatchers handle everything from tree falls to medical emergencies and fires.

“It can be the worst of times and we prioritize,” Lugo said.

Brevard County Fire Dispatch is a secondary PSAP. From its single location in Rockledge, it is the communication contact for 32 fire departments serving unincorporated sections of a county stretching 78 miles long and 30 miles wide along the Atlantic Coast. Four dispatchers of an optimal 28-member dispatch staff are always on duty working eight-hour shifts. All are EMD/EFD certified. Call volume in 2015–2016 exceeded 90,000 fire and EMS calls. Seven answering positions and six inbound 911 trunks provide the extra space necessary during a major crisis.

Hurricanes are not the only potential disaster. Wildfires could decimate land surrounding the Kennedy Space Center and Cape Canaveral Air Force Station, the county’s moniker “Space Coast.” Ships wreck from wind, water, and tides eroding and shifting land along the 45-mile barrier island coastline, and people drown in the powerful riptide conditions off Brevard County beaches (all lifeguards have a minimum of first responder training). It is the sole county in the Palm Bay–Melbourne–Titusville, Florida Metropolitan Statistical Area and ranks among the Top 100 most populous metropolitan areas in the United States. On any given day of the year, the county hosts an average of 1.2 million tourists.

Emergency calls reflect a mix of geography, climate, and demographics, with the space center adding a unique dimension. For example, in the latter category, the SpaceX launch of a recycled Falcon 9 rocket on March 30 might have triggered concerns of earthquake activity in a seismically inactive region.

“The sonic boom will literally shake your house,” Lugo said. “If you don’t know and your window rumbles and your house rattles, your first thought is calling 911. It’s an explosion or an earthquake, and we explain it’s the rocket.”

Coastline and abundant wildlife refuges carry with them the possibility of animal attacks or simply the fear of dangerous encounters from sharks, alligators, and wild boars. They don’t send response for a sighting, such as a shark swimming close to shore or an alligator basking on a log at the edge of a lagoon. And being chased by a wild boar while hiking at St. Sebastian River Preserve State Park? Well, that’s just another day in Florida.

The demography of residents 65 years and older (20 percent of the population) and senior snowbirds (seasonal tourists) tend to increase calls involving falls, strokes, sudden cardiac arrest, and breathing problems. Spring break attracts college students from across the country for beach parties that, in turn, increase heat- and alcohol-related emergencies.

“It gets complicated,” Lugo said. Some EMDs/EFDs like Karen Holly stay because of the variety. “Every day is different,” said Holly, who is in her 15th year at the center. “You never know what’s going to happen next.”

For others, it’s the intensity of calls, occasional lockdowns, or the stress of unexpected events that drives the decision to look elsewhere for meaningful work. And not everyone can adjust to working in a bunker, despite great drainage and wind-proofing. It’s a tough job, which explains the large inflatable hammerhead shark that takes up temporary residency coinciding with Discovery Channel’s “Shark Week.”

“We have that conversation with everyone we interview,” said Radio System and Dispatch Manager Lesley Lewis, who has worked in Brevard County public service since the early 1980s. “You can’t stop everything. You learn to accept. We’re also
NON-SPECIFIC COMPLAINT
Where do we go from here?

Brett Patterson

Hi Brett:
It’s 3 a.m. here in New Zealand, and we are having a discussion on shift about what protocol you would go down for: “Not well, can’t stand, foaming at mouth, mouth dropped, history of cancer” with no further info given or obtainable, except for halfway through questioning when the caller says, “She’s just bumped her leg on the table, and now it’s bleeding—but that’s the least of my worries.” The caller then says, “She’s got white stuff on her lips,” and then again on Case Exit, she says, “Yeah, she has a history of stroke, too, by the way.”

I went down 26: Sick Person (came out as a 26-D-1) but curious on what everyone else would do.

Options for 28: Stroke (CVA)/Transient Ischemic Attack (TIA) were discussed as with 12: Convulsions/Seizures, but nothing was enough to push for those protocols.

Cheers,
Mike Ray
Emergency Medical Dispatcher
St. John Ambulance
Christchurch, New Zealand

Hi Mike:
These are non-specific complaints, and Protocol 26 was the most appropriate selection; anything else suggested is really an attempt to “diagnose” the problem and is not appropriate in the DLS environment. And while the scraped leg is a tempting target, it is obviously incidental to the Chief Complaint and can easily be addressed using the Target Tool to offer some bleeding instructions after handling the call on P26.

Hope that feeds the discussion, and thanks for the question!

Brett A. Patterson
Academics & Standards Associate
Chair, Medical Council of Standards International Academies of Emergency Dispatch

Hello Brett:
One of our new dispatchers went to the EMD course last week and posed a question in reference to CPR instructions. On Protocol C: Airway/Airway/Arrest/Choking (Unconscious) Panel 4: Pathway Director, it states Ventilations 1st for Overdose/Poisoning and Toxic inhalation. The dispatcher’s concern is whether this could potentially create a second patient if we tell the caller to put his or her mouth on the patient’s mouth and the patient had taken some sort of poison or inhaled a toxic substance.

Could you please advise on how to answer her?

Mariam Habibzadegan
City of Kissimmee Central Communications Center
Kissimmee, Florida, USA

Hi Mariam:
Good question. Please note that if you are dealing with any sort of serious contamination, Protocol 8: Carbon Monoxide/Inhalation/HAZMAT/ CBRN should be selected by Rule (v13.0, Case Entry Rule 6). And note the first DLS link on Protocol 8 for “Danger or Contamination,” which links directly to X-7, where the caller is advised to stay away from, and not touch, the patient. So, in short, when dealing with scene/patient contamination, one never gets to Panel C-4.

There are, however, toxic inhalations that do not pose a threat to rescuers after the patient is removed from the environment, e.g., carbon monoxide, methane, etc. This is why the term “Toxic inhalation” is included in the Ventilations 1st Pathway. Hope that helps.

Brett
Indiana approves $1.5 million in training funds

Michael Snowden

This is the first in a series describing training programs at emergency communication centers. The series will continue online at iaedjournal.org along with instructions on how to participate.

Hamilton County PSC (HCPSC) in Noblesville, Indiana, USA

Stats:
- 398 square miles and a population of nearly 312,000
- Call volume of 329,575 phone calls and dispatched 317,471 calls for service (2016)
- Dispatches for seven police departments, the Hamilton County Sheriff’s Office, and nine fire and EMS agencies
- 60 professional telecommunicators, eight supervisors, and administrative staff
- Made 9,007 outgoing texts and received 353 incoming text messages (2016)

1. How is your center funded?
Hamilton relies on the State 9-1-1 Fund for approximately 42 percent of our budget and our five contributing partners (agencies we dispatch for) for the other 58 percent of our budget.

2. Does the state of Indiana require minimum training standards for all emergency dispatchers (EDs)?
Currently, there are no minimum training standards in the state. We are actively looking at the State 9-1-1 Board to adopt the minimum guidelines at their next meeting.

3. Does the state of Indiana provide funding for emergency dispatcher training?
Until very recently, there was no funding source for training in the state. At its April meeting the State 9-1-1 Board approved a plan to provide up to $1.5 million in training to meet basic telecommunicator training for all of the approximately 2,000 telecommunicators in the state.

4. Describe the ED training program at HCPSC.
Upon hire, a new telecommunicator has eight weeks in the classroom. During that time, the person receives certification through the ETC course and all three of the Priority Dispatch® protocol systems (EMD, EFD, and EPD) as well as CPR certification. The balance of the class time teaches the trainee about policies and procedures, geography, interpersonal skills, customer service, etc. After the classroom, the trainee works with a CTO for a minimum of 10 12-hour shifts at each of the three functional areas of our center: calltaking, police dispatch, and fire dispatch. At its shortest possible duration, our training lasts for four months, but it is almost always at least five to six months before the trainee is released to work on their own.

5. Did the outcome (minimum training standards) meet your expectations?
Yes and no. While I was happy to see a minimum training guideline that was approved in a bipartisan (if you will) way, I was personally looking for something that had a little more teeth to it and went beyond a bare minimum. Recognizing this was meant to be a start and not the end goal, I was happy to get onboard and look forward to the next step that will hopefully strengthen these guidelines even further.

To read the full interview visit us at iaedjournal.org
SUCCESS ENCOURAGES GROWTH
MPDS sweeping China

Audrey Fraizer

The ambulance was en route in response to a baby-on-the-way emergency call. Would crews make it in time to resuscitate the baby who was neither breathing nor crying? Family members reported finding their 70-year-old patriarch unconscious with his lips turning blue. Would bystanders agree to follow CPR instructions?

A 73-year-old woman was without a heartbeat. Would she live long enough to make it to the hospital and survive?

Similar dramas are played over and over each day, thousands of times, in the emergency dispatch centers using the Medical Priority Dispatch System™ (MPDS®). Baby deliveries. Sudden cardiac arrest. Motor vehicle accidents. Falls. Choking. And thanks to the phenomenal growth in the use of the MPDS in China, millions more people are receiving the benefits of a protocol system both standardized in form and modified to complement cultural nuances.

As of December 2016, 25 centers in China were using the protocol, and at least five more were on the verge of implementation. Some centers are stand-alone facilities, while the majority are part of a hospital’s emergency medical services.

Prehospital care

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

Beijing’s selection as host city of the 2008 Summer Olympics increased emphasis on technology, infrastructure to support global networks, and delivery of medical services. Due to the disparity in EMS across China, the Ministry of Health set a goal to standardize and clarify practice guidelines and promote systems methodology to emergency medical care. The consequent three-stage approach highlighted nationally applied accreditation and training programs culminating in outstanding centers of excellence. They wanted to “fill in the time gap” between emergency call and on-scene EMS arrival.

It was at this same time that two American authors, Jeff Clawson, M.D., and Kate Boyd Dernocoeur, caught the attention of Ding Fang, a representative for the Chinese CAD vendor Zhuhai Anke.

“He read Principles [of EMD] from cover to cover,” said Ken Hotaling, Priority Dispatch Corp.™ (PDC™) Program Administrator. “The book convinced him this was the way to go.”

Ding’s fascination with the MPDS led to the Academy’s presence at a conference hosted by the Health Ministry in Beijing. Dr. Clawson, protocol inventor; Ron McDaniel, VP of Client Support, PDC; and former PDC Consultant Bill Boehly discussed protocol implementation and deployment in other parts of the world.

**Interest grew**

Commitments were made. Suzhou and Wuxi in Jiangsu province along China’s east coast and Yunnan province in southwest China were the first centers to implement MPDS.

Suzhou was a new center and, from the start, served a population close to 6 million. Calltakers were trained and certified, in addition to instructors and quality assurance specialists. Dispatchers rotated through the EMD certification course, and two EMD certified instructors traveled to China to conduct an Instructor Academy.

Resources were established in China to oversee everything, from training to software, and all collateral materials. Gao Chaolun “Kim” is an MPDS Consultant and Implementation Specialist.

For nearly two years, Gao has assisted more than two dozen public safety emergency communications agencies throughout China with implementing the Medical Protocol and ProQA™ software.

A certified EMD and ED-Q™, Gao spent a month working as a dispatcher at an ACE agency as part of his training to become familiarized with the Medical Protocol and ProQA and AQUA™ software, and understand how dispatchers use them. That experience, in turn—along with tutelage from Priority Dispatch System™ (PDS™) Program Administrators Ross Rutschman and Hotaling—provided him with the experience and knowledge necessary to assist other agencies in China through the implementation, go live, and post go live phases of using the protocol.

Gao said an important part of his role involves acting as an advocate and customer service representative for the agencies with which he’s worked in order to develop a high level of trust.

“If the clients don’t like you, they won’t ask you questions they need to ask,” Gao said. “I always tell them, ‘Anytime you have a question or problem, call me.’ Some call me in the middle of the night. But that’s OK; I do it. I’m always there to back them up.”

Ding and two translators developed a (simplified) Chinese language version of Principles and training materials. The Chinese Cultural Committee (made up of MPDS users in China) translated the North American English version of medical ProQA, and suggested revisions to better capture cultural differences without jeopardizing the protocol’s integrity.

For example, the word “drug” means “to absorb poison” in the Chinese language and is considered insulting and not used in polite conversation.

“Chinese people are very sensitive to this word,” said Translator Zhang Shendong “Tony,” Anke Electronic Hangzhou Ambulance Center.
Technology Co., Ltd, in Xi’an Shaanxi, China. “If calltakers directly asked a question with the word drug, callers would feel offended and become very angry.”

In MPDS, the word “drug” appears in Key Question 6 of Protocol 10: Chest Pain/Chest Discomfort (Non-Traumatic) and Key Question 7 of Protocol 19: Heart Problems/A.I.C.D. The Chinese Cultural Committee suggested rewriting the word in Chinese to mean medicine-like substance, which the IAED™ approved.

“Now it will be much easier for the callers to accept the way they are asked,” Zhang said.

The translation, however, wasn’t about an American product going overseas, and that’s a major reason Ding was able to attract emergency center leaders to MPDS.

“They truly view MPDS as an international system and not simply an American product they bought into,” Hotaling said. “It’s the international focus creating the excitement.”

The universality is the beauty of the MPDS Protocol, Gao said.

“Even though they were invented in the USA, the protocols work and save lives in China, just as they do throughout the world,” he said.

Work behind the scenes has included building caller confidence through public education campaigns and teaching dispatchers how to give callers the impression of a professional helper when using the structured question sequence.

Ding considered the centers pioneers in “Zero-Minute Response,” and embraces the concept that emergency care starts at the moment the telephone rings. Right from the start, he anticipated other centers following suit once other leaders in China’s emergency communications field realize the potential.

**Results impress**

Yunnan Emergency Center established its dispatching system in 1992, and during the past 25 years it has incorporated an advanced computerized information processing system, global positioning system (GPS), and General Packet Radio Service (GPRS). MPDS went live in August 2010, and in one year, April 2010 to April 2011, the sudden cardiac arrest patient survival rate through CPR increased from 2.4 percent to 12.33 percent, according to a report from the Yunnan Provincial Dispatch Center.

Based on these comparisons, the report concluded that following the protocols and providing PDIs and DLS reduced the average dispatch time and increased the survival rate.

“Their plan was to raise the survival rate, and that’s exactly what they did,” McDaniel said. “A lot of the credit goes to the people determined to make this happen.”
Eye on ACE

Protocol users and prospects know up front that ACE is part of the package. To date, seven agencies in China have attained EMD ACE status in the past four years.

Wuxi Emergency Medical Services (EMS) Communication Center was the first to achieve ACE in April 2013. Wuxi Emergency Center provides emergency care coverage to 3.6 million people in a predominantly urban province covering 1,643 square kilometers (1,021 square miles). Wuxi is the primary PSAP for a stand-alone ambulance service affiliated with China’s Center for Disease Control and Prevention and, each month, receives an average of 23,000 calls and dispatches an average of 5,300 ambulance runs.

“I would rather walk away if we can’t agree on the ACE,” he said. “But only look at the numbers from centers using MPDS. I have yet to walk away. They reach ACE standards and are accredited generally within six months.”

ACE is the reason MPDS is spreading so fast in China, McDaniel said. Each center serves as an example for the next potential user, and high approval ratings make the job easier for Hotaling and Rutschman.

“Ken and Ross are the shining stars in China for how this works,” McDaniel said. “They’ve been at it for several years and have learned how the country works. How decisions are made.”

Back to the baby and CPR

“Hello, 120. What’s the address of the emergency?”

EMD Wu Ye, Jiangyin Emergency Center, in Jiangyin, China, received an emergency call at 1:45 a.m. on June 26, 2016, from a caller whose wife had delivered their baby in the car on the side of the road moments earlier. The baby was neither crying nor breathing. Wu immediately instructed the caller to gently massage the baby’s back, clear the baby’s mouth, and, when the baby’s condition did not change, she gave instructions for CPR. The baby let out a loud cry, and Wu used the MPDS breathing diagnostic tool to verify breathing in the normal range. Three days later, Jiangyin Emergency Center was told that mom and baby were doing well at the People’s Hospital of Zhangjiagang. The family praised Wu, who, they said, performed in a professional way.

Xia Jing, Wuxi Emergency Center, in the Jiangsu Province, was selected Dispatcher of the Year at China NAVIGATOR 2016 based on her ability to manage callers during situations involving a high degree of difficulty, and the two calls submitted with her nomination required giving CPR instructions.

On March 10, 2016, family members of a 70-year-old unconscious male found him with his lips turning blue. Using the MPDS and CPR PAIs, Xia was able to get the bystanders to complete an initial 600 compressions followed by continued resuscitation efforts. Paramedics arrived 10 minutes after the call was placed. The patient was successfully resuscitated.

On June 14, 2016, family members of a 73-year-old female found her with no heartbeat. Using the MPDS, Xia guided the bystanders through CPR, completing more than 10 minutes of compressions, with interspersed ventilations after the initial 600 compressions. Paramedics arrived after nearly 13 minutes. The patient was successfully resuscitated.
Cartoonist Hilary Price invigorates the pedestrian side of life. She gets an idea from experience and observation and adds a twist, sometimes revealing universal and surprising truths about human nature. Her superheroes are human, while at the same time real crusaders beyond the capes and leotards that identify them.
Price is the creator of the immensely popular “Rhymes with Orange” comic strip syndicated in 400 newspapers. She’s been doing the strip for 21 years, beginning in 1996 when she and three roommates shared an apartment in San Francisco, California, USA. Price slept on a futon and worked odd jobs while in career limbo following graduation from Stanford University with a degree in English literature. Cartooning was a hobby.

Her “oddest” jobs—such as writing advertising copy for a bank—were not lost to shaping her slant on life. Rather, the everyday scenes of people in normal places inspired the singularity that Price decided would define her cartoon strip. That’s the reason behind the name.

Her cartoons don’t correspond to any particular theme, except in their original take on the ordinary.

“Nothing was going to be like this,” she said.

Her idea worked. Price was the youngest woman to have a syndicated strip.

The “Dispatch Man” cartoon strip, published Aug. 27, 2015, exemplifies the multi-tasking, singularly focused “secret weapon” behind the scenes supporting the “Justice League.” Price acknowledges the cataclysm of emergency services and the people behind the controls. She recognizes the urgent, split-second prioritizing. She expects nothing less than a superhero can handle the job.

“It’s got to be a tough job,” she said. “Just look at everything they have to do.”

Price was never in emergency communications. She’s called 911 only once to report a dog running off leash on the grassy part of a rotary (The dispatcher asked, “Bosco again?”). Her sister, Jessica Price, is the closest connection. She was an EMT at a ski resort in Colorado, USA, working on commission, more-or-less.

“They would bring the ambulance to the lodge at the end of the day,” Price said. “That’s when most accidents happened, with people pushing it to get in the last run. If there was a call, they’d get paid.”

Acknowledging the bittersweet parallels, the yin and yang of human

![The Justice League's Secret Weapon](image)

SUPERMAN, ROBBERY AT THE FED. GREEN LANTERN, FORGET THE DIAMOND HEIST AND STOP THE SPEEDING TRAIN. FLASH, KIDNAPPING ON 5TH AND MAIN -- THE MAD SCIENTIST CAN WAIT.

![Facebook](image)
experience, is the essence of a comic strip that strikes a chord, Price said. “There’s always some kind of twist in every cartoon, as in life,” she said. “It has to have that extension.”

After all, the cartoon that reaches us recognizes we can be wacky, sometimes in not-so-funny situations, she explained. We can relate to the funny twists and turns—but imaginatively creative—disrupting the routine of life.

Price no longer resides in a cramped California apartment. She moved back East, where she grew up, and creates the comic strip in a former toothbrush factory converted to artist studio spaces. She pays a mortgage. She sleeps on a bed with a mattress and springs. Her audience has grown right alongside her, from fledgling to a person who can merge past and present. She finds connections, something touching something and leading to the whole.

“I can’t please everyone all of the time,” Price said. “That’s not my goal. But people who like what they see really like it. They feel seen, and that’s important to me.”

Price generates ideas from many sources, including stories told to her by readers. She likes to collaborate and invites emergency dispatchers to send her their stories. Visit [rhymeswithorange.com/contact](http://rhymeswithorange.com/contact) for ways to reach Price.

Note: Dr. Jeff Clawson had originally cut this one out for his “great cartoon” collection, and, upon re-finding it in one of his endless “piles” of paper, thought it would be a great addition to the Journal and reached out to Ms. Price. Not one to waste the Academy’s precious money, he paid for the rights to use it himself. He is thinking about asking Ms. Price to consider increasing the priority for dealing with “mad scientists” if there is ever a sequel.
NO PLEASURE CRUISE

What dispatching would be like on a cruise ship

Josh McFadden

In the 105 years after its tragic sinking, people have been fascinated with the subject of the RMS Titanic, the ill-fated passenger liner that hit an iceberg in the Atlantic Ocean and later sank in the cold sea on April 15, 1912. The disaster resulted in the deaths of more than 1,500 passengers and crew members. Less than one-third of all aboard survived the shocking ordeal.
The Titanic catastrophe remains one of the deadliest commercial maritime disasters in history.

In the years since the incident, historians, scientists, adventurists, and people of all walks of life have studied the Titanic and its voyage and sinking. Numerous books, articles, television programs, and films have depicted the events. The 1997 movie “Titanic” is one of the most critically acclaimed and commercially successful motion pictures of all time, having been the first film to surpass the $2 billion mark at the box office.

The sinking of the Titanic was a horrific disaster that could have been avoided in many ways through better preparation and response. For instance, the ship was not equipped with a full capacity of lifeboats, and some of the lifeboats were launched before they were full. The incident led to sweeping changes with navigational safety regulations for cruise ships and other commercial carriers.

**Other notable incidents and disasters**

- Boldly declared “unsinkable,” the Titanic isn’t the only notable cruise ship disaster during peacetime years. Other ships have suffered horrific incidents, resulting in loss of life and trauma. Here are other well-known emergencies and catastrophes:
  - In July 1915, the S.S. Eastland tipped over while at port in Chicago. This caused the death of more than 800 people. The ship had more than 2,500 passengers, most of whom were employees of Western Electric, which was hosting its annual employee picnic aboard the ship.1
  - Somali pirates hijacked the cruise liner Seabourn Spirits on Nov. 2, 2005. Luckily, none of the 161 passengers were physically harmed.2
  - In 2005, the cruise ship Norwegian Dawn was hit by a 70-foot wave while sailing between New York City and the Bahamas. Two people were injured, and 62 cabins were flooded.3
  - In February 2010, more than 350 people aboard a Caribbean cruise liner fell ill during the voyage. About 20 percent of all passengers got sick.4 Vomiting and diarrhea were the common symptoms.
  - In November 2010, the Carnival Splendor had anything but a splendid trip. Before reaching Mexico on a scheduled seven-day cruise, the engine room caught on fire, cutting power to the ship. Passengers could not use toilets for 13 hours, and refrigerated food was spoiled, forcing passengers to small rations of food.5

**Emergency procedures**

We’ve learned a lot about how to prevent and mitigate disasters since the Titanic and Eastland of the early 20th century. Still, extended trips on cruise ships today are not immune from problems. With hundreds, if not thousands, of people aboard these behemoths at one time, it may surprise some that more incidents aren’t reported. But for those who do suffer illness, injury, or discomfort, an anticipated several days of paradise and bliss can quickly turn into a nightmare.

Because of the array of possible emergency situations that could arise on a cruise ship, one might think an emergency dispatcher would be busy fielding calls from these vessels. However, due to their remote locations and their cross-international border trips, cruise ships have different procedures for handling emergencies large and small.

Staff writers with the online publication “Cruise Critic” assert that “Cruise ships are some of the safest modes of moving transportation you’ll ever be on.”6 This may be due to the readily available medical and fire responders on board the ships. Most cruise ships have a doctor and two nurses aboard, as well as a trained security officer, who is prepared to handle any reports of violent behavior.
or criminal mischief. Only Disney cruise ships have trained lifeguards on board. In addition, all crew members are trained in safety, security, and first aid response, such as man overboard and abandon ship procedures, fire prevention, and other emergency drills.

In recent years, authorities have implemented even more enhanced measures to ensure passenger safety aboard cruise ships. In contrast to the Titanic, typical cruise ships today have lifeboats to accommodate 125 percent of the total number of people aboard. Plus, most ships have 4,000 smoke detectors, 500 fire extinguishers, 5,000 sprinklers, 16 miles of sprinkler piping, and 6 miles of fire hose. There are also mandatory safety drills for all passengers before the ship takes off.

In the case of cruises on U.S. waters, when major emergencies hit, such as the need to abandon ship, the U.S. Coast Guard acts as the first responder. The Coast Guard also oversees the construction and operation of all U.S. cruise ships.

The Priority Dispatch® protocols and the hypothetical cruise

Based on the previous cases of cruise ship disasters, and by using your own imagination, it’s easy to see the array of problems a person could encounter while on a cruise. From minor medical issues such as illnesses (Protocol 26: Sick Person) and headaches (Protocol 18: Headache) to more life-threatening ones such as drowning (Protocol 14: Drowning/Near Drowning/Diving/Scuba Accident) or heart attack (Protocol 9: Cardiac or Respiratory Arrest/Death), a dispatcher could face just about the same challenges he or she would encounter anywhere else.

Imagine, for a moment, if the day ever came when cruise ships were equipped with their own dispatch centers. What if a team of dispatchers were on board these vessels, prepared to answer calls from passengers or crew members? Using the MPDS®, PPDS®, and FPDS®, dispatchers could then dispatch the appropriate onboard emergency responders, who would then render aid to afflicted passengers. This may be a pipe dream, but who knows? Think about what improvements have been made aboard these ships in the last 100 years following the Titanic.

Let’s examine how the protocols could be applied to a few possible issues that might occur on a cruise ship.

**Scenario 1: mass illness**

When the 350 people fell ill aboard a Caribbean liner in February 2010, the crew and the small staff of medical personnel were overwhelmed. A dispatch center and additional responders would have rendered aid more quickly and could have given instruction to the afflicted that may have eased their symptoms.

Protocol 26 handles sick person calls. Sick Person here is defined as “A patient with a non-categorizable Chief Complaint who does not have an identifiable priority symptom.”

In this scenario, the patients complained of vomiting and diarrhea. Protocol 26 has DELTA-, CHARLIE-, BRAVO-, ALPHA-, and OMEGA-level Determinant Descriptors; “Not alert” is the only DELTA-level one. A call with a sick person who has been vomiting would be coded as 26-A-11 “Vomiting.” This would be considered a NON-PRIORITY Complaint.

However, if a caller reported that the sick person was showing signs of an altered level of consciousness, the call would be coded 26-C-1 “ALTERED LEVEL OF CONSCIOUSNESS.” The definition for ALTERED LEVEL OF CONSCIENTIOUSNESS points out that “Sick persons present in many clinical states.
The identification of complete awakeness (alertness) can be problematic. This code (26-C-1) should be used whenever certain descriptors (of recent onset) are offered by the caller. The definition then lists several possible descriptors that a caller might use to describe an ALTERED LEVEL OF CONSCIOUSNESS, such as combative, confused, dazed, delirious, disoriented, incoherent, and lethargic.

**Scenario 2: fire onboard**

In the FPDS, Protocol 64: Marine/Boat Fire would be used in response to a fire on a cruise ship. The answer to the first Key Question, “What type of body of water is this?” would tell the dispatcher that this should be coded as 64-D-7 “OCEANIC water” if the cruise ship were out to sea. If the ship had been docked, it would be coded as 64-D-2 “Docked in COASTAL water.” You know to code it as COASTAL Water because the protocol defines this as “A navigable body of water such as a bay, canal, channel, harbor, inlet, or sound that is located on or near a coastline.”

Determinant Suffixes are also used in this protocol. To figure this out, the dispatcher will ask about the size of the vessel. This also helps in determining the specific response needed. A cruise ship would be considered Large (greater than or equal to 50 feet in length), so the letter L would be added as the suffix. If multiple people were injured on this ship, the suffix would be U; if a single person was injured, the suffix would be T.

Dispatch is sent after Key Question 4, “Is the fire threatening anything?” The Post-Dispatch Instructions focus on telling the caller and people aboard to “not enter the burning compartment” and to “not try to put the fire out,” among other critical instructions.

Rule 1 of the protocol tells the dispatcher, “Advise the caller that if unable to control the fire, prepare to abandon ship.”

**Scenario 3: sexual assault**

Protocol 106 is used to address assaults and sexual assaults. Both assaults and sexual assaults receive a DELTA-level Determinant Code. ASSAULT is defined in the protocol as “An unlawful attack, or attempted attack, upon another person.” SEXUAL ASSAULT is defined here as “An assault or attempted assault of a sexual nature. It can vary from unwanted touching of areas of the body to violent, invasive sexual intercourse.”

In PPDS v6.0, assaults are coded as 106-D-5. A sexual assault on an adult is coded as 106-D-4, while a sexual assault on a child is 106-D-3. Shootings and stabblings are coded as 106-D-1 and 106-D-2, respectively.

Determinant Suffixes are used when applicable for both assaults and sexual assaults. These include C = Club, E = Explosive, G = Gun, K = Knife, M = Multiple weapon types, and O = Other.

The dispatcher asks whether weapons were used and, if they were, what types were involved in Key Question 1. After asking how many suspects were involved (Key Question 2) and the age of the victim if the call is about a sexual assault (Key Question 3), dispatch is sent, and PDIs are given.

Once back in Key Questions, it’s important for the dispatcher to get DESCRIPTION ESSENTIALS on the suspect’s race, gender, age, clothing, build/height/weight, hair color/hair length/hair style, and other characteristics.

Rape is a form of sexual assault; Protocol 106 defines it as “Sexual intercourse by physical force or duress without consent.”

**Bringing it back to port**

Dispatchers may or may not ever have the chance to field calls for distressed cruise ship passengers or crew members, but it’s clear such a service would be valuable on these voyages. Though large-scale disasters such as the Titanic are extremely rare, especially with improved safety precautions on today’s ships, accidents can happen anytime at any place.

**Sources**

3. See note 1.
4. See note 1.
5. See note 1.
7. See note 6.
What could be more important than protecting our children?

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

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

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

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

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

CEO Overview Course

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

For more information, visit wmissingkids.com/911 or email 911@ncmec.org
Get out of sinking vehicle as fast as you can

Audrey Fraizer

Gordon Giesbrecht's first voluntary vehicle submersion into icy cold water was in Alaska. He had the resources to stay alive for a couple of hours if, he said, "it came to that." It never did, which doesn't make the experience any less memorable.

"It's something I'll never forget," said Giesbrecht, professor of thermophysiology in the Faculty of Kinesiology and Recreation Management, University of Manitoba, Winnipeg, Canada, and an internationally known authority on hypothermia.

He believed that submerging the sinking vehicle was the best way to study approaches to improve the success odds for victims trapped in the same situation. And the first submersion, seated in a Ford Tempo dropped by crane into a frozen lake, proved that operating on common belief was not the way to go. As long as there was air inside the car, a person struggling to get out couldn't push against the pressure outside.

"I took a deep breath [from the bubble in the car]," Giesbrecht said. He cranked open the window and swam for the surface.

Giesbrecht survived, of course, and in the process discovered the fallacy of common practice. The pressure did not equalize, effectively scrapping the notion of easily swinging the car door open. It wasn't going to happen. Doors and windows are difficult, or impossible, to open when there is higher pressure from the outside.

The first voluntary vehicular plunge was followed by some 100 vehicle submersions, 30 in which he played the unlucky driver stuck in a sinking car. His hard-won recommendations helped establish a better route of survival.

You don't wait for help to arrive. You don't sit in the car with the windows up, with water rising past your neck. You release your seatbelt, break a window, grab the kids, and get out. Even with the torrent of water pushing in, Giesbrecht found it was still possible to escape through the window. A car will float for a minute, and you need to escape in that first minute.

In plain terms, acting quickly is your best defense. If a vehicle leaves the road and lands in deep water, most passenger vehicles will float on the surface for a short period of time. Eventually, all vehicles will sink.

Escape is based on a time factor that evolved from a single period (hit water, sink) to three distinct phases of submersion: flotation—vehicle floats for 15 to 63 seconds before water reaches the bottom of the side windows; sinking—the period until the vehicle is completely underwater, but before water fills it completely; and...
submerged—the vehicle is full of water and several feet below the surface.

“There isn’t enough time to wait for rescuers to arrive,” Giesbrecht said. “You have to get out of the vehicle before the water gets up against the windows.”

It’s one thing, however, to do the research and publish results and quite another thing to convince the public of a change in operating instructions.

“We’re trying to reverse the ‘stay in your car until the vehicle fills with water,’ and that’s very hard to do,” Giesbrecht said. “The wrong thing was taught, and now we are asking people to erase that from their memory.”

**Gets the Academy’s attention**

Giesbrecht’s research caught the attention of Jay Dornseif, Fire Program Administrator with Priority Dispatch Corp.” (PDC”). One discussion led to the next, and during 2010, Giesbrecht and the Academy opened a series of meetings to refine the Sinking Vehicle Protocol the IAED™ had first released in 2001.

There was nothing unusual about making the introduction, said Jeff Clawson, M.D., inventor of the emergency dispatch protocols. After all, protocol is the child of perpetual research when it comes to influencing protocol evolution. It’s what the Academy does.

“When new data comes along that could benefit public safety, we’re very eager to find out whether it would be in the best interest to revise the protocols accordingly,” Dr. Clawson said.

The IAED-commissioned Vehicle Submersion Subcommittee created an evidence-based revision of the existing “vehicle in water protocol.” A new protocol was created for the Fire Priority Dispatch System™ (FPDS™) using a combination of published research (primarily from the Netherlands, Operation Submersed Transportation Automobile Research (STAR), University of Oklahoma, and Giesbrecht’s Operation ALIVE (Automobile submersion: Lessons In Vehicle Escape)).

The IAED Fire Council of Standards approved the subcommittee’s work for incorporation into the “vehicle in water” protocol. Since its approval in 2013, the protocol has been rolled out in the latest versions of the FPDS, the Police Priority Dispatch System™ (PPDS™), and the Medical Priority Dispatch System™ (MPDS™).

Currently, in FPDS, this is Protocol A: Water Rescue.

In MPDS, it is Protocol L: Vehicle in Water. MPDS v13.0 splits the water rescue and sinking vehicle/vehicle in floodwater instructions into two different protocols: K and L.

Fire includes all of those instructions in one protocol (Protocol A).

Police includes only the sinking vehicle/vehicle in floodwater instructions as Protocol A: Sinking Vehicle/Vehicle in Floodwater (Caller Inside). The protocol also handles cases where the vehicle hasn’t started sinking but is trapped in or being pushed along by floodwater.

The PPDS and FPDS address sinking vehicles with a caller inside through a direct Dispatch Life Support (DLS) Link from Case Entry. The PPDS codes the call as 131-E-1 “Sinking vehicle,” and the FPDS codes it as 72-E-1 “Sinking vehicle.” The

**MECHANISM (k through t)” (where the “s” suffix indicates a sinking vehicle/vehicle in floodwater) and links directly to PAIs for a sinking vehicle.

The PAIs, however, are the same in each protocol system and follow the public advice Giesbrecht developed from his experience: Get out of the vehicle fast. This evolved into the steps written into the Academy’s protocol:

- Have everyone release their seat belts and unlock the doors.
- [Open a window, and if a window can’t be opened] Move into the backseat, where you need to try to break a rear side window.
  - Electric windows normally should work for 30–60 seconds, Giesbrecht said.
- Starting with the oldest child, help them undo their seat belts and have them get out through the open window. Push all the children out ahead of you.
- Get out of the vehicle now and swim to the nearest shore.

Because a cellphone will likely stop working, the emergency dispatcher must give certain instructions early in the PAI sequence, prior to losing contact with the caller, to prepare them as much as possible for the escape attempt.

Case Entry Protocols link directly to PAIs for a sinking vehicle. In MPDS Protocol 29, the dispatcher leaves Case Entry but does not ask any Key Questions. Instead, the call is coded as 29-D-2s “HIGH

If, for some reason, the caller hesitates or the the connection is fading, the Emergency Dispatcher should warn the caller that water will continue to rise to a point where the caller must take a final
breath and get out as quickly as possible. Once water fills the car, the pressure will be equalized, and the door can be opened. But to do this, it takes an expert at holding his or her breath in an extremely stressful situation.

Thus, the dispatcher is providing self-rescue actions from the first flotation phase (when success is most likely) until the end of the submersion phase. Even though success is unlikely at the end of submersion phase, giving specific action instructions is better than merely encouraging the victim to be calm and wait for rescue.1

Giesbrecht believes calling 911 is an impediment to a successful outcome because using a cellphone actually steals precious seconds away from the caller’s chance for survival. Yet, he realizes the call in a state of panic is inevitable.

“People have cellphones, and they call 911 in an emergency,” he said. “The Academy looked at what they could do when nobody else was. So, yes, it makes sense. If dispatchers can teach you how to give CPR, they can tell you how to get out of your sinking vehicle.”

Giesbrecht organized Operation ALIVE to formulate escape and emergency response strategies involving sinking vehicles for the public. He believes instructions—similar to the Academy’s PAIs—for what to do if trapped inside a sinking vehicle should evolve into the “stop, drop, and roll” message of the 21st century.

“Everybody knows ‘stop, drop, and roll,’ yet the odds of being in a sinking vehicle are far greater than catching your clothes on fire,” he said. “In a perfect world, if every kid in North America hears the message ‘seatbelts, windows, out,’ in a generation we’d be done.”

Location, location, location

The sinking vehicle protocols are also a departure from the process dispatchers learn at the onset of protocol training: location, location, location.

Dave Warner, Police Program Administrator with PDC, said his thinking about location changed after listening to audio versions of non-protocol driven dispatch assistance to 1st party callers in sinking vehicles that, despite dispatcher efforts, often ended in tragedy. The most common element, he said, was the failure to provide instructions that could have saved the callers’ lives.

“It begged the obvious question: Why?” he said. “If you listen to them, at least part of the reason becomes very apparent. In all of the cases, the calltaker worked blindly on the address or location. Any viable escape time was completely used up trying to ascertain an accurate location.”

Warner’s subsequent advice represented a major shift in dispatcher training for this specific protocol.

“We are now teaching our new students that location is secondary on these calls,” he said. “You only have to listen to a couple of these calls to realize that the only viable option is getting to the instructions and getting them out of the vehicle as quickly as possible. Anything else will likely result in their death by drowning.”

There’s also the probability of subsequent calls from people witnessing the event.

“They can provide location,” Warner said. “I know in some circumstances at the outset you may have units that won’t know where to go, but trust me, your dive team or your fire department/police department would much rather go looking for these people wet on the bank somewhere as opposed to fishing their dead bodies out of a submerged car.”

Further enhancements

Further enhancements to protocol followed. In MPDS version 13.0, instruction involving vehicles in floodwater was added. They already existed in v6.0 of the FPDS and v5.0 of the PPDS.

Whereas the Sinking Vehicle instructions tell callers to swim to the nearest shore, the Vehicle in Floodwater instructions provide an alternative exit approach to follow if the car is not moving in the current. In this case, callers can climb to the roof and stay with the vehicle; however, if the vehicle starts to move with the current, the caller is told to wade or swim to the nearest shore or fixed object.

Each protocol’s Determinant Codes provide agencies with the ability to plan the most appropriate response configuration based upon the resources within their jurisdiction.

While the goals are the same—to get out of the water as quickly as possible—techniques to develop the protocol relied on logic over experimentation.

“It’s tough to study a vehicle in floodwater,” Giesbrecht said. “If I want to sink a car in a pond, who cares? With floodwater, you have to wait for an actual flood, and it’s very difficult to get permission to drive into a flooded road.”

Source

YOU MUST BE CERTIFIED TO TAKE THIS QUIZ

Answers to this quiz are found in the article “Time Running Out,” which starts on page 32. Take this quiz for 1.0 CDE unit.

1. The process for getting out of a sinking vehicle involves:
   a. staying in the vehicle and waiting for help to arrive.
   b. waving your hand out of an open window in hopes someone will call for help.
   c. releasing your seatbelt, breaking a window, grabbing the kids, and getting out.
   d. pushing on the car door until it opens, instructing passengers to leave through the door, and swimming to the surface.

2. During which phase of submersion does the vehicle float for 15 to 63 seconds before water reaches the bottom of the side windows?
   a. flotation
   b. sinking
   c. submerged

3. Since its approval in 2013, the Vehicle in Water Protocol has been rolled out in the latest version(s) of the:
   a. Fire Priority Dispatch System.
   b. Police Priority Dispatch System.
   c. Medical Priority Dispatch System.
   d. all of the above

4. MPDS v13.0 addresses the Vehicle in Water Protocol:
   a. in one protocol.
   b. in two protocols based on the type of vehicle and age range of occupants in the vehicle.
   c. in two protocols, splitting the water rescue and sinking vehicle/vehicle in floodwater instructions.

5. The PPDS and FPDS address sinking vehicles with a caller inside through a direct Dispatch Life Support (DLS) Link from:
   a. Case Entry.
   b. Key Questions.
   c. Post-Dispatch Instructions.

6. The “s” suffix on MPDS Protocol 29 indicates a:
   a. submerged vehicle in lake/pond.
   b. sinking vehicle/vehicle in floodwater.
   c. situation demanding specialized water rescue equipment.
   d. standing water situation that does not require immediate response.

7. The dispatcher provides self-rescue actions from the first flotation phase (when success is most likely):
   a. and repeats them several times.
   b. through the sinking stage.
   c. until the end of the submersion phase.
   d. until help arrives.

8. What is the primary objective when handling a call involving a vehicle in water?
   a. ascertaining location
   b. getting a vehicle description
   c. ascertaining whether the occupants can swim
   d. getting the occupants out of the vehicle as quickly as possible

9. Vehicle in Floodwater instructions provide an alternative exit approach to follow if the car is not moving in the current.
   a. true
   b. false

10. If the vehicle in floodwater starts to move, the dispatcher tells the caller to:
    a. stay inside the vehicle.
    b. wade or swim to the nearest shore or fixed object.
    c. grab anything that would work as a flotation device and hang on to the outside of the vehicle until help arrives.
    d. return to the car once the water has subsided to retrieve possessions.

To be considered for CDE credit, this answer sheet must be received no later than 08/31/18. 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.
THE HEAT IS ON
Wildfire season brings plenty of danger

Josh McFadden

Depending on local climate and geography, the winter months can be agonizingly long. By the time spring finally rolls around, people are itching to get outdoors for some highly anticipated vacationing, recreating, and sightseeing without worrying about cold temperatures or snow.

Warmer weather entices more and more people to get out of their homes. It can also create ideal conditions for wildfires. Hot and dry is not a good combination for avoiding fires, nor is carelessness among campers and others enjoying the outdoors.

Summertime is definitely wildfire season.

In the Western United States, in particular, wildfires can keep dispatchers and firefighters busy. These fires can range from anything that may burn a few acres and be contained in a matter of minutes, to massive, destructive forces that burn uncontrollably for weeks and cause millions of dollars in damage.

What the numbers say
A brief look at wildfire statistics can be alarming and staggering. Statistics vary depending on the source, but there is an undeniable trend: Incidents of wildfires have been consistent for decades, and humans are usually the culprit. In fact, National Geographic reports that four out of every five fires are started by humans.

In the United States alone, there has been an average of 64,248 wildfires per year since 2012. The 10-year average (2007–2016) is even higher at 73,304 per year. In 2016, 67,743 wildfires burned in the U.S., including 9,300 in Texas. However, in the last five years, even though there have been fewer fires per year, the fires have been more destructive, burning an average of 7.215 million acres per year. Conversely, between 2007 and 2016 the fires burned an annual average of 6.991 million acres. The year 2008 was particularly devastating, as there were 78,949 U.S. wildfires.

According to the National Interagency Fire Center, 61,852 wildfires each year are started by humans. Also, human-caused fires burn 2.5 million acres annually. Conversely, lightning is the cause of 10,280 fires every year, amounting to 3.7 million burned acres. The Southwestern states, known for their hot, dry climates, have the most lighting-caused fires each year: 1,716.

Loss of human life in wildfires is much lower than with structure fires. Since 1910, 1,114 people have died in wildfires (including 15 in 2016), whereas 3,275 people died in all types of fires in 2014. Wildfires are hardly isolated to the United States. In fact, 54 percent of...
the world’s wildfires occur in Africa.8 Between 2010 and 2014, there were 38,000 fires in Asia’s forests.9 Statistics show that fires in other parts of the world can be deadlier than they are in the United States. On Feb. 2, 2009, 180 people perished in a brush fire in Australia.10 Other examples of large death tolls in wildfires have occurred in the following locations: on Aug. 24, 2007, 65 people died in a forest fire in Greece; in May 1987, 191 people died in a forest fire in China; and in September 1997, 240 people lost their lives in Indonesia after a forest fire ravaged the area.11

The cost of national, state, and local agencies to fight and suppress these wildfires isn’t cheap. In 2014, U.S. wildfires cost $1.52 billion to put out. That number was down from $1.9 billion in 2012.12

Fire definitions

In the Fire Priority Dispatch System™ (FPDS®), wildfires are addressed in Protocol 67: Outside Fire. In Protocol 67, wildfires fall under the designation of WILDLAND Fires, which the protocol defines as “A forest, tree farm, or heavy brush fire, regardless of the type of vegetation.” Protocol 67 is used for four other types of fires: LARGE BRUSH/GRASS, SMALL BRUSH/GRASS, LARGE OUTSIDE, and SMALL OUTSIDE. Determinant Descriptors can also include LARGE OUTSIDE fire with hazardous materials and SMALL OUTSIDE fire with hazardous materials. This Protocol states that “Local Fire Administration must define and authorize for dispatch purposes what constitutes a LARGE BRUSH/GRASS fire in their area.”

Be cautious when assigning a Determinant Descriptor to a WILDLAND fire, as it can easily be confused with a LARGE OUTSIDE fire.

Protocol 67 uses Determinant Suffixes to help delineate what is being threatened by the fire. WILDLAND fires may include the following suffixes: A = Animals; B = Buildings (non-residential); O = Other; P = People; R = Residential; U = Unknown; V = Vehicle; X = Single injured person; and Y = Multiple injured persons.

Protocol application

In Case Entry, if the caller reports a fire in a forest, tree farm, or in some brush and says that someone is on fire, you will code the call as 67-E-1 “Person on fire (outside)” and dispatch immediately. At this point, the call is coded for Person on fire, not WILDLAND, even though the fire in question is a WILDLAND fire. You would then give the appropriate PDIs.

Once in Protocol 67, Key Question 1 instructs the dispatcher to say to the caller, “Tell me exactly what is burning.” After receiving a response, the dispatcher will ask, “What size of area is burning?” Remember, the caller may not have an exact description of how large it is, so encourage the person to estimate as best as he or she can. Rule 6 can be helpful here: “If the caller struggles to determine the size of the fire, ask them to relate it to the size of a familiar area (e.g., football field, tennis court, etc.).” This can be especially helpful when trying to describe a WILDLAND fire.

Your caller’s answers to Key Questions 1 and 2 will help you determine whether this is a WILDLAND fire or one of the other possibilities. Next, ask Key Question 3, “Is the fire threatening anything?” You may need to press the caller for specifics such as whether animals, people, buildings, or vehicles are in harm’s way. Rule 2 guides you by instructing, “The determination of whether a fire is threatening a building should be based on the caller’s judgment.” If the caller isn’t sure whether any buildings are threatened, you need to assume that they are.

In a different scenario, if no one was on fire and you coded the call as a WILDLAND fire (67-D-1), Key Questions 1, 2, and 3 previously discussed would be applicable here. In this case, at this point you would dispatch firefighters to the scene. Don’t forget to include the appropriate Determinant Suffix.

In the 67-D-1 call, you would then give the following PDIs:

- I’m sending the fire department to help you now. Stay on the line, and...
I’ll tell you exactly what to do next.

• Do not try to put the fire out.

Unless there are electrical lines on the ground in the area of the fire, you do not need to give PDI-c.

Make sure you return to Key Questions and ask whether anyone is in immediate danger. Key Questions 6 and 7 ask, “Is the fire spreading?” and “Is anyone injured?” Yes answers to either of those questions will prompt additional subquestions. You can omit Key Question 8, “Do you know the warning placard numbers (chemical ID) of the hazardous materials?” if this is not a HAZMAT situation, unless you are certain such materials are involved in the WILDLAND fire. A HAZMAT incident involves a gas, liquid, or solid that, in any quantity, poses a threat to life, health, or property.

Protocol 67 has one Axiom, which is directly applicable to our discussion on WILDLAND fires. It says, “WILDLAND fires, especially fires in canyons, are very dangerous and unpredictable.”

“Fires in canyons tend to burn and move up,” said Mike Thompson, PDS™ Program Administrator—Fire and Medical. “The fire preheats the fuel ahead of it, which makes it easier for it to ignite, and when it does, it does so quickly and at times explosively dependent on the fuel moisture content. These things will make a fire move up the side of a canyon extremely quickly, and the steeper it is, the quicker it will move. A fire will move up a hill much faster than a human being can run up it. In addition, canyons tend to be places where winds are unpredictable and gusty, which compound the problem, making the fire behavior unpredictable and erratic.”

In a WILDLAND fire call, if the caller isn’t in danger and there are no HAZMAT issues, you will link to X-1 for Case Exit. If the caller’s life is in danger but the person is not trapped, link to B-2. Here, you will instruct the caller to leave the area immediately if it is safe to do so. Tell the caller not to return to the area for any reason. Also, remember to ask whether they can take their phone with them. If this isn’t possible, give the following instruction: “Call us back from a safe location, if possible. If you can’t call us back, make yourself known to the firefighters (responders) when they arrive.”

HAZMAT dangers require you to use B-4.

Conclusion

Wherever your agency may be located, WILDLAND fires are a possibility, especially if you are in the American Southwest or Australia, where fires are prevalent during the hot, dry months of the year.

The key to determining whether the call should be coded as WILDLAND fire or LARGE OUTSIDE fire is by assessing what the area is like where the fire is burning. If the fire is occurring in a forest, tree farm, or in heavy brush, it should be considered a WILDLAND fire.

Though WILDLAND fires are not the deadly killers that structure fires can be, they are difficult to predict and can spread easily and quickly.

Sources

3. See note 2.
4. See note 2.
6. See note 5.
11. See note 11.
12. See note 2.
YOU MUST BE FIRE CERTIFIED TO TAKE THIS QUIZ

Answers to this quiz are found in the article “The Heat Is On,” which starts on page 36. Take this quiz for 1.0 CDE unit.

1. According to National Geographic, humans start _____ out of every five wildfires.
   a. one
   b. two
   c. three
   d. four

2. What causes 10,280 wildfires each year?
   a. unattended campfires
   b. lightning
   c. discarded cigarette butts
   d. controlled fires

3. In 2014, it cost ______ to put out wildfires.
   a. $1.52 million
   b. $7.125 million
   c. $1.52 billion
   d. $1.9 billion

4. The FPDS defines WILDLAND fires as:
   a. a forest, tree farm, or heavy brush fire, regardless of the type of vegetation.
   b. anything that threatens agricultural products, elevated structures, and landfills.
   c. a fire that is larger than 5 acres.
   d. something local fire administration must define.

5. Which of the following is not a suffix used to code Protocol 67 Determinant Descriptors?
   a. B = Buildings (non-residential)
   b. P = People
   c. S = School
   d. V = Vehicle

6. What can help the dispatcher acquire information from the caller on how large of an area the wildfire is burning?
   a. Rule 6
   b. Rule 7
   c. Axiom 1
   d. This is not a question dispatchers need to ask.

7. Dispatchers can use ______ to help get answers to Key Question 3: Is the fire threatening anything?
   a. Rule 1
   b. Rule 2
   c. Rule 3
   d. Axiom 1

8. Key Question 8 is only necessary if hazardous materials are involved in the fire.
   a. true
   b. false

9. As Axiom 1 points out, in which places are WILDLAND fires particularly dangerous and unpredictable?
   a. dense forests
   b. hayfields
   c. industrial parks
   d. canyons

10. The key to determining whether a fire should be designated as a WILDLAND fire or a LARGE or SMALL OUTSIDE fire is:
    a. figuring out how much area has burned.
    b. assessing what the area is like and where the fire is burning.
    c. knowing how many people are trapped in the area.
    d. evaluating how long the fire has been burning.
TRUE CLASSIC
Debunking the L&S dispatch myth

Jeff Clawson, M.D.

This study by Richard Hunt, et al., Is Ambulance Transport Time With Lights and Siren Faster Than That Without? (Annals of Emergency Medicine, April 1995), is a true classic in the subject of debunking the notion that responding or transporting L&S significantly (clinically speaking) reduces the time in getting to a patient or hospital. In this study, Hunt, et al., took a significant number (50) of L&S cases, initially dispatched by their comm. center in Eastern Carolina, and replicated those same transports—traveling in a similar unit, over the same ground route to the final destination COLD, at the same time of day plus or minus five minutes, and on the same day of the week. They showed, not unexpectedly to those of us in the Academy, that the average time of the savings was only .43 seconds, which is obviously not significant to any cases not determined by protocol to be Time-Life Priority sensitive (i.e., cardiac arrest, choking, high-risk childbirth, uncontrolled bleeding, or an airway obstruction that cannot be relieved by prehospital care providers). This is a seminal study that should help us to more responsibly utilize, only when clinically needed, lights-and-siren devices in our daily responses and transports. To do otherwise is nothing less than response and/or transport malpractice.
Is Ambulance Transport Time With Lights and Siren Faster Than That Without?

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Study objective: To determine whether ambulance transport time from the scene to the emergency department is faster with warning lights and siren than that without.

Design: In a convenience sample, transport times and routes of ambulances using lights and sirens were recorded by an observer. The time also was recorded by a paramedic who drove an ambulance without lights and siren over identical routes during simulated transports at the same time of day and on the same day of the week as the corresponding lights-and-siren transport.

Setting: An emergency medical service system in a city with a population of 46,000.

Participants: Emergency medical technicians and paramedics.

Results: Fifty transport times with lights and siren averaged 43.5 seconds faster than the transport times without lights and siren [t=4.21, P= .0001].

Conclusion: In this setting, the 43.5-second mean time savings does not warrant the use of lights and siren during ambulance transport, except in rare situations or clinical circumstances.

D I S C U S S I O N

Use of L&S during patient transport by ambulances to the ED averages 43.5 seconds faster than transports without L&S. Although the mean difference is statistically significant, it is not clinically significant, except in rare circumstances.

An average time saving of 43.5 seconds with L&S during patient transport would be clinically significant if an assessment or intervention (or both) that was not performed by prehospital care providers could be accomplished at the time of arrival in the ED and would make a difference in outcome. However, in very few situations or clinical circumstances would a 43.5 second-faster transport time to the ED make a difference in outcome. Applicable outcome measures here include mortality, lifestyle, future health, or injury, return to work, hospital days, and cost.

In what circumstances would the average time saving of 43.5 seconds with L&S make a difference in patient outcome? As an example, the 43.5 seconds saved might decrease the amount of anoxic brain damage in an infant with airway obstruction that cannot be relieved by prehospital care providers, assuming that the obstruction is relieved within 43.5 seconds of the child's arrival at the ED. The most time saved using L&S in our study was 5 minutes, 11 seconds (an outlier, the second greatest time saved with L&S was 2 minutes, 42 seconds). Five minutes, 11 seconds may make a positive difference in outcome in a patient with a gunshot wound to the heart, in whom an ED thoracotomy might be lifesaving. A logistic circumstance that would warrant savings is a patient with a chest injury who requires emergency transport. These uncommon situations must be considered in view of the corresponding L&S transport.

Many EMS responses are to patients who do not have conditions requiring advanced life support (ALS) care or interventions. A retrospective study published in 1991 showed that ALS EMS units were spared from initial dispatch in 14,100 of 35,075 (40.2%) EMS incidents when EMS dispatchers used a few questions to identify calls requiring ALS. Only 1.8% (254) of those cases subsequently required or involved ALS procedures. Another study published in 1990 demonstrates that by using a priority medical dispatching system, patients who sustain prehospital arrest or a critical condition can be successfully differentiated from less critical patients. Clearly those patients without conditions requiring ALS do not require L&S transport.

For those patients who do require ALS, the EMS system in this study and those in many others perform ALS interventions before the patient arrives in the ED. The ALS capability frequently predetermines the need for transport with L&S that results in only minimal time savings.

One published study suggests that medical protocols can be used to determine which patients can be transported without L&S without adverse medical outcome. Most patients (92%) were transported without L&S, there were no adverse patient outcomes related to those transports.

In public safety trade journals, few studies have had findings similar to those reported here. One report compared the response times of an ambulance driven with L&S with the response times of an unmarked passenger car that followed all traffic laws. The ambulance was faster than the car by approximately 60 seconds. The EMS system and geographic area for that study were not described. Another study of emergency vehicle response in Salt Lake City demonstrated that fire pumpers and paramedic-staffed fire engines using L&S while responding within their initial-response districts in urban or suburban areas experienced a 9% to 28% reduction in response times. Reduction depended on the time of day and concentration of semaphores, or visual signaling apparatuses, encountered. It was found that the maximum saving occurred during rush hour, when emergency vehicles traveled in the same direction of main flow, and when there was a traffic light at every block. The average time saved in these responses was 30 seconds.

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<thead>
<tr>
<th>Time of Day</th>
<th>L&amp;S (%)</th>
<th>Non-L&amp;S (%)</th>
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<tbody>
<tr>
<td>Daylight</td>
<td>39 (78)</td>
<td>23 (48)</td>
</tr>
<tr>
<td>Dusk/dawn</td>
<td>4 (8)</td>
<td>8 (12)</td>
</tr>
<tr>
<td>Night</td>
<td>7 (14)</td>
<td>21 (43)</td>
</tr>
</tbody>
</table>

*Although all non-L&S simulated transports were carried out at the same time of day, the increased night and dusk/dawn light conditions reflect an increase from Daylight Savings Time for the L&S group to Eastern Standard Time for the non-L&S group.*

The minimal time savings with L&S demonstrated in this study must be balanced against the risks associated with its use. There are many reports of ambulance crashes during L&S responses and transports resulting in injuries or deaths, and dollar costs. It has been estimated that as many as 12,000 emergency medical vehicle crashes occur each year in the United States and Canada as a direct result of L&S use. In addition, because of the “wake effect” of emergency units confusing and startling other drivers, up to five times as many accidents are caused by units responding with L&S that do not physically involve the emergency vehicle itself.
In New York state, 1,412 ambulance crashes occurred between January 1, 1984, and December 31, 1987, resulting in 1,894 injured ambulance occupants and six fatalities. In Tennessee, 102 ambulance crashes were reported to the Tennessee Department of Health and Environment's Division of Emergency Medical Services from January 1, 1983, to July 1, 1986. Forty-eight ambulances (47.1%) were responding to an "emergency" (lights and sirens), 54 (51%) were responding to a "nonemergency." Forty-nine ambulances (48%) were responding to a call for help; 40 (39.2%) were transporting a patient to the hospital; 3 (2.9%) were returning from a call, and 10 (9.8%) were parked at the time of the crash. When the ambulance was responding or transporting on an "emergency traffic" (lights and siren), the crash was more likely to yield an injured victim than when the vehicle was responding or transporting on a "nonemergency traffic" (routine driving). Twenty-nine of those crashes contributed to a total of 65 injured victims and one death. The mean delay time to receiving hospital care after the crash was 9.4 minutes.

The National Highway Traffic Safety Administration reported that in 1990, 25 ambulances were involved in crashes in which 31 persons were fatally injured. Twenty were occupants of the other vehicle in the crash, 6 were occupants of ambulances (1 driver and 5 passengers), and the remaining 5 were pedestrians struck by ambulances. Forty-eight percent of the ambulances were in "emergency use" at the time of the crash. The NAEMSP and the NASEMSD have recommended that a national reporting system for emergency medical vehicle crashes should be established.

Monetary losses from ambulance crashes have, in some venues, eclipsed those of any other negligence-related EMS problem. One ambulance insurer suggests that the epidemic of ambulance crashes could dry up all sources of coverage; for every claim against an EMS service alleging defective medical care, there are seven related to ambulance collisions.

The results from this study should prompt other EMS systems to evaluate the time savings with L&St use in their own area. This study showing minimal time savings with L&St transport was performed in a city with a population of approximately 46,000. Transport time savings may be different in rural or urban settings. Any time savings found with the use of L&St may be considered in the context of the clinical circumstances in which the time saved will make a difference in patient outcome and must be balanced against the risk of an ambulance crash with its potential for injury, death, and monetary costs. A limitation of this study was that EMT drivers knew that the observer was timing the transport time. However, the purpose of the study was not discussed with any of the EMTs, and other intervals were also timed by the observer.

Although the sirens on the ambulances in this study are similar to those used on other ambulances in the United States, the siren is a severely limited warning device, effective only at short ranges and very low speeds.

In this study the siren was never used continuously during any of the transports, was used intermittently in 82% of the transports, and was not used at all during 18% of the transports. This pattern of variable siren use is common practice in our system and other EMS systems. Further investigations should specifically address the impact of nonuse, intermittent use and continuous use of the siren on transport time.

Another limitation in this investigation was use of simulated patients when transports were repeated without lights and sirens. The impact of transporting a real versus a simulated patient on driving is unknown. We did instruct the driver for the non-L&St group to obey the speed limit and traffic laws and signs, and we believe this would need to be part of any EMS system's policy for transport without L&St. Use of the simulated patient is a confounding variable but enabled us to control for time of day ±5 minutes, day of the week, and location.

Light conditions (Table 2) may have resulted in longer mean transport times for the non-L&St group. Because of decreased visibility, non-L&St transports performed during night or dusk/daybreak conditions may have had longer transport times compared with their corresponding L&St transports performed in daylight.

**CONCLUSION**

We conclude that in the setting in which this study was conducted, the +3.5-second mean time savings with warning L&St does not warrant use of L&St during ambulance transport, except in extremely rare, situational, or clinical circumstances. We support the NAEMSP and the NASEMSD position that the use of warning L&St during an emergency response to the scene and during transport should be based on standardized protocols that take into account situational and patient problem assessments, and that EMS system medical directors should participate directly in the development of policies governing the use of L&St. Further studies to determine time Savings with L&St in other EMS systems, especially those in urban and rural areas, are needed so that each system can rationally balance any time savings with L&St against the risks associated with their use.
Yo Ur sPace  |  dispatch in action

FAST TRACK TO HELP
EMD and early CPR keys to saving life

Audrey Fraizer

Carolyn Evans heard a thump coming from downstairs in her home in Corona, California, USA. She called down asking what had happened. No answer. Several seconds later she found her husband, 64-year-old Jeffrey Evans, unconscious on the kitchen floor. She tried talking to him. He could not respond. She called 911.

“She told me he was turning purple,” EMD Elise Neff said. “She didn’t know what to do.”

Through questioning, Neff was able to determine that Jeffrey was not breathing. He had no pulse. Neff proceeded to CPR Fast Track instructions from Case Entry, bypassing Protocol 9: Cardiac or Respiratory Arrest/Death.

This was the first time Carolyn was in the position to give CPR.

“She was distraught,” said Neff, Corona Police Department Communications Center. “She thought she wasn’t doing it right. She thought she was failing instructions.”

Carolyn’s fears were unfounded. Within four minutes of the call received at 3:27 p.m. on Saturday, Jan. 21, a Corona Fire paramedic and Corona Police officer had arrived on scene.

Neff ended the call and, as usual, went on to the next call without knowing whether the patient would make it to the hospital alive. Nearly three weeks later, Neff had her answer. Carolyn and Jeffrey had scheduled a visit to the Corona Police Department.

Neff was nervous the morning of the Feb. 8 meeting. Sure, she answers 911 calls that would make most people nervous all the time. But she likes that part about dispatch. Neff likes helping people over the phone, and she’s good at it. She wasn’t as confident about talking to people she had helped in person.

Any feelings of anxiety faded when Carolyn, Jeffrey, and their children and grandchildren walked through the door of the room adjacent to the communication center, where the police department had arranged to hold introductions.

“He [Jeffrey] looked good, like nothing had happened,” Neff said. “She [Carolyn] was so grateful. She said I kept her focus on giving compressions.”

Carolyn said as much during comments to media invited to cover the event. Every time emotions threatened to interrupt her during the four minutes of CPR, “Elise,” she said, “led me right back. She walked me through it.”

Jeffrey said he felt “wonderful” and humbled by all the people involved in saving his life.

Paramedic Chris Yoshioka attributed Jeffrey’s recovery from full cardiac arrest to early CPR. He was given advanced life support, and while still at the home, he regained spontaneous breathing and a pulse. In less than a week, he was out of the hospital and making a full recovery at home. He returned to work in March.

Four years ago Neff decided to pursue a career in law enforcement. She went on police ride-alongs and listened in on police calltaking and dispatch. She preferred providing emergency assistance from behind the scenes.

Neff has no regrets. She was made for dispatch. She enjoys the focus demanded, particularly during the hard calls. But when it comes to receiving accolades, Neff would rather not take the credit.

“Everyone here does this every day,” she said. “We all do the best that can be done when a call comes in.”

The Corona Police Department implemented the Medical Priority Dispatch System™ (MPDS®) in September 2016. The center’s 25-member 911 team processes more than 295,000 phone calls each year.
Kit Edwards doesn’t like to be bored. And she has the schedule to prove it.

The dispatcher for Franklin Regional Communications Center (FRCC) in Farmington, Maine, USA, works a rotating day schedule. She’s also a member of Jay Fire and Rescue, where she’s been a part of the department for two years—following a one-year stint about eight years earlier while a single mom to her daughter Evany (now 13).

“I love what I do now,” she said. “The job (dispatching) had come up. Mike mentioned it and thought I might be good at it. It’s been really crazy cool. I love the responsibility.”

Mike Booker is Edwards’ boyfriend of one year and a longtime friend. He’s also the Fire Chief and Reserve Police Officer in the town of Jay, Maine. Plus, Booker has a lawn care business that Edwards helped out with last summer. She occasionally works part time for My Dad’s Place, a local food hangout in Jay. Her past experience managing an Arby’s helps as she does a little bit of everything from serving to cooking—all while making sure people have the best experience possible.

But if you thought work was enough to keep Edwards busy, you couldn’t be more wrong. Her daughter and Booker play a big role in what she does for fun, from target shooting, working out at the gym, and watching her daughter participate with her Maine FIRST Lego League robot team—The Clan of Mor’du.

Edwards and Booker started target shooting when Evany was 2 years old, and in May, the eighth-grader decided to give it a shot. Edwards sees it as a great stress reliever and has several favorite rifles to shoot with including her 1912 Chilean Mauser (the first gun she bought), which doesn’t have a scope, and the Remington Model 870 pump shotgun given to her by Booker.

“It was just so fun,” she said. “I don’t know why. It’s like a challenge—how far away can you shoot? You get zoned out because you focus on your target.”

Edwards looks for additional ways to relieve stress. Her desk at FRCC allows her to stand up to work, and her center is working on getting treadmills that fit under the desks. But Edwards takes it a step further and visits her favorite hole-in-the-wall gym, sometimes with Evany and Booker. When she started doing pump training for the fire department and needed to be able to pull levers by herself, the gym became a place she decided to frequent, particularly for weightlifting. It helps after coming off a shift at FRCC too.

“If you’ve had difficult calls, there’s something about doing that that’s letting all of your energy out,” Edwards said.

Evany enjoys exerting energy working with Legos as part of a team that builds robots while exploring science, technology, engineering, and mathematics. Edwards recently traveled to St. Louis, Missouri, USA, with her daughter for the annual FIRST Championship. The Clan of Mor’du built a robot to perform missions and also completed a separate project. For their project, the team researched information on beehives and bears to come up with a solution to help bees without hurting bears. They decided to use waves to deter bears from attacking beehives because when bears go for the honey, they kill the hive.

“The Lego thing was really, really cool,” Edwards said. “It was incredible. Such a great feeling of people coming together that normally wouldn’t. The kids are so mature.”

Whether it’s taking a trip to a Lego competition, target shooting, or weightlifting, Edwards moves at a fast pace outside of work.

“I don’t know how to not stay busy,” she said.
ONE POTATO, NO POTATO
Heimlich maneuver dislodges potentially fatal food clog

Audrey Fraizer

Conrad Fivaz, a second-year medical student, was done for the day, relaxing, eating dinner, and watching a televised rugby game after a long day in the school’s dissection lab. His meal consisting of roasted potatoes, meat, and vegetables was similar to any other meal served in the common room of his dormitory.

But those cubed potatoes? Those he will never forget. Distracted by rugby, Fivaz was less attentive to the potato at the end of his fork. He couldn’t swallow it. The chunk lodged in his trachea, where soft foods such as potatoes, bananas, and hot dogs can adapt their shape and cause obstruction. Fivaz coughed. He threw his arms up over his head, an instinctive reaction alerting the student sitting next to him at the table. The student, his friend and college roommate Adriaan Van Biljon, didn’t hesitate.

“He knew exactly what was wrong,” said Fivaz, Medical Director, Priority Solutions. “He went behind the chair and did the Heimlich. The piece of potato dislodged, and I was able to breathe immediately.”

Fivaz thanked Van Biljon profusely, and they finished their dinners while continuing to watch rugby.

Choking on food is frightening. Even more eye-opening, perhaps, is what could have happened. The potato chunk lodged in his trachea cut off the supply of air to Fivaz’s lungs and caused the involuntary coughing and gasping for air. If fellow student Van Biljon hadn’t acted so fast, Fivaz could have experienced serious injury due to a lack of oxygen to his brain. Permanent brain damage can result in about two minutes and death in three minutes.

“Choking is a very time-limited event,” Fivaz said. Choking is the fourth-leading cause of unintentional injury death in the U.S. Globally, choking due to a foreign object, including food, resulted in 162,000 deaths in 2013.

Fivaz lived to tell the story because of a technique used successfully on George W. Bush, Queen Elizabeth, Elizabeth Taylor, and thousands upon thousands of people worldwide. It was invented by Dr. Henry Heimlich.

“I was a chest surgeon,” Heimlich said during a 1992
interview with Parade Magazine. “I knew there was enough air in the lungs that, if you pushed on the diaphragm, it would clear the airway. I knew it would work.”\(^2\)

Heimlich could not test the procedure for obvious ethical reasons (pushing food down the throat of test subjects and then attempting to dislodge it), but he was so confident it would work, he published his findings in 1974 (Pop Goes the Café Coronary, Emergency Medicine).

At that time, he was Director of Surgery and Physician-in-Chief of the Esophagus center at the Jewish Hospital. He concluded the article asking: Should you use, or learn of anyone using, the Heimlich method, by the way, please report the results either to EM or to me.\(^3\)

The Heimlich maneuver requires little more than the willingness of a bystander to firmly and abruptly pull the fist, covered by the other hand, into the top of the choking victim’s stomach.

While it’s impossible to say how many people the technique has saved, rough estimates number into the thousands. The Medical Priority Dispatch System™ (MPDS®) incorporates the Heimlich (by name) in PAIs (Protocol D: Choking (Conscious) – Adult/Child/Infant/Neonate) for adults and children. The technique is not advised for infants and neonates.

Heimlich was a great fan of EMDs and the MPDS. He was the featured speaker at the second annual Emergency Medical Dispatch conference held in 1989, where he talked about the vital role of EMDs in EMS and his theories on creative thinking and application.

Prepare for rejection and ridicule, Heimlich told his audience. “If our peers initially understand and accept your idea, it’s not really very new or creative.”\(^4\)

While Heimlich is best known for the maneuver, it is only one of many procedures and devices he developed during his decades-long career. He also designed a simple flutter valve from a flattened piece of tubing to inflate collapsed lungs that, during the Vietnam War, provided field response for soldiers with chest wounds. The Heimlich Procedure gave patients with esophageal cancer the ability to eat by constructing an esophagus from a section of the patient’s stomach.

The Heimlich maneuver, however, was his claim to infamy and, as he told a reporter, the number of people potentially saved wasn’t his badge of honor.

“You can’t picture thousands of lives,” he said. “What does move me is the individual people who come up to me and tell me their stories, or reading in the newspaper the story of the 5-year-old who saved a 6-year-old from choking. Those things move me.”\(^5\)

While some have debunked the Heimlich maneuver and the man behind it (most notably his son Peter Heimlich), the technique still holds a place in the layperson emergency medical kit.

Choking on a potato certainly made an advocate of Fivaz.

“It worked for me,” he said. “It saved my life.”

Heimlich was 96 years old when he used the maneuver for the first time, and quite successfully. In May 2016, he applied his theory to dislodge a piece of hamburger from the airway of an 87-year-old woman at a retirement home in Cincinnati, Ohio, USA, where the surgeon had lived for several years prior to his death in December 2016.

**Sources**

5. See note 4.