

# the **JOURNAL** of emergency dispatch

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**NEVER JUDGE  
CALLER INTEGRITY**

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**DIP YOUR TOES INTO  
RESEARCH**



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# the JOURNAL

of emergency dispatch

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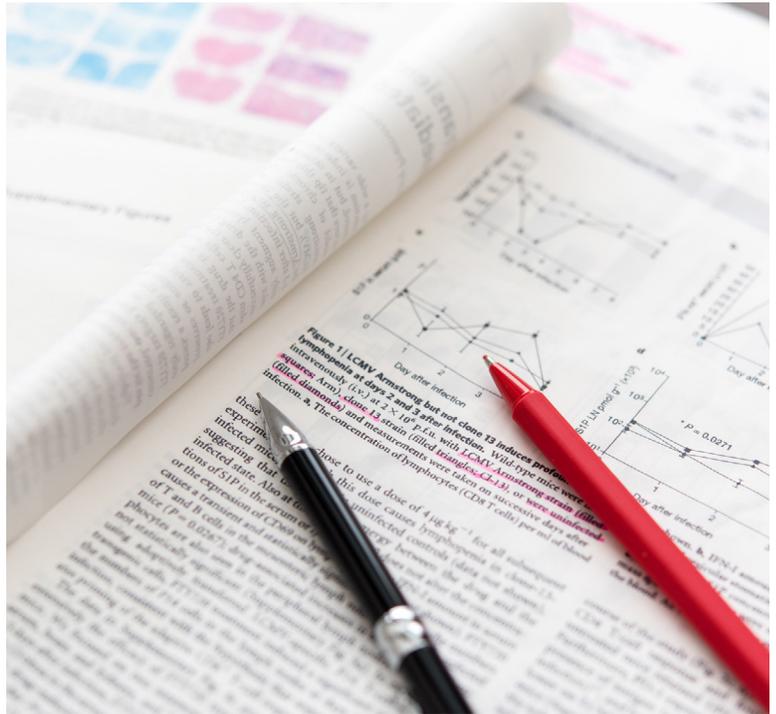
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Intimidated by research? Don't be! This feature breaks research down to the basics to make it work for you.



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The following U.S. patents may apply to portions of the MPDS or software depicted in this periodical: 5,857,966; 5,989,187; 6,004,266; 6,010,451; 6,053,864; 6,076,065; 6,078,894; 6,106,459; 6,607,481; 7,106,835; 7,428,301; 7,645,234; 8,066,638; 8,103,523; 8,294,570; 8,335,298; 8,488,748; 8,494,868; 8,712,020; 8,971,501; 9,319,859; 9,516,166. The PPDS is protected by U.S. patent 7,436,937; 8,396,191; 8,670,526; 8,873,719. The FPDS is protected by U.S. patent 8,417,533. Other U.S. and foreign patents pending. Protocol-related terminology in this text is additionally copyrighted within each of the IAED's discipline-specific protocols. Original MPDS, FPDS, and PPDS copyrights established in September 1979, August 2000, and August 2001, respectively. Subsequent editions and supporting material copyrighted as issued. Portions of this periodical come from material previously copyrighted beginning in 1979 through the present.



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**JUST ADD DATA**

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Matthew Miko

**D**ata. It's everywhere we turn ... seemingly tracking every move we make.

In public service, we know that the data can be used to improve critical outcomes. For example, tracking opioid overdoses helps direct substance abuse prevention efforts, and after an emergency response, data provides insight into response times and how quickly an issue was resolved. Today, data is an indispensable tool for tracking (and tracing) the spread of COVID-19, as well as evaluating mitigation and prevention efforts.

At the IAED™, we understand the importance of data. This is why, several years ago, we created the IAED Data Center with the purpose of gathering information on members' protocol use. A built-in benefit of a structured protocol is the ability to study and evaluate the system's effectiveness because of the tens of thousands of members asking the same questions in the same way on every call. Every new agency that joins the Data Center heightens this ability to evaluate the system and make improvements.

With data from over 12 million calls, and close to half a billion ProQA® keystrokes, we can study just about any question you could imagine related to the protocol. Are the protocols working the way we expect? How can they be improved? What tools would benefit a patient or bystander before response arrives on scene?

We can also take vital measurements, such as the efficiency in response and success of PAs. How long until dispatch? How effective is the Breathing Verification Tool at identifying a possible cardiac arrest? And, from there, how long did it take to get hands-on-chest?

While we do publish studies in peer-reviewed scientific journals, more often the data helps us develop a better understanding of an issue relating to emergency dispatch. For example, when questions were raised about whether the pandemic was causing bystanders to be less willing (or more hesitant) to perform CPR, we were able to examine thousands of calls to see whether the evidence supported these concerns about the pandemic's impact. And thankfully, a review of the data did not indicate any change in the rate of bystander CPR during the pandemic.

This work would not be possible without the participation of our member agencies. But participation is not a one-way street. We are just as committed to helping agencies contributing to the Data Center, which is why these agencies are provided with their own secure agency dashboard so they can analyze trends specific to their concerns. To learn more about the Data Center, please [click here](#). ●

The Journal of Emergency Dispatch is the official bimonthly publication of the International Academies of Emergency Dispatch (IAED), a nonprofit, standard-setting organization promoting safe and effective emergency dispatch services worldwide. Comprised of three allied academies for medical, fire, and police dispatching, the IAED supports first-responder-related research, unified protocol application, legislation for emergency call-center regulation, and strengthening the emergency dispatch community through education, certification, and accreditation.  
By meeting certain requirements, certified membership is provided for qualified individual applicants. Accredited Center of Excellence status is also available to dispatch agencies that comply with Academy standards. ©2020 IAED. All rights reserved.



# HOW ‘BLACK LIVES MATTER’ AND SHOULD REINFORCE OUR VALUES IN THE REALM OF EMERGENCY DISPATCH

Jeff Clawson, MD, Matthew Miko, JD

**A**s emergency dispatchers, we have been given a physical “leg up” in the long fight against racism—we can’t, while on-duty, currently see the caller, patient, or victim. In this regard, emergency dispatchers are “colorblind.” However, simply because we can’t see the calltaker doesn’t completely eliminate the possibility of implicit biases influencing our actions. Any number of

caller.” Unfortunately, there are several examples where a dispatcher thought that they could see beyond the information given by the caller with tragic results. The value of a structured protocol is that it keeps preconceived notions, assumptions, and stereotypes literally out of the equation. There is a known reason that these types of mindsets are called “Danger Zones” for dispatchers, and that emergency

standard of care and practice is based on these rules and requirements.

The following is a case from the “Legal Aspects” chapter in the Principles of Emergency Medical Dispatch (Sixth Edition):

*An example of inappropriately judging the caller involves a call from a payphone in a run-down section of a large southern California city, where the caller stated, “There’s a guy laying here. He can’t see or can’t breathe or something!” The new EMD (an experienced firefighter/EMT) classified this as a 32-B-3 (unknown situation, third-party). The case was reviewed. When the calltaker taking this case was confronted with the possibility that the call should have been coded as a 6-C-1 (difficulty breathing), he bridled at the suggestion, stating, “Listen to this guy, he’s an idiot. He doesn’t have a clue. Look where he’s calling from.”*

In this situation, the calltaker ignored information that was sufficient to properly prioritize the call. Instead, he judged the information based on a partially nonsensical statement from the caller and the location the call came in from.<sup>2</sup>

I (JC) simply mentioned to the QA review group what later became the EMD’s Second Rule of Caller Judgment: “Let’s replay that tape for the ladies and gentlemen of the jury.” The plaintiff’s attorney will not play the audio, but simply show these damning words on a very big chart in the courtroom (no accent, no stuttering, no slurring). Case over.

*The preconceived notion that people (callers or patients) with alcohol-related or other problems are somehow less deserving of help or quality care is rampant in emergency work. Personal prejudices or impressions cannot be allowed to influence the performance of the emergency dispatcher’s critical duties. It does not matter*

**Emergency dispatchers must always avoid the appearance of responding to or categorizing emergency calls in a haphazard or arbitrary manner.** – James George, JD

nonvisual cues, such as an ethnic-sounding name, the location of an incident, or accent or dialect, could be enough to trigger some preconceived notions about callers or the nature, severity, or veracity of their emergencies. As the first first responder, it is a must that we put on our professional, emotional “blindness” at the calltaking console. Race, color, socioeconomic status, disability, gender, sexual preferences, mental effects, and other related areas of “perceived” differences must never be allowed to play a part in the structured process we follow in service to all our clients—the calling public. In fact, research demonstrates that, with adequate compliance, a protocol-driven process in emergency dispatch can help dispatchers in providing equitable services to callers.<sup>1</sup>

The Emergency Dispatcher’s First Rule of Caller Judgment states that “The ED is never allowed to judge the integrity of the

dispatchers need to always be on guard against biased or stereotypical thoughts and any inappropriate actions based on them. Most of these Danger Zone items have a dead body literally at their core.

We must take information from callers at face value because we (being remote and trying to do a prompt, but time-restricted, “snapshot” evaluation of things) can’t know the ultimate “truth” of every statement or answer. We never will, and it’s both foolish and incredibly dangerous to even try. While I have frequently made the point that, in both medicine and the law, “If we didn’t write it, we didn’t do it,” the reverse is also true in the courts regarding the record, which is that, “If they said it, it happened.” With no way to know otherwise, we must assume that what is said on a call is factual—and rarely is it not. The simple fact is that during an active, quickly unfolding call, how could we possibly know which? The

whether these negative thoughts and actions result from the stress of the situation or from the EMD's personal belief system.

**Emergency Dispatcher's First Rule of Caller Judgment is "The ED is never allowed to judge the integrity of the caller."**

While we know we can't "save everyone," we have, over all these years at the Academy, clearly learned that if we do our jobs correctly, we can literally "help everyone" we come in contact with. Since this is our job, we must involve and refine our unique ability to deal with all callers professionally—which we can currently only do in the listening and verbal realm—which must always be done in an effort to expand our influence to the oppressed, disadvantaged, socially ostracized, and minority or diverse populations. In our opinion, this effort continues to be a significant failure within our society, as we now unfortunately witness all too often, and in all too grisly detail, on TV.

By following a well-scripted, carefully thought-out, and evolving protocol, including its embedded learning rules, written by Academy experts with the intent to remove any hint of racism or any other form of invidious discrimination or assumption, we can better succeed regardless of the human station of the caller, patient, victim, or suspect. Assisted by these protocols and training, we best perform our role as the dedicated, thoughtful, and unbiased interpreters of the answers provided by a caller—and, as implied in the 911 environment, do it promptly and effectively. When this doesn't happen, it only serves to increase the concerns that many in our society have about calling 911. An excerpt from an ongoing study on attitudes toward 911 found that diverse communities have a number of concerns and expectations when it comes to calling 911, including fear, anxiety, and mistrust (Scott et al., 911 Attitudes Study, unpublished data, IAED).<sup>3</sup>



## Emergency Dispatcher's First Rule of Caller Judgment is "The ED is never allowed to judge the integrity of the caller."

Moreover, concerns about calling 911 can create, or exacerbate, barriers to the provision of lifesaving aid. It's well-established that racial disparities exist relating to the performance of bystander CPR. A study published only a few months ago determined that in Memphis, Tennessee, USA, white patients were much more likely to receive bystander CPR compared to black patients (44.0% vs. 29.8%), while a 2009 study identified a similar disparity in Los Angeles, California, USA (24% vs. 13%).<sup>4,5</sup>

In an effort to examine reasons for disparities in bystander CPR rates in minority and lower socioeconomic status neighborhoods, researchers in a 2015 study interviewed residents of high-risk neighborhoods in Denver, Colorado, USA, to understand their concerns about calling 911.<sup>6</sup> "High-risk" neighborhoods were defined as those with higher than average rates of out-of-hospital cardiac arrest and below average rates of bystander CPR. The researchers found "fear of becoming involved because of the distrust of law enforcement, a result of possible undocumented status or outstanding warrants, was a common barrier that precluded [the] high-risk neighborhood residents from calling 911." Reflecting upon the role that emergency dispatchers play in their neighborhoods and communities, providing help to those when life is often at its most dire point of survival, some words spoken by Senator Robert F. Kennedy in Cape Town, South Africa—challenging that country's system of apartheid though many

advised against doing so—seem particularly appropriate, even though more than half a century has passed since:

*"Each time a man stands up for an ideal, or acts to improve the lot of others, or strikes out against injustice, he sends forth a tiny ripple of hope, and crossing each other from a million different centers of energy and daring those ripples build a current which can sweep down the mightiest walls of oppression and resistance."*

In a recent op-ed article in our local paper, Ethan Walker, a black college student, stated, "I ask you, look at our distress with new eyes, see at least a fraction of our experience, and join together in commitment to make black lives matter." As an emergency dispatcher, each time you answer a call, and you give your very best effort to help someone in need, and you do so impartially, unbiasedly, and without assumption, you send forth just such a ripple, one which most certainly gives hope. ●

### References

1. Afolayan J, Heward A, Olola C, Glucksman E, Gummett J, Clawson J. "Consistency of Emergency Medical Dispatchers' Decisions Using a Protocol-Based Triage System." *Annals of Emergency Dispatch and Response*. 2013; 1 (2): 18-22.
2. Clawson JJ, Dernocoeur KB, Murray C. (1986). *Principles of Emergency Medical Dispatch*. Sixth Edition. Priority Press; Salt Lake City, Utah, USA. 1986.
3. Trefts E, Hurst J. "Ensuring Trust in 911." *The Journal of Emergency Dispatch*. 2020; July 22. [iaedjournal.org/ensuring-trust-in-911](https://iaedjournal.org/ensuring-trust-in-911) (accessed July 27, 2020).
4. Justice JM, Holley JE, Brady MF, Walker JR. "Association of race and socioeconomic status with the rate of bystander-initiated CPR in Memphis." *JACEP Open*. 2020; May 21. [doi.org/10.1002/emp2.12095](https://doi.org/10.1002/emp2.12095) (accessed July 21, 2020).
5. Benson PC, Eckstein M, McClung CD, Henderson SO. "Racial/ethnic differences in bystander CPR in Los Angeles, California." *Ethnicity and Disease*. 2009; 19 (4): 401-406.
6. Sasson C, Haukoos JS, Ben-Youssef L, Ramirez L, Bull S, Eigel B, Magid DJ, Padilla R. "Barriers to calling 911 and learning and performing cardiopulmonary resuscitation for residents of primarily Latino, high-risk neighborhoods in Denver, Colorado." *Annals of Emergency Medicine*. 2015; 65 (5): 545-552.

**Fourth Law of Dispatch: The science of dispatch requires non-discretionary compliance to protocol.**



# YOU DRIVE THE INCIDENT

No Screaming Mimis and no singing

Heidi DiGennaro

**Y**ou never know when a call will become a newsmaker. Your simple alarm call turned into a burglary with a pursuit, bailout, area search, and what felt like a three-ring circus. Dispatch the clown car, ringmaster telecommunicator, because they may need that too.

Social media can turn events viral in seconds. In the call's timeline, you were the first point of contact: the calltaker, dispatcher, or both. It may have been a twist of fate it was you; you may have listened to your co-worker's talk group while they were on break.

It's your voice on the recording. How did you sound? As the calltaker on the simple alarm call, you may have sounded bored because it is your thousandth alarm. You probably have the alarm questions memorized and entertain yourself to see if you can finish the protocol or the call in less than 60 seconds.

If you did get the radio when the fan was smacked, you suck it up and handle it. When your co-worker comes back, it's guaranteed you express your pleasure (or displeasure) to them. Just remember the incident's public record. Because of the Freedom of Information Act, the call can be used by the media, for court purposes, and for training.

Composure is the key. Your radio compartment has ripple effects. If you come across like you are amped up on five energy drinks (Screaming Mimi), your excitement is contagious. You will ramp

up everyone else and potentially escalate a situation beyond what it actually is; this does not help and puts everyone more at risk. On the other hand, a wheezing law enforcement officer in a foot pursuit answered by a bored telecommunicator will have that officer questioning if you care that they are risking their life.



A telecommunicator who isn't fazed, their voice containing the right level of gravity without excitement, will have impact. One calm voice in the midst of madness can and will keep those who are affected by emotions or moods somewhat reasonable. Another side effect: They are clear voiced on the radio. Bonus for our side.

Then you have the singers on the radio. You know who they are. They make transmissions sound musical, every syllable its own flowing high or low note. Singing (and not the open mic variety) will have you teased. Some field providers stuck with singers will turn their radios

down so low they have to be radio-paged to get their attention. Not safe and not productive for either party. So don't sing.

How do you figure out what you are so you can get better? Listen to your playbacks or ask to hear recordings of yourself. In the bad ol' days, my unorthodox training involved hitting me in the back of the head with a legal pad while dragging my chair around whenever I attempted to dispatch a call. This was done to force me to keep an even tone. We've come pretty far since then, but boy did I learn.

Sometimes a sparingly used particular voice tone is a cue for a bad call. I used one voice tone specifically for the highest acuity or ugliest calls. Deputies would tell me they could be in the middle of doing whatever (sometimes BS'ing without clearing a call because they knew I

had a queue of calls waiting for them), hear that voice tone, and **boom!** I had their complete attention and they started clearing because they knew things were bad. That's a pretty powerful relationship to establish with your field providers.

Your radio voice can drive the incident. You yammer too much, they ignore you. You sound like a hyperactive Jack Russell terrier on caffeine, they ignore you. But if you are calm, don't scream, and don't sing, you will earn respect and they will (mostly) pay attention to you. You won't sound like a doofus on playback, especially to the media. That way, everybody's a winner. ●



# SIX FEET/TWO METERS APART

Spread the health

Art Braunschweiger

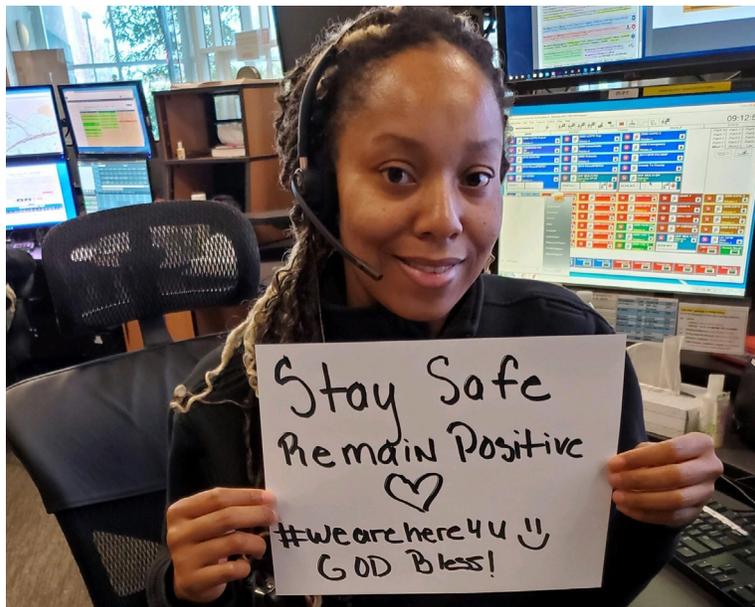
Every generation has its defining events. Anyone 30 or older can remember where they were on Sept. 11, 2001, when terrorists took over four commercial airliners in flight and killed thousands. And I remember exactly what I was doing half a lifetime before that when the U.S. space shuttle *Challenger* exploded, killing a crew that included a schoolteacher for the first time. The defining event for the newest generation is now COVID-19.

But even for those of us who experienced Sept. 11, COVID is different. On that day, we were safe within our walls. In my travels I've been to comm. centers that could resist a serious attempt at entry from armed intruders, and I've seen centers that can seal off the ventilation system from the outside air. One in eastern Pennsylvania (USA) was even built underground as protection against accidents from a nearby nuclear power plant. Yet never before have we faced a real and crippling threat that can infiltrate our centers, unseen and undetected, through one of us.

First, if you're one of those who took extra shifts in the past six months to help out or cover a quarantine co-worker, thank you. (If no one's said that before, they should have.) We may not have the risk or the stress of front-line responders, but we have to be there for them. And how our dispatch lives have changed! That exchange of smiles in passing someone in the hallway has been replaced by guarded looks behind the masks. And maintaining

six feet/two meters of separation is surprisingly difficult. It's as if we're all suddenly playing a children's game where you lose if you allow someone to come within your personal protected space.

For the future, increased separation should be the norm wherever it can be practiced. Spread the health! Those extra



Ashley Boston

Photo courtesy of Union County (NJ) Regional Communications

dispatch positions at the far end of the room should be permanently utilized, and the ones in between used as situations warrant. Backup dispatch centers, for those who have them, should be routinely staffed by a given number of dispatchers. (Side benefit: Working in the backup environment becomes routine, and there's zero-time cutover if the primary center goes down.)

Much of what we're doing now in terms of personal and workspace sanitation are things that we need to continue doing as we move forward. And not just for COVID. While deaths from COVID-19 are far higher than most people could have imagined,

a 2017 study from the U.S. Centers for Disease Control puts the number of annual influenza deaths worldwide between 291,000 and 646,000 (from 1999-2015).<sup>1</sup> In spotlighting these figures, in no way am I suggesting we equate the two or that any precautions against COVID are excessive. Quite the opposite: We should have done

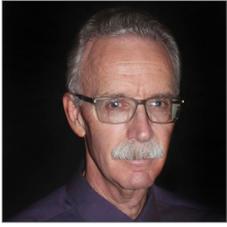
better all along to protect ourselves and our families.

Moving forward, "doing better" means continuing to be diligent about wiping down our workstations and associated equipment at the beginning and end of every shift. Dispensers for disinfecting wipes should be installed at multiple points within dispatch centers and hand sanitizing stations similarly placed. And the stigma of not coming to work if you're "not that sick"—which we, as dispatchers, often perpetuate—has to go away. It's simple math, and the comm. center

wins every time: One day of paid time off if you think you might be getting sick costs much less than the overtime to cover two others who call out sick for a week because they caught what you have. Besides which, emergency dispatch isn't something that should be attempted by someone who's physically and mentally below par from battling any respiratory virus—whether it's the common cold or COVID-19. ●

## Source

1. "Seasonal flu death estimate increases worldwide." Centers for Disease Control and Prevention. 2017; Dec. 13. [cdc.gov/media/releases/2017/p1213-flu-death-estimate.html](https://www.cdc.gov/media/releases/2017/p1213-flu-death-estimate.html) (accessed July 18, 2020).



# PUT ASIDE CALLER'S ANGER

Focus on message, not delivery

Eric Harne

Dealing with irritated, angry people is periodically part of the emergency dispatcher's job description. This can be particularly troublesome when dealing with life-or-death situations and the person on the other end of the phone is belligerent and angry. Since it's an issue that won't go away, it becomes a matter of defusing the anger and resolving the caller's problem without resorting to anger and creating a more significant problem.

There's a methodology to handling such calls—a way to calmly navigate the vitriol while gathering information and successfully assisting the caller. That methodology consists of the Angry Customer Protocol (ACP) and Communications Mapping. The ACP is a tool that emergency dispatchers can implement to control both themselves and the caller, while Communications Mapping is used by quality assurance to visually represent the verbal exchanges between telecommunicator and customer and analyze what went right or wrong with a call. [Click here](#) to read about Communications Mapping.

Someone will always be upset about something and often those same people will verbally abuse those from whom they seek help. Handling these calls properly often falls completely on the shoulders of the calltaker.

Hence, the ACP and its associated rules.

## Five rules of ACP

*Rule #1: There will always be angry customers. It's inevitable.*

If you're in emergency communications and wake up every day praying that you won't have to deal with angry, unreasonable

people, you will have a long, unhappy career. Providing a service invites customer complaints. Some of those complaints may be justified, some may not, others may just be misunderstandings, but if you build it, the complaints will come.

*Rule #2: Customers will often use language that insults and demeans.*

Sooner or later it's going to happen. Communications can deteriorate very



quickly if at least one person in the conversation isn't the adult in the equation; the only thing worse than expecting respect from a caller is to think that we **deserve** respect from one. We deserve nothing and realizing that can go a long way in managing both our emotions and those of the angry caller.

*Rule #3: Telecommunicators can't change Rules #1 and #2.*

Deal with it. Accept it. Embrace it. The sooner you do, the better off you will be.

*Rule #4: Dodge the highly critical or abusive language and grab the facts.*

It's mind-boggling listening to emergency dispatchers going toe-to-toe

with an angry caller, exchanging insults, yelling, and believing they've successfully transcended the situation by acting like them. Unfortunately, the result of such an encounter yields an even angrier customer, a stressed out emergency dispatcher, and a fractured resolution to the problem. Focus on the message, not the delivery system. A belligerent caller doesn't negate a legitimate concern that must be addressed.

When we acknowledge the importance of the caller's concern, without judgment, the caller will often begin to calm down.

*Rule #5: Work the facts and resolve the problem.*

Once you have the facts, use them to work the problem and resolve the issue to the best of your ability. Most customers don't want arguments. They want solutions. They want to know that you hear them and you're taking the actions necessary so they no longer feel powerless.

Being polite, attentive, and constructive give you an opportunity to help the caller, enhance your organization's reputation, and retain your sanity.

While it might seem counterintuitive, the ACP is designed to reduce our stress. Less stress and a calmer mind enable us to make better decisions. When your mind is cluttered with anger and irritation toward the person you're supposed to be assisting, the chances of failure increase. It comes down to a simple choice: either react or respond. A calltaker who reacts is an attempt to put the customer in his or her place. A calltaker who responds is unaffected by emotional outbursts and focuses on the facts and resolving the caller's problem. ●



## CHICKEN OR EGG?

Hatching the most appropriate Chief Complaint

Brett Patterson

### Brett:

With my understanding of the Medical Priority Dispatch System™ (MPDS), the medical concern takes precedence. The following scenario was highly debated amongst our team, and I would like to get an expert's opinion of the right process to follow.

Scenario: Geriatric patient in a skilled nursing facility experienced a ground-level fall and hit their head; the patient is awake but not verbally responding after the fall.

Case Entry Rule 2 states to “choose the Chief Complaint Protocol that best addresses the mechanism of injury.”

Case Entry Rule 5 states “If the complaint description appears to be MEDICAL in nature, choose the Chief Complaint Protocol that best fits the patient's foremost symptom, with priority symptoms taking precedence.”

The debate we are having is whether to use a trauma protocol or a medical protocol.

The Falls Protocol (MPDS Protocol 17) makes sense since the patient fell and hit their head, but there is now a priority symptom, with the patient being altered.

The patient may have potentially had a CVA (cerebrovascular accident) and fallen. Due to that reason, I would argue that the Stroke Diagnostic Tool would better help evaluate the scenario and give the responding crew better information.

*Thank you for your time.*

*Ivan Diaz*

*Dispatch Supervisor*

*AlphaOne Ambulance*

*Sacramento, California (USA)*

### Great question, Ivan.

You have described a classic “chicken or the egg” dilemma, which is often dependent on the actual Chief Complaint description. This dilemma is particularly important when dealing with a fall resulting in cardiac arrest because even a few moments delay in CPR may adversely affect the patient's outcome. However, in this scenario, we have a bit more time to actually address both possibilities.

If the Chief Complaint is fall, use Protocol 17 to address the mechanism of

injury and any subsequent injuries; the Not alert DELTA driver adequately addresses the response. If stroke is suspected as the cause of the fall, it is quite prudent to use the Stroke Diagnostic Tool and report the results to the responders.

Your mention of the potential medical cause is well noted and appreciated; we need more of this! If the Chief Complaint description is highly suggestive of cardiac arrest, stroke, diabetic problem, etc., and the subsequent fall is known to be ground level, I always encourage EMDs to go with the cause and then use the Target Tool to address any injuries. In most cases, injuries from a ground-level fall are not as serious as the underlying cause, especially when dealing with cardiac arrest.

We know that there is a high incidence of cardiac arrest in the 17-D-3 (Unconscious) code, so it is prudent to take the cardiac arrest pathway when the scenario strongly suggests sudden collapse resulting in unconsciousness, even if the caller is reporting only the fall

they have witnessed. I have attached a couple of related articles that may be of interest and education.

EMD is a very dynamic and diverse environment making black-and-white answers to Chief Complaint selection questions challenging, but this is really for the best. If our world was governed by strict rules that do not allow for thoughtfulness and experience, we could simply automate our role—"Press 1 if you're choking."

*Editor's Note: Brett discusses Chief Complaint selection in an article published in the Journal of Emergency Dispatch. Click here to read it.*

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

### Brett:

A question was raised recently on which protocol to use for an injury from a pellet/BB gun. Would it be shooting or the assault card?

*Patty Boatman  
Quality Assurance Coordinator  
Orlando Fire Department  
Orlando, Florida (USA)*

### Hi Patty:

Coincidentally, this topic was recently debated on the True 2 Q Facebook page, and the answer I'm about to give you is not as simple as I prefer.

First of all, we need to know "exactly what happened." Namely, was the shooting accidental or intentional? This is because I'm going to throw two more Protocols in the mix, Protocol 30: Traumatic Injuries (Specific) and Protocol 16: Eye Problems/Injuries, either of which might be appropriate if accidental and superficial.

Protocol 27: Stab/Gunshot/ Penetrating Trauma was designed for penetrating injuries as its title suggests. It can be used if accidental or intentional, or if the injury is penetrating or if unknown if penetrating. However, many times BB gun injuries are reported as accidental and superficial, in which case P30 or P16 may be appropriate. If intentional and superficial, P04 (Assault/Sexual Assault/ Stun Gun) is appropriate.

As always, err on the side of safety and worst-case scenario when circumstances are unknown, i.e., assume intentional unless accidental is known and assume penetrating unless superficial is known and offered. This information is best obtained by getting a clear and complete answer to "Okay, tell me exactly what happened?"

*Brett*

### Hello Brett:

My agency is trying to prepare training for MPDS 13.3, and we came across the new rule and need some clarification and possibly a good example for when this would come up. Is this new rule stating that when a patient is considered not alert by the caller (not necessarily the patient) but there is information that patient is responding somehow, awake, and talking in some fashion that the calltaker should use the Aspirin Diagnostic Tool? Any example, additional information, etc., that you could provide would be appreciated.

*Timothy Keough  
Regional Communications Duty Officer  
Quality Improvement Unit  
Training and Development Division  
Broward Sheriff's Office  
Fort Lauderdale, Florida (USA)*

following incidents where aspirin was not given to patients because of the alert criteria in the Critical EMD/EFD/ EPD Information (CEI) when, in fact, it was obvious to the EMD the patient could safely take an aspirin, i.e., patient is awake, talking, responding, and quite obviously maintaining her/his airway.

You may recall that in earlier versions of the MPDS we had an "INEFFECTIVE BREATHING and Not alert" DLS link criteria to PAIs. This meant that anytime a caller used a term that qualified a patient for INEFFECTIVE BREATHING, and the patient was reported to be not alert, the Protocol directed the EMD to PAIs where the caller would then be directed to lay the patient down. This became problematic because many of these patients were not only conscious, they were having respiratory distress and did not take kindly to being laid down. The link is now limited to unconscious patients.

The point is that while some not alert patients should not have anything by mouth because of the risk of aspiration, other patients, who are clearly maintaining their own airway (awake, talking, and responding), will not be compromised by chewing a single aspirin, and that therapy may prove to be very beneficial.

## PROTOCOL 10: Chest Pain/Chest Discomfort (Non-Traumatic)

Multi-Protocol Changes affecting this protocol: C

Changes affecting only this protocol:

- A new Rule 8 has been added: "Use of the Aspirin Diagnostic & Instruction Tool may be considered when a patient reported to be **not alert** is known to be **awake, talking, and responding**. Sips of water should only be provided upon patient request." See Figure 9.

Use of the Aspirin Diagnostic & Instruction Tool may be considered when a patient reported to be **not alert** is known to be **awake, talking, and responding**. Sips of water should only be provided upon patient request.

Figure 9. New Rule. Protocol 10. MPDS v13.3. © 1979–2020 PDC.

**Rationale:** Aspirin administration may be clinically appropriate for a subset of not alert patients if they are obviously maintaining their own airway.

### Hi Tim:

You are likely aware that we have significant over-triage in the "Not alert" Determinant Codes in the MPDS. This is likely due to the lay public's lack of understanding the term in its clinical sense, i.e., poor perfusion. Anyway, this Rule change is the result of user requests

As for the practicality of this Rule, if a patient is reported to be not alert and we only know the patient is conscious, do not advise aspirin. However, if it is clear from the call the patient is awake, talking, and responding, and the patient otherwise meets the aspirin criteria, advise its administration.

*Brett ●*

Established  
-2001-



*Through dedication to excellence,  
Westcom Emergency Communications  
strives to provide the highest quality  
of services to our partners  
and communities as the first  
“first responders.”*



Westcom Emergency Communications

# SPOTLIGHT'S ALWAYS ON

NTW never ends

Audrey Fraizer

**N**ational Public Safety Telecommunicators Week (NTW) celebrations can stretch four to six weeks at Westcom Emergency Communications, West Des Moines, Iowa (USA). But that's only the formal observance because every day, year-round, puts the spotlight on the city's emergency dispatchers.

"Our people are the most important part of what we do," said Supervisor Aubyn Giampolo, who's made it her priority to create a community standing in support of one another.

NTW is a themed event that in 2020 tied a "Back to the Future" landscape to the two weeks the 911 center was forced back into the past. A malware attack in late December 2019 that affected West Des Moines city operations brought down the 911 applications and changed the way they were handling calls. The calls were still coming in.

Fortuitously, they were able to carry on business as usual, with one major exception. No CAD. They went "old

school," Giampolo said, reverting to the paper and pen style of dispatching. They rolled with it, and Giampolo made an adventure game loosely based on the 1985 classic "Back to the Future," which tells of a time machine that goes awry.

The game's process of elimination can take four to six weeks to play out among competitive teams vying for prizes like a mini fridge, smart TV, air fryer, and KitchenAid mixer. Telecommunicators collect raffle tickets from winning bingo cards (numbers based on call types, IOWA/NCIC entries, and whatever else can fill a blank). The tickets are also handed out for "just about anything you can think of," Giampolo said.

The "donations" don't amount to passing an envelope when money is needed. Rather, center staff worked together to set up an association that replicates police and fire charitable organizations. Now in its sixth year, the Westcom Emergency Communications Association thrives on contributions deducted from paychecks upon the

express permission of each staff member who chooses to be involved. Everyone donating to the fund is an association member, and they decide where the money goes. NTW festivities and prizes are funded through payroll contributions going into the association's bank.

The emergency dispatcher funding goes far beyond fun and games. A majority goes to care packages or other types of gifts commemorating public service employees, particularly at times when a card cannot adequately convey their message of sympathy and shared grieving. Five line of duty deaths in three incidents during 2016 hit Westcom Emergency Communications hard.

In March 2016, Westcom Emergency Communications received a call at 12:32 a.m. about a vehicle traveling the wrong direction on eastbound Interstate Highway 80. Within a minute, the emergency dispatchers received a second call that the vehicle was involved in a head-on collision. Four people were killed in the fiery crash: Des Moines police Officers Susan Farrell

and Carlos Puentes-Morales, a prisoner they were transporting, and the driver of the other vehicle.<sup>1</sup>

Five months later, West Des Moines Police Sgt. Shawn Miller was killed in a motorcycle crash while returning from court after testifying in a hit-and-run case at the Dallas County Courthouse.<sup>2</sup>

Three months after the last call for Sgt. Miller, in November 2016, a lone gunman ambushed two Des Moines police officers—Officer Justin Martin and Sgt. Tony Bemino—who were sitting in their

sponsor a Toys for Tots drive during the holidays. The communities reciprocate. In April 2019, EMD Peg Aldrich was honored at an Iowa Cubs baseball game for providing CPR instructions over the phone that in eight of her calls, the patient survived and was discharged from the hospital.

While NTW events and the goodwill represented in care packages go a long way in keeping the communication center community connected, commemorative plaques reinforce their importance. A CPR

and the distinction of giving the father instructions on helping the distressed infant breathe.

It seems unfair to point out only two examples of CPR saves and baby deliveries. Post after post on the Facebook page recognizes emergency dispatchers as community volunteers, lifesavers, and response coordinators who “work tirelessly” during thunderstorms, tornadoes, and other hazards that—as you might guess—qualify emergency dispatchers for “On the Spot” awards for efforts in the extreme.

Giampolo said creating community inside and outside the center is all about engagement.

“We can rely on people,” she said. “The people you work with are there standing behind you, and the people calling know we’re here for them.”

Westcom Emergency Communications is a consolidated public safety dispatch facility in central Iowa that receives public safety related calls and dispatches police, fire, and emergency medical services for the cities of Clive, Norwalk, Urbandale, Waukee, and West Des Moines. Staff includes 24 full-time and three part-time emergency dispatchers, a training coordinator, four

dispatch shift supervisors, assistant chiefs of operations and logistics, and a chief. ●



Raffle time at Westcom Emergency Communications

patrol cars at separate locations, two miles and 20 minutes apart. While the suspect targeted police, the officers he killed were chosen randomly.<sup>3</sup>

The overwhelming loss of five officers in eight months turned into an opening to help other centers grieving similar losses. They send care packages to “let them know we are thinking of them,” Giampolo said.

If it’s not packages showing they care, Westcom also participates in voluntary events, such as packaging events for Meals from the Heartland and a dodgeball Special Olympics Iowa fundraiser. They

Plaque that made its debut in 2007 is in its fifth edition totaling nearly 50 names—some more than once—with a save in February 2020 that brought EMDs Alex Kerr and Chinyere Nwogu in front of the Urbandale City Council in recognition of giving PAIs that directly helped save a life before field support arrived.

The Stork Plaque is quickly catching up with stories about the over-the-phone delivery featured on the Westcom Emergency Communications Facebook page. EMD Brian Albright supplied childbirth PAIs on Nov. 23, 2018, which merited him the No. 6 spot on the plaque

## Sources

1. Bolten K. “Questions linger in fiery crash that kills 2 cops, 2 others.” Des Moines Register. 2016; March 26. [desmoinesregister.com/story/news/2016/03/26/des-moines-police-officers-killed-had-just-joined-force/82291266](https://www.desmoinesregister.com/story/news/2016/03/26/des-moines-police-officers-killed-had-just-joined-force/82291266) (accessed May 22, 2020).
2. “Sergeant Shawn Glenn Miller.” Officer Down Memorial Page. [odmp.org/officer/22917-sergeant-shawn-glenn-miller](https://odmp.org/officer/22917-sergeant-shawn-glenn-miller) (accessed May 23, 2020).
3. Bolten K. “Police ‘heartbroken’ after ambush leaves 2 Des Moines-area officers dead.” Des Moines Register. 2016; Nov. 2. [desmoinesregister.com/story/news/2016/11/02/2-police-officers-killed-ambush-attacks/93155012](https://www.desmoinesregister.com/story/news/2016/11/02/2-police-officers-killed-ambush-attacks/93155012) (accessed May 22, 2020).



The staff of Franklin County ECC. Photo by Cathy Davis-Berends.

# STANDING ALONE TOGETHER

Franklin County ECC can weather any storm

Becca Barrus

In the beginning of May 2020, Franklin County Emergency Communications Center (Ottawa, Kansas, USA) and its service areas experienced a severe spring storm that brought hail and high winds, knocking down trees and power poles. What happened next was indicative of the attitude of Franklin County ECC emergency dispatchers.

“Two employees just showed up unannounced,” reported Sarah Peffly, Dispatch Manager. “They put on a headset and went to work. They know where they need to be when crap hits the fan.”

It’s important to know you can count on your colleagues in the smoothest times—it’s especially important when you’re a small center during any kind of disaster.

Emily Stanley, a Dispatcher II and one of the employees who came to help during the May storm, said it’s something positive she’s learned and relearned about her co-workers in recent times of change and crisis. “Everybody has stepped up to the plate, no matter how burned out they feel,” she said.

The physical building that houses Franklin County ECC is in downtown Ottawa. It’s a beautiful red brick building that also houses the Franklin County jail. A long way back, dispatchers also used to be jailers and although none of them currently carry keys to unlock cells, they do field calls from the lobby shared between the jail and the communication center from people coming to pick someone up from lockup.

Until 2018, Franklin County ECC was part of the Franklin County Sheriff’s Office, which is why they’re in the same building. However, needs change and what Franklin County ECC found they needed was to become a standalone agency. Rather than answering to the sheriff’s office now, they answer to a county commission. They make big decisions with the help of their advisory board, which is made up of representatives from law enforcement, EMS, emergency management, and fire departments (one from a rural department, one from an urban department).

“Everyone has a voice,” said Peffly, including the emergency dispatchers who are routinely asked for their input regarding potential changes.

Franklin County ECC is a small center: There are 10 full-time and two part-time emergency dispatchers. Between them, they cover Franklin County’s needs around the clock on 12-hour shifts. Three people are on the floor during peak times (10 a.m. to 10 p.m.), both calltaking and dispatching. Outside of peak times, only two people are on the phones and radios. With such a small worker pool, it’s important to know that you can rely on each other. That doesn’t just apply to the other dispatchers either; Franklin County ECC is responsible for dispatching for 13 individual agencies that serve a population of roughly 25,000 people. Eight of the nine fire departments are manned by volunteers, and a large portion of the service area are rural addresses.

In addition to being close to one another, they’re also close physically and

emotionally with the responders they send on calls. They know the names, faces, and voices of their field units, which can be both a blessing and a burden. Franklin County had never experienced a line-of-duty death until recently when two officers died within 18 months of each other. Stanley personally drove one of the officers to the hospital in the officer's patrol car. Even in less acute calls, they're dealing with calls from friends, family, and co-workers.

Where do they go to rest and relax when they're not on the clock? Because they dispatch for law enforcement, they don't spend a lot of time hanging out at local bars where they're more than likely to run into someone they've interacted with on a police call, so they tend to hang out with each other and other first responders.

"We used to have a crawfish boil every year," said Stanley, who is from Louisiana (USA) and whose father used to bring the seafood up from Lafayette, Louisiana.

And just because their relationship with the community is complex doesn't mean that Franklin County ECC dispatchers don't do their best to serve and protect them. When COVID-19 began spreading in America in March 2020, the emergency dispatchers readily answered questions about pretty much anything you could think of.

"Am I going to get arrested if I go fishing?' 'Can I put my boat in the water?' 'Is it okay to take care of my livestock and work in the fields?' 'Can I take my senior citizen parents for a ride?' 'Is it okay if I still do court-ordered child exchanges?'" Peffly recalled. "There's a lot of uncertainty in the community."

Peffly is well acquainted with Ottawa and the 13 surrounding towns. She was born and raised there and has lived there all her life, except for a brief two-year stint when she lived in Moscow, Idaho

(USA). She's been working in emergency dispatch since 1998—a tenure of 22 years.

"When I first started working here, the training program for new hires was four weeks; that's been extended out to four months," said Peffly, who regularly worked night shifts for 16 of those 22 years. "We've seen a lot of changes in the last two years too, and they've been positive. We got a new radio system, a new phone system, and we became accredited."

Before Franklin County ECC started the process to become an Accredited Center of Excellence (ACE) in January 2019, they didn't have a Q program at all. Now Stanley is the unofficial head of the

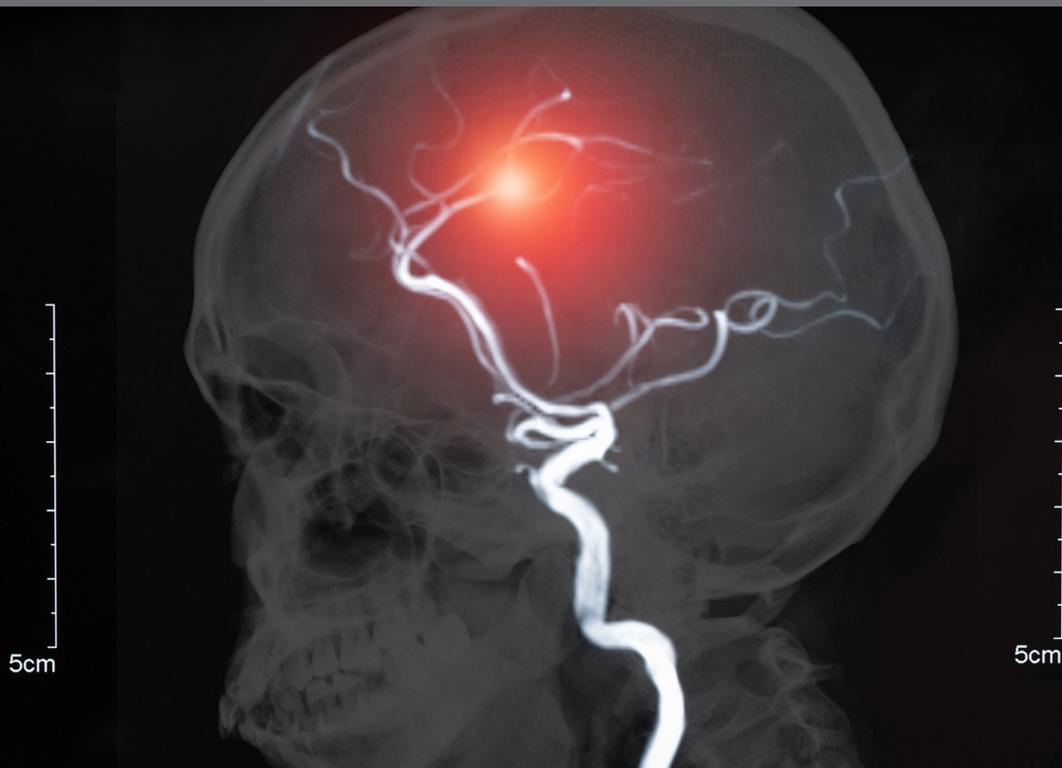
QA/QI division, and she'll be an official QA/QI Lead when the advisory board approves the position hopefully sometime in the future. The team worked together and achieved ACE in April 2020, a mere 14 months after taking their first steps.

"I'm really proud of how hard they worked," Peffly said. "I couldn't ask for a better group of employees! Being a small agency, you come to know and trust your partner. We don't have the backstabbing or the cliques."

Stanley chimed in, "We accept each other the way we are. We support each other in one common goal," whether that's ACE or supporting their community through any kind of disaster. ●



The staff of Franklin County ECC. Photo by Cathy Davis-Berends.



## CHANGING THE MINDSET

Strokes can affect anyone, at any age

Audrey Fraizer

**A** neighborhood group dog walk introduced Fiona Bayley to an opportunity to modify an existing mindset in stroke identification. The same goes for co-worker Fiona Roberts. She wasn't along for the same dog walk, but she was elated to go the distance.

Bayley and Roberts work at East Midlands Ambulance Service (EMAS), Nottingham, U.K. Bayley is a calltaker and an ED-Q™ (call auditor). Roberts is a calltaker and an Education Developer (trainer). A call for speaker presentations for UK NAVIGATOR inspired them to develop a proposal, and among their ideas was a review of the Medical Priority Dispatch System™ (MPDS) Stroke Diagnostic Tool.

Enter Ella Raynsford, a 15-year-old secondary school student who often went along on the neighborhood group dog stroll. Ella and Bayley got to chatting, and Ella stunned Bayley about her experience involving emergency care.

Ella experienced a stroke two years earlier.

"I was shocked," Bayley said. "Never once had I thought about a child having

a stroke. A stroke patient surely must be older. Children don't have strokes."

Bayley was incredulous. As a calltaker, she naturally considered the possibility that they had overlooked the Stroke Chief Complaint for a caller not meeting the popularly perceived age criteria, despite complaining of stroke symptoms. She also looked at her own children, comparable in age to Ella. The same could happen to them. No one expects stroke in a healthy, active teen.

Ella was athletic and she gravitated to karate and kickboxing.

One night at mixed martial arts training, she sustained a neck trauma followed sometime later with a hand trauma. She felt a numbness in her arms. Her parents, Graham Raynsford and Claire Garton, noticed Ella was acting a bit off. She was slow, not responding well, but logic dictated the hand trauma was causing the sensation of pins and needles. The lethargy was easily attributed to an energetic teenager with a busy social life.

Her symptoms intensified. The numbness spread from her limbs to her

face. She felt warm. Her parents called 111 and were advised to bring Ella into an Accident and Emergency Services (A&E) Clinic. The triage nurse gave her one look and asked Graham and Claire, "Has her smile always been drooped?"

"That's when the bells went off," Claire said.

Ella was whisked away for neurological testing. A CT scan and MRI showed bleeding in Ella's brain, which was attributed to causing the stroke. The stroke diagnosis was shocking, something no parent of a teenager would ever expect.

"Stroke in the young doesn't cross your mind," Claire said. "It's the last thing you expect to hear. We were shocked."

A second larger stroke and further examination tied the susceptibility of recurring brain bleeds/clots to a previously undiagnosed autoimmune disorder known as antiphospholipid syndrome. The disorder attacks the immune system, causing sticky blood to form on healthy tissue, increasing the risk of blood clotting. Ella spent six weeks in inpatient therapy. Properly

regulated medication decreased her chance for further strokes.

Jump ahead three years. Ella, a once incredibly athletic person, was no longer participating in mixed martial arts or karate. She and several friends had remained close, but others had dropped away. They no longer shared the same athletic interests. She was open about her experience and never shied away from describing what happened.

Ella's experience hit a nerve. She inspired Bayley, and Bayley inspired Roberts.

As Ella's experience showed them, strokes can happen to anyone, not only stereotypically among the elderly. It was a message that Ella and her parents shared in a video that became part of a presentation at UK NAVIGATOR and Euro NAVIGATOR.

Ella stole the show in her debut. She is perky, candid, and dispels misconceptions identified through case studies in the subsequent presentation "A Stroke Patient: Surely They Must be Elderly." The case studies present hypothetical patients in the age groups of infancy, teenage, middle-age, and senior age. The audience is tasked to choose the patients most likely experiencing a stroke, based on symptoms Bayley and Roberts had researched and incorporated into seven scenarios. A 90-year-old male patient was everyone's selected stroke

patient. Their answers were one patient short. No one had selected a 12-year-old exhibiting the same symptoms after a fall.

"It proved the point," Roberts said. "Somebody's age influences the Chief Complaint. That perception emphasizes how difficult it can be for an emergency dispatcher to identify a stroke when it deals with age. We don't expect a stroke in the young."

Statistics accompanying the presentation drive home the message (see below).

Roberts said meeting Ella for the video drew her to the cause. She could not resist promoting a potential knowledge gap in stroke identification within their education development program. Training now includes use of the Stroke Diagnostic Tool when recommended by protocol (automated) and when the calltaker believes it appropriate based on new and updated information (manually from the ProQA<sup>®</sup> toolbar).

"They are much less likely to dismiss possible strokes as a Chief Complaint [MPDS Protocol 28] based on symptoms reported for younger patients," Roberts said.

Subsequent analysis of 999 calls in which Protocol 28 has been selected between April 2019–March 2020 showed that 194 patients between the age 0–17 years had experienced a stroke/stroke symptom (EMAS figures).

Beverley Logan, IAED™ U.K. Associate

Director/National Accreditation Officer, was inspired and enlightened by Ella's story when she attended Bayley's and Robert's session at UK NAVIGATOR 2018. Like most, Logan had attributed the age factor to the chance of stroke.

"What a change in the mindset," she said.

NAVIGATOR sessions are often the platform for further study and a way to bring topics to a larger audience internationally. The stroke presentation highlighted the reality of strokes occurring in younger people and it has taken on a new role in control centers. Per Logan's recommendation, UK/Europe MPDS instructors supplement their courses with the information to deepen the knowledge of stroke. There has been mention of adding "Ella's Law" to the Stroke Protocol to remind emergency dispatchers that age is not a primary factor for the specific Chief Complaint.

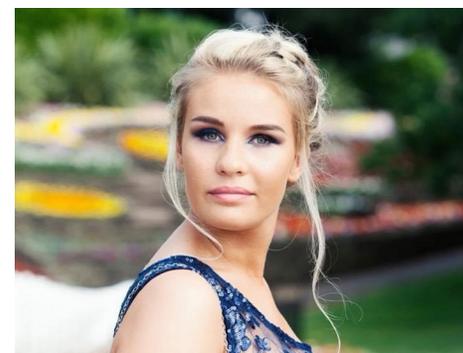
Ella's story has affected Bayley and Roberts on a deeper level.

"They feel Ella's emotional journey," Logan said. "The project became very personal for them."

Ella does not hide the facts of what she can do and what she is determined to do. Now 18 years old, she works part time. As a result of the stroke, she developed epilepsy, which forces her to avoid overexertion since it can trigger seizures. There are days when she forces herself out of bed because of the fatigue related to the stroke and its neurologic damage. She has yet to regain the full use of her left hand and arm. Despite the ups and downs, her tenacity carries the day, Bayley said.

Bayley and Roberts still look to Ella for motivation. Her story has become personal for them.

"The more we do, the better," Roberts said. "Any opportunity we can get to promote this topic, we grab it." ●



Ella Raynsford

All Stroke Cases				
Date Range	Chief Complaint	Cat Code Only	Calls	Response
2019/2020	Stroke (CVA)	Category 1	80	74
2019/2020	Stroke (CVA)	Category 2	18930	16130
2019/2020	Stroke (CVA)	Category 3	1772	1076
2019/2020	Stroke (CVA)	Category 4	816	35
2019/2020	Stroke (CVA)	Category 5	259	3

<b>Total</b>	<b>21857</b>	<b>17318</b>
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Stroke Cases of Children between the age of 0 and 17				
Date Range	Chief Complaint	Cat Code Only	Calls	Response
2019/2020	Stroke (CVA)	Category 2	169	127
2019/2020	Stroke (CVA)	Category 3	8	4
2019/2020	Stroke (CVA)	Category 4	11	0
2019/2020	Stroke (CVA)	Category 5	6	0

<b>Total</b>	<b>194</b>	<b>131</b>
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Statistics compiled from the research drive home the message.

# ROCK 'N' RESEARCH

Get familiar with the basics of research

Becca Barrus



**T**he word “research” has some pretty dull connotations, right? You might be thinking that it’ll be a miracle if anyone even reads past the headline. You might also be thinking that research is too boring or too academic. You might be skeptical that the people who are doing research have a realistic view of the field they’re investigating. Or maybe you know that research is theoretically valuable to you in both your personal and professional life, but think that often it’s so hard to read that it may as well not exist at all. What’s the point?

Most people get interested in reading and participating in research because they have a question. It's as simple as that. They wondered: How are lights-and-siren responses affecting our agencies' response times? Why are callers reluctant to perform CPR on patients? Is dispatch-assisted CPR even effective in helping resuscitate patients? How long should you wait before hanging up on a silent caller?

And the good news is that those questions already have answers! Getting involved with research doesn't always mean starting from scratch. Sometimes it means that you use the answers that other people found to improve your performance or satisfy your own curiosity.

Does that sound too good to be true? Maybe you've seen one of the articles answering the questions above and couldn't make heads or tails of it. Where do you even start? Luckily for you, the International Academies of Emergency Dispatch<sup>®</sup> (IAED<sup>™</sup>) is the world's leading expert on emergency dispatch research and science, and we have some tips and tricks to help you make research work for you.

One of the most convenient things about research is you can cultivate your experience so it fits your needs and interests. Although there are dozens of forms that can be used to present

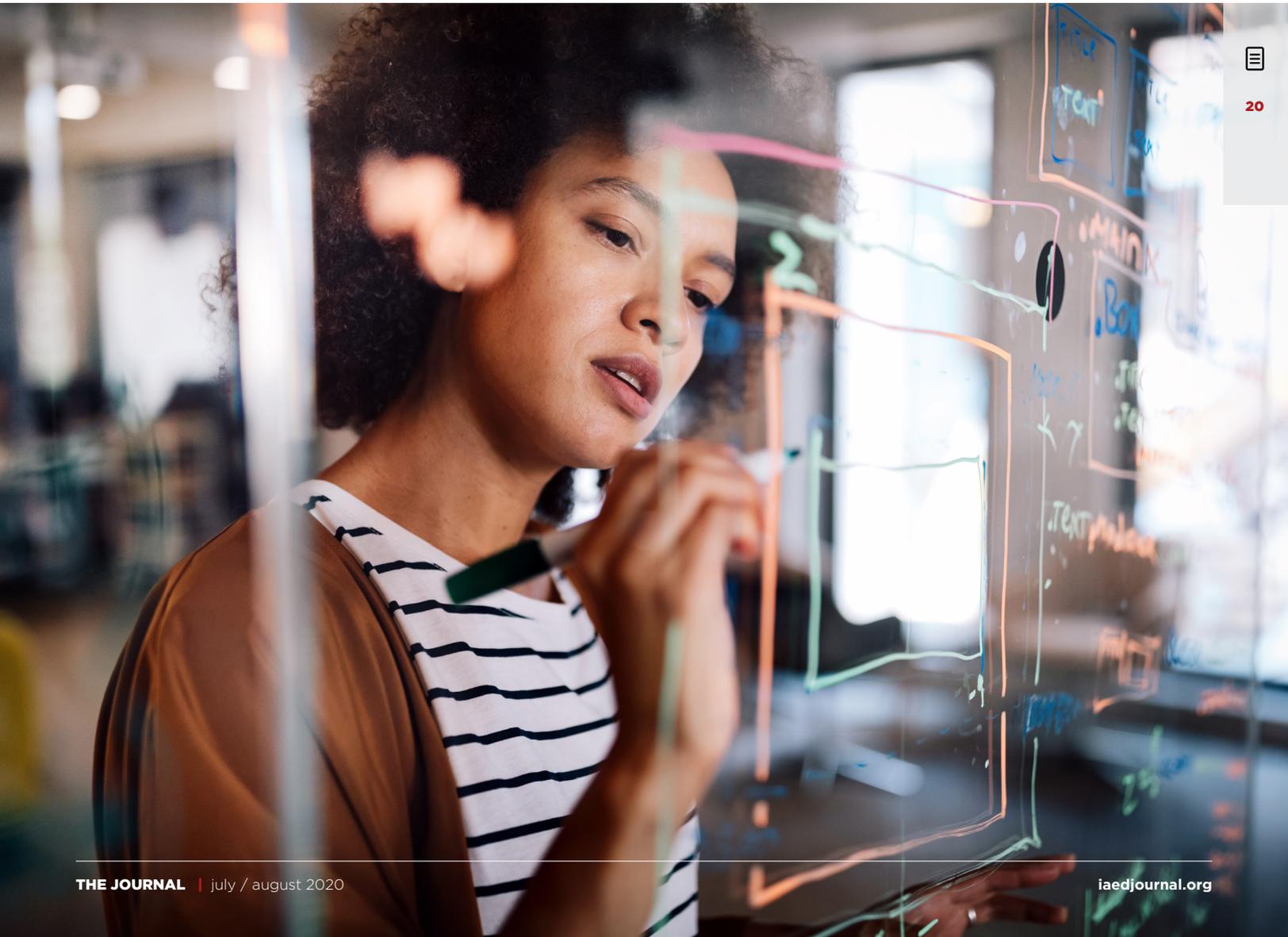
research findings, in this article we're going to focus on the three forms used for the Annals of Emergency Dispatch & Response (AEDR): research papers, research posters, and research briefs.

### Research papers

The following secret is guaranteed to blow your mind and change your life. You don't have to read an entire research paper in order to get a good grasp on what it's saying. In fact, most people—even other researchers—don't usually read the entire research paper. Unlike an article or a book, it isn't designed to be read from start to finish. If you're looking for a way to get the general gist of the question being asked and answered, all you need to read is the abstract. It comes at the beginning of the paper and gives you all the information you need in just a couple of paragraphs.

The abstract tells you: why the researchers thought about studying this (background), what they wanted this to accomplish (objectives), what they did and when (methods), what happened (results), and what it means (conclusions). That's it. The whole project distilled down to, generally, fewer than 500 words.

What if reading or skimming the whole abstract is still too daunting? What if you don't have the time? Hit up the conclusions



section at the end of the abstract. It'll tell you the "what" and "why" of the paper in even fewer words than the overall abstract. If anything in there catches your interest, you can go back to the section about it to get a more in-depth perspective. It's like reading the end of the book before you read anything else so you know what happens and don't have to live in suspense. That's encouraged in research. There's too much information out there not to get to the good stuff first to find out if it answers your question. If it doesn't? You can move right along and find another paper.

### Research posters

If you're not convinced that reading research papers is for you, maybe give research posters a whirl. The best research posters easily communicate their information at a glance through graphics and/or pictures. The phrase "a picture is worth a thousand words" is well-known (if clichéd) for a reason. With research posters, you can read the title to find out what question is being asked and then look at the graphics to find out what the answer is.

If you learn better when someone is explaining a concept to you (as opposed to reading about it on your own), research posters are a great place to start. Generally, they are meant to be displayed at conferences (like NAVIGATOR and NENA's Annual Conference & Expo) with the poster presenter standing alongside to answer any questions. Research is supposed to be a conversation. Maybe you agree. Maybe you disagree. Maybe you aren't sure how conclusions have been reached by the researcher. That's what the presentations are for—to ask questions! Those presenting their findings in this manner will be more than happy to engage with you.

What if you found a research poster outside of a conference setting? Does that mean the conversation between you and the researcher can't happen? Of course it doesn't. Most research posters will

have the authors' contact information on them to encourage people to chat with them about it. The information will usually include their email address or phone number, so don't be shy—if you don't know how to start the conversation, ask them how they came up with the idea in the first place.

### Research briefs

So you're not quite comfortable with reading the research paper abstracts and aren't ready to engage in a meaningful conversation with a research poster author. Is your journey to learning more about emergency dispatch research done? Not necessarily! The IAED also produces research briefs, which have graphics, like research posters, and have the added bonus of being clear and concise. They often include an example of how the

## Research posters are a great place to start.

research was applied by someone in the field of emergency dispatch or a related field (EMS, fire, or police).

Because emergency dispatch is a worldwide topic, the IAED has made some of the research briefs also available in German, French, Italian, and Dutch. You can get Continuing Dispatch Education (CDE) credit for reading them and taking a corresponding quiz on the College of Emergency Dispatch. Not only will you be building your research-comprehension skills, you can also work toward your recertification at the same time.

Similar to the research briefs, you can also get CDE credit and dip your toes into research by listening to the IAED's podcast "Dispatch in Depth." Each episode is a conversation with researchers about their questions, answers, and everything in between. You can listen to it on the AEDR website, SoundCloud, iTunes, or wherever you get your podcasts.

### Peer review

One thing to look for in any kind of research—no matter the form or location of said research—is whether or not the findings have been peer reviewed. Peer review is like the fact checking: It shores up the findings and makes sure that researchers can't just present whatever results they wanted to find instead of what they actually found. The people who do peer review are usually considered to be experts or specialists in the field, meaning that their perspective has experience and weight.

Peer reviewers have several jobs. First, they make sure that the paper's methodology is sound, which means that the study and results can be duplicated. One of the aims of coming up with research findings is for people to then apply them in their own settings. If the methodology

isn't sound or replicable, it doesn't move the conversation around the question forward. Second, they make sure that the results are plausible and well-presented and that the interpretation of the results is valid. Again, the whole point of research is to come up with an answer to a question, and that answer needs to make sense. If

the researchers haven't connected the dots quite right, the peer reviewer points it out and the findings aren't published until it's corrected.

If two papers investigating the same question come to dramatically different results, do some investigating yourself. Find out if both have been peer reviewed and by whom. In the age of excessive information, it's a good skill to be able to sort out valid from nonvalid sources not just on emergency dispatch-related topics but for any topic that's important to you.

### Potentially problematic pre-alerts

This thingy is all well and good, but how about a concrete example? Dawn Faudere worked for Johnson County Emergency Communications Center (JCECC) in Olathe, Kansas (USA), as an Operations Supervisor. While she was reviewing calls as part of her EMD-Q<sup>®</sup> duties, she noticed that



the center's rapid post approach didn't seem to be the most efficient use of resources. Also called "pre-alerts," rapid post sends out responding units prior to the calltaker coming up with a Determinant Code in ProQA<sup>1</sup>. The reasoning behind pre-alerting is that it saves significant time, which then has a significant impact on the patient outcome. Faudere wasn't so sure that's what was actually happening. Time and time again she saw units that had been pre-alerted get canceled because there had been no real reason to send them out the door to begin with, especially not with lights-and-siren.

Faudere used the data from her center to try to figure out what was really going on. She used FirstWatch to find calls that were "mismatched"—calls where the responding units were sent out as high priority but turned out to be a low priority situation (or vice versa). She compared the dispatch data with ambulance service data (including the paramedic impression and Glasgow Coma Scale) and patient information. Faudere needed a way to prove that the process of taking a call correctly was just as important as getting responding units to the specified address in the shortest amount of time possible.

Johnson County wasn't the only center using pre-alerts where someone was wondering if there was a better way. Faudere met Jeff Hutchens with Guilford County Emergency Services (North Carolina, USA) and found out that he was having the same questions. They pooled their resources and data together to create a research poster of their question and their findings and then later published a paper in AEDR. They looked at a total of nearly 140,000 calls and found that just over 50% of them were downgraded from their original dispatch level and 5% were canceled altogether. Additionally, in 29% of the calls, at least one response unit was canceled. In their words, "This indicates a waste

of valuable resources and an implied increase in cost and risk."<sup>1</sup> That's a pretty strong argument for waiting for proper dispatch assessment before sending a response out. In fact, Hutchens used the results of the study to make changes to the pre-alert policy at Guilford County Emergency Services. He turned data into action.

## Conclusion

Research gets a bad rap, but it doesn't have to be intimidating or boring. Think of it as a buffet where you can go to find things you're interested in. You may only want a slice or even just a bite of cheesecake rather than committing to eating the whole thing. As you get more comfortable reading and comprehending research, you can read more and more of it. Research comes in many forms—research papers, posters, and briefs, to name a few—and the best research goes through a peer review process.

Check out [AEDRjournal.org](https://www.aedrjournal.org) for more information—click on the "Learn" tab for more tips and tricks or dive right into the papers, posters, and briefs if you're ready. If you have a specific question, email the experts at [ARCresearchteam@emergencydispatch.org](mailto:ARCresearchteam@emergencydispatch.org). Chris Olola, Greg Scott, and Matt Hirschi will be glad to hear from you and will probably ask you questions of their own.

(You may have noticed that all of the information in the article is right here in the conclusion. If you want to read more about a specific point, you can go back and read just that section. That's how abstract conclusions should work!) ●

## Source

1. Faudere D, Hutchens J, Olola C, Scott G, Broadbent M, Gardett I. "Implications of Pre-Alerts for Medical Emergency Calls." *Annals of Emergency Response*. 2018; Dec. 4. [aedrjournal.org/implications-of-pre-alerts-for-medical-emergency-calls-2](https://www.aedrjournal.org/implications-of-pre-alerts-for-medical-emergency-calls-2) (accessed July 16, 2020).

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# PANDEMICS, EPIDEMICS, AND OUTBREAKS

Protocol 36 helps you do more with less

Becca Barrus

**B**efore COVID-19 there was the H1N1 influenza virus—more commonly known as the swine flu—which is estimated to have infected 60.8 million people (including 12,469 deaths) from April 2009 to April 2010 in the United States alone.<sup>1</sup> Like COVID-19, symptoms were described as flu-like, including fever, cough, and body aches. Unlike COVID-19, however, H1N1 was not likely to cause patients 65 and older to get significantly sick, although they were at a high risk of developing serious complications if they did contract it. Before H1N1, the last worldwide pandemic was an H3N2 influenza virus that resulted in 1 million deaths worldwide.<sup>2</sup> H3N2 emerged in 1968, 10 years before Dr. Jeff Clawson released the Medical Priority Dispatch System™ (MPDS).

Because it was the first global pandemic in 40 years, H1N1 gave the International Academies of Emergency Dispatch<sup>1</sup> (IAED™) the impetus to create a protocol specifically for managing

disease outbreaks. Protocol 36: Pandemic/Epidemic/Outbreak (Surveillance or Triage) was released in April 2009 and underwent some updates in April 2020 to more accurately serve emergency dispatchers and the community during the COVID-19 pandemic.

Protocol 36 is only to be used “during an officially declared outbreak, epidemic, or pandemic,” and thus doesn’t apply to regular seasonal flu.<sup>3</sup>

When does an outbreak turn into an epidemic and then become a pandemic? The definitions on Protocol 36 outline the differences between the related but distinct phenomena:

- **Outbreak:** A sudden increase in the number of disease cases, or occurrence of a larger than expected number of cases, within a short period of time.
- **Epidemic:** A sudden outbreak of a disease or an unusually large number of disease cases in a single community or relatively small area. Disease may spread from person to person and/or through the exposure of many

persons to a single source, such as a water supply.

- **Pandemic:** An epidemic that becomes widespread, affecting an entire region, continent, or the world.

Since a pandemic is usually made up of many regional and local outbreaks, the same disease may impact your agency and your service area much differently than other nearby regions, and those further away from your area. If Milan (Italy) has 22,000 active cases and your center has fewer than 500, you can both be using Protocol 36—just in different capacities.

What does Protocol 36 do? Simply put, Protocol 36 helps your EMS response system and your local hospitals do more with less. Like other protocols, Protocol 36 allows EMDs to quickly and accurately determine which cases need a rapid EMS response; however, unlike other protocols, Protocol 36 identifies patients with outbreak-specific symptoms to allow for a reduced or modified response—or perhaps no EMS response at all. During a severe outbreak in your region, conserving system

resources and not overwhelming your local hospitals with outbreak patients is one of the most important public health goals.

Another way to use Protocol 36 is to surveil the situation in your area, watching carefully for signs of escalation. In the case of our current pandemic, many places in North America still have not seen their system severely stressed. Those regions can anticipate future activity and may want to watch for spikes in call load so they are able to implement response changes quickly. In situations where call load has already escalated, such as in New York City (USA) or Milan, there's no need for that. It's time for action—or rather, reduced action.

### On the level

There are four levels of patient triage on this protocol: Level 0, Level 1, Level 2, and Level 3. In the original version of the protocol there were only Levels 1, 2, and 3. Level 0 was added in 2020 and is used to keep an eye on the number of disease cases in your specific jurisdiction. There is no change in response when your center is using Level 0 on Protocol 36. Levels 1–3 “allow for locally designated, potentially different levels of patient triage and reduced response.” Your local medical director or medical control authority will decide which specific Determinant Codes will get a reduced response. In Level 1, there should be a consideration of referring ALPHA cases only. In Level 2, there should be a consideration of reduced response for CHARLIE cases. In Level 3, there should be a consideration of referral for some CHARLIE cases and reduced response for DELTA cases. Obviously, Level 3 would be implemented during a time when your area has been hard hit by the disease and resources are truly decreased.

It's important to note that if your agency moves to Level 1 or even Level 2, it isn't locked in at that response level for the rest of the pandemic. It's designed to be an adjustable protocol. If more of your

resources are freed up, it might be time to return to more typical response assignments. You can revert back to Level 0 (surveillance mode) or discontinue the use of Protocol 36 altogether when infection levels in your area become more manageable.

The PDIs for Protocol 36 are adjustable as well. There are options for circumstances when regular dispatch is available, when dispatch is limited/reduced, when there is no EMS response at all or the patient should remain quarantined at home, and when there is no EMS response and an alternative treatment site is available. In the case of this last example, instructions decided on by local authorities will tell you where to send patients and how to get them alternative transportation if needed.



### Too many questions?

Depending on the patient's condition, there may be more Key Questions than most protocols have on average. However, you may or may not ask all questions for every single caller suspected of having the specified disease.

Rule 2 states that “Once two flu-like symptoms in Key Questions 4–13 have been identified, skip the rest of the questions to Key Question 14 and then choose the appropriate Determinant Code. If positive flu-like symptoms were mentioned in Case Entry, these Key Questions do not have to be asked again. More than one flu-like symptom

creates a higher likelihood that the Chief Complaint is actually the current outbreak illness.” As with other protocols, priority symptoms are still relevant and will trigger a higher response level when they are present. Someone calling about a patient displaying INEFFECTIVE BREATHING with flu-like symptoms will receive a different response level than someone calling about a patient with multiple flu-like symptoms only.

Priority symptoms to watch out for include INEFFECTIVE BREATHING, DIFFICULTY SPEAKING BETWEEN BREATHS (DSBB), Abnormal breathing, level of consciousness, CHANGING COLOR, and Chest pain/discomfort (a higher Determinant Code will be assigned to patients aged 35 and up ). Key Question 14 also asks if the patient has any

HIGH RISK conditions. Your Local Medical Control will have defined and authorized conditions that qualify a patient as HIGH RISK and they will likely include: patients aged 65 and older, blood disorders, diabetes, kidney and liver diseases/disorders, neurological diseases, pregnancy, sickle cell disease, and weakened immune system.

People aren't going to stop having other medical emergencies just because there's a pandemic. There will still be cardiac arrests, strokes, and falls that will require a quick response.

Protocol 36 will help your center determine how best to respond to emergent medical situations when everything feels emergent. ●

### Sources

1. “2009 H1N1 Pandemic (H1N1pdm09 virus).” Centers for Disease Control and Prevention. 2019; June 11. [cdc.gov/flu/pandemic-resources/2009-h1n1-pandemic.html](https://www.cdc.gov/flu/pandemic-resources/2009-h1n1-pandemic.html) (accessed May 22, 2020).
2. “Influenza Historic Timeline.” Centers for Disease Control and Prevention. 2019; Jan. 30. [cdc.gov/flu/pandemic-resources/pandemic-timeline-1930-and-beyond.htm](https://www.cdc.gov/flu/pandemic-resources/pandemic-timeline-1930-and-beyond.htm) (accessed May 22, 2020).
3. “Special Procedures Briefing: Protocol 36 and Emerging Infectious Disease Surveillance.” The International Academies of Emergency Dispatch. 2020; May 5. [cdn.emergencydispatch.org/iaed/pdf/NAE\\_Pandemic\\_v13-3.pdf](https://cdn.emergencydispatch.org/iaed/pdf/NAE_Pandemic_v13-3.pdf) (accessed May 22, 2020).



## BEHIND THE WHEEL

Staying sober keeps everyone safe

Audrey Fraizer

**G**etting behind the wheel of a vehicle after consuming drugs or alcohol is a serious crime that puts the driver, passengers, and other vehicles sharing the same roads in extreme danger.

Never driving under the influence (or while intoxicated) is the primary rule when getting behind the wheel. But the laws governing driving while intoxicated do not only apply to a car, truck, or motorcycle. Anyone operating a motorized vehicle or a vehicle with any type of drive train while intoxicated can be charged with a DUI-type offense; this includes operating motorized watercraft, lawnmowers, mopeds, electric scooters, and non-motorized bicycles.

Individuals using self-propelled conveyances such as skateboards, Rollerblades, manual scooters, and pogo sticks would not be charged with a DUI offense if stopped while intoxicated, but they could be charged with public intoxication and other offenses depending on the jurisdiction.

By way of definition, impaired driving is "an offense committed by one in control of a motorized vehicle while under the influence of intoxicating liquor or drugs. [This is] commonly referred to by the acronyms DUI [driving under the influence] or DWI (driving while intoxicated)" (Police Priority Dispatch System™ (PPDS) Protocol 115).

### Do not wait until it happens

Police officers do not wait until a crash has occurred to get intoxicated drivers off the road. They rely on their own observations of traffic maneuvers and fellow drivers' reports to emergency dispatchers. In *Navarette v. California* (2014), the Supreme Court held that police have the right to stop a driver to check whether he or she is impaired based solely on an anonymous call to a 911 emergency dispatcher because most people would think twice before calling 911.<sup>1</sup>

The EPD receiving a citizen complaint of a suspected intoxicated driver uses

PPDS Protocol 115: Driving Under the Influence (Impaired Driving). The first Key Question, "Were weapons involved or mentioned?," is asked for scene safety purposes. An intoxicated driver is always assumed dangerous to responding officers, the reporting party, and others, but the presence of weapons identified by any of six suffixes heightens the potential danger.

The other Key Questions gather information about the vehicle, the location of the vehicle, the direction it is heading, and the person's description. Key Question 7 determines if the caller is following the vehicle, after which the EPD may provide related Post-Dispatch Instructions dependent on local policy. Accordingly, if the agency's policy does not support the caller following the suspect, the EPD will advise the caller to discontinue following or making any contact with the driver of the other vehicle. If the agency's policy supports the caller following the suspect, the EPD will caution the caller to do so

only if it's safe and to continue following at a safe distance. EPDs will also caution callers to obey traffic laws and not make direct contact with the other driver.

Five Determinant Codes are assigned to the Protocol: a 115-D-1 applies to a DUI, a 115-C-1 applies to drinking in a parked car, and a 115-B-1 indicates a past DUI offense. The 115-Q-1 and 115-Q-2 Determinant Codes designate a referral or a report for informational purposes.

During a traffic stop for suspected DWI, the police officer may determine probable cause to search the vehicle if a crime is suspected. If the search reveals evidence of alcohol, drugs, or drug paraphernalia, the officer may test the individual for drugs or blood alcohol content.

Protocol 115 provides a standardized way to address DUI/DWI situations in the dispatch environment; however, it does not aid the enforcement of DUI/DWI laws or remove the threat to public safety. Police guidelines provide direction for identifying and safely removing impaired drivers off the road; state and community laws and regulations support rehabilitation programs where changes can be made.

### Telltale signs

Police officers across the United States have developed a list of more than 100 driving cues to predict blood alcohol concentrations (BAC) of 0.08% or greater. This list was reduced to 24 cues during three field studies involving hundreds of officers and more than 12,000 traffic stops. Law enforcement officials often look for these specific behaviors to determine whether a driver is potentially under the influence of alcohol or drugs:<sup>2</sup>

#### *Lane position problems*

When a driver is impaired, maintaining proper lane position can be challenging. Intoxicated drivers tend to weave. Vehicles drift from side to side, angle off a straight line, and swerve close to moving or stationary people and objects. In extreme cases, the driver might be traveling down a lane in the wrong direction.

#### *Speeding and braking inconsistencies*

Inconsistent speed—accelerating and braking rapidly—is another indication of

driving while intoxicated. The driver often travels 10 or more miles per hour under the posted speed limit. Problems include abrupt stops, stopping too far from a curb, stopping at an incorrect angle, or stopping too short or beyond a limit.

#### *Vigilance problems*

Impaired motorists generally have a short attention span; they are forgetful. They may drive at night without headlights on, neglect the use of turn signals, or, if drowsy at the wheel, they may think it's okay to catch some momentary shut-eye. Response times are also significantly slowed.

## Intoxicated drivers tend to weave.

#### *Poor judgment*

Someone under the influence might tailgate, make unsafe lane changes, turn improperly, or drive on pavement that is not designated as a roadway.

#### *Driver's appearance*

The final cue is one or more of a set of indicators related to the personal behavior or appearance of a driver: gripping the steering wheel tightly, driving with one's face close to the windshield, slouching in the seat, or staring straight ahead with eyes fixed. Some police officers routinely scrutinize the faces of drivers in oncoming traffic, looking for these indicators.

Not only the driver, however, faces charges for drunk driving. Passengers can also face charges if the arresting officers determine the passenger helped steer the vehicle, switched seats with the drunk driver, or if the officer is not sure who drove the car.<sup>3</sup>

### Why the impact?

The reasons why certain substances inhibit driving ability may be about as clear as someone's thinking when climbing behind the wheel inebriated. Drugs

interfere with the way neurons process, send, and receive signals. In general, drugs affect the central nervous system and autonomic functions like respiration, blood pressure, and body temperature.

The way alcohol affects the brain and body depends on the blood alcohol concentration. In general, two or three drinks in an hour increase the BAC by 0.1%. This fluctuates depending on variables such as body weight. In general, a standard drink would be 12 ounces of beer, eight ounces of malt liquor, five ounces of wine, or 1.5 ounces of hard liquor. Throughout the United States, the legal limit to drive is below 0.08%, but

some states may enact additional statutes, especially regarding drivers of commercial vehicles or individuals who are under the legal drinking age. Many states also impose harsher penalties on individuals who have BACs that are exceptionally high.<sup>4</sup>

There are several ways alcohol and drugs affect driving skills, as indicated in the signs police look for in traffic. A slow reaction indicates alcohol or drug impaired driving because it takes longer for the brain to engage and hit the brakes before running into a car, pedestrian, or cyclist. Heavy drinking can affect the sloppy positioning of feet on the pedals. Reduced coordination may cause the driver to veer off course when attempting to walk a straight line. The inebriated driver may also suffer from a short attention span that, when combined with blurred vision, may try to make it through a changing traffic light. Such bad judgment makes a drunk driver an accident waiting to happen. ●

### Sources

1. Epps G. "Can an Anonymous Tip Get You Arrested for Drunk Driving?" *The Atlantic*. 2014; May 14. [theatlantic.com/national/archive/2014/05/navarette-v-california/370803](https://theatlantic.com/national/archive/2014/05/navarette-v-california/370803) (accessed May 28, 2020).
2. "The Visual Detection of DWI Motorists." National Highway Traffic Safety Administration. [nhtsa.gov/sites/nhtsa.dot.gov/files/documents/808677.pdf](https://nhtsa.gov/sites/nhtsa.dot.gov/files/documents/808677.pdf) (accessed May 28, 2020).
3. "Can a passenger in a car get charged with DUI?" Shouse California Law Group. [shouselaw.com/can-a-passenger-in-a-car-get-charged-with-dui](https://shouselaw.com/can-a-passenger-in-a-car-get-charged-with-dui) (accessed June 3, 2020).
4. "BAC Legal Limits in Different States, Counties, & Cities." *Alcohol.org*. 2020; April 15. [alcohol.org/dui/bac-limits](https://alcohol.org/dui/bac-limits) (accessed June 2, 2020).

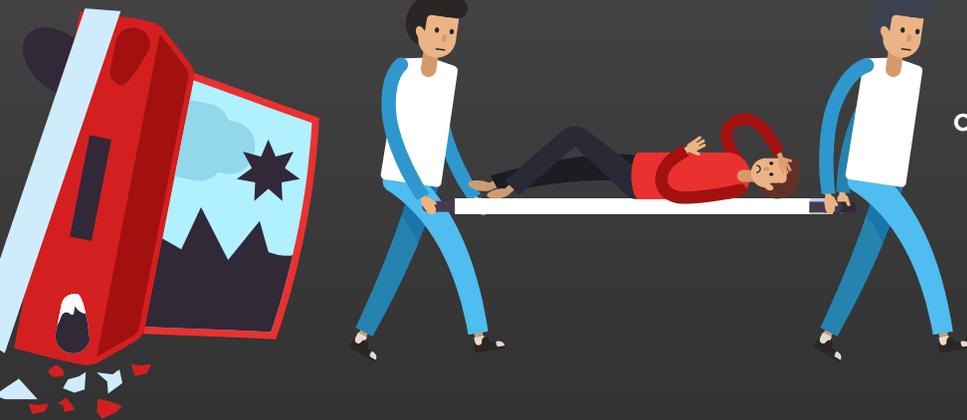
# DRUNK DRIVING



The rate of alcohol-impaired driving fatalities **decreased 65%** since 1982.



In 2018, drunk driving fatalities ranged from **19% to 43%** in the U.S. and District of Columbia combined.



**67%** of people killed in drunk driving crashes were in crashes in which at least one driver had a **BAC of 0.15%+**.

**10,511** people died in drunk driving crashes involving a driver with an illegal **BAC of 0.08%+**.





Time machine "1960 Turner Home Entertainment. DeLorean "By Terabass via Wikimedia Commons

## FIRST, DO NO HARM

Data and dangers associated with lights & siren use

Brian Dale

Everything we do in public safety has a guiding principle that states: first, do no harm. This includes responding to any request for service, emergent or non-emergent. The article Bright Lights, Big Noise lays out the data and dangers associated with the use of lights-and-siren. I believe it is important to understand that in today's car manufacturing environment, the value of a quiet ride and improved stereo systems increases the risks of emergency response collisions. Many drivers of emergency vehicles will tell you that their lights move traffic more effectively than their sirens, especially at night. The flat truth is that many drivers just don't hear us coming, and to complicate matters even more, many people are distracted by their cellphones or conversations with passengers.

There have been a host of studies and recommendations for better equipping and marking of emergency response vehicles from the colors of their

lightbars, to the reflective stripes placed on the vehicles, to the sounds used in emergency sirens, and even how fast the lights flash for response versus on scene circumstances. I remember reading an article that showed when fire vehicles were stopped on a road and had red lights on the backs of their vehicles, drivers initially pulled toward them—not a good idea. When the vehicles had yellow lights (meaning caution) on the back, drivers moved away from the lights.

Most communities have laws that predicate how emergency vehicles may be operated when responding to an emergency. While the language differs, the expectation remains the same. Emergency response drivers are given the right to break traffic laws as long as they are able to control their vehicle at all times. In its Model Policies and Procedures for Emergency Vehicle Safety, the International Association of Fire Chiefs states: "No person shall drive a vehicle at a speed greater than is reasonable and

prudent under the conditions and having regard to the actual and potential hazards then existing." They must be able to stop at any intersection and cannot place anyone's life unnecessarily at risk during the response. Remember our obligation—first, do no harm. The real value of lights-and-siren is not necessarily to go fast, but to stop rarely and only briefly during the response.

The emergency dispatcher using any of the Academy's Emergency Priority Dispatch Systems™ is in a unique position within public safety. This first, first Responder can do a quick assessment of the situation, identify the appropriate level of response, and provide accurate information and instructions to potentially stabilize the situation. When an agency uses the associated Determinant Codes to identify how many response vehicles are sent on any given incident type, and how many of those are responding HOT, they are reducing the inherent risks for collisions and injuries during responses. ●

# Bright Lights, Big Noise

## How Effective are Vehicle Warning Systems?

By Robert A. De Lorenzo, MD, BSBE

**W**HILE COLORS, MARKINGS, lights and sirens constitute the primary warning systems on emergency vehicles, controversy surrounds the effectiveness and appropriate use of these various warning devices. Regardless of the controversy, however, with the challenges of timely patient care, safety and risk management, the optimal use of emergency vehicle warning systems will greatly benefit EMS providers and their patients.

### Collisions

Currently, there are an estimated 40,000 ambulances in the United States, with thousands of additional first response and rescue EMS vehicles.<sup>1</sup> Although driving to and from the scene of an emergency is frequently performed with lights and sirens, emergency vehicle crashes are not uncommon, and the results are often tragic.<sup>2-4</sup> (The term “accident,” which implies an unpreventable and unpredictable event, is not appropriate to describe motor vehicle crashes, which are, in fact, largely preventable and predictable. Therefore, the

term “crash” is used here.) Between 1984 and 1987, there were 1,412 ambulance crashes in New York state, resulting in 1,894 injuries and six deaths.<sup>2</sup> Extrapolated nationwide, this translates into an estimated 5,400 injuries and 17 deaths each year. By this calculation, one out of every 10 ambulances in the United States would be involved in a crash each year.

Intersections pose the greatest risk for emergency vehicle crashes, with ambulances more likely to be struck by another vehicle than vice versa.<sup>5</sup> The ability of another driver to detect and avoid an emergency vehicle approaching an intersection is crucial to crash prevention. Thus, the appropriate use of warning devices is of paramount importance in alerting the motorist about the approach of emergency vehicles. The emergency vehicle operator, therefore, must be familiar with the capabilities and limitations of the vehicle’s warning devices; incorporating this knowledge into a total vehicle operation program will enhance public safety and emergency personnel risk management.

***With intersections posing the greatest risk for emergency vehicle crashes, the ability of drivers to detect and avoid an emergency vehicle approaching an intersection is crucial to crash prevention.***

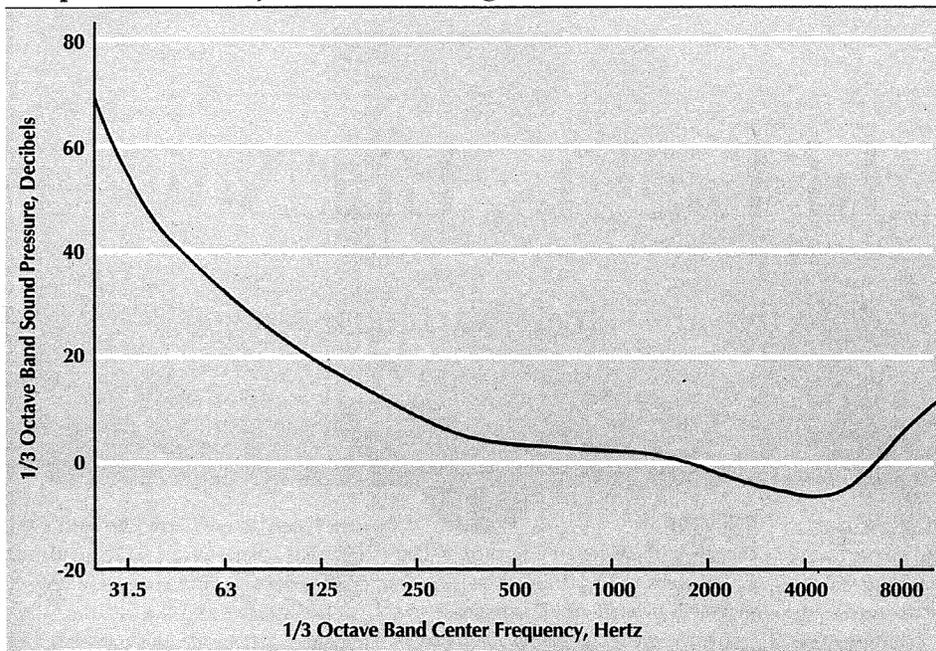
PHOTOGRAPH BY STEVE EISEN



JUNE 1992 JEMS 57

Figure 1.

## Spectral Sensitivity of Human Hearing



## Sirens

Virtually all emergency vehicles are equipped with sirens, and most state laws require that sirens be used during emergency runs.<sup>6</sup> In fact, following a collision between an ambulance and another vehicle, a New York state appeals court found that, although the ambulance was using its lights, it lost its emergency status because it did not sound an audible warning.<sup>7</sup>

While bells, gongs and whistles were originally employed as emergency vehicle warning devices, these mechanical sound generators were gradually replaced by electromechanical sirens. Due to the inability of these sirens to produce most of the desirable signal characteristics of effective warning signals and the huge power draw they require on start-up, they have been replaced by more efficient electronic devices. Each development has brought improvements in sound amplification and in the variety of signals available; today, the modern electronic siren can produce a wide array of signals with amplifier power ratings measured in hundreds of watts.

Optimal attributes of a warning signal include sufficient power and wide frequency spectrum to overcome both environmental masking noise and sound insulation in modern passenger automobiles. A rapid rise in pitch and relatively rapid cycling time have also been recommended, and a frequency range between 1 kHz and 4 kHz is best, as it coincides with the peak sensitivity of human hearing (see Figure 1).<sup>8</sup> Furthermore, frequencies higher than 4 kHz cannot be localized, or "placed" by human ears, and the signal itself becomes lost in background noise if it is below 1 kHz. A siren manufacturer can provide details on individual siren performance specifications.

Placement of siren speakers on the front grille—as opposed to the cabin roof—can greatly improve signal transmission ahead of the vehicle and increase the range of sound projection. The use of two speakers angled slightly apart improves right-angle sound transmission, a highly desirable factor when approaching intersections, because the signal will project down cross streets and warn drivers

approaching the intersection.<sup>8</sup>

Proper connection of the speakers to the amplifier is essential, as improper wiring can result in out-of-phase speakers and degraded sound output. (Out-of-phase speakers result when, due to improper wiring, one speaker's vibration cycles are produced exactly opposite those of the other speaker. The two sounds tend to cancel each other out, and sound output is greatly reduced.) While high-directivity siren horns may provide improved forward

sound projection, their large size may limit use to only large vehicles.<sup>9</sup>

To be effective, a siren signal must compete with various sources of noise, including engine and road noise, car radios and ventilation fans. They must also overcome modern sound-insulation techniques. While a 1977 U.S. Department of Transportation (DOT) study demonstrated that a siren's maximal effective distance at urban intersections was a mere 25 to 40 feet, the situation has only worsened since that study, as automobile sound-insulation techniques and audio systems have improved without corresponding advances in siren technology.<sup>10</sup>

It is important to recognize that this 25- to 40-foot distance represents less than one second at typical city traffic speeds (30 mph). Factoring in reaction times and stopping distances, then, it is apparent that a siren is ineffective in warning approaching motorists at urban intersections. From this and other studies, a maximal safe entry speed of only 10 mph at red-light intersections is therefore recommended.<sup>11</sup> (Many agencies and

states require that emergency vehicles stop at red lights to ensure traffic safety before continuing.) At speeds greater than 10 mph, the emergency vehicle operator reduces the siren to a mere community annoyance and operates with a sense of false confidence. From a practical standpoint, the siren would be just as effective if turned off.

In suburban intersections and straight-ahead highway environments, the siren-effective distance is modestly increased. Because speeds in these environments are typically much greater than in cities, however, the siren may provide insufficient warning. In fact, it has been suggested that if traffic is flowing smoothly, a safer response might occur if the siren is turned off and the ambulance actually merges with traffic.<sup>12</sup>

The optimal use of different siren modes, such as wail, yelp and hi-lo, is controversial. One commentator has recommended different modes for different traffic conditions, suggesting, for example, that yelp clears intersections more quickly.<sup>13</sup> Others suggest that the hi-lo European-style siren is less effective than other modes, but acoustics experts have also recommended the hi-lo signal as the most appropriate for emergency vehicles.<sup>14,15</sup>

Scientific studies do not demonstrate any significant differences between siren modes and, in general, efforts to identify the optimal siren signal will likely achieve only marginal improvements given the overall limited effectiveness of audible warning devices.

Siren use is recognized as contributing to environmental noise pollution. While annoying, this noise probably does not place the

general public at risk for excessive sound levels because their exposure levels and duration are low. The same is not true for EMS personnel, however, as demonstrated by a federal study that documented excessive sound levels in the cabin of ambulances responding with sirens on.<sup>16</sup> In addition, four different medical studies have shown that, over time, exposure to the high levels of sound produced by sirens can result in permanent hearing damage.<sup>17-20</sup>

While EMS crews and patients in the backs of ambulances are generally not believed to be exposed to damaging noise levels, the one exception may be the neonate, who may be especially sensitive to noise levels that would not harm an adult.

Every EMS agency needs to develop a hearing-conservation program for its field personnel. This begins with closing the cabin windows during an emergency response and installing the siren speakers on the front grille rather than on the cabin roof. All emergency personnel who are exposed to siren noise should have periodic exams to detect any hearing loss.

The use of sirens during certain types of patient transports has been criticized in the past. For example, concern that the

use of lights and sirens would potentially worsen an acute cardiac problem has been expressed, the theory being that siren noise would increase anxiety in the patient and thus increase catecholamine release, placing an additional workload on the heart. This theory has never been proven, however, and remains scientifically untested. Furthermore, for all serious or critical patients, total prehospital time is an important consideration in providing the best possible overall care. If the transport time can be substantially shortened, lights and siren use may be justified in these cases.

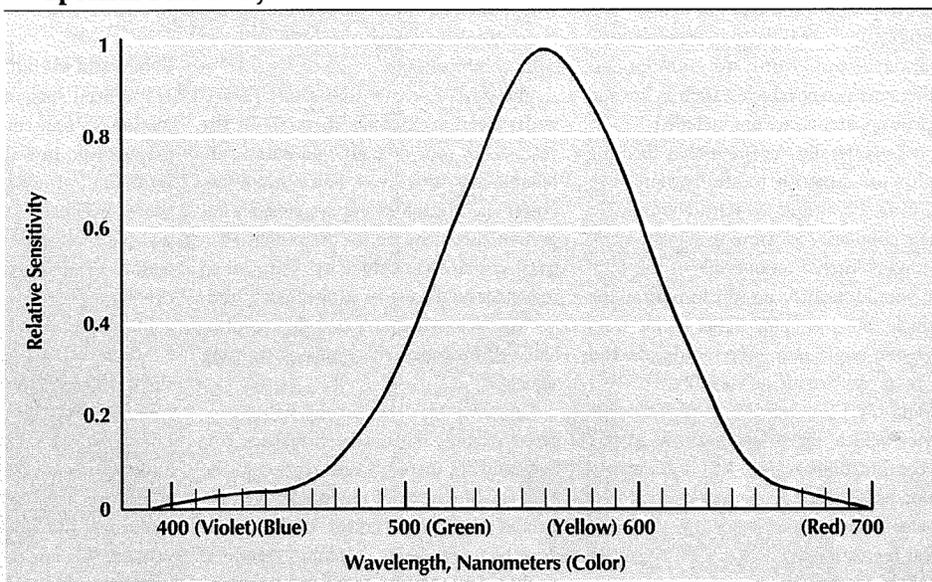
### Horns and Other Audible Devices

Air horns are often installed as adjuncts to sirens, especially on larger emergency vehicles, but little scientific data exist to identify optimal characteristics of this device. While some have suggested that dual-trumpet air-powered horns are best, others caution against drowning out the siren at a crucial time with a simultaneous horn blast.<sup>8</sup> These claims await validation by properly conducted scientific studies.

A separate but beneficial audible alarm system is now required on most emergency vehicles with obstructed rear views.

**Figure 2.**

### Spectral Sensitivity of Human Vision



Commonly called a back-up alarm, the device is invaluable for warning unseen pedestrians in the path of an ambulance moving in reverse. Although many designs allow the operator to cancel the alarm, this must only be done with extreme caution and only after the driver has ensured that there is no one standing behind the vehicle.

An interesting technique proposed several years ago involved the broadcast of siren signals over radio frequencies. The goal was to transmit the emergency vehicle's presence to motorists through an automobile receiver. While technical and financial difficulties prevented implementation of the system, the idea has received renewed attention.<sup>21</sup>

### Lights

Because much of a motor vehicle driver's sensory input is visual, visual warning devices are an important method of alerting motorists to an approaching emergency vehicle. While federal specifications provide for minimal ambulance lighting standards, the appropriateness of these standards has been questioned, especially with regard to colors and types of lights.<sup>22</sup> It is important to realize that these federal standards apply only to ambulances; other emergency vehicles, such as fire and rescue apparatus, are not included.

It is generally accepted that flashing lights are superior to steady signals in gaining attention, which accounts for their popularity as warning signals. Vehicle lights located on one side of the vehicle should flash in unison to outline the vehicle, but too many lights visible from any one angle may increase dazzle and glare, thereby reducing visibility.<sup>22</sup>

The most appropriate color for emergency vehicle lights has been the subject of continued discussion. Red is a common color, as it signals danger in our society. It is also frequently embraced in state and local regulations. However, criticisms include its weak visibility and the fact that it

is easily lost in tail lamps.<sup>8</sup> White is a more visible color, but it lacks identifying characteristics. And, while yellow, blue and green are more visible than red, each suffers drawbacks that make it a less than optimal warning color (see Figure 2).

Although researchers have attempted to identify the optimal emergency vehicle light color, studies to date have been plagued by technical flaws that render their conclusions suspect. One proposed solution to the question of optimal color is the use of color combinations, such as red and yellow, that combine the high visibility of yellow with the rapid identification of red.<sup>23</sup> And the California Highway Patrol demonstrated good results with blue and red light combinations in 1979,

**W**ith the challenges of timely patient care, safety and risk management, the optimal use of emergency vehicle warning systems will greatly benefit EMS providers and their patients.

with police agencies nationwide having been quick to adopt the blue and red color combinations.<sup>24</sup>

The use of strobe lights has gained widespread acceptance throughout the years. They provide high light output, are reliable and long-lived, and require less power than incandescent systems, an important consideration for the vehicle electrical system. While there was some initial resistance to the use of strobe lights, studies have since demonstrated their equivalence to incandescent lamps as warning signals.<sup>25</sup>

The early fear that strobe lights triggered seizures has not been realized.<sup>26-29</sup> Not only are there no case reports in the medical literature of emergency vehicle strobes triggering seizures, but no anecdote has ever been validated. Medical studies demonstrate that the electroen-

cephalograph (EEG) changes commonly attributed to strobes are not pathologic and therefore will not affect driving, nor are these EEG changes the same as seizures.<sup>30</sup> Furthermore, flashing incandescent lights can produce EEG changes similar to those produced by strobe lights.

While studies have shown that both strobes and incandescent lights are acceptable for emergency service, the choice of which type of light to use should be guided by practical factors, such as effectiveness, cost and reliability.

Flashing headlamps are useful adjuncts to standard flashing light systems, especially during bright days, when sunlight may limit the effectiveness of other lights. Care must be taken, however, to limit their use during night responses to avoid blinding oncoming drivers.<sup>31</sup> Steady low beams are effective at increasing the vehicle's visibility and should be used whenever the vehicle is in service.<sup>32</sup>

One interesting use of flashing lights is the Opticom system from the 3M Corp. of St. Paul, Minn.<sup>33</sup> Instead of directly warning oncoming drivers, the system's strobe light activates traffic signals to accommodate the responding vehicle. The result is that the ambulance faces few—if any—red traffic signals and thus has a reduced risk of collision. However, the expense of setting up such a system has limited its implementation.

### Colors and Markings

It has been suggested that the color and markings of an emergency vehicle play a greater role in reducing collisions than lights and sirens combined.<sup>34</sup> Furthermore, because color and markings are passive techniques that do not require action on the part of the operator, they can serve to reduce risk even when the vehicle is not on an emergency response.

Much discussion has revolved around the best color for emergency vehicles, especially in the fire service literature.<sup>35-37</sup> Lime yellow has near-universal scientific and expert support, and evidence clearly shows lime yellow to be more visible than traditional red when used on emergency vehicles.<sup>34</sup> While more than 50 percent of new fire service vehicles are painted lime

yellow, unfortunately, ambulances are typically white with an orange stripe. This color scheme was widely adopted in the early 1970s without scientific basis and persists today, largely due to federal KKK specifications.<sup>22</sup> While distinctive, the orange and white color combination does not provide optimal visibility and is thus less desirable than lime yellow.

Occasionally, ambulances are painted non-traditional colors, such as white with red, blue or green stripes. These color combinations suffer in terms of visibility, especially in urban environments, where the camouflage effect is common, and they rob the motorist of quick emergency vehicle identification. Adoption of lime yellow as the standard color for ambulances has therefore been recommended, but an appropriate change in federal guidelines and state regulations will be required to ensure the process.<sup>37</sup>

Because the Star of Life is an established symbol for EMS, judicious use on

EMS vehicles ensures rapid identification by the public.<sup>38</sup> Overuse of this or any other symbol, such as lettering or stripes, on a contrasting background can produce the camouflage effect, however. In a similar fashion, retroreflective material (such as Scotchlite tape) can enhance nighttime visibility. Spot application of the tape is to be avoided, however, as it, too, increases the camouflage effect. Instead, the vehicle should be outlined to provide approaching drivers with a clear image of the size and shape of the ambulance.

### Conclusion

While state-of-the-art information about visual warning systems can help EMS providers reduce the risk of ambulance crashes, it must be emphasized that a complete collision prevention program includes not only knowledge and application of warning systems but also proper vehicle operation, maintenance and continual training.

Training in emergency vehicle operations must include current information on visual warning techniques, and the importance of vehicle colors and markings must be stressed. In addition, the role of various lighting strategies should be included and, where applicable, local and state officials should be lobbied to encourage a change in ambulance regulations that reflect a scientific basis for visual warning-technique use.

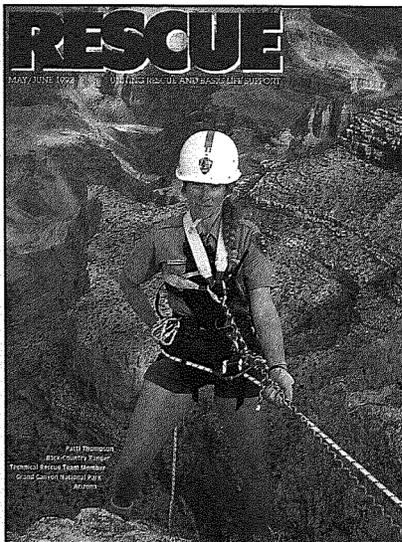
Above all, the decision to use lights and sirens should always be made in the context of good patient care, with agency protocols being developed to reflect this principle. **U**

### References

1. "State and province survey." *EMS*. 19(2):221-244, 250-260, 1991.
2. Elling R: "Dispelling myths on ambulance accidents." *JEMS*. 14(7):60-64, 1989.
3. Washburn AE, LeBlanc PR, Fahy RF: "Report on firefighter fatalities 1990." *NFPA J*. 85(4): 47-58, 90-91, 1991.
4. Garza M: "Ohio paramedic jailed in deaths from ambulance crash" (*Inside EMS*). *JEMS*.

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14(12):21, 1989.

5. Beck D: "New study addresses ambulance accidents." *JEMS*. 12(7):21, 1987.
6. Shanabgerger CJ: "Running hot." *JEMS*. 12(4):75-76, 1987.
7. Morse HN: "Audible ambulance warnings." *Emergency*. 13(7):65, 1981.
8. Lamm WI: "Vehicle warning systems." *Emergency*. 15(10):32-35, 1983.
9. McKinnon B: "New technology for emergency vehicle sirens." *Fire Engineering*. 143(11):65-72, 1990.
10. Skeiber SC, Mason RL, Potter RC: "Effectiveness of audible warning devices on emergency vehicles." *Sound and Vibration*. 12:14-17, 20-22, 1978.
11. "Exploring the intersection illusion" (editorial). *Mechanical Engineering*. February:37-39, 1986.
12. "The siren-and-light syndrome" (editorial). *JEMS*. 7(10):4, 1982.
13. Childs B: "The siren." *JEMS*. 8(2):49-51, 1983.
14. Hatton L: "Apparatus safety." *Firehouse*. 11:66-69, 1988.
15. Committee on Hearing and Bioacoustics and Biomechanics: "A proposed standard fire alarm signal." *J Acoust Soc Am*. 57:756-757, 1975.
16. Flesch J, Tubbs R, Carpenter S: "Siren noise." *Emergency*. 18(10):42, 1986.
17. Johnson DW, Hammond RJ, Sherman RE: "Hearing in an ambulance paramedic population." *Ann Emerg Med*. 9:557-561, 1980.
18. Jerger J, Jerger S, Pepe P, et al: "Race difference in susceptibility to noise-induced hearing loss." *Am J Otol*. 7:425-429, 1986.
19. Pepe PE, Jerger J, Miller RH, et al: "Accelerated hearing loss in urban emergency medical services firefighters." *Ann Emerg Med*. 14:438-442, 1985.
20. Rasmussen JA, McLean JM, Stasiak RS: "Sound levels in emergency medical services." *J Environ Health*. 45:176-178, 1983.
21. Page JO: "For whom the siren oinks." *JEMS*. 15(11):6, 1990.
22. Solomon SS: "Ambulance accident avoidance." *Emergency*. 17(1):34-35, 44, 1985.
23. Scarano S: "The sights and sounds of emergency vehicles." *Emergency*. 13(1):38-41, 1981.
24. Aldrich RD, McKusick C: "We need standardized warning light systems." *Fire Command*. 46(12):28-29, 1979.
25. Muhler W, Berkhout J: "Detection distance in daylight of roof-mounted emergency vehicles." *J Safety Res*. 8:50-58, 1976.
26. Solomon SS: "Warnings about emergency lights." *Fire Engineering*. May:20-23, 1976.
27. Solomon SS: "Strobes not safe" (editorial). *JEMS*. 8(2):4-5, 1983.
28. Sidebar in Dernocoeur K: "Understanding seizure seizures." *JEMS*. 7(10):28-35, 1982.
29. Keith-Lucas T, Warman RH: "Strobe lights are safe." *Fire Command*. 46(11):30, 32, 1979.
30. Kasteleijn-Nolst Trenité DGA: "Photosensitivity in epilepsy: electrophysiological and clinical correlates." *Acta Neurol Scand*. 80(125 suppl):9-149, 1989.
31. Cooke PL: "Blinded driver hits fire fighter" (parts 1 and 2). *Fire Command*. 55:15-17, 31-33, 1988.
32. Childs B: "Seeing the light." *JEMS*. 7(12):59-61, 1982.
33. Dick T: "Opticom: safety at the signal." *JEMS*. 6(10):38-40, 1981.
34. Solomon SS: "Lime yellow color as related to reduction of serious fire apparatus accidents—the case for visibility in emergency vehicle accident avoidance." *J Am Optom Assoc*. 61:827-831, 1990.
35. Solomon SS: "The safety color." *Firehouse*. June:106-108, 1984.
36. Saly AJ: "Lime yellow." *Firehouse*. January:34, 38, 1980.
37. Solomon SS: "The case for lime yellow." *Firehouse*. May:56-58, 65, 1991.
38. Zatz A: "Star of life." *Emergency*. 14(9):38, 1982.

**Recommended Reading**

1. De Lorenzo RA, Eilers MA: "Lights and siren: a review of emergency vehicle warning systems." *Ann Emerg Med*. 20(12):1331-1335, 1991.

**Robert A. De Lorenzo, MD, BSBE, is an emergency medicine resident at Wright State University in Dayton, Ohio. He has more than 10 years of field and supervisory experience in EMS and also holds a degree in engineering.**

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El Paso 911

# COMMUNITY ENDURES

Tragedy unites community

Audrey Fraizer

**D**onning a gold-colored crown and a royal blue greatcoat festooned with epaulettes and brass buttons, Paul Gilbert Anchondo celebrated his birthday in style, accepting well wishes and gifts from thousands of drive-by celebrants.

While the one-year-old boy might not grasp why the blowout of a birthday, he certainly stood tall in the day's significance. Paul Anchondo is the youngest survivor of the mass shooting at the Cielo Vista Walmart on Aug. 3, 2019. Paul's parents, Jordan and Andre, were shielding their infant son when the gunman aimed his assault weapon at them and fired. They were among the 23 people killed.

By police estimates, 3,000 people—customers and employees—were at the Walmart when gunfire erupted at the store about 5 miles from the U.S.-Mexico border. According to reports, the assailant opened fire with an AK-47 in the parking lot and continued the deadly rampage as he entered the front door.

El Paso 911 Emergency Dispatchers Karina Armendariz and Bernadette Sakon received the first calls of an active shooter shortly after 10:30 a.m. Police Dispatcher Guadalupe Martinez was at the radio and handled the channel for the shooting. Amanda Dominguez was off duty and, like all available El Paso 911 (Texas) emergency dispatchers, was called into the communication center. A video taken at the time of the incident records a scene the dispatchers could only imagine from the panicked sounds they heard in the background as the calls flooded their CADs.

*A man lies on his side in a pool of dark blood, with a bandage on his back. A voice tells him, "Try not to move," adding, "Stay with me, OK?" At the front of the store, victims' bodies are shown near a table that appeared to have items for sale. The body of a man in blue jeans and a blue shirt is seen on the ground near the table, lying on his stomach, seemingly dead, as a woman rushes over to help. Near him is a woman, taking cover between a garbage can and the wall.'*

First responders—police units and sheriff's officers—arriving at the scene assisted with the dead and wounded, providing immediate lifesaving care to victims until the scene was cleared for bringing EMS in. Emergency dispatchers coordinated agency response.

As a supervisor, Dominguez focused on the emergency dispatchers, watching and listening for signs of extreme stress. She advised them to take breaks and to eat something from the food ordered in by El Paso Fire Department Battalion Chief Carlos Franco.

"They pushed through the calls; they never stopped," Dominguez said.

Adrenaline was driving them.

A second group of calls came from people horrified at the news they heard on the radio and TV. "My mother was there. Was she shot?" or "My daughter was at the fundraiser booth for her soccer team. Is she alive?" The emergency dispatchers could only tell them to stay away. They did not have information about the dead or wounded.

Adrenaline crashed later that afternoon and evening. The jubilation of the team performing in the extreme quickly faded. Silence, not knowing what to say, and tears replaced the earlier actions of 20 emergency dispatchers moving together as one piece in the chain.

Dominguez sometimes goes back to that day and is always proud of where she works and the people she works alongside.

"We accomplished this as a team," she said. "We were there for each other."

And as shown in the celebration for little Paul, she said, they stand together.

The 21-year-old shooter surrendered to police without incident. A federal grand jury returned a 90-count indictment against the 21-year-old shooter, which the Department of Justice described as an act of domestic terrorism.<sup>2</sup> ●

## Sources

1. Gaytan S. "El Paso shooting updates: 22 killed in El Paso Walmart shooting near Cielo Vista Mall." El Paso Times. 2019; Aug. 3. [elpasotimes.com/story/news/crime/2019/08/03/el-paso-police-report-shooter-walmart-cielo-vista-mall/1910012001](https://www.elpasotimes.com/story/news/crime/2019/08/03/el-paso-police-report-shooter-walmart-cielo-vista-mall/1910012001) (accessed June 1, 2020).
2. Kennedy M. "US Charges Suspect in El Paso Walmart Shootings with Hate Crimes." NPR. 2020; Feb. 6. [npr.org/2020/02/06/803503292/u-s-charges-walmart-gunman-in-el-paso-with-hate-crimes](https://www.npr.org/2020/02/06/803503292/u-s-charges-walmart-gunman-in-el-paso-with-hate-crimes) (accessed June 2, 2020).



Daniel Young, Julie Daniels, and Candice Young

## MIRACLE MAN

Man beats the odds with help from EMD and responders

Heather Darata

**W**hile it might sound strange that a call to 911 could bring a series of good things into people's lives, that's exactly what happened.

When the call for help came in on the morning of Oct. 22, 2019, EMD Julie Daniels, Shawnee, Oklahoma (USA), Police Department Day Shift Supervisor, had no idea that a first in her emergency dispatch career would come from this call at a later time.

Candice Young was on the other end of the line that morning.

"She told me that her husband was unresponsive," Daniels said. "She was really frantic. Once I used her name and reassured her, she started to calm down."

It did not take long for Candice to focus on what Daniels was saying. Candice's husband, Daniel, had been lying in bed when he started making a funny sound.

"I knew she [Daniels] was the only chance to save his life," Candice said.

Daniels dispatched an ECHO response. She then told Candice how to perform chest

compressions—something that helped keep the blood moving in Daniel's body.

"I don't remember getting tired at all," Candice said. "She was counting with me. That helped."

Responders arrived about seven minutes after Candice started chest compressions. They took Candice to another room while they hooked up a defibrillator and a machine to perform chest compressions on Daniel. He received eight shocks in 24 minutes.

Responders took Daniel to the hospital in Shawnee to stabilize him before transporting him to Oklahoma City. Complications arose. Daniel's organs started shutting down from lack of blood flow. He had a 5% chance of survival.

"At first, they were saying that he wouldn't make it," Candice said.

But she did not believe it. Candice relied on God to help Daniel make it through, believing that she and Daniel would have time to work out their struggling relationship.

"When he woke up, he didn't know who I was for a day," Candice said. "It was heartbreaking."

She stayed by his side in the hospital for 18 days. Candice was the one to realize that the fentanyl he was being given to help with pain was causing hallucinations.

Once Daniel was taken off fentanyl, the focus went to having a defibrillator implanted inside of him before he could leave the hospital. The day came that he was able to go home.

The most amazing part of the story was that Daniel did not have any permanent damage from this congestive heart failure episode—no brain damage or additional heart damage.

"The odds of everything working out are slim to none," he said. "Everything was miraculous. I'm lucky that Julie Daniels was a professional and knew what to do."

Daniel was also grateful for the role his wife, the police, EMTs, and hospital workers had in saving his life.

Candice is a big believer in showing gratitude. She took cards to the hospital and the police. She reached out to REACT EMS and was able to meet and thank the team that helped save her husband.

Some months later, something 12 years in the making happened to Daniels in March—she met someone she helped for the first time in her emergency dispatch career. This call was seared in her mind because she helped Candice and Daniel on her daughter's birthday.

**I knew she was the only chance to save his life.**

"They are alive, and they are doing good," Daniels said. "That call will always be with me. It has special meaning."

The incident that threatened Daniel's heart also helped heal his relationship with his wife—all because he was given the miracle of time.

"It all came together for a reason," Candice said. "We learned a lot from this incident. I was glad to be able to thank her [Daniels]." ●



Melba Mickle just before her 1989 retirement.

Photo courtesy of Allegany County Historical Society.

## BIG VOICES IN SMALL COUNTY

Never a break in emergency dispatch

Audrey Fraizer

**M**elba “Mel” Mickle was like an intrepid postal carrier except instead of delivering mail, she lent her voice for 19 years to Allegany County, New York (USA), public services.

Mickle was the sole fire/ambulance radio operator for the county. With a single tower site, Mickle received the seven-digit fire/ambulance and Andover Police Department calls and dispatched mutual fire aid for the entire county, excluding Wellsville, which had its own rescue operator.

Mickle took over dispatch services immediately after her husband, George, died in 1969. Affectionately known as the voice at the base station (KED-620), Mickle kept the line open 24/7, day and night, except for Sunday church services during which volunteer firefighters substituted. According to Allegany local history, Mickle sometimes went “days and nights without sleep to make sure every piece of fire equipment and fire personnel were where they were supposed to be and were safely back at home when the fire was over.”

Mickle retired in 1988 when the radio was moved back to the Allegany County courthouse in Belmont, and 911 services were consolidated. She died nine years later on Nov. 12, 1997.

Mickle’s funeral was the “who’s who” in Allegany County public service, drawing not only relatives and friends but, also, an extended family that included 24 crews from Allegany County Fire Department, patrol cars sent by New York State Police, Allegany County Sheriff’s Department, and Village Police Department and crews from two Pennsylvania fire departments arriving in fire and rescue trucks and ambulances.<sup>1</sup>

Don’t think for a second that Mickle was soon forgotten, a postscript in the annals of Allegany County fire history. In 1999 the Mickle family, who lived in Wellsville (Allegany County), organized the first Christmas fireworks display in her honor.<sup>2</sup> The tradition continues as the concluding event in the annual “It’s a Wonderful Life in Wellsville” Christmas Celebration.

Allegany County is predominantly rural, with a population numbering less than 50,000 in an area of about 1,000 square miles. Andover, on the county’s eastern edge, numbers about 1,800 people, down from the past decade due to declines in agricultural and manufacturing industries.

While newcomers and visitors might ask “why” about the Mickle name in fireworks, it’s still a place where generations stay and recall their past.

Randy Swarthout has lived his entire

life in Allegany County, and for the past 31 years, he’s been a dispatcher at Allegany County 911. Of course he remembers Mickle.

“It’s a small town,” he said. “People liked her. She got paid for what she did, but not very much, and she was always there taking the calls.”

She was very particular about radio etiquette too, according to former Andover Fire Chief George Givens. Things were to be done a certain way, and people did it. Givens said he could remember saying “Okey-dokey” over the airwaves once.

Later he was given a citation by Mel for it.<sup>3</sup> Mickle worked her last day on Dec. 31, 1988. Swarthout worked his first day on Jan. 1, 1989. He is now head dispatcher and the last remaining of the original hires.

Swarthout was in a work/study EMS program in college when the assistant manager at the consolidated center “twisted” his arm to apply. He was the third hired among three new employees tasked with answering calls coming in on 30 extensions. Designated buttons on each phone alerted responders serving the location the callers cited.

They sat on folding chairs at a table inside the civil defense room at the county building and took notes with pen and paper. Initial training lasted three hours and, mostly, they learned “on the fly.” Experience as an EMT helped Swarthout guide callers in need of emergency instruction for cardiac arrest or baby delivery.

“Very generic [instructions] to pass on to the caller so they could get something started before an ambulance arrived,” Swarthout said.

The center has since come into its own. They dispatch fire/ambulance/law enforcement from a dedicated room in the county sheriff department complex. CAD was installed in the late 1990s. There are 25 full- and part-time emergency dispatchers. Interoperability is set up to go once NG911 becomes available.

While Swarthout never expected to retire from dispatch, it’s also a career he’d find hard to replace.

“The next phone call could be someone having their worst day,” he said. “It’s satisfying to know you can help.”

**Editor’s Note:** To view a list of sources, [click here](#) and scroll to the bottom of the article. ●



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