

the JOURNAL

of emergency dispatch

iaedjournal.org

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**SHIFT WORK SCHEDULES
TAKE ADJUSTMENT**

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**EMERGENCY DISPATCH
PROFESSIONAL STATUS**



[2019]

ANNUAL REPORT

annualreport.emergencydispatch.org



[**69,304+ MEMBERS WORLDWIDE**]

● | **4,000** Centers in **54** Countries | ● | **7** NAVIGATORS

[**CERTIFICATIONS**]

69,394

Total Current
Membership

117,302

Total Current
Certifications

240,554

Total Members
Trained To Date

[**DISPATCHER OF THE YEAR RECIPIENTS**]

U.S.
KT McNulty

IRELAND
Darragh Clarke

U.K.
Aneela Ahmed

AUSTRALASIA
Kim Brown

CHINA
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EURO
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[COLLEGE OF EMERGENCY DISPATCH]



384,483

Lessons completed



27,208

Users



372,680

CDE hours earned



2,225

Agencies



[25 LANGUAGES]



[CALL OF THE WEEK]

We just completed our **THIRD YEAR** honoring emergency dispatchers for their outstanding calls. Many of these were featured in local news outlets. Our 2019 calls included:



House fire



CPR



Boat rescue



Man on fire



Baby deliveries



Suicide attempt



Sinking vehicle

[COUNTRIES COMPLETELY ACCREDITED]



Trinidad and Tobago



New Zealand



Malaysia



Qatar



Lithuania



Ireland



Wales



Northern Ireland



[2019 ANNUAL REPORT MESSAGE FROM THE PRESIDENT]

Greetings from the International Academies of Emergency Dispatch®.

I'm Jerry Overton, and it's an absolute privilege to serve as your president. It is our members, our friends, and our volunteers who make a difference. It is you who are out there every single day, 24 hours a day, seven days a week, interacting with the public in the absolute worst circumstances. You're saving lives; you're saving property. I want to say thank you for the commitment you are making.

This has been a record year. In 2019, we surpassed more than 69,000 members. Now, we have a total of more than 117,000 certifications. Since 1979, we have trained more than 240,000 members. Those members are now staffing nearly 4,000 centers across the world—4,000 centers that are using the Priority Dispatch System™, whether it be the MPDS®, PPDS®, FPDS®, or ECNS™.

We're continuing to experience growth around the world. We are now in 54 countries, and our protocol has been translated into 25 languages and dialects, ensuring that we're truly international.

This year, 35 agencies were re-accredited as ACEs or achieved ACE for the first time. They have my personal congratulations. This means you are the best of the best. You have made the commitment to being compliant; you have made the commitment to serving your communities on every single call, every single time. On a special note, we celebrated two new tri-ACEs: Rehoboth Beach Police Department 9-1-1 in Rehoboth Beach, Delaware (USA), and Livingston County 911 Central Dispatch in Howell, Michigan (USA).

NAVIGATOR events are an important part of our mission, and we hope to see you at one, whether that NAVIGATOR is in the United States, Europe, Asia, or Australasia. This past year, in National Harbor, Maryland (USA), we enjoyed our highest attendance ever with a record number of sessions. It was a phenomenal event.

Education has become more and more important, especially as we've implemented the College of Emergency Dispatch. We now have more than 27,000 users, and those users have completed close to 400,000 lessons.

As you can see, 2019 has indeed been not only a record year but an amazing year—a remarkable year! And it again comes back to you, who are a part of us. Everyone here at the IAED™ is looking forward to working with you and your team to make 2020 even more successful.

Thank you for being a part of us!

Sincerely,



Jerry Overton

President

International Academies of Emergency Dispatch

the JOURNAL

of emergency dispatch

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The perks and perils of shift work in dispatch around the world.



Follow IAED on social media.

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.



Adam is an instructional writer for Priority Dispatch Corp.™ He specializes in creating software training materials.

ADAM ANDERSON
7 | DEAR READER



Andre is Assistant Executive Director of Communications and Control Centers for Hamad Medical Corporation, the national ambulance service in the State of Qatar in the Middle East. He is a Master Software Instructor and National Q Evaluator for Priority Dispatch Corp.™ as well as an Adjunct Instructor at Jacksonville State University's Department of Emergency Management where he earned his BSc, M.S., and M.P.A. He is currently working on a Ph.D.

ANDRE JONES
22 | PROFESSIONAL STATUS



Heidi started in late 1993 in police dispatch and meandered down the career path of calltaking, backup fire dispatch, statistician, SARA TITLE III assistant, supervisor, and finally shift manager for the Harford County Department of Emergency Services in Maryland (USA). What an adventure!

HEIDI DIGENNARO
10 | SURVIVING THE HEADSET



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

ART BRAUNSCHWEIGER
9 | FROM THE DISPATCH SIDE



During his more than four decades in EMS, Mike's credentials include street paramedic, writer, conference speaker, and multi-decade associate professor. As a consultant Mike has worked with EMS, fire, and public health in 48 of the 50 states and throughout the world. His expertise includes EMS Street Survival, Patient Centered Leadership, and Effective Quality/Performance Improvement. He is the improvement guide at FirstWatch.

MIKE TAIGMAN
20 | ACADEMY ANALYTICS



Jonny joined the Northern Ireland Ambulance Service more than 10 years ago. He has worked as an Urgent Call Taker, an EMD, and an Auditor prior to his current role as Control Training and Quality Assurance Officer. He is an EMD Mentor Instructor for the IAED™ and sits on the IAED EMD Mentor Board of Curriculum.

JONNY MCMULLAN
24 | MENTOR

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SO, WHAT DO YOU DO?

The role of an instructional writer

Adam Anderson

It is a simple fact of American life that, whenever you meet new people, someone will ask, “So, what do you do?”

And though I've worked for Priority Dispatch® for over a year, it is only recently that I found a way to answer this question without someone thinking that I am an emergency dispatcher or that I sound pretentious. I've finally settled on, “I write training materials for emergency dispatchers,” and while that's perfectly fine for small talk over Cheez-It® crackers before playing Dungeons and Dragons, for people who know what dispatching is like, that's not quite the whole story.

Chances are, despite my short tenure, that you have or will read something that I've written. Whether it's the user guide for the latest AQUA® release or the ProQA® practice guide for MPDS®, FPDS®, or PPDS® (if you think the language in the scenarios is a little stilted, trust me, I know; sometimes art must be sacrificed for accuracy), I've written, edited, and sometimes even typeset myriad training materials.

The only training materials my team produces that I don't have an official hand in creating are the Advancement Series lessons, though I still help to edit and revise where I am needed. You may have even heard me narrating some of the Advancement Series lessons.

But the work I'm most excited about, I'm not saying anything about. I'm not sure how much information I can share before it's released. I am currently developing and writing the next generation of software training for AQUA and ProQA users. But don't get me wrong, it, like everything else I do, is a team effort, and I get to work closely with talented programmers, artists, designers, and other writers to make this training a reality.

I can't wait to share it with you. And though I can't share any details right now, trust me, you'll know it when you see it.

So, I guess “I write training materials for emergency dispatchers” just about covers what it is I do here, but I do so much more, too. At the core of what I do is our company principle “Be the Solution.” I want to make sure that what I do and what I write is useful—that it answers some question somewhere that someone may have. Emergency dispatchers save lives, and I'm proud to be a part of that, however small. ●

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.

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PROTOCOL VERSION CONTROL ESSENTIALS

Seeing the forest through the trees

Jeff Clawson, M.D., and Greg Scott

Generalizability is viewed in academics as the gold standard for a research-driven process. In simple terms, generalizability means achieving the same results in different environments, with completely different populations. Attaining generalizability presents a daunting problem in the realm of emergency dispatch calltaking. Indeed, given their vast disparities in size, geographical jurisdictions, technology, roles, responsibilities, and staffing, a reasonable question would be: Is it even possible to achieve the same (or at least similar) results in emergency dispatch agencies throughout the world? Emergency calltaking is such a chaotic task after all, with panicked callers, life-threatening events, and overworked, underpaid calltakers—what's the use in trying?

Enter protocols—a set of structured rules, instructions, and actions arranged in an organized, methodologically sound system used to complete all specific objectives in the right order in the emergency calltaking process. Protocols for emergency fire, medical, and police calltaking have become the standard of practice for achieving consistency of process, as well as a high level of service in emergency dispatch centers throughout the globe.

However, emergency dispatch protocols require continuous review and updates in order to stay current and effective. This need for updating protocols leads to an additional challenge for the emergency dispatch community: version control.

The necessity of version control is rooted in the need for comparability within a user or study environment.

Most would agree that a dispatch center should not have multiple variations of a given protocol between individual workstations or shifts, because if it did, the performance from station-to-station and shift-to-shift would be, by definition, different. The dispatch results at one station, if protocols were followed as written, would be different (who

“protocols/guidelines” can be modified at will by the user agency, the number of dispatch “protocol” types increase exponentially as each of these versions continues to morph.

In addition, what may be the same as, or different from, your protocol cannot be easily identified. The comparison factor involving studies done in these systems breaks down past the center level. Their individual outputs, and any outcomes based on

them, therefore may be directly comparable only to themselves. In today's sophisticated dispatch centers, generality “walks,” while specifics “talk.”

A related problem in any dispatch study is the simple failure to identify which “system” is actually being used. Often the best an agency can do is quote the system's general type: “priority dispatch protocol,” “criteria-based dispatch,” or even more general, “the EMD protocol,” etc., without being able to report version (and date) information because they have no organized way to evolve or even identify versions. At its worst, agencies cannot even report basic protocol taxonomy (version evolution) because they have no record of where the original system came from or what it was. It might as well have been “homegrown” because effectively that's what it has become. This makes it impossible even to describe how the current version differs from the parent. In cases like this, even if a study is published, findings are impossible to analyze properly, and any suggested protocol changes are then difficult, if not impossible, to effectively implement. ●

**{ Generality “walks,”
while specifics “talk.” }**

knows how much?) than the results at the next station. Such a practice of using different versions of a root protocol (or dispatch method) within a single agency make it difficult, if not impossible, to compare findings and hence to reach any valid conclusions about high, low, or mediocre dispatcher performance, or in reviewing good or bad case outcomes based on any one of the protocol variations in use.

This dilemma expands itself across jurisdictions and even between neighboring agencies in a similar way. When an issue might be studied by an agency, any data, findings, or recommendations examined are not necessarily comparable to another agency that uses a fundamentally different dispatch system.

In these environments, the various types of dispatch systems become, by definition, an increasing number of variations. Moreover, when certain



UNREALISTIC EXPECTATIONS

When the reality can't deliver

Art Braunschweiger

People's resilience in the face of crisis never fails to impress me. On a hot July day last year, while returning to the airport from a training course in Miami, Florida (USA), the Metrorail train I was riding lost power and stopped moving. We were on an elevated section of track between stations, so exiting the train wasn't an option.

For the first 30 minutes or so, everyone sat patiently waiting for the train to move. Even after an hour, there was only moderate complaining. But after multiple failures to send another train to push, pull, or otherwise rescue our train, a few passengers' talk turned to emergency services. One woman stated that we should call 911 (the emergency number in North America). Now one thing I'm not very good at is staying out of conversations like this, so I joined in. It went something like this:

Me: "The fire department will not come just because you call 911. Right now there is no emergency, and no one is in distress."

Passenger: "They have to come. This IS an emergency."

Me: "No, ma'am, it's not. We're not in any danger, you're only being inconvenienced right now, as am I. And as much as I would like to get out of here too, the fire department will not bring their ladder trucks and rescue us just because the train isn't moving." (And then, because I had managed to remain in such a good humor so far, I was accused of not caring. I guess that's the price I pay for being an eternal optimist.)

Anyone who's ever worked as an emergency dispatcher knows that people in crisis can be impatient and demanding. Some callers have no concept of response time or distance when they insist we help them now. Fortunately, the more widespread the crisis, the less likely people are to think of themselves. When a tropical storm has dumped 10 or more inches of rain in our area overnight minor flooding is common, and we've had lists of upward of a hundred homes in a single town that the fire department needs to respond to. Almost without exception no one calls to complain when it takes a day or more to get to them.

Some complain about situations that we can't do anything about. In the first week of April 2019 the Pine Barrens in the southern part of my state (New Jersey, USA) experienced a wildfire that consumed over 11,000 acres. The smoke from that could be smelled outside my dispatch center over 70 miles away. One man called to complain about the poor air quality, saying it was unacceptable since his son had asthma. The supervisor to whom the call was transferred to politely suggested that if staying indoors wasn't a solution, they should consider temporarily relocating somewhere far enough away where the air was better.

Most callers aren't that extreme in what they expect us to do for them. Most of the time they're simply focused so much on their problem that they fail to realize that many others are experiencing the same issue. Our job isn't to reprimand or scold them for calling, and yet that happens all too often. It's not necessary or appropriate.

Explaining why the fire department can't respond, or respond right away, should be done with as much customer service as anything else. A truly versatile dispatcher can do that. Often

it takes no more than remembering that your caller is probably a nice person who's just having a really bad day. Be kind and be patient—and remember that at the end of your shift, you get to walk away from it all. ●





WE'RE ALL MAD HERE

How to make the madness manageable

Heidi DiGennaro

Alice asked the Cheshire Cat, who was sitting in a tree, "What road do I take?" The cat asked, "Where do you want to go?" "I don't know," Alice answered. "Then," said the cat, "it really doesn't matter, does it?"

Lewis Carroll, Alice's Adventures in Wonderland

The road you want to take is the one that will keep you (mostly) sane and healthy at the end of your journey. Without direction, you will trudge through each day like a march to your last day.

Now's when you take care of yourself before the cumulative effects start or become entrenched. Too often we take on the stress of an incident gone wrong even if we had little to nothing to do with the outcome. Or we berate ourselves for mistakes. Five years later, we're still bitter about that mistake. Is this healthy for us? No.

I've received several pieces of advice on how to handle a work/life balance. Use them or lose them at your discretion.

1. If you think you know everything, quit.

You don't. Always be open to learning something new. In this technology age, programs change faster than their operators, and we are forced to adapt. Just because we do something the same way for years doesn't mean it won't change. Keeping an open mind will help you learn shortcuts, too. I recently taught a five-year plus veteran a time-saving trick she never knew.

2. The 30-minute rule. You get 30 minutes total—it doesn't have to be consecutive—to vent about your day. Get rid of the stress even if you're talking to the furry family member. After 30 minutes, you can't talk about work until after the next shift so you can focus on life outside the dispatch center.

3. Is it worth your health? Is what you are worked up about that is raising your blood pressure, heart rate, etc., worth

the physical cost? Will it matter in a year, two years, five years? Can you change whatever's upset you? If you can't change it, say your piece in the appropriate forum to the appropriate chain of command. If it's not worth your health, don't dwell on it. You've had your say, and your body will thank you.

4. Sick leave usage. Stop and think about you before you come in sick. You are not at your best or even close, and you are setting yourself up to fail. You have a higher chance of making a mistake. You and your co-workers need your A game, not your C game. How much good are you if you're passing along your germs and not doing a good job? Take the time for yourself, and don't share germs with everyone.

a. This includes mental health days when your body is OK but your head or emotions are not. Your emotions are contagious—bad emotions spread with the speed of a plague. If you can do it, take the time. Am I suggesting for you to get in trouble because you don't have leave? No, this isn't a permission slip. It's a prompt to stop and think about how effective you are going to be.

5. Find one positive thing each day.

Look for something positive every day. Even in the midst of crisis, you can find one positive thing. Maybe the incident isn't

as bad as it could be. Maybe one person made you smile. Build on those moments.

Your mental health is as important as your physical health. Invest in yourself. Sometimes that one day off or that open mind can be the difference between enjoying your job and surviving it. You want a long retirement; you've worked for it. Neglecting your mental and physical health can shorten that

retirement. So find a direction, know where you are going, and go forth and stress no more! ●



I DROWNED.

Your data helped
save me.

I fell into the pool and stopped breathing. The 911 dispatcher told my mom exactly what to do to get me breathing again. Thanks to your agency's focus on CPR data using Academy Analytics, your dispatcher helped my mom get hands-on-chest faster and saved my life.

**[prioritydispatch.net/
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BETTER DIRECTION

Advice for increasingly more common call

Brett Patterson

Brett:

We've several employees asking what to do when the reporting party states they have taken an abortion pill and are now bleeding. I want to give them direction on what path to take, but it seems it may vary depending on how far along they are, whether they are bleeding heavily, cramping, or have passed anything. It's a frustrating call for most of my calltakers, and I'm looking for direction on how to best equip them to take these calls.

Heidi Partlow

CQI Supervisor

Valley Regional Emergency

Communications Center (VRECC)/

West Region

Modesto, California (USA)

(Editor's Note: The question included a transcript of a call, for an example, in which Brett made the following comments placed in parentheses for purposes of discussion.)

CEQ3: "She's having extremely bad pain." (No clarification by EMD.)

Caller volunteers: "She's having an abortion." (Again, no clarification by EMD.)

EMD moves to P26 then shunts to P21 when vaginal bleeding is discovered.

EMD asks P21 KQ 1a (EMD does not shunt to P24 for Yes answer and does not ask KQ 1ai; no codification as to what has passed.)

(Situation finally clarified by caller) EMD asks: "When did they give her the pill?" (Freelance, no benefit.)

EMD stays with P21.

Heidi:

There are several issues with this call that all stem from not knowing what happened on Case Entry. We need to clarify at Case Entry to get on the right track. In this case, the EMD went to P26 with no information other than non-descriptive pain.

This was a call for an intentional, pharmaceutical abortion with vaginal bleeding and pain (still don't know where). Once this information is known, P24 becomes obvious, and KQ1 dictates the correct pathway.

- MISCARRIAGE if fetus or tissue less than 24 weeks gestation.

- THREATENED MISCARRIAGE if bleeding or bleeding and cramps less than 24 weeks gestation.
- STILLBIRTH if greater than 24 weeks and purposeful/induced by physician. Simply put, if prior to 24 weeks, pill or no pill, it's a MISCARRIAGE (fetus or tissue) or THREATENED MISCARRIAGE (blood or blood and cramps). If after 24 weeks, STILLBIRTH, unless SIGNS of LIFE are present.

Brett A. Patterson

Academics & Standards Associate
Chair, Medical Council of Standards
International Academies of
Emergency Dispatch*

Brett:

Thank you for your reply. I do agree with your findings (Q-wise). We seem to get these calls more often in the past year than we have before, and my calltakers are just unsure of where to go. So, digging more at Case Entry 3 as far as asking where the pain is and

when she took the pill? And/or has the fetus already passed? Or if it is known she took the pill we just go to Protocol 24 and go from there? My calltakers are wanting to go to Protocol 21 (or on this call Protocol 26).

When choosing from the drop-down should the EMD choose "MISCARRIAGE situation" or just "Pregnancy/ Childbirth/ Miscarriage"?

On KQ 1 if the RP is not having abdominal pain/cramping—just bleeding—what would be the appropriate choice if it is known they took an abortion pill? I think this is where they are getting off track and not choosing "threatened."

They do follow the DLS Links, but it seems as though many of the instructions are not applicable to this particular situation and don't seem appropriate, unless we're looking at this wrong. For example, "I'm sorry" or even mentioning the term "baby" may be uncomfortable.

Again, thank you for all your input and guidance on this. I'm just hoping to be able to put out a training bulletin on what to do and how to handle these types of calls better.

Heidi

Heidi:

My point: EMDs need to know what happened. Simply knowing this woman was prescribed a pill to terminate and is now bleeding and cramping is enough. If she was prescribed a pill to terminate pregnancy, she is pregnant. And if now bleeding, cramping, or passing tissue or delivering a fetus, P24 is appropriate. P24 will ask about gestation and provide the appropriate answer options:

If she is just bleeding, or bleeding with cramps, and is less than 24 weeks, THREATENED MISCARRIAGE, by definition.

If fetus or tissue and less than 24 weeks, MISCARRIAGE, by definition.

If fetus and greater than 24 weeks, and purposeful termination by a physician, STILLBIRTH, by definition.

Protocol 21 is for vaginal bleeding when not pregnant, or for POSTPARTUM

Hemorrhage ONLY, meaning no other problems (baby born <= 8 weeks and the only complaint now is mother bleeding).

Please note: Some of the instructions

may not be appropriate—

"(I'm very sorry. There's nothing we can do for the baby)" has recently been placed in parentheses

to make it optional, so simply don't read them if not appropriate.

Recommendations: Always clarify what happened and get on the right train at the right station before the train leaves. This may help: iaedjournal.org/art-and-science.

Learn these four DLS definitions:

- MISCARRIAGE
- THREATENED MISCARRIAGE
- STILLBIRTH
- SIGNS OF LIFE

Let me know if I can be of further assistance.

Brett

Brett:

I'm trying to get an answer for one of my dispatchers. As are many areas of the country, our state is fighting an opioid crisis. One of my dispatchers recently took a call for an opioid overdose. While following PAI Q for administering Narcan, the caller advised that the dose was expired.

It is my understanding that expired drugs really don't have any different effects—they just may be less effective due to the drug's half-life. In this case, wouldn't it be worth the shot to try the expired Narcan until EMS can arrive? I could not find anything in the protocols that addresses expired drugs.

Tim Coale

*Communications Center Manager
Worcester County Department of
Emergency Services
Snow Hill, Maryland (USA)*

Tim:

You are absolutely correct. While an expired drug may have lost some potency, it is safe and appropriate to give in an emergent situation unless clearly damaged. In fact, we recently

removed the section of Protocol P that stopped administration instructions due to particles or discoloration in an auto-injector. It now reads (v13.2):

P7 - Expired Injector Kit

It is common to have an expired kit, which may be discolored or have particles in it. Out-of-date injectors can still contain significant amounts of adrenaline (epinephrine) that can help her.

(They just might not be as strong.)

Unless you have another one immediately handy, we advise you to use this one now.

Here is how Panel 7 on Protocol P appears in MPDS v13.2. © 1979–2020 PDC.

Thanks for the great question and all the best with the efforts of your team.

Brett

Brett:

Caller advises they have non-chewable low-dose aspirin; what instructions would be given?

Do we tell them to take with a mouthful of water?

Eric Gerald Fahler

*Lebanon County 9-1-1 Deputy
Lebanon, Pennsylvania (USA)*

Eric:

"Non-chewable" means enteric coated, which means a firm coating is applied designed to get the aspirin through the stomach and dissolve in the gut. Essentially, it protects the stomach from the long-term effects of acetylsalicylic acid (aspirin). It is prescribed for patients on long-term ASA therapy.

This coating is not terribly hard and can be chewed. We actually tested this on several folks in the Salt Lake City (Utah, USA) office, and there were no resulting broken teeth or complaints.

Swallowing an enteric coated aspirin delays absorption, and this is not optimal in the potential heart attack setting. Advise the caller to chew the aspirin as per the MPDS' instructions. If they refuse, swallowing it is probably better than nothing, although the medics will likely provide a "chewable" on arrival.

Your question is also addressed in the ASA FAQ section of "Principles of EMD." You will find your question and answer on page 6.21.

Brett ●



Salt Lake City Department of Airports personnel practice extinguishing aircraft and ground fires in preparation for actual events.

THE WILD BLUE AND BEYOND

SLC airport dispatch keeps sights on land, sky, and millions of people

Audrey Fraizer

Nothing in air, on building site, or on runway escapes the attention of emergency dispatchers at Salt Lake City (SLC) International Airport (Utah, USA).

The communication center sits adjacent to the runway and less than a half-mile northeast of a new terminal that will completely replace the present facility built 50 years ago to accommodate half the 26 million passengers now flying in and out every year.

The first phase of the estimated \$3.6 billion construction project in its sixth year of the 10-year timetable opens to the public in September 2020. All eyes will be on the 908,000-square-foot Central Terminal with every inch of it patrolled by remote cameras streaming live to the dispatch center.

Video surveillance is far from a recent introduction at the SLC airport, with a closed-circuit television surveillance system

around for security purposes for more than 20 years. The way the system is used, however, has expanded with the times. Constant scanning reinforces the safety of passengers, staff, and property from accidental or malicious acts of vandalism, assault, trespassing in restricted areas, and other threats, and—with the benefit of medical ProQA® in the communication center—accelerates out-of-hospital care for passengers and staff injured or suddenly ill.

The security cameras are positioned at entrances (parking garage and light-rail stop), security checkpoints, terminals and gates, and all open areas to get continuous footage of airport activity. Cameras at the construction site provide updated progress reports to the public via social media.

The video surveillance system is as dynamic as the airport redevelopment project. A solid-state color security system has replaced the original monochrome security cameras, and

the 1,100 cameras currently monitoring live digital images of the airport via a computer network are expected to double with the Central Terminal's opening, followed by completion of a Gateway Center (shops and restaurants) and two main concourses by 2024.

Everything is recorded and saved using video management software, said Airport Operations Supervisor Jeremy McCulley. Long gone are the days of analog archives stored on cassette tapes. The videos are stored digitally for liability purposes and training.

Take, for example, the passenger who suddenly disappears from the moving walkway or the escalator. A less astute observer from a distance would not catch the fall, much less the fact that one less traveler is in line heading toward departure. Not so from the set of emergency communications. The videos are learning opportunities.

"Did you see that?" asked Whitney Rogers, Airport Operations Supervisor—Training, while streaming a video scrubbed for privacy. "We know where something happens and can tell people where to go for an AED [in cases of suspected sudden cardiac arrest] rather than asking if an AED is available close by."

The situational awareness from a distance develops alongside the other multitasking job requirements. Each console has two video screens that stream 24/7, with views dependent on the assignment and, at a minimum, there are two emergency dispatchers on shift at night and three during the day. Emergency dispatchers can control the view, although it's rare for them to catch an incident in real time. More often, it's an attendant arriving on scene and calling for assistance. Cameras are zoomed to view the incident, giving emergency dispatchers the eye and ear in coordinating response.

Emergency dispatchers do not dispatch from the video software system. The airport is home to the first airport-user of the medical ProQA® (since 2004), and Emergency Medical Dispatchers go through the same scripted process of asking Key Questions, giving PAIs and PDIs, and selecting the appropriate response code. The airport communication center is also the first and only airport medical Accredited Center of Excellence (ACE).

Lifesaving tools for serious hemorrhage, drug overdose, and sudden cardiac arrest—the stuff of PAIs—are readily available from inside cabinet-size emergency rooms located throughout the three terminals. Cabinets originally placed for AED access also store Narcan nasal spray and instructions and bleeding control kits containing tourniquets, chest seals, trauma bandages, markers, and instructions. Contents are accessible to airport employees and the traveling public.

Cameras are a standout feature because of the visual component added to dispatch. They can watch the delivery of an AED, Narcan, or tourniquet to the patient.

On-scene rescue is discreet, and while the video keeps running, the phone line is disconnected once medical personnel come on scene and take over care, said Heidi Harward, Airport Operations Manager—Safety Programs.

"It's incredible for us to see someone resuscitated," Harward said. "But security clears the area of passengers for access and to discourage rubbernecking."

What goes on outside the terminals gives Sam Allen, Airport Operations Manager—Airfield, the biggest office—the airport campus of which nearly 50,000 acres in four runways are constantly cleaned free from rocks, hardware, stray animals, or anything else that could jeopardize flight safety.

"All we care about is moving people and moving planes," Allen said, along with the seasonal task of plowing upward of four to five feet of snow. He and his staff of 34 also coordinate ground safety for construction workers, which can number up to 2,400 people on any given day.

Streaming video

At the airport, streaming is an accepted part of the system for surveillance and a facet of a job, that like PSAP counterparts, requires multitasking. SLC airport emergency dispatchers gather accurate information from callers and use the information to dispatch response. They communicate using a multi-channel radio system and maintain daily incident logs. The National Crime Information Center (NCIC) and Salt Lake City Advanced Records Management System are used to determine vehicle registration, criminal history, warrants, stolen property, and gun files. They also coordinate with the National Weather Service housed on the airport's east side to disseminate severe weather forecasts.

Training lasts six months, although acclimation to the job generally takes another half year.

"You have to know the inside, outside, and in between," Rogers said. "But you don't have to watch everything that comes in."

Streaming will be new to most traditional communication centers accustomed to a nonvisual environment. The effort will also contrast markedly under the NG911 initiative designed to switch from legacy circuit-switched voice to IP-based networks. NG911 allows callers to transmit videos to emergency dispatchers via mobile devices. Caller transmission of information (video or text) is not a reality at the airport and neither is the technology for an emergency dispatcher to send a link to the caller that allows the cellphone camera to show surroundings in real time. The technology to watch an incident no matter how it's relayed, however, does raise the same concerns.

"You can't expect people to automatically accept seeing what they've only heard," McCulley said. "Not everyone wants to or can cope with that level of a situation."

McCulley recommends limiting visual access in a PSAP, leaving it open to those who are trained and able to transmit the video to responders, sort out relevant information, and ignore distractions.

The videos are learning opportunities.

Rogers said there's also an awareness factor. This is not home video. This is something personal happening in a very public place.

"We build dispatchers up to be superheroes, but we can only handle so much," she said. "You hold on to some things more than others."

Streaming video is essentially a tool that relates to an emergency dispatcher's situational awareness and understanding the boundaries within dispatch.

"The job will always be about gathering the appropriate information to provide appropriate help," McCulley said. "It's all about keeping the focus." ●

SALT LAKE CITY AIRPORT

A cinder-covered landing strip in a marshy pasture called Basque Flats (after the Spanish-French sheepherders in the area) was the rudimentary beginning of the airport.



1933

Salt Lake City built an airport administration building that housed a passenger waiting room, mail room, airport manager's office, lunchroom, weather observatory, radio control room, and leased office space to airlines, at a cost of \$52,000.



1975 TO 1980

The airport grew to 7,500 acres.



2002

The city and airport hosted the Olympic Winter Games.



10

airlines and their affiliates serve SLC International Airport.



2018

The airport served 25,554,244 passengers and hosted 337,276 operations (take-offs and landings), including commercial air traffic, cargo, general aviation, and military activity.



370+/-

scheduled commercial departures from SLC each day, serving close to 98 cities with nonstop flights.



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Northwest Territories 9-1-1 staff

LET ME INTRODUCE YOU

Northwest Territories is 911 ready

Audrey Fraizer

Few out-of-towners rushing to claim luggage or hurrying to ground transportation at airports serving the Northwest Territories (NWT, Canada) tended to notice the multiple numbers listed for emergency services. When something did happen that demanded immediate assistance, reaching a recorded message after dialing 911 was undoubtedly disappointing—911 was unavailable.

That all changed on Nov. 4, 2019, when NWT went live with a territory-wide 911 public safety answering point, located in Yellowknife. Callers get a real voice at the other end of 911 and, crucially, access to the Medical Priority Dispatch System™ (MPDS) and the Fire Priority Dispatch System™ (FPDS). NWT 9-1-1 dispatchers will ask the caller's location, callback number, provide Dispatch Life Support, give Post-Dispatch Instructions, and connect to the emergency services already accessible in the community for

dispatch. In the case of communities without medical or fire first responders, dispatchers will direct callers to self-rescue and provide Dispatch Life Support, if necessary, while 911 notifies the nearest health center of an incoming patient.

The territory's telecommunications network supports basic 911. The technology required for Next Generation 911, which includes texting and spatial positioning capabilities, could be available within the next five years.

How did people in NWT's remote and isolated areas used to cope during an emergency?

"They did what they have always done," said Ashley Geraghty, Manager, NWT 9-1-1. "They know how to keep themselves alive and well. They have been on their own for centuries."

Geraghty is the driving force behind the 911 project and is understandably anxious about its reception in areas where self-reliance within a community

is second nature. He doesn't expect people to resist calling for help; it's more about the act of accepting a new way of doing things.

"Smaller communities aren't sure how 911 will help them," Geraghty said. "They think of it as an old-fashioned operator transfer service. Part of the holdup was convincing people what we can do."

Making 911 a reality

Geraghty, an informatics network specialist by profession, was hired 21 years ago to design the territory's telemedicine system. At the Health and Social Services Authority, he developed the Med-Response program, which provides air ambulance and practitioner-to-practitioner support. (It receives between 3,600 and 3,800 calls annually.) He has a Master of Arts in Health Administration, is trained as an emergency medical responder, and is a certified fire officer, instructor, and

safety officer through the National Fire Protection Association. He has over 10 years' experience with the city of Yellowknife as a volunteer firefighter.

Geraghty pushed hard to develop a 911 system with pre-arrival instructions and dispatch life support following a call that struck a chord. The dispatcher answering the call did not have access to CPR dispatch life support instructions in an attempted suicide and suspected the parent was doing CPR incorrectly. Geraghty knew there had to be a better way.

He transferred to the Department of Municipal and Community Affairs to develop the 911 program. He networked, enlisting the aid of the Department of Health and Social Services, the Department of Justice, and Infrastructure Canada, among others, and together they embarked on the massive project. He looked across Canada for the gold standard of care in 911 centers and selected MPDS for its ability to help people and save lives. He helped draft the NWT 9-1-1 Act & Regulations; devise the 911 program, including staffing, funding, and operational policies; and design the Emergency Communications Centre (ECC) and its technical, security, and operational systems.

"As we say, we built the bridge as we walked on it," Geraghty said. "We took all our planning and made it reality."

The ECC is brand new, from top to bottom, side to side. The Med-Response program and the 911 program are co-located and co-supported. This secure workplace can continue to function during frequent and prolonged power and services interruptions. The ECC has a total of seven workstations: four are active positions and three are training and surge positions. The dispatch room is small enough that all positions can hear and see the others. Med-Response has one nurse and one emergency dispatcher on 24/365, plus supervisory staff during business hours. NWT 9-1-1 has one emergency dispatcher on 24/365, plus supervisory staff.

In the months leading up to Nov. 4, the go-live date, basic information was posted on the NWT 9-1-1 website and a public awareness campaign was rolled out when the service was operational.

"We didn't want to risk any public misunderstanding," Geraghty said, "having someone call 911 expecting to get help when the service was not yet in place."

Caution reigns

NWT's land area is approximately 1,171,918 square kilometers (728,196 square miles), with a population of approximately 41,786. The 33 official communities range in size from Yellowknife, with a population of 19,569, to Kakisa, with a population of 36. The NWT Official Languages Act recognizes 11 official languages (nine Indigenous plus English and French). NWT 9-1-1 dispatchers must be bilingual in English and French.

NWT's smorgasbord of bad weather and topography—thunderstorms, hail, blizzards, ice storms, high winds, and extreme cold—complicates search and rescue. If a road accident or other mishap doesn't kill you, the cold will. Summers in the north are short and cool, with daytime highs of 14–17 C (57–63 F) and lows of 1–5 C (34–41 F). Winters are long and harsh, with daytime highs around minus 20 C (minus 4 F) and lows around minus 40 C (minus 40 F). Locals pack extensive first aid kits in their vehicles in case they need to hunker down for a few days, or on the off chance they come across stranded, lost, or incapacitated travelers.

Straying outside the borders of a municipality into the bush is risky, even around Yellowknife. "You get turned out five minutes outside the city, and you can walk for weeks without getting anywhere," said Geraghty, who has multiple personal tales of bears chasing him, nearly fatal airplane incidents, and, of course, the wonder of living in a remote and beautiful part of the world.

But don't get the impression everybody's on their own in an

emergency. Response is available, with the extent dependent on the area and its community services.

Six communities have organized ground ambulance and fire services. Most services are volunteer-based except for Inuvik and Behchokǝ ground ambulance and the city of Yellowknife ambulance/fire, which have full-time crews. Yellowknife airport also has a full-time aircraft rescue and firefighting crew.

Policing is generally provided territory-wide by the Royal Canadian Mounted Police (RCMP). The RCMP also provides search and rescue, and the Canadian military conducts technical search and rescue out of the Trenton region. A Canadian Forces base in Winnipeg, Manitoba, can dispatch Hercules airplanes (parachute in). Both the Canadian Coast Guard and Auxiliary Coast Guard have a presence along navigated waterways. Four communities, though, have no emergency services of any kind except the Med-Response program.

Many communities are fly-in or only accessible by winter roads built and maintained by the transportation department, linking those towns and giving them temporary access to the outside world. These are some of the same roads featured in the reality television series "Ice Pilots NWT" and "Ice Road Truckers," although don't let their bravado fool you. Winter days are dark and cold, services are few on the roads, and nonessential travel on the longer routes is discouraged.

Future sights

Geraghty is hesitant to draw conclusions about the impact of NWT 9-1-1. Early call volume projections suggest approximately 3,000 calls yearly—but he expects actuals to be at least double this figure. He does believe that NWT 9-1-1 and its pioneering staff will make a major difference in the lives of the people they serve.

"You don't always see how you impact people, and now we have people ready and trained, knowing they will make a difference," he said. ●



DATA ANALYSIS

Something done well deserves studying the heck out of it

Mike Taigman

When people first start realizing the power of real-time data analysis using Academy Analytics, it's common for them to ask, "Can we compare ourselves to other centers to do some benchmarking?" The desire for comparison, ranking, grading, and the like seems to be woven into our collective DNA. How does our center's frequency of aborted calls stack up against other centers? Is my time in Case Entry shorter than Stephen's on A shift?

Benchmarking, the improvement science term for comparison, can be a helpful improvement tool, but not the way most folks think about it. In emergency services most benchmarking projects are built on the principle of "We will all measure the same thing the same way and see who is best and who is worst."

The best will feel good, and everyone else will feel less good. And that's usually where it ends.

In the world of health care performance improvement, benchmarking is about finding an organization that does something really well, then studying the heck out of them by reading about, talking to, and visiting them. The goal is to learn about changes that might improve performance in your center.

For example, you might read about the significant improvement that the folks from New Castle County Office of Emergency Management, Delaware (USA), made in their percentage of cardiac arrest patients getting CPR and shortening their time to hands-on-chest by nearly a minute. Then it would be about figuring out how to learn from them to resuscitate a higher percentage of patients in the community you serve.

Ask three questions

Blending benchmarking with the Institute for Healthcare Improvement's Model for Improvement is a good approach.

1. What are we trying to accomplish?
The answer is your project's aim statement. The strongest aim statement is specific, measurable, and achievable and includes how much improvement you hope to make by when. For example: Our aim is to improve CPR rates by reducing the time to hands-on-chest from 130 seconds to less than 90 seconds and improving the percentage of cardiac arrest patients who receive Dispatcher-Directed CPR (DD-CPR) from 34% to over 70% by the end of August 2020.
2. How will we know that change is an improvement? The answer focuses on measurement. Identify your outcome,

process and, if needed, balancing measures. Outcome measures are the results that you're hoping to produce. In our example that would be walking with and talking to survivors of cardiac arrest. Process measures are those things that if done well are shown to produce the outcome we are looking for. In this case, good process measures could include the:

- time from initiation of the first ring of the 911 call in the primary PSAP (if you can get it) to the time of the first compression measured in seconds.
- percentage of cardiac arrest patients identified in EMS patient care records who received CPR initiated by bystanders on their own or DD-CPR.
- balancing measures, which are unintended and potentially problematic consequences that you'd like to avoid. (In our example, it's hard to think of any important balancing measures.)

Once you've identified your measures, it's important to grab baseline data on these from over the last 12 months or so as a platform to start your improvement project. Once you have the data, plot the data in chronological order on a run chart or control chart.

3. "What change(s) can we make that will result in improvement?" will be a list of change ideas and theories that you can test in your center. How do you gather these? Benchmarking can be a great way to develop change ideas.

You could visit Robert Rosenbaum, M.D., FACEP, EMS medical director for New Castle County, and his team to study their practices and processes along with the changes they made to produce their improvements.

You could also reach out to the Resuscitation Quality Improvement Telecommunicator (RQI-T) team that studies and provides training on ways to improve the percentage of people who are successfully resuscitated from cardiac arrest. RQI-T is a continuous quality improvement program to help

telecommunicators improve survival from cardiac arrest (visit the RQI-T website at rqipartners.com/rqit).

For that matter, you could search for any place that produces great results. As you study these systems, identify potential changes that you can make to produce similar results in your system.

Time to PDSA

Test the change ideas with the Plan, Do, Study, Act (PDSA) cycle.


Plan: The first step in the testing process is to plan the smallest and fastest test of change you can think of. It's often best to do this in simulation with practice cases so that you can see how things really work in your system. Many experienced leaders admit that few good ideas survive intact after confrontation with frontline employees. As part of the plan, predict what you think will happen. For example, if the change idea is moving Pre-Arrival Instructions from the secondary PSAP to the primary PSAP to shorten the time to first compressions, flowchart your current process times and estimate how many seconds faster it would be if the telecommunicator in the primary PSAP provided CPR instructions.

Act: In this step we take our analysis from the test and decide whether to adopt, adapt, or abandon this change idea. Adoption makes sense if the change produced good improvement and seemed workable without causing too many complications from the perspective of those involved with the test. Adaptation is appropriate if there was some but not enough improvement or the folks involved noticed things that made the execution of the change idea problematic. With adaptation you think about how to modify change and then do the next PDSA cycle. Abandonment is the logical choice if the test failed to produce any improvement, and the folks involved can't think of a way to adapt the idea for the desired change.

Before implementing any change, continue to conduct PDSA cycles until you arrive at a proven workable change that reliably produces improvement.

Let it be known

Once you've implemented a successful improvement idea, continue tracking outcome, performance, and balancing measures to make sure that the improvement takes hold and



If we continually collaborate to improve the results we produce, we can make the world a safer, healthier place through our communication centers.

Do: Conduct your test, record measurements, and gather the opinions and observations from the folks involved in the test to inform your analysis.

Study: Compare results of the actual test with your predictions. Did it produce the improvement you'd hoped for? What else did you discover with your test?

sustains. Next, write up your project and submit it to the Annals of Emergency Dispatch and Response (AEDR) so that others can learn from your success. If we continually collaborate to improve the results we produce, we can make the world a safer, healthier place through our communication centers. ●



Adel Badraoui, Senior Supervisor, and Ronald Soriano, EMD Mentor

ACCOMPLISHING DISTINCTION

Hamad Ambulance Service EMDs achieve professional status

Andre Jones

Is an Emergency Medical Dispatcher a professional?

The short answer is, YES! The more complicated answer is ... yes, but it is an unrecognized profession. Until now.

The state of Qatar, a small but influential nation in the Middle East that will soon host the World Cup in 2022, has brought distinction and respect to the field of emergency dispatch by reclassifying and professionalizing Emergency Medical Dispatchers (EMDs). The Hamad Medical Corporation Ambulance Service (HMCAS), the national ambulance service in Qatar, sought support from the Qatar Council for Healthcare Practitioners (QCHP) to register and license EMDs alongside their ambulance paramedic brothers and sisters.

A journey that started nearly two years ago was achieved in August 2019 under my stewardship. The foundation of this achievement was years of practice

using the internationally recognized Medical Priority Dispatch System™ (MPDS) at accreditation levels.

As you know, EMDs ensure that the right ambulance resources are sent to the right person, at the right time, in the right way, and provide the right instructions for the care of the patient until help arrives. Starting a career as an EMD traditionally requires a high school education or equivalent. This is because it is an entry-level position where classroom and on-the-job training prepare the EMD for the role.

HMCAS EMDs fell under the job description of Ambulance Service Medical Dispatcher, which had moved from an allied health position to a clinical support position in 2017. The reason for this change had to do with the minimal education requirements as well as the overall nature of the job duties as described. This is similar to

what U.S. emergency dispatchers are facing in trying to move the occupation of public safety telecommunications from administrative support occupations to protective service occupations. At issue is the job classification and how it impacts staff benefits including basic salary, leave, promotions, and allowances.

At HMCAS, the answer was not in making the EMD a first responder. The way to assure that EMDs could be moved from an unprotected post to a protected post was to get the job licensed as a health care practitioner under QCHP.

QCHP was established to regulate and accredit health care practitioners like physicians, nurses, dentists, pharmacists, and other allied health care providers. HMCAS submitted a scope of practice document as well as licensure requirements to describe the competency framework comprising of

professional ethics, clinical practice, and learning and professional development intrinsic to the role of the EMD as well as the qualifications of the EMD's professional roles, activities, and practice settings.

However, before HMCAS could go before QCHP, an internal audit of the job description was performed with the Job Evaluation Panel of HMCAS. They were on board with the idea that the EMD uses an algorithmic and rapid clinical patient evaluation questioning process to analyze information provided by the caller to triage the request and identify appropriate resources to be prioritized and allocated at the earliest possible opportunity. They could not fathom how someone just out of high school could do this. I am inclined to believe that some of the issues with the panel's lack of confidence was not with the role of the EMD, but the inherent education system that would produce said EMDs.

HMCAS provided evidence-based research, giving examples of best practices internationally, and allowed the panel to listen to some of the cases. The panel was of the firm opinion that based on the associated job grade, a diploma in a clinical degree was more appropriate. The issue was then that of the 155 EMD staff at HMCAS, 75 were deemed to have a high school equivalent qualification. The proposal was to grandfather them into the program. This was approved, and the EMD job was transformed into that of a health care practitioner.

HMCAS EMDs are now required to have a three-year diploma in a clinical discipline and two years' experience in a clinical discipline. If recruited, the EMD must complete the IAED™ EMD and ETC courses within six months and maintain EMD certification including BLS and completion of continuing dispatch education to achieve licensure.

Gist of it

Internationally, EMDs are drawn from both trained health care professionals and non-health care professionals. In the United States, United Kingdom, Canada, Czech Republic, Estonia, and Ireland, EMDs are typically recruited from non-health care backgrounds but are then subsequently trained using an EMD syllabus. It is noteworthy, however, that Australia, the U.K., and Canada have also developed a "clinical desk" to inject additional clinical experience and knowledge to support the emergency dispatch systems because of the lack of clinical knowledge and experience present in their EMDs.

However, in Belgium, Croatia, Lithuania, the Netherlands, Norway, and Turkey, qualified nurses are typically recruited as calltakers/dispatchers. In Germany, South Africa, and Hungary, ambulance paramedics are used in the EMD role. Interestingly, Denmark and Sweden use a combination of specially trained registered nurses and/or paramedics for this role. Additionally, it was identified that the use of clinicians in a dispatch environment helps to minimize the risk of underestimating the clinical seriousness of a situation and therefore avoid assigning a lower EMS response priority.

This is to say that the combination of nurse and/or paramedic knowledge with the specialist emergency operator's training, at an EMD center, may potentially improve the prehospital care for those requiring emergency medical care. The combination of the health care professional with additional specialist training as an EMD offers increasing resilience and room to grow the profession. To this end, HMCAS built, strengthened, and developed its dispatch/calltaking process supported by the added professionalization of the service provided. ●

HAMAD MEDICAL CORPORATION AMBULANCE SERVICE



In 2014, HMCAS is certified ACE.



Hamad Medical Corporation is the national ambulance service in the State of Qatar in the Middle East.



The Medical Communication Center receives more than 250,000 calls annually at the National Command Center.



Resources include 167 ambulances, 20 rapid response vehicles, and a Life Flight air ambulance helicopter.



AN INSTRUCTOR'S BEST FRIEND

Mentoring adds to the learning culture

Jonny McMullan

Editor's Note: An EMD Mentor Course is scheduled from 8:30 a.m. to 5:30 p.m. during the three days of pre-conference at NAVIGATOR 2020 (Sunday–Tuesday, April 26–28). For more information, go to navigator.emergencydispatch.org.

Jonny McMullan discusses the benefits of the EMD Mentor Course and provides insight into the feedback from EMDs qualifying as IAED™ mentors and the trainees they have assisted. He also highlights the vital role mentors play in maintaining the learning culture within agencies—without, he writes, “doing myself out of a job as an instructor!”

Role of mentoring

The role of mentorship is increasingly viewed as critical to the

successful integration of new staff into an existing workforce. Benjamin Franklin's words ring true for EMDs walking into the dispatch center to process their first emergency calls. In training, we cover the fundamentals of the systems we use in the control room; the policies, procedures, and protocols we need to follow; our Medical Priority Dispatch System™ (MPDS™) certification; and scenario training in the classroom. What we can't re-create is the reality of answering that first emergency number request from a distressed member of the public.

Having an experienced EMD beside you, someone who sat in that chair and waited for their first call, can make all the difference to a mentee. A direct

point of contact within the dispatch center, someone who understands the interpersonal relationships at play, and a person with genuine experience of the job's pressures can provide that precious combination of support and guidance when it is most needed.

If this is the case, then how does the EMD Mentor Course prepare our EMD mentors for that responsibility?

Mentor certification

In the U.K. and Ireland, the Mentor Course is in huge demand as agencies recognize the importance of acknowledging the role that mentors can play in working with new EMDs. The course curriculum includes sessions on:

Telecommunication techniques
Providing feedback
Universal standards
Dispatch stress

The content is interactive, and it provides exercises focused on Chief Complaint selection, teaching and learning styles, and giving feedback. Discussion of quality assurance standards impresses upon mentors an understanding of calltaking from a performance perspective and tests their own abilities in a safe and fun environment.

Something old

At my agency, the Mentor Course is often the first formal certified training that an EMD receives after MPDS certification. In this capacity, it provides two immediate benefits to the EMD: a feeling of investment in their career progression and recognition of their status within the dispatch center *and* a refresher in the MPDS fundamentals and IAED vision and values.


The most common feedback received from the EMDs attending the course is a sense of relief at having the opportunity to improve their own skills and knowledge before working with a trainee for a significant period of time. I recall one student in the course, who had been an EMD for 15 years, approaching me on the final day and saying, “I was so worried about mentoring. What if I tell them the wrong thing or don’t support them enough? This has really given me a boost—even just for me.”

Qualifying as a certified mentor also reinforces pride in the EMD role that can sometimes erode over years of emergency communications calltaking. So often I hear comments like, “I had forgotten what the job was all about,” “just getting some attention has really

made me feel motivated and ready to help a new member of staff,” and “the pressure of the job has really ground me down over the years; it’s stressful, but this course has reminded me why I wanted to do it in the first place.”

Something new

What does this mean for your dispatch center? The control room can be a challenging and intimidating environment. The group of trainees you are introducing into the workplace is met with a motivated and positive team of mentors ready to impart their knowledge from experience without any barriers or negativity. When teaching in agencies across the U.K. and Ireland, trainees often tell me about the horrible experiences



**Tell me and I forget.
Teach me and I
remember. Involve
me and I learn.**

Benjamin Franklin

related to their first shifts due to the role of “mentors” who have received no formal training. One relatively new EMD told me, “I came in for my first shift and the manager introduced me to my mentor. She sat me down and told me that she didn’t get paid for this and had only been asked to do it the day before. I felt like a burden, and it really added to the pressure. I wasn’t concentrating on the emergency number calls because I was worried about annoying my mentor. I felt I couldn’t ask any questions and whenever I did, I got a reply that just highlighted the negative parts of the job.”

There is nothing more demotivating for “newbies” than having their enthusiasm squashed by “battle-hardened” workers who have forgotten what it’s like at the start of an EMD

career. For many trainees the support of a staff member who has attended and passed the Mentor Course increases their confidence.

The Mentor Course prepares experienced staff members for the challenges of providing coaching and guidance while reinforcing the purpose and vision of the EMD role. It’s a morale booster for everyone on staff.

Mentoring and a learning culture

With many agencies undertaking recruitment at a quickening pace, the Mentor Course is also creating, or at least adding to, the cycle of learning within dispatch centers. I regularly visit agencies where EMDs attending the course have been mentored by

former students. At my agency, Northern Ireland Ambulance Service (NIAS), we are privileged to witness the same as more and more EMDs volunteer to become mentors based on their own experiences as trainees. A staff member recently told me, “If it hadn’t been for my mentor, I never would

have finished my training or been signed off for 999s. The thought that I might provide that support to someone else just starting out really makes me want to be a better EMD and mentor.”

The impact of having EMDs coached by mentor-certified peers who then become certified mentors has huge potential. We create a staff group of similar-minded, highly motivated EMDs who understand the importance of effective mentoring and possess a desire to improve performance for the benefit of the patient *and* new employees. My advice to you? Invest in your mentors and their mentees’ futures. The potential is immeasurable.

And remember, we need someone to teach the mentors, so instructors still need a job, too! ●



MAKING IT A GOOD DAY

Mentoring builds working relationships

Audrey Fraizer

Nothing's worse than spending your day telling people what they have done wrong.

On the flip side, who can beat a day having conversations that are meaningful and take the awkward out of difficult situations?

The flip side is an approach underlying the mentoring program, an IAED™ initiative that last year went cross-Atlantic from its origins in the U.K. to centers in North America. Although revised to tap into country-specific cultural and motivational nuances, the message is clear on both shores.

Mentoring is participatory for all parties involved and develops a culture of trust and respect in the communication center. It acknowledges the adult learner in everyone. It happens in real time.

"Mentoring is about the approach," said Kim O'Donnell, Commander, Communications Education and Quality Improvement for Toronto Paramedic Services, Canada. "It's a way of speaking, interacting, and allowing the person to figure things out, rather than saying what was done wrong."

O'Donnell certified as a mentor in 2014, and four years later, she and Cynthia Campbell, Superintendent, Communications Education and Quality Improvement, Toronto Paramedic Services, participated in the EMD Mentor Instructor Academy. The five-day course gave them the tools to certify 36 staff members (communications training officers, superintendents, senior emergency dispatchers, and education superintendents) as mentors

during 13 separate sessions at the busy Toronto center.

In addition to reinforcing adult learning techniques, the feedback approach taught puts the kibosh on the former "praise, criticize, praise" feedback sandwich and replaces it with an "ask, tell, ask" approach.

For example, rather than telling an Emergency Medical Dispatcher (EMD) she flubbed the Chief Complaint and telling the EMD how to do it right the next time, the mentor asks why that particular Chief Complaint was selected. The question provides an opportunity for the EMD to think out loud, discuss the reasoning, and arrive at a decision.

The approach is participatory, conversational, and non-confrontational. It encourages decision-making rather

than being told, “This is the way you should have done that” or “This is the way it’s always been done.”

“We’re treating people as adults and as equals in terms of investigating the issue,” O’Donnell said. “Mentoring lays a foundation. Mentoring sharpens the focus and helps everyone succeed.”

Performance is one measure of success in Toronto. After implementing the mentor program, 59 Emergency Medical Dispatchers were recognized for calls receiving excellence, a number nearly double from the year before.

Mentoring is not only about protocol, policies, and procedures, and it caters to new and veteran emergency dispatchers by “helping them wade through the ocean of calls received,” said Tiffany Good, ED-Q™, Operations/Training Manager, New Brunswick EMS, Moncton, New Brunswick, Canada.

The “we” are emergency dispatchers skilled not only over the phone but

overall in their interactions with others. They are known for high-level customer service over the phone during the worst of times and recognizing ways they can help fellow workers stay on path on the dispatch floor.

“They are people persons,” said Good, who certified as a Mentor Instructor at the same course attended by O’Donnell and Campbell. “They build a confidence.”

A people person is curious about the world and people around them. A people person shows genuine interest in others, doesn’t judge, listens without second-guessing or interrupting, knows how and when to show empathy, and finds ways to relate (understand their position). This confidence—and trust—built through the mentoring relationship extends to walls beyond the communication center. If personal problems boomerang to effect work, the dispatcher can talk about it without

the fear the conversation will reach unwanted ears.

The benefits, Good said, work for both the mentor and the person mentored.

Those mentored can ask any question about the job, the center, policies and procedures, and protocol without fear of embarrassment for appearing naïve or uninformed. Mentors teach from an “I’ve been there, done that” perspective to help prevent others from making the same mistakes. They model behavior others naturally look up to and provide insight, observation, and support. Learning takes place on both sides.

“It’s pulling out the inner emergency dispatcher in a way that’s non-threatening,” Good said. “Mentors make it so someone doesn’t feel alone, and they learn new insights from the person they’re mentoring. It’s a team.” ●

NAVIGATOR 2020 MENTOR CERTIFICATION COURSE

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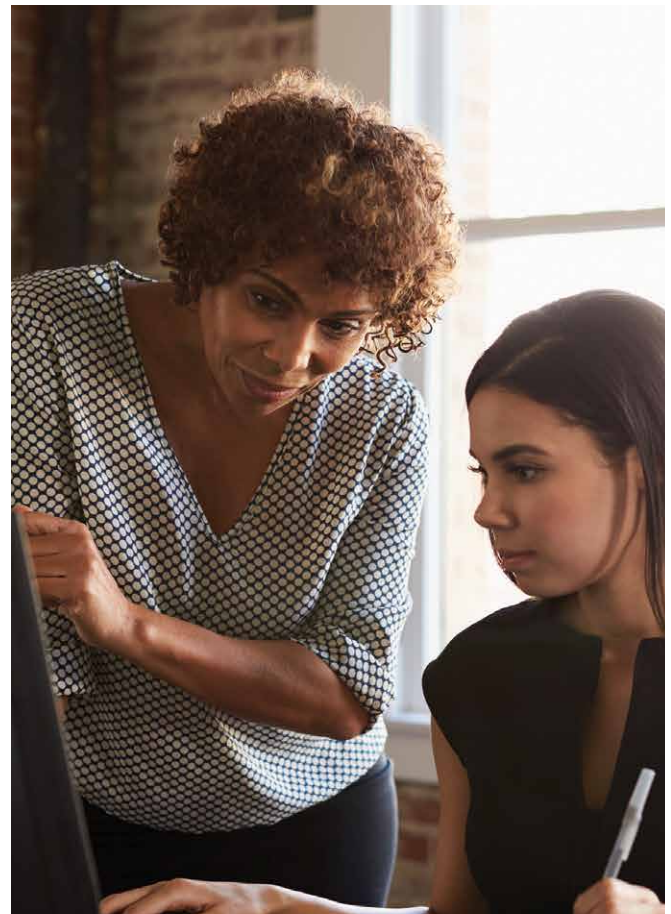
BECOME A MENTOR. A MENTOR is a peer who helps another emergency dispatcher learn the ropes and succeed in a center.

The Mentor Certification Course teaches you:

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- How to answer questions about protocol and quality assurance
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LET'S TALK SCHEDULE

A lot to like—and dislike—in shift work

Audrey Fraizer

Want a topic that provokes discussion instantly? Try “shift work.” Shift work is a given in emergency dispatch, and the optimal shift length tends to dominate the conversation and, as it seems, totally up to personal preference. In other words, is it an 8-hour, 10-hour, or 12-hour shift that provides the best quality time away from the console? It's up to the individual.

“There's no way around shift work and no way of saying what works for everybody,” said Melissa Swope, Communication Supervisor, Rankin County Sheriff's Office, Mississippi (USA). “Everyone is different. Everybody handles shift work the best way they can to accommodate their lives.”

For some, 12-hour shifts offer liberty and convenience. Yes, 12 hours are a tough haul, but the benefits can outweigh the negatives. Days off compared to days on are a great motivator (182 days on with 183 days off and then taking 24 hours paid time off and ending up with seven days off straight). At centers guaranteeing every other weekend off (with exceptions for massive emergencies and staffing) and the number of days off between shifts make the longer shift worth it.

EMD Katie Fletcher, East Midlands Ambulance Service (EMAS), NHS Trust, U.K., does not mind the 12-hour shifts because of the shorter work week (four days on, rather than five).

“Some staff find the lengths of shifts a struggle, but we are open and honest with staff during the recruitment process,” Fletcher said. “If a staff member wants to adjust their shifts, the

Trust will attempt to meet their needs whilst considering the service levels required of us and needs of business.”

A phasing in process mitigates the shock to the system for newcomers. Shift lengths are adjusted to eight-hour days for the first month while in training and gradually increase to two weeks of 10-hour shifts, and finally to the 12-hour shifts “to ease the trainees into the pattern of working we desire,” Fletcher said.

Chantal Wiley, Polk County Sheriff's Emergency Communication Center, Winter Haven, Florida (USA), said she “couldn't see going back” to a routine 8-hour day shift like she had prior to emergency communications.

“That [a routine 8 hours] would not adapt to my life,” said Wiley, who left aspirations to run a daycare center when she made the transition to emergency dispatch 13 years ago. “This is the life for me. I love emergency dispatch. Some people think we're receptionists at a call center. We're not. We are literally on the phone about somebody's life.”

Others might feel disoriented outside of routine. Out-of-sync body rhythms for night shift workers is comparable to flying between the U.S. and Europe every night, working, and flying back. It's hard to get sleep on the opposite side of the clock. The time warp jumbles feelings of falling asleep or staying alert. Noise, daylight, and the anxiety of missing out on family time affect sleep quality and quantity.

Granted, it takes time to adjust, Wiley said. In fact, she found it more difficult in the merger nine years ago to a system that dispatches for 25 agencies throughout the county.

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“Merging with the county was harder getting used to,” she said. “There were lots of changes, but if this is what you want, you work at it, and that’s the same I tell dispatchers coming in.”

What is shift work?

According to the National Sleep Foundation (NSF),¹ shift work is work that takes place on a schedule outside the traditional 9 a.m.–5 p.m. day. It can involve evening or night shifts, early morning shifts, and rotating shifts. Many industries rely heavily on shift work, and millions of people work in jobs that require shift schedules.

Shift schedules differ, of course.

EMDs at East Midlands Ambulance Service (EMAS) normally work rotating shifts, depending on which roster pattern they are working. EMAS has two core rosters—one with annual leave built in and the other in which staff book their own leave. Relief shifts are scheduled around the core areas for newer staff or for those unable to work full day or night shifts due to health issues.

Associated risks

At the expense of suggesting yet another occupational hazard to emergency dispatch, personal experience and research indicate not all is well in shift work. Reasons involve a multitude of interacting factors, and the focus is shifting to what can be done to alleviate the risks when eliminating shift work is simply not an option.

A lot of the problems are associated with night or rotational shift work throwing a curveball to our circadian cycles.

Disrupted sleep patterns

Shift workers are significantly more likely to sleep fewer than six hours on workdays. They labor at night when others usually sleep, potentially disrupting their circadian rhythms.

Disrupted (misaligned or desynchronized) sleeping patterns can evolve into the chronic condition

circadian rhythm sleep disorder. With shift work disorder, the individual experiences a hard time sleeping when sleep is desired, needed, or expected.

The neurological disorder Restless Legs Syndrome (RLS) characterized by an irresistible urge to move the limbs is significantly higher in rotational shift workers (15%) than workers with permanent morning work schedule (8.5%).²

Shift work disorders

Circadian rhythms are an internal clock operating on a roughly 24-hour schedule that signals when to feel sleepy or alert. Symptoms of shift work disorder can be present even if technically sleeping enough hours during the day because the body’s internal clock continues to send “you’re getting sleepy” signals during the night (as it is naturally programmed to do).

The brain is the body’s primary circadian clock; however, other body tissues also have circadian clocks, including the liver, which regulates blood glucose levels. Each of the body’s circadian clocks operates on its own schedule to perform its necessary functions. Ideally all the body’s clocks should work on their correct schedules. But, as anyone who has ever been on a graveyard or swing shift knows, the ideal is seldom reality.

Research

Cancer

A study out of the State Key Laboratory of Biotherapy and Cancer Center at West China Medical Center of Sichuan University (China) found that women who pull the night shift regularly might be at greater risk for a number of cancers.³ For the study, the researchers conducted a review of 61 studies involving almost 4 million people from North America, Europe, Australia, and Asia to look for an association between long-term night shift work and the risk of developing 11 types of cancer. Results indicated that wee hours in the long term

was associated with a 19% greater risk among women.

Looking at specific types of cancer, researchers found the risk of skin cancer jumped 4%, the risk of breast cancer increased 32%, and the odds of developing gastrointestinal cancer was 18% higher.

The caveat: The study did not prove that night shift work caused the risk of these cancers to rise. Results, according to the researchers, might help establish effective measures to protect female night shift workers.

Heart and stroke risk

Shift work—especially working nights—increases the risk of heart attack and stroke, according to a Canadian-led study in the *British Medical Journal*. About a third of Canada’s full-time labor force does shift work and the study pooled results from 34 studies (published from the 1960s to 2012) involving more than two million people to determine whether there is an increased risk or no association whatsoever.

The study found shift work correlated with a 23% increase in the risk of heart attack, a 5% increase in the risk of stroke, and a 24% increase in the risk of unstable angina, coronary artery disease, and other coronary events. Night work was associated with the sharpest increase in risk—41 percent—for major vascular problems.⁴ Just how the erratic schedules might heighten heart attack and stroke risk wasn’t clear from the study, but several mechanisms were thought to come into play. Blood pressure, heart rate, and even cholesterol levels all return to low levels during sleep while the body rests. Diets centering on fast foods high in carbohydrates and fats and a sedentary lifestyle could also contribute to the increase in heart attack and stroke.

Another factor cited in the same study was the exposure to electric light at night, which, up until a decade ago, was a recent and rarely studied phenomenon.

Blue light special

Night isn't night so much anymore. In fact, the distinction between day and night is disappearing in the most heavily populated regions of the earth, creating a rapid shift with consequences for human health. Adding to the problem is blue light wavelength emitted by various gadgets (smartphone and computer screens), which suppresses melatonin, the hormone that maintains a normal sleep cycle.

Blue light—picked up by light sensitive receptors in the eyes—goes to the biological clock. As explained by Andrew Moore-Ede, Director of Client Services, Circadian Light, the effect of blue light is hereditary, offering advantages that are repeated over and over again in our DNA. Moore-Ede's comments were made during a podcast moderated by the IAED⁵.

"Ancient cells in the eyes looked up to the sky for blue light to tell us how to maintain our biological rhythms," said Moore-Ede, whose father Martin Moore-Ede led a team at Harvard Medical School that located the suprachiasmatic nucleus, the biological clock in the human brain that controls the timing of sleep and wake, and conducted research on how the human body can safely adapt to working around the clock and sustain optimum physical and mental health.⁵

Lifestyle changes have impinged upon the advantages. We don't sit around the campfire at night, snuffing out the light to be awakened by morning. Evening exposure to blue light wavelengths important for color perception and being alert during the day

has been shown to disrupt the melatonin that regulates circadian rhythms, making it hard to sleep.

Most Americans spend less than 10% of their lives outdoors, and inside they depend on TV, computers and tablets, smartphones, and incandescent lighting. Blue light emitted from these devices has a different wavelength than the blue light channeled from the sun. Wavelengths that put us at risk are between 400 and 430

nanometers and most digital devices produce blue light wavelengths above 430 nanometers. Prolonged exposure and the eyes start to give out. Text blurs. Headaches creep up. Errors occur more frequently and go unnoticed.



Conventional blue pump LED light at night disrupts circadian rhythms and suppresses melatonin, which is associated with an increased risk of obesity, diabetes, and breast and prostate cancer.⁶

Basically, Moore-Ede said, we are “throwing the music off our biological rhythms.”

Since shift work is unavoidable, Moore-Ede said the focus shifts to staying healthy in a 24-hour environment. “It takes committing to the shift work lifestyle,” he said.

Commit to the lifestyle

Rest is when our bodies repair things. Rest helps us stay healthy, and disruption in sleep-

wake patterns and daytime darkness affect our ability to recover.

Can anything be done to curtail the negative effects of shift work?

While nothing beats a normal night's sleep, shift workers have options. The first and obvious solutions are to focus on improving the quality of daytime sleep by reducing ambient noise and light and avoiding caffeine in the latter parts of the shift. It's also advisable to curtail other unhealthy habits, such as eating foods high in carbohydrates. Establishing routines and patterns for getting ready for bed helps as does turning off cellphones and computers. Scheduling regular

physical exams and cancer screenings is recommended.

Other solutions include the adoption of LED lights for indoor and outdoor use. LEDs use a fraction of the electricity of traditional incandescent lights. Circadian Light conducted a series of tests to determine optimally safe lighting. Unable to find a light on the market (sufficiently low blue light that did not create the neon yellow light in the absence of less than 2% blue light), they tested different light-source spectra on subjects working 12-hour day and night shifts. As a result of their findings, they created white LED lights that maximize Circadian Potency during daytime and minimize the disruptive effect of light at night.



For Fletcher, 12-hour shifts complement a better work/life balance, and they devise ways to work around the few negatives. For example, her team gets around working through the Christmas holiday by celebrating the holiday on another day. Other negatives involve traveling to and from shifts in the dark and frequently in poor weather conditions (rain, wind, snow, fog, and ice are not uncommon in a U.K. winter).

That's just part of the job, Fletcher said. "This is an emergency service and the expectation is that we will work unsociable hours, and most staff come into the job with their eyes open to that eventuality."

Family support and engaging outside the communication center are imperative.

Wiley has three children and while they have visited the communication center on "Family Day" and she talks to them about emergency dispatch, she doesn't tell them the details of their calls. At the end of her 12-hour shift she uses the

15-minute drive time home to de-compartmentalize. It's her zone time.

"I am calm, relaxed, and ready for the next round in my day," she said. "I don't take the baggage from work home. I leave everything behind for quality time with family. A movie, homework, whatever they want to do, we do."

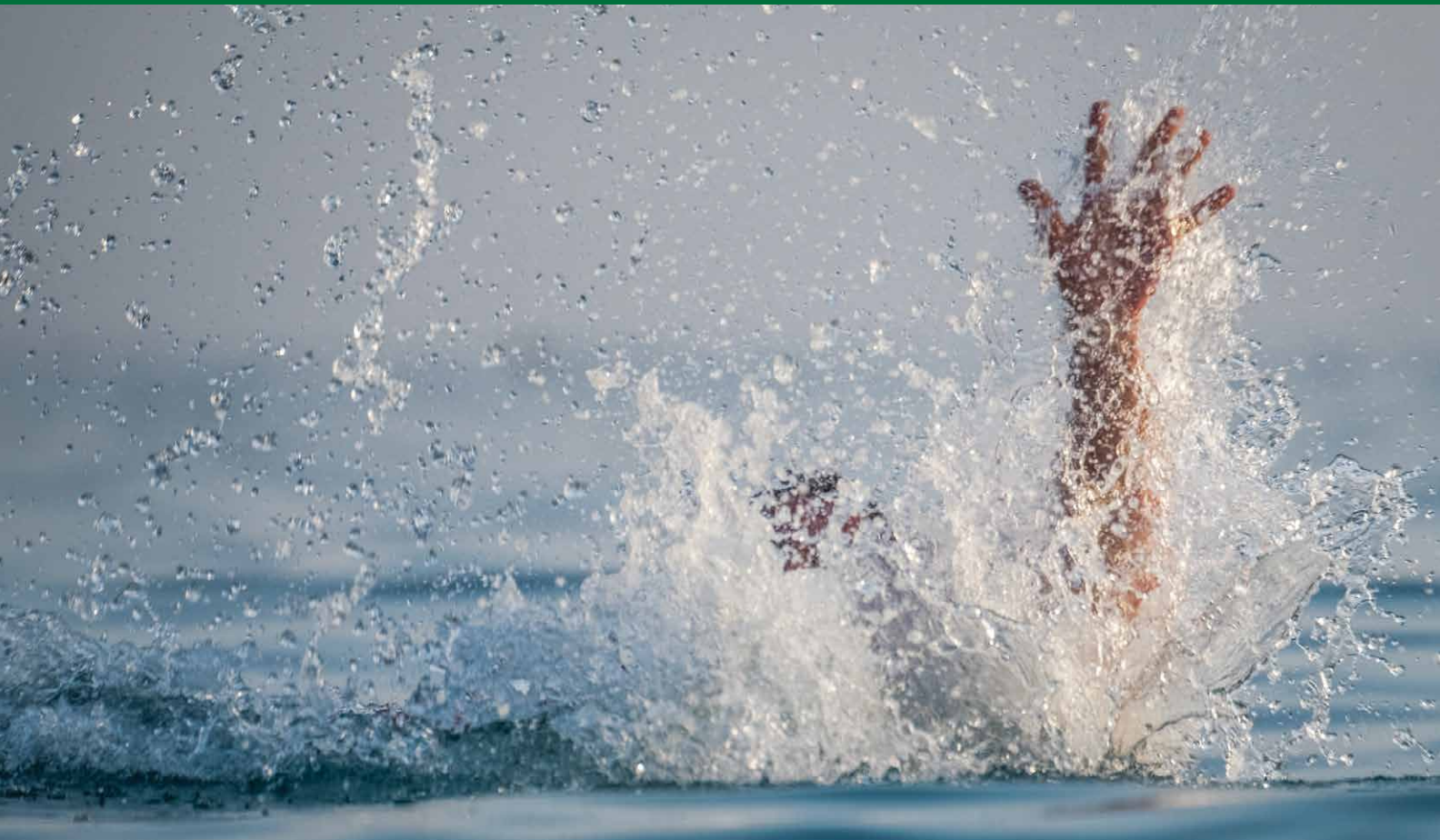
As a supervisor, Swope rotates her shift among the shifts schedule to keep tabs on the well-being of staff and handle concerns as they arise, rather than hearing secondhand in her absence. She talks to her seven-year-old son about the challenges of her profession and the reasons she has stayed going on 12 years.

"I like what I do," Swope said. "My co-workers. The calls. The ability to help people. So, I press on. Not everyone can do emergency dispatch. It's my feeling that since I can, it's the place I should be." ●

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LEAST USED PROTOCOLS

Your data at work

Becca Barrus

If someone asked you which Medical Priority Dispatch System™ (MPDS) Protocol was used most often, you probably wouldn't have to think very hard before answering Protocol 26: Sick Person (Specific Diagnosis). You'd be right, too.

The International Academies of Emergency Dispatch® (IAED™) has been collecting data from various emergency dispatch agencies—both accredited and not—since 2012. Your agency might even be one of them. As of October 2019, the total number of cases in the database is 4.28 million from 38 agencies over seven years.

Of those 4.28 million calls, a whopping 703,473—or 16.44% of all

total calls—were triaged using Protocol 26. That's a lot of sick people!

If someone asked what you thought the three least used protocols were, you might take longer to answer. After all, if they're used the least, it's less likely they'll be on your mind, unless they're low frequency, high acuity emergencies. The following three protocols are all low frequency—the lowest frequency, in fact, according to the numbers—and all have the potential to be high acuity. Because they aren't used as often as, say, Protocol 26, it's a good idea to get familiar with them in case your next call requires you to use one of them.

Before we move on, this is a reminder that the IAED doesn't have

data from every single center that uses the MPDS. While 4.28 million calls is an impressive number, it's only a snapshot of the volume and types of calls all of you take every day. Therefore, the following can't necessarily be used to predict future protocol outcomes and might not be exactly reflected in your own center. If you find that's the case, send us your data! We're always looking to expand our database to make it more accurate.

Protocol 14: Drowning/Near Drowning/Diving/Scuba Accident

The third least used protocol was Protocol 14, which was used to triage 1,874 calls (0.04% of overall cases).

Perhaps this seems obvious to you, or perhaps it seems like it occurs more frequently in your center than this. Either way, even though the numbers show that the frequency is low, 53% of overall drowning-related calls were coded at a DELTA level, and the most commonly used Determinant Code was 14-D-5 “Not alert” at 53% of calls. The second most commonly used Determinant Code was 14-A-1 “Alert and breathing normally (no injuries and out of water)” at 33% of calls. Drowning-related calls were most often fielded in the afternoon, on Saturdays and Sundays, and in the months of June and July.

It will probably not surprise you to learn that, unfortunately, 30% of the patients in drowning cases were children between zero and five years old.

So what does that mean for you and your center? Yes, it might be statistically unlikely that the next call you receive will be drowning-related, but that doesn't mean you can't be prepared just in case it is. Get familiar with providing CPR instructions, particularly the specific ones for infants under one year and children between one and seven years old.

Just in case you were wondering how often scuba accidents were reported, here's the answer: not a lot! The S suffix was used for fewer than 1% of all calls triaged using Protocol 14. The most commonly used Determinant Code was 14-D-5S “Not alert” at 0.32% of all total drowning-related calls which, after all is said and done, comes out to about six cases total over the seven-year span.

Protocol 22: Inaccessible Incident/Other Entrapments (Non-Traffic)

The second least used protocol was Protocol 22, which was used to triage 1,662 calls (0.04% of overall cases). This protocol is probably less familiar to you than Protocol 14, if only because the Chief Complaint description is a little less clear. What, exactly, is an

inaccessible incident or other (non-traffic) entrapment? An ENTRAPMENT is defined as “a situation involving prevention of escape in which there is an increased threat of injury, illness, or death to a victim.” An example could be construction workers stuck in a collapsed trench or children who have accidentally been locked inside a car trunk.

As with Protocol 14, although Protocol 22 wasn't used on a regular basis in the seven-year span, when calls were triaged using it, the situation was emergent. Some 54% of calls triaged using this protocol were DELTA-level calls; 45% of calls were triaged using a BRAVO-level Determinant Code. The Determinant Code used most often, in 33% of all cases, was 22-D-1 “Mechanical/Machinery/Object ENTRAPMENT.” The second most often used Determinant Code was 22-B-2

“PERIPHERAL ENTRAPMENT only,” barely coming in under 22-D-1 at 32% of all calls. As you probably already know, the difference between a PERIPHERAL ENTRAPMENT and a run-of-the-mill one is which body part is trapped.

PERIPHERAL body parts are defined as a finger, foot, forearm, hand, lower leg, toe, or wrist. A head stuck in a banister would qualify as Mechanical/Machinery/Object ENTRAPMENT, even though it isn't strictly speaking life threatening, because it involves a non-PERIPHERAL body part.

The time of day, week, or even year didn't appear to markedly vary between inaccessible incident calls. It was unusual for a call triaged using Protocol 22 to come in between the

hours of midnight and 7:00 a.m., but not inconceivable. And while there was a dip between inaccessible incident calls from July to November, the calls were pretty evenly spread throughout all seasons.

Protocol 15: Electrocution/Lightning

Finally, the very least used protocol was Protocol 15, which was used to triage 976 calls (0.02% of overall cases). Similar to Protocols 14 and 22, the majority of calls triaged using this protocol were DELTA level (59%). Unlike Protocols 14 and 22, which both had DELTA-level Determinant Codes as their most commonly used codes, the most commonly used Determinant Code was 15-C-1 “Alert and breathing normally,” which was used for 36.78% of the calls. The second most commonly used Determinant Code was 15-D-4 “Power not off or hazard present” at 22.54% of calls.



Drowning, electrocution, and inaccessible incidents are all fairly high acuity emergencies.

It should be noted that the lowest determinant level on Protocol 15 is a CHARLIE—no ALPHAs here, unlike Protocols 14 and 22. That's because the human body uses electricity to send signals via the nervous system and any sort of disruption of it due to outside electrical forces warrants medical attention fairly quickly, even if the patient is alert and breathing normally after the encounter. Rule 1 on Protocol 15 states, “All electrocution and lightning strike patients are assumed

to be in cardiac arrest until effective breathing is physically verified. Stay on the line with the caller until breathing can be safely verified.”

You might be wondering which was more prevalent: calls involving electrocution or calls involving lightning strikes? And perhaps you assumed that lightning calls were less common because lightning strikes are rare and electricity is all around us. The Academy’s database doesn’t show the causes of patterns, just the numbers and patterns themselves. The numbers show that 90% of calls triaged using Protocol 15 used the E suffix, meaning they involved electrocution.

Speaking of patterns, 62% of patients involved in an electrocution/lightning call were reported to be male, and roughly 20% of patients were aged 25–34. The gaps between male and female callers in the other two protocols mentioned were nowhere near as stark, nor were the gaps in age brackets (aside from young children being more likely to be patients in drowning-related calls). Again, the numbers don’t show us the causes, but there’s definitely a research project there if anyone is curious as to why such a large gender gap exists.

Is there an ECHO in here?

Maybe you already knew that only two of the three aforementioned protocols have ECHO-level responses—Protocol 14 has “Arrest (out of water)” (used 9.66% of the times Protocol 14 is used) and “Underwater (DOMESTIC rescue)” (used 9.35% of the times Protocol 14 is used) and Protocol 15 has “NOT BREATHING/

INEFFECTIVE BREATHING” (used 3.69% of the times Protocol 15 is used).

Drowning, electrocution, and inaccessible incidents are all fairly high acuity emergencies (even if they are low frequency), so why doesn’t Protocol 22 have an ECHO option as well? Isn’t someone being trapped inside a sewer at least as emergent as someone being electrocuted by a power line?

The purpose of an ECHO response is to get the closest responders on scene as quickly as possible, regardless of what vehicle they’re driving or the equipment they have on board. This

Going back to the example of the person trapped in a sewer versus the person being electrocuted by the power line (who is not breathing), the person who was electrocuted probably needs an AED at most as far as external machinery goes. Most fire, police, or EMS vehicles would have one on board, which is why it makes sense to send the closest possible responder to the scene. There’s more to it in the sewer scenario. Not only does the responder have to take the care of the patient into account, they also have to take into account how they’re going to retrieve



works well in situations involving electrocution and drowning because the patient needs CPR and/or an AED and not a lot of other specialized equipment. This is not so for inaccessible incidents. Often, those types of calls need specific machinery to respond to the scene; sending whoever is nearby won’t be as useful as sending the most appropriate responders in the first place.

the patient from the sewer, as well as how to do it without exposing anyone else to possible harm.

It should also be noted that the step between an ECHO- and DELTA-level response is not a huge one. If the correct response is sent in the first place, it ends up being much quicker than sending a “fast” response that has to wait for more backup to arrive. ●

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TROUBLE IN THE WAY

Protocol takes charge when disaster overwhelms

Audrey Fraizer

From hurricanes and typhoons causing death, flooding, and property damage to polar vortexes bringing record low temperatures, weather disasters around the world have made their mark on 2019 and will undoubtedly echo through the years to come. Widespread power outages can also impact communities in relation to these emergencies.

Here's just a sampling of these events from the past year:

Hurricane: Hurricane Dorian made landfall Sept. 1 in the Abaco Islands before stalling over Grand Bahama for 30 hours. The Category 5 hurricane battered the islands with sustained 185 mph winds and a storm surge of more than 20 feet, leveling entire

neighborhoods and leaving some 70% of Grand Bahama underwater.¹

Typhoon: Typhoon Hagibis proved to be extraordinarily devastating for northern Japan when it struck the weekend of Oct. 11–13, unleashing more than three feet of rain in just 24 hours in some locations, causing widespread flash flooding as well as river flooding. According to the Washington Post, more than 20 rivers in central and northeastern Japan burst their banks, flooding more than 1,000 homes in cities, towns, and villages.²

Polar vortex: Winter in the northern hemisphere, also called the polar vortex—an area of low pressure and cold air surrounding the Earth's poles—can expand, hurtling along the jet stream and bringing extremely cold temperatures.

In 2019, a polar vortex came after a winter storm dumped up to 13 inches (33 centimeters) in the Midwest (USA) and brought record lows to locations in the affected region. For followers of the Farmers' Almanac, its extended 2019–2020 weather forecast calls for yet another freezing, frigid, and frosty winter for two-thirds of the country.³

Widespread power outage:

Extended power outages impact entire communities when the electricity is shut off either as a result of weather or other disaster or when planned to avert disaster. For example, Pacific Gas and Electric shut down power in mid-October to an estimated 2 million customers to decrease the likelihood of equipment sparking wildfires. The lack of electricity shut down medical devices,

spoiled perishable food, and caused economic losses for businesses.

“Response priorities are different because of the unpredictability,” said Gary Galasso, Chair, IAED™ Fire Council of Standards, Priority Dispatch System™ (PDS™) Program Administrator—Fire and Medical, and retired San Jose (California, USA) Fire Department Fire Deputy Chief. “New protocol gives emergency dispatchers more tools for assessing these critical situations to make the best selection for response.”

Adverse events spark change

The International Academies of Emergency Dispatch® (IAED) has increased the EFD’s active role in directing caller/bystander safety with Dispatch Life Support (DLS) Instructions in Version 7.0 of the Fire Priority Dispatch System™ (FPDS™). The IAED Fire Council of Standards replaced the primarily passive approach to caller actions with much more dynamic caller/bystander safety and DLS Instructions.

Revised instructions aim to guide callers to a more survivable situation, ranging from simply moving away from danger to self-rescue or self-protect situations. More complex advice, once risks are assessed, may direct the caller to attempt to rescue or stabilize a companion or bystander whose life would likely be lost unless some action were taken immediately.

Dynamic triage priorities may change as the incident progresses and, consequently, necessitate a direct liaison between public safety services and the communication center. A hurricane in the Atlantic or a fire burning in a distant forest are handled differently than these same threats in an urban location where lives, homes, high-density residential facilities, and commercial and public structures are threatened. Well-established formulas to automatically

send the assigned units for the incident type, which are programmed in CAD, may be suspended. Resources may be overwhelmed. Disasters imperiling emergency communications services and delaying response are not unusual circumstances, and issues like these will continue to increase considering continued population growth, urban sprawl, and stretched public service budgets.

Examples include the following:

- An ice storm in Sioux Falls (South Dakota, USA) in 2013 lasted three days and nearly caused the 911 system to freeze up. Emergency dispatchers handled more than 3,000 calls a day, responding to crashes, downed tree limbs, and power lines. Over the three-day period, 115,000 people were without power.⁴

Instructions aim to guide callers to a more survivable situation.

- The Napa Valley fires in Northern California (October 2017) pushed CAL FIRE and local department emergency dispatchers to the breaking point. Too many calls were coming in for emergency dispatchers to handle. Those getting through were a litany of personal disasters that firefighters and EMS resources, in general, were too overwhelmed to address.⁵

Typical of these situations, emergency dispatchers prioritized calls, worked extra hours, and, in many cases, came into the center or backup center either voluntarily or upon request to help handle the overload. The internet-based NG911 initiative will make it possible for 911 centers to network

with each other. If one jurisdiction’s 911 center is overwhelmed by a natural disaster, such as a hurricane, a technical failure, a terrorist attack, or some other incapacitating event, its workload can be forwarded automatically to other 911 centers nearby, or even hundreds of miles away, to ensure that 911 calls are not dropped or put on hold.⁶

While trends in the amount of area wildfires damage differ from year to year, an increased number of wildfires is a predicted element of climate change. Warmer temperatures and drier vegetation are perfect conditions for wildfires. The wildland-urban interface (WUI)—where houses border wildland vegetation and where wildfire problems are most pronounced—grew rapidly from 1990 to 2010 in terms of the number of new houses (41% growth) and land area (33% growth), making it the fastest-growing land use type within the one common boundary: the contiguous 48 states in the U.S.⁷

Protocol 83: Weather/Disaster Situations

Protocol 83: Weather/Disaster Situations is among six protocols added in FPDS v7.0. This protocol may be used to accomplish incident triage when the communication center is overwhelmed by calls for assistance during extreme weather or disaster situations. Key Questions open with identifying the type of weather or disaster emergency: Hurricane, Tornado, Earthquake, Flooding, Wind, Snow/Blizzard, Hail/Ice/Freezing rain, MCI, Widespread power failure, and Other. The next Key Question addresses whether anyone is trapped (if so, “How many?” and “Exactly where are they located?”), and Key Question 3 identifies whether anyone is in immediate danger (possible numbers and location). Key Question 4 asks about injuries, and Key Question 5 gathers information about buildings and structures involved and an estimated extent of damages, if appropriate.



The EFD should take note of the definitions listed on this protocol, as follows:

ENTRAPMENT/TRAPPED: A situation involving prevention of escape in which there is an increased threat of injury, illness, or death to a person.

IMMEDIATE DANGER: A situation where the dangers at the scene could be reasonably expected to cause death or serious physical harm immediately.

Local Fire Administration must also define and authorize specific terms such as MASS CASUALTY INCIDENT, CRITICAL INFRASTRUCTURE, and NON-CRITICAL INFRASTRUCTURE based on local needs and resources, as discussed in greater detail later.

Post-Dispatch Instructions (PDIs) direct the caller/bystanders to take action, particularly in a disaster mode compromising immediate response. The PDIs provide a script that underlines the urgency and efforts of 911 and responders in these life-threatening situations. The emergency dispatcher cannot control nor predict when the fire department will arrive to provide aid (and the IAED Performance Standards discourages emergency dispatchers from promising or providing false reassurances). As PDIs b, c, and d indicate, survival depends largely on the actions of the caller/bystanders in the absence of an immediate response.

b. (Compromised structure) Make sure that everyone is out of the building/structure and in a safe location.

c. If it's safer to stay where you are, remain there. If not, move to a safer location.

d. (Medical) If it's safe to do so, try to find transportation to the hospital/doctor. Call us back if you find transportation.

Rules accompanying the Protocol are explicit in explaining the Protocol's design and use. Again, the objective is rapid assessment and prioritization of incidents as response may be limited until conditions permit. The communication center should have a policy to document/log the time the calls are received and whether a response was sent. Emergency dispatchers should follow up on all calls for assistance as time allows.

Individual actions are based primarily on the caller's observations and descriptions. Part of the overall responsibility during a large-scale disaster falls on the caller. Rule 8 states "The determination of whether or not someone is in immediate danger should be based on the caller's judgment and the scope of the incident." However, decisions on when to use this Protocol should be based on local policy and procedure and reviewed periodically.

Additional Information

Three determinant suffix codes help to delineate the type of problem for specific response and safety purposes:

X= MCI Level 1

Y= MCI Level 2

Z= MCI Level 3

Protocol defines MCI as a "Medical/Trauma situation where the combination of multiple patients and injuries exceeds the immediate capability of the EMS system." Local Fire Administration/Agency must define and authorize for dispatch purposes what constitutes the assets essential for the functioning of a society and economy (e.g., electricity, gas/oil production, communication systems, water, agricultural production, public health, transportation, financial and security services, etc.). ●

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

HOW I 'DISCOVERED' THE PROTOCOLS

The decision support tool that changed emergency dispatch

Greg Scott

Many of us remember our first experiences learning dispatch protocols—and they were often not pleasant. Perhaps it was those long days in the classroom learning to use a highly structured calltaking process that seemed overly complex. Or the course exam that meant you had to demonstrate that you absorbed and made sense of all those scripted questions and instructions, new terminology, and case scenarios.

Indeed, for those of us who started our emergency calltaking careers without following a protocol every time we picked up that emergency phone line, there was an extra dose of skepticism. After all, when an emergency dispatcher has lots of experience under one's belt, who needs a cookbook telling you what questions to ask, what instructions to give, and when to disconnect the phone call—isn't that what

we're already trained to do? Next, you'll be asking us to check our brains at the door before we enter the dispatch center!

You might be surprised to learn that's exactly the way Dr. Jeff Clawson viewed protocols as a young physician intern at the huge Charity Hospital of New Orleans (Louisiana, USA) many years ago. In medical school he learned that doctors should be knowledgeable and experienced enough to figure it all out on their own—no need to rely on any crutch to help you do what you should already know. That mindset was quickly challenged when young Clawson was rudely introduced to the chaotic setting of the patient clinic at the venerable New Orleans hospital. In the following article written by Dr. Clawson himself, you'll learn how he "discovered" protocols—and how they changed his career.

Over the years, dispatch protocols have proven themselves time and again

as a tested decision support tool that empowers us to make faster and better decisions when we pick up that phone line, not knowing which of thousands or more possible problems and complaints that await us. And as it turns out, it's those well-worn protocols that free up your brain to focus on the one activity that really requires your expertise—interpreting what the caller is really saying to you.

Perhaps the fast-paced, often helter-skelter environment of today's emergency dispatch center may be not so different than the turbulent setting that a struggling young physician found himself in 45 years ago. Reading his story may give you a better perspective on your own role, and perhaps even a better appreciation of the tool that has become the standard of care and practice in emergency dispatch centers throughout the world. ●

How I “Discovered” the Protocols

In 1975, I was an intern at Charity Hospital of Louisiana at New Orleans. After a few months, I found myself working in the large medical clinics at Charity. The “clinics” were much different than anything I had experienced in my limited medical practice to date, especially compared to my medical student experience back in the relatively sedate setting of the University of Utah Medical Center in Salt Lake City. Sick people came to Charity—lots of them. For the patients, clinic began as early as 6 a.m. Not that we saw the patients quite that early, but since clinic was “first come, first served,” 100 to 150 patients had generally been waiting in the queue several hours each morning.

Upon entering any of the small evaluation rooms, each intern was confronted with stacks of patient charts leaning high upon the wall at the back of each work table—and I mean thick charts. Most adult patients at Charity, if not born there, had received all their medical care at CHNO. That often represented 50 to 70 years of medical documentation for each patient in Hypertension clinic. In addition to “High Blood Clinic” as it was called, other clinics included “Sugar Clinic” (diabetes) and “Pus Clinic” (surgical follow-up).

After a few weeks “working the clinics,” I became increasingly frustrated. Each patient I evaluated and treated seemed to be a new experience. I knew as a physician, albeit a very new one, that I should be able to “figure out” what to do with each patient. After all, this is what I had [been] trained for years to do. However, I often couldn’t remember what I had done for a similar patient two hours, two days, or two weeks before.

I sensed I was moving too slowly and patients weren’t getting their money’s worth from me (even though Charity’s medical care was basically “free” at the time).

At one point, my growing despair drove me to seriously consider quitting to return to Salt Lake and become a paramedic with several of my friends at Gold Cross Ambulance. Late one morning, as “High Blood Clinic” ended, I confronted the senior resident on the LSU service, Dr. J. V.

Jones, an imposing, stocky fellow from Baylor. “Look J.V.” I said, “I think I’m killing people here. How do you keep it all straight, patient after patient, with all these complaints, symptoms, lab values, medications, and everything?”

He slowly put his arm around me, laughed, and said, “Clawson, that’s why I’m the resident and you’re the intern.” I was definitely caught off guard, but then I was given some needed advice. He opened his coat, revealing an inner pocket from which he pulled a set of worn, dog-eared 4-by-6-inch cards held together with a dirty rubber band, and said, “What you need, my man, is a protocol.”

“Protocol?” I frowned, “You mean a cookbook?” They had warned me at Utah that cookbooks were bad. “You’re a doctor now. You should be able to figure it out yourself.” Silently for a moment, he turned, pointing toward the now empty, but trashed, waiting room of a hundred folding chairs, and said, “Cookbook, my ass! At the Big Free, Clawson, you can’t live without ‘em.”

Needless to say, I was a bit shocked. For the next 10 minutes, he sat down and showed me through his “protocols,” which he lent me overnight. I made a set and went to clinic the next day with a different feeling—a bit skeptical, but definitely curious. Soon I was having a very new and remarkable experience. Things went smoother and faster, and my time was better spent gleaning the necessary information from the patient rather than reinventing common medical care. In a short time, I found myself, leaning out of my little evaluation room, much happier, and much more often, calling spiritedly to the next of dozens of patients still waiting, “Mary Jones, come on down!”


Not everybody should have to learn the hard way that there are certain times and places for protocol use within the patient evaluation and care process regardless of where you practice your medicine. I guess, in a way, the first life I ever “saved” with a protocol was my own. 

Fig. 13-2. “How I ‘Discovered’ the Protocols” by J. Clawson.



Jenny McMorris

IMPROVISING THE SITUATION

Idaho emergency dispatcher gets creative during unique call

Josh McFadden

In recent years, a television commercial has made the rounds, depicting a frightened woman calling 911 and ordering a pizza.

Jenny McMorris, of Kootenai County Sheriff's Office in Coeur d'Alene, Idaho (USA), recently took a disguised call like this. The woman on the other end of the line wasn't requesting her favorite pizza but took a similar route to ask for help without explicitly saying so.

It was clear to McMorris from the outset that this was a call where the person could not safely describe what was going on. The caller wouldn't give her address or provide details of her situation. Instead, she pretended to be making a call about her children's doctor's appointment, telling McMorris she could send her their immunization records.

"Yes, if you could give me the immunization sheet, that would be great," McMorris said, acknowledging that she understood the caller's ploy.

McMorris also asked the caller if she could verify her birthdate, to which the

caller replied that she could, also giving McMorris the last four digits of her Social Security number.

After the caller began talking about her children's Medicaid information, McMorris said, "So, you said that you cannot talk, correct?" When the caller replied, "Yeah," McMorris responded with, "Then we'll just have a regular conversation."

To get information from the caller, McMorris told her that she was going to ask some questions and that the caller needed to hit a button for yes and two buttons for no. Her questions were:

"Are you there by yourself?"

"Are you at that location now?"

"Were weapons involved or mentioned?" (The caller answered, "Yes.")

"Was it a gun?" (The caller answered, "I don't think so. But it was so long ago that she was born.")

"Was it a knife?" (The caller answered, "Oh yeah.")

"Was it a pocketknife?" (The caller answered, "No.")

"Was it a kitchen knife?" (The caller answered, "No.")

"Was it a butcher knife?" (The caller answered, "I honestly don't remember.")

"Are the weapons in the residence?" (The caller answered, "Yes.")

At this point in the call, McMorris reassured the caller that she had officers on the way.

"If at any time you are in danger, say what you need us to do," she said.

McMorris continued asking questions from the Police Priority Dispatch System™ (PPDS) to send the right response to the location. She was able to find out that three people had broken into the caller's home, and at least one person was currently standing close to her holding a knife. The caller continued talking about doctor's appointments, Medicaid cards, and insurance information. She even giggled at some of the questions. Meanwhile, McMorris tried to find out where in the house she was and whether she could safely get out. The caller indicated she was in the bedroom and couldn't get out but could open a curtain.

"Are you OK?" McMorris asked as police officers closed in on the location.

"Um, yeah, for right now, yeah," the caller said. "But, she's going to run out of formula here really quick."

From McMorris' questions, the caller indicated that no one needed medical attention.

"I have a lot of law enforcement coming your way—a lot," McMorris said.

McMorris reassured the caller that she would stay on the line until she was safely with the officers.

The officers arrived and eventually determined that the call was a psychiatric issue. Still, McMorris didn't know this and properly handled the call as if the patient was in an unsafe environment.

"Her handling of this call was exemplary and an excellent example of how she would respond in the event of an actual emergency of this type," said Cheryl Hallgren, Kootenai General Manager. "It was also an excellent example for her co-workers that the protocols can be used for this type of call." ●



Angela Welch

NEVER LEFT IN THE DARK

Ambition sees its way to EMS awards

Audrey Fraizer

Amanda Tudor has seen a lot during her 14 years in the TCAD Paramedics Communication Center, which is on its face contrary to an obvious element to the profession.

The anonymity over the phone in a nonvisual environment appeals to Tudor while, at the same time, complements her priorities to help people and safeguard those sent in response. She also likes working in the background to help improve communication services and strengthen the bond between each link of the Taney County Ambulance District (TCAD Paramedics) operations (Hollister, Missouri, USA).

"You can't beat the challenge, and I get to help people without seeing anything," said Tudor, Communication Center Manager.

Less obvious to callers but visible to Tudor is the profession's on-the-go nature.

Tudor recalls a change in guard at TCAD Paramedics nearly 10 years ago that made things a bit rocky for the ambulance service although, in the short

run, provided the management team guidance for the service to push forward. TCAD Paramedics Chief Darryl Coontz introduced system status management (SSM)—locating ambulances based on expected demand—which is an operational cost savings universally embraced in EMS. From there, things just seemed to snowball. The Medical Priority Dispatch System™ (MPDS™) fell right in place with the triaged priority code for all calls for allocating resources.

Communications became TCAD's central coordinating nexus to support EMS operations. As a secondary PSAP, TCAD Paramedics evolved into a highly sophisticated, state-of-the-art communication center, staffed by eight full-time and five cross-trained (operations and communications qualified) certified Emergency Medical Dispatchers.

Tudor advanced to the next challenge, achieving an Accredited Center of Excellence (ACE). She focused on training and quality assurance. Angela Welch, an EMD trainer and EMD-Q®, earned an advanced EMD-Q certification

and reviewed calls. A heavy-handed approach was never even debated.

"They were all in," Tudor said. "They know everything I do is for them and our center, and if I don't have them, I don't have a center."

Protocol, certification, updated and integrated CAD, ACE, constant education, and training added up to what Tudor never saw coming. She was named the 2019 Missouri Ambulance Administrator of the Year by the Missouri Emergency Medical Services Association (MEMSA). Tudor is the first communication center manager in Missouri to receive the award (Coontz received the award in 2016).

Welch was up next, receiving the 2019 Missouri Communications Specialist of the Year award. Welch has been with TCAD for 10 years.

TCAD's communication force keeps on pushing ahead. They're implementing pieces of NG911. Tudor sees expansion in the future, particularly in providing contract EMD services to neighboring counties. After all, the benefits of EMD are well-known and those without access do know what they're missing.

"I want to get our dispatch center out there, so everyone gets better service," she said.

Tudor's full schedule doesn't leave much time for reflection. She was certainly flattered by the award and credits it to staff, ongoing projects, accreditation, and disaster preparedness.

But how did Tudor see the award come about? Ambition?

"Maybe that's the word for it," she said. "I am constantly doing something."

In addition to the two awards mentioned, TCAD Paramedics was selected as the 2019 Missouri EMS Service of the Year. TCAD EMT John Fox received the 2019 Missouri EMT of the Year award.

TCAD, in southwest Missouri, covers 632 square miles, including the popular tourist destination Branson. TCAD is the only dual-accredited IAED™ ACE/CAAS (Commission on Accreditation of Ambulance Services) ambulance service in Missouri. ●



WATCH YOUR STEP

Caution is key to survival

Audrey Fraizer

There are any number of reasons tourists flock to Iceland.

The island in the northern sea lives up to its reputation of unbridled open space, raw beauty, wildlife, eye-popping horizon, vibrant cultures, and time for introspection away from busy lives.

The desire to capture a spirit of adventure is braided through the past and present and into the future. Present day harkens new bold adventures across expanses of ice sheets and over mountains and backpacking through remote stretches of forest and wildlands.

The drawbacks? That depends. Do your survival skills measure up to maintaining proper body temperature despite unpredictable weather, navigating harsh environments, overcoming unforeseen hazards and miscalculation, and all without immediate access to emergency help?

After all, an accident can happen anywhere, anytime even when the traveler is well-equipped for adventure. In the outdoors, no matter where your travels take you, slips, trips, and falls are the primary mechanism of injury, and in a remote area where response isn't

a given, minor incidents can escalate quickly into major fiascos.

"Any number of places can be the death of you," said Tomas Gislason, Deputy CEO, Iceland Consolidated Communication Center. "We do our best to trust people not to get into trouble. We trust they know how to behave."

In 2018, two million people traveled to Iceland for reasons of culture, history, scenery, and adventure, while a comparatively small population of 339,747 people reside year-round in Iceland.

In the outdoor environment, tourists and residents must follow the rules and use common sense: Stay on marked trails circumventing geothermal pools, dress for the weather, and resist the temptation to take selfies on a block of ice in a lagoon or at the water's edge on the North Atlantic where a wave can suddenly sweep you to sea.

Although guards might be present at the more popular tourist stops, they can't always save you. A vista of the "must-see" Northern Lights is, indirectly, a relative death trap for tourists preoccupied with sky watching while navigating icy, twisting, and

narrow roads. Half of the 18 people who died in traffic crashes in 2018 were foreigners (not from Iceland) and, in 2017, more tourists were killed on the road than residents.

Despite what can happen, Iceland has gone the extra mile to keep you safe. The SafeTravel.is website provides advice and up-to-the-minute alerts. The country has 97% GPS coverage, and Gislason said cellphones are never more than one-half mile from coverage. The national emergency number 112 can be reached anywhere in Iceland, from any telephone, by voice or SMS, and is multi-language fluent. A 112 app checks you into an emergency authority database that stores your GPS coordinates.

The 20 emergency medical dispatchers (EMDs) staffing the Icelandic Rescue Center in Reykjavik coordinate response for over 300 emergency and rescue units, including police districts, fire brigades, ambulance services, and search and rescue teams. The center also works with the Icelandic Coast Guard and sends alerts to government agencies.

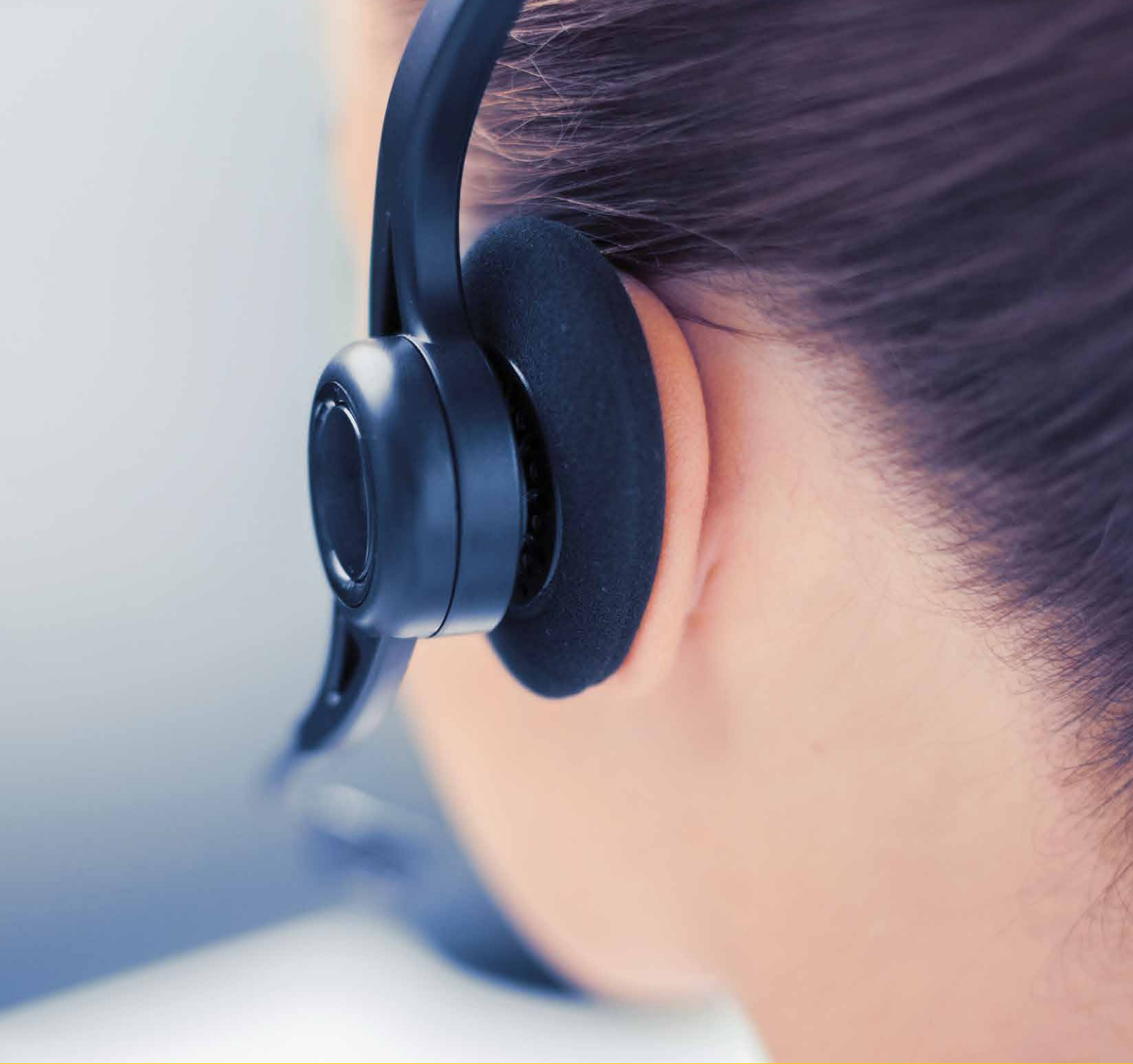
Search and rescue teams known collectively as Slysavarnafélagið Landsbjörg, or, in English, the Icelandic Association for Search and Rescue—ICE-SAR—are world class. They develop, maintain, and follow databased search techniques and internationally recognized standards for lost person behavior.¹

Informed caution, of course, is always a tourist's best bet. Before you go, study up. Sign the Icelandic Pledge² that was developed to inspire a tourism culture of safety: "I will take photos to die for, without dying for them" and "I will follow the road into the unknown, but never venture off the road."

"Try to be smart," Gislason said. "Take precautions. Know where you are. No one wants to get in an accident, but accidents do happen." ●

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