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features







Saving Time and Saving Lives

A high-tech evidence management solution to fulfill incident recording requests faster

By Linda Haelsen

System Upgrade or System Replacement? How to Make the Best Decision

Determine the best way to update your PSAP's technology

By Neil Horden

Buyers' Guide

APCO's one-stop resource for your product and service needs

10

President's Channel
By the Numbers—Project 43
By Martha K. Carter

13

On Scene
National-Level Concepts Explored in the Project 43 Report
By Jeff Cohen

20

The Role of EMDs in Active Shooter Incidents CDE #44546 By Sheila Hanna

26

Preventing Burnout CDE #44547 By Kimberly D. Turner

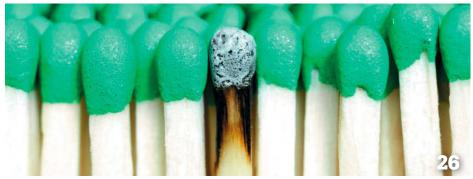
44

Telecommunicator Spotlight
Davlynn Racadio
By Jennifer Kirkland

46

Direct Channel With APCO
APCO's Project 43 Report and
How to Make It Work for You







Member Resources

- **8** Executive Committee
- 9 Board of Directors, Executive Council & Chapter Presidents
- 11 Membership Information
- 24 CDE Exam
- 28 CDE Exam
- 29 Institute Information
- 45 Ad Index



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351 N. Williamson Blvd., Daytona Beach, FL 32114 386-322-2500 • 888-APCO-911

Director of Marketing & Communications

Meghan Architect 571-312-4400 x7009 architectm@apcointl.org

Marketing & Communications Manager

Hollann Treber 571-312-4400 x7010 treberh@apcointl.org

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> Publisher Heidi Boe

Editor

Tamára Perry-Lunardo

Project Manager Celio Ramos

Publication Director Shaun Greyling

Sales Representatives

Krys D'Antonio, Tracy Jones, Scott Mckenzie, Christian Naja, Leron Owens, Mark Ragland, Doug Smith, Jamie Williams

> Layout and Design Emma Law

> > Marketing Natalia Arteaga

Project Support Specialist

Morgan Bedsole

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Executive Committee of the Board of Directors • 2017-2018



President
Martha K. Carter, ENP
9-I-I Administrator
Caddo Parish 9-I-I Communications District
Shreveport, LA
318-675-2222
mcarter@caddo9II.org



First Vice President
Holly E. Wayt, ENP, RPL
Communications Manager
Westerville Communications Division
Westerville, OH
holly.wayt@westerville.org



Second Vice President
Tracey Hillburn, RPL, ENP
Director
Bossier Parish 911 Communications Dis #1
Benton, LA
hilburn911@bellsouth.net



Immediate Past President Cheryl J. Greathouse, RPL Director, Instructional Services Georgia Public Safety Training Center 478-993-4637 cgreathouse@gpstc.org



Executive Director & CEO
Derek K. Poarch
APCO International
1426 Prince Street
Alexandria, VA 22314
888-APCO-911
poarchd@apcointl.org

Editorial Committee • apcoeac@apcointl.org Chair • Christina Dravis Vice Chair • Cheryl Konarski

Tina Chaffin, Monica Corbin-Simon, Jayme Horner, David Larson, Barbara Loveless, Nancie Lutze, Christine Massengale, Valerie Pursley, Tonia Rogers, Matthew Schreiner, Mary Weiler, Sarah Weirick, Isia Wilcox

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As of August 29, 2017

Regional Representatives

East Coast Region Chief Frank T Thomason, ENP/EMD North Carolina APCO thomasonf@carolina.rr.com

David W. Saffel West Virginia Chapter West Virginia State Police, Retired (Communication Section) dwsaffel@suddenlink.net

Gulf Coast Region

Angela R Bowen, RPL Georgia APCO Georgia Public Safety Training Center abowen@gpstc.org

Becky Neugent Alabama Chapter Clarke County E9-1-1 bneugent@clarkecountyal.com

North Central Region

Matthew D. Franke Ohio Chapter Butler County Communications mfranke@butlersheriff.org

Iason F. Kern Illinois APCO Southeast Emergency Communications jkern@seecom911.org

Western Region

Desi Calzada Northern California Chapter California State University East Bay Police Dept. desi.calzada@csueastbav.edu

Margie Moulin, RPL, CPE Oregon Chapter Emergency Communications of Southern Oregon margie.moulin@ecso911.com

Commercial Advisory Council Representative

Brian A Hughes Virginia APCO Eastern Communications, Ltd bh@easterncommunications.com

EXECUTIVE COUNCIL

Alabama Amanda A. White Florence Police Dept. awhite@florenceal.org

Alacka

Stephanie L. Johnson Fairbanks Emergency Communications Center sjohnson@fairbank.us

Sheila J. Blevins, ENP, RPL, CPE Marana Police Dept. sblevins@maranaaz.gov

Arkansas

Kristi Key, RPL Fayetteville Police Dept. kkey@fayetteville-ar.gov

Charlene A. Fisk, RPL Norton Public Safety Communications Dept. cafisk@nortonmaus.com

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VACANT Colorado

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Vail Public Safety Communications jkirkland@vailgov.com

CPRA (So. Calif.)

Jim Acosta APCO CPRA jimacosta61@gmail.com

Ricky A. Rowell, RPL Nassau County Sheriff's Office rickvr@nassauso.com

Angela R. Bowen, RPL, CPE Georgia Public Safety Training Center abowen@gpstc.org

Melissa Stroh Idaho State Police melissa.stroh@isp.idaho.gov

Illinois

Michael R. O'Connor, ENP Libertyville Police Dept. moconnor@libertyville.com

Darin T. Riney, BS, ENP Hamilton County Public Safety Communications darin.riney@hamiltoncounty.in.gov

VACANT

Eric M. Dau Clinton County Communications ericdau@gapa911.us

Kansas

Michele A. Abbott, RPL Hutchinson Reno County Emergency Communications michele.abbott@renolec.com

Kentucky

Joshua R. Glover Carlisle County E9-1-1 carlisle911@windstream.net

Capt. Jack Varnado, RPL Livingston Parish Sheriff's Office jvarnado@lpso.org

Michigan Kim D. Ostin

markim42@hotmail.com

Mid-Eastern Chief Jeffrey Patrick Miller New Castle County DPS Emergency Communications Division jmiller@nccde.org

Minnesota Charles E. Venske, ENP Hennepin County Sheriff's Office charles.venske@hennepin.us

Mississippi

Sheri D. Hokamp, RPL, CPE Biloxi Police Dept. shokamp@biloxi.ms.us

Missouri

Chief Roger D. Martin Missouri State Highway Patrol roger.martin@mshp.dps.mo.gov

Michele C. Blais Montana Highway Patrol

mblais@mt.gov

Nebraska

Amv I. Meier Lincoln Emergency Communications Center ameier@.ne.gov

Nevada Nonie E. McCandless, RPL Douglas County 9-1-1 Emergency Services nmccandless@douglasnv.us

Sandra Davison Sandoval County Regional Communications Center sdavison@rrnm.gov

North Carolina VACANT

North Dakota

Janell S. Quinlan North Dakota State Radio Communications jquinlan@nd.gov

Northern California

Jacqueline Pace Redwood City Police Department ipace@redwoodcity.org

Jay D. Somerville, ENP Northwest Regional Emergency Communications Center isomerville@dublin.oh.us

Oklahoma

Sgt. Lisa Poarch Oklahoma Highway Patrol lmpoarch@gmail.com

Oregon

Jennifer Reese Washington County Consolidated Communications Agency ireese@wccca.com

Pacific

Kenison L. Tejada Honolulu Fire Dept kenisonltejada@gmail.com

Pennsylvania

Jay Groce, III, ENP jaygroce01@comcast.net South Carolina Tasha Todd, ENP, RPL Pickens County E9-1-1 Office

tashat@co.pickens.sc.us

South Dakota Matthew Tooley, ENP Metro Communications Agency mtoolev@911metro.org

Tennessee

Stephen P. Martini, ENP Williamson County Dept. of Emergency Communications stephenm@williamson-tn.org

Bill Keller Texas Dept. of Public Safety bill.keller@icloud.com

Melanie Crittenden Summit County Sheriff's Office mcrittenden@uca911.org

Virginia

Nicola C. Tidey, RPL Orange County Emergency Communications ntidey@orangecountyva.gov

Washington State

Sheryl Mullen, RPL Redmond Police Dept smullen@redmond.gov

West Virginia VACANT

Wisconsin

John E. Dejung, ENP Dane County Public Safety Communications dejung@countyofdane.com

Wyoming

Robin Etienne, ENP Sweetwater Combined Communications Joint Powers Board robin.etienne@sweetwater911.org

CHAPTER PRESIDENTS Alabama

Chief Steven Timothy Webb Jefferson County 911 Emergency Communications District webbs@jeffcoal911.org

Alaska

Tammy L. Goggia, ENP Soldotna Public Safety Communications Center tammy.goggia@alaska.gov

Arizona

Teresa Villescaz Gila River Indian Community teresa.villescaz@gric.nsn.us

Arkansas

Mary Kay Sullivan, RPL Benton County Office of Emergency Communications mary.sullivan@bentoncountyar.gov

Christina L. Dravis, RPL, CPE Tompkins County Dept. of Emergency cdravis@tompkins-co.org

Ferdinand Cedeno, PR Puerto Rico EMS ferdinand.cedeno@gmail.com

Bruce L. Romero, ENP Arapahoe County E911 Authority bromero@arapahoegov.com

ddigiamb@riversidesheriff.org

Florida Jacquelyn J. Yeager, RPL St. Petersburg Police Dept. Jacquelyn.Yeager@stpete.org

Dale Digiambattista Riverside County Sheriff

Georgia

Lynn Smith, RPL Habersham County E-911 lsmith@habershamga.com

Jennifer Sullivan Idaho State Police jennifer.sullivan@isp.idaho.gov

Illinois Brent M. Reynolds Glenview Public Safety Dispatch bmorganrey@comcast.net

Melissa N. Christman Huntington County Public Safety Dispatch melissa.christman@huntington.in.us

Ioe McCarville Cedar Rapids Joint Communications j.mccarville@cedar-rapids.org

Kansas Elora Forshee Sedgwick County Emergency Communications elora.forshee@sedgwick.gov

Kentucky Kevin R. Woosley Kentucky State Police

kevin.wooslev@kv.gov Louisiana

Kayla Stein, RPL St. Tammany Parish Fire District #12

Michigan Sandra Nielsen, ENP Tuscola County Central Dispatch snielsen@tuscolacounty.org

Terry M. Whitham Dover International Speedway, Inc. twhitham@dovermotorsports.com

Darlene Pankonie, ENP Washington County Sheriff's Office darlene.pankonie@ co.washington.mn.us

Mississippi Sheri D. Hokamp, RPL Biloxi Police Dept. shokamp@biloxi.ms.us

Stephen W. Hoskins Kansas City Police Dept. stephen.hoskins@kcpd.org

Montana

Kerry O'Connell, RPL Gallatin County 9-1-1 kerry.oconnell@gallatin.mt.gov

Nebraska

Elliott Davis

Neil A. Miller Buffalo County Sheriff's Office sheriff@buffalocounty.ne.gov

Las Vegas Metropolitan Police

Department - Communications e7274d@lvmpd.com

New Mexico Randy Vallejos Santa Fe Regional Emerg. Comm. Center

North Carolina

Jeryl Lynn Anderson, RPL Orange County Emergency Services janderson@orangecountync.gov

rvallejos@santafecountynm.gov

Pamela Blinsky

Stutsman County Communications Center favre 41@vahoo.com

Northern California

Brenda Bruner Alameda County Sheriff's Office Emergency Services Dispatch bbruner@acgov.org

Kelley S. Davidson, ENP Grove City Police Dept. kdavidson@grovecityohio.gov

Oklahoma

VACANT

Oregon Toni J. Sexton, M.Ed., ENP Oregon Military Dept. Office of Emergency Management toni.sexton@state.or.us

Pacific

Kenison L. Tejada Honolulu Fire Dept. kenisonltejada@gmail.com

Ronald R. Linville Pennsylvania State Police

rlinville@pa.gov South Carolina Tasha Todd, ENP, RPL

Pickens County E9-1-1 Office tashat@co.pickens.sc.us

South Dakota Matthew Tooley, ENP Metro Communications Agency mtooley@911metro.org

Tennessee

Paul A. McCallister, RPL Dickson County Communications 9-1-1 pmccallister@dicksoncountytn.gov

Kimberly Turner Tarrant County Sheriff Office kimturner@tarrantcounty.com

Karl J Kuehn Layton Police kkuehn@laytoncity.org

Virginia Jo-Anne C Munroe, RPL

jmunroe55@gmail.com Washington State Karl Hatton
Jefferson County 9-1-1 Communications

West Virginia Charles W. Bickford Nicholas County DHSEM

khatton@jcpsn.us

charleybickford@yahoo.com Wisconsin Gary A. Bell, ENP, RPL Waukesha County Communications gbell@waukeshacounty.gov

Wyoming Glen Crumpton Laramie County Combined Communications Center gcrumpton@laramiecounty.com

By Martha K. Carter

It is critical for our nation's PSAPs to secure adequate and sustainable funding sources allowing our **Emergency** Communications Centers to prepare for the next generation of technologies and workforce challenges so that we can meet our citizens' expectations and needs well into the future.

By the Numbers—Project 43

o get attendees excited for APCO 2017, APCO put together a "by the numbers" infographic to share fun facts about our conference and host city. As another annual conference comes to a close, when looking at the "numbers," the conference was a huge success. The APCO conference consisted of four days of programs with over 100 sessions in nine different session tracks, but maybe one of the most important numbers discussed during the conference was the number 43 for APCO's Project 43 Report: Broadband Implications for the PSAP. The Project 43 report was released at the conference and is the culmination of over 12 months of hard, collaborative work by a group of over 70 dedicated, public safety practitioners and APCO staff.

Project 43 was launched in April 2016 and was created to explore the impacts of broadband on the PSAP and provide education, guidance and focus to our PSAPs and 9-1-1 authorities for the benefit of the entire public safety communications community.

Another important number to remember is the nearly 30,000 public safety communications professionals who make up APCO International. Our members are 9-1-1 directors, comm center managers, call takers and dispatchers, radio system managers and radio technicians, GIS and mapping/addressing specialists, training officers, CAD System managers and database specialists, LAN managers, IT technicians and communications service providers, wireless and wireline network providers, land mobile radio and data communications manufacturers, console furniture manufacturers, consultants and attorneys. APCO's membership is diverse, and while we may be different in our job functions, the one thing we have in common is that we are all dedicated to public safety communications.

If we, as public safety communications professionals, are going to be able to meet the challenges of Next Generation 9-1-1 and address the issues that have been identified in the Project 43 report relative to the impact of broadband on our emergency communications centers, it is going to take every one of us working together to meet not only these challenges, but to meet the growing demands and expectations of our citizens. It is those expectations that count. We cannot lose sight of who we serve.

Someone once said, "The only chance we have to reach our true potential is when we rise to the challenges that life throws at us."

How are we going to meet the challenges that Next Generation 9-1-1 and the new broadband technologies will be throwing at our PSAPs? It starts with a vision and working together. The vision was Project 43; next comes the work.

The APCO executive committee feels that Project 43 is a launching point for the future growth of public safety communications, and we firmly believe that this will drive the direction of APCO for years to come. To meet these challenges, we envision that additional task forces and committees will be created to continue the work that was started by the dedicated members of the Project 43 team. To view the full report, go to apcoP43.org.

As a result of the P43 report, several new initiatives have been identified that we will want and need you, as APCO members, to be a part of. These initiatives include establishing the Public Safety Apps task force, which will expand APCO's existing efforts by engaging public safety professionals and app developers; undertaking an analysis to determine what new or modified standards may be needed as a result of the Project 43 report; reviewing existing training and certification programs and exploring the need for changes to address emerging broadband technology; performing an occupational analysis of the work performed by the next generation of telecommunicators; developing and offering a cybersecurity hygiene course for PSAP personnel; reviewing existing materials related to GIS for public safety to ensure best practices and guidance are sufficient for PSAPs implementing next generation services; updating existing and developing new curricula related to broadband implications for the PSAP; and looking at Project RETAINS to incorporate broadband-specific inputs to help address NG9-1-1 staffing issues.

And most importantly, APCO will continue to advocate for federal funding for modernizing 9-1-1. It is critical for our nation's PSAPs to secure adequate and sustainable funding sources allowing our emergency communications centers to prepare for the next generation of technologies and workforce challenges so that we can meet our citizens' expectations and needs well into the future.

While we may not be able to implement all of these initiatives in this next year, we definitely have a direction. When the call for participation goes out for these new task forces and committees, please answer that call and volunteer to help us meet the challenges. Through your service and participation in our association, you can play a significant role in the enhancement of public safety communications.

Martha Carter is the Director of the Caddo Parish 9-1-1 Communications District in Shreveport, La. She has been an active member of APCO for 28 years and currently serves as president of APCO International.







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PSC | September/October 2017

National-Level Concepts Explored in the Project 43 Report

PCO Project 43—Broadband Implications for the PSAP—resulted in a detailed report analyzing the future of emergency communications. The report is a starting point for an ongoing discussion of the operations, governance, cybersecurity, technology, training and workforce issues related to the modernization of public safety communications technology, particularly NG9-1-1. While there are many interesting topics to explore for stakeholders across sectors and at various levels of government, this issue of On Scene focuses on several national-level concepts.

At the outset, the report presents a vision for the future of public safety communications. To realize the full benefits of enhanced technology, stakeholders must work from a shared view of what's possible. This includes implementing features such as live video from the scene, inputs to 9-1-1 from sensors and advanced alarms, and seamless interoperability and data exchange with responders in the field and other PSAPs.

One important step to achieving this vision is the adoption of a common definition of NG9-1-1 nationwide. The report includes examples of several definitions of NG9-1-1 to show the current variety and recommends uniformly defining NG9-1-1 as "a secure, nationwide, interoperable, standards-based, all-IP emergency communications infrastructure enabling end-to-end transmission of all types of data, including voice and multimedia communications from the public, to an emergency communications center." This means a member of the public can send a multimedia message such as a photo or video to a PSAP that in turn is capable of receiving, analyzing and forwarding this information to a field responder to render an emergency response.

Having a common understanding of what fully-deployed NG9-1-1 means is important for operations and technology adoption, as well as obtaining the resources needed at the state, local and federal levels. As the report explains, a one-time injection of federal

funding is needed to upgrade legacy networks and equipment to IP-based, broadband-enabled, NG9-1-1 systems nationwide. Accordingly, one of APCO's commitments coming out of Project 43 is to continue to advocate for federal funding for modernizing 9-1-1 services across the country.

Congress could establish a grant program to accomplish several objectives for 9-1-1. For example, funding could be conditioned upon establishing and sustaining interoperability, establishing sustainable funding mechanisms and preventing 9-1-1 fee diversion.

Having a common understanding of what fully-deployed NG9-1-1 means is important for operations and technology adoption, as well as obtaining the resources needed at the state, local and federal levels.

While responsibility and control over 9-1-1 should remain with state and local authorities, federal agencies could play important supporting roles. For example, the National Institute of Standards and Technology (NIST) could provide ongoing support through a research and development program for improved NG9-1-1 technologies. This could be modeled after the existing public safety communications research and development program that the FirstNet legislation established within NIST.

The Federal Communications Commission could also build upon its role in promoting NG9-1-1. As described in the report, broadband technology presents opportunities to capture and analyze large amounts of data, which in turn can be used to inform policy development and strategic planning for NG9-1-1. The FCC currently provides annual reports to Congress on the expenditures of 9-1-1 fees, including for NG9-1-1 and cybersecurity programs. This kind of data, especially when augmented by operational data generated by broadband technology, could be helpful for 9-1-1 authorities to develop sustainable funding mechanisms and operational policies.

Finally, federal agencies have a role to play in addressing cybersecurity threats for public safety networks. Broadband-based technologies introduce new cyber vulnerabilities, and managing and responding to these threats is complex. Sharing cybersecurity resources can lead to new efficiencies and result in improved detection and response capabilities. Project 43 includes a recommendation for stakeholders to explore a concept known as the Emergency Communications Cybersecurity Center (EC3), which would centralize intrusion detection and prevention systems for next generation public safety networks. Information gathered by EC3s at the state or regional level can be sent to a centralized federal repository to improve the detection and response for geographicallydistributed attacks.

These national-level issues are only a subset of the full Project 43 report. To explore these and other concepts further, visit apcoP43.org. •

Jeff Cohen (cohenj@apcointl.org) is Chief Counsel and Director of Government Relations for APCO International.

Mark Reddish (reddishm@apcointl. org), Senior Counsel and Manager of Government Relations, Nicole Zimbelman (zimbelmann@apcointl.org), Government Relations Counsel, and Lauren Corcoran (corcoranl@apcointl.org), Government Relations Associate, also contribute to this column.





COURTESY OF CITY OF WESTMINSTER (COLORADO) POLICE DEPARTMENT

SAVING TIME SAVING LIVES

How a high-tech evidence management solution is helping Las Vegas Metro and Westminster police fulfill incident recording requests in a fraction of the time.

By Linda Haelsen

n June 8, 2014, three people were killed in a shooting spree in Las Vegas, Nevada. The rampage started at a pizza restaurant where two officers were ambushed and murdered while on their lunch break. After brutally shooting the officers, the assailants fled to a nearby Walmart where they shot a civilian and engaged responding officers with gunfire. As the incident unfolded, 9-1-1 calls came streaming in from the different locations.



COURTESY OF LVMPD COMMUNICATIONS BUREAU

The shooting spree may have only lasted minutes, but the ensuing investigation was very complex.

The 9-1-1 audio and radio transmissions were a key part of the investigation and needed to be retrieved, assembled and reviewed for a clear picture of what happened. Staci Fason, a Research Assistant for the Las Vegas Metro Police Department (LVMPD) Communications Bureau, headed up the effort.

"With an event of this magnitude, there was a large initial response, from our own

department and neighboring agencies," says Fason. "And when the shooting was over, large numbers of detectives were dispatched to the scene. The incident was open for almost two days straight. As you can imagine, it took a long time to retrieve and piece together all the audio recordings."

While incidents like this do not happen every day, they do highlight a critical but often overlooked function of emergency communications centers: fulfilling audio reproduction requests. Audio recordings



COURTESY OF CITY OF WESTMINSTER (COLORADO) POLICE DEPARTMENT

are invaluable for piecing together the who, what, when, where and why.

For a typical agency, requests for audio recordings can number in the thousands annually, and come from in-house investigators, DAs, public defenders, private attorneys, the media and even private citizens.

The problem is that far too many 9-1-1 centers still rely on outdated technology and inefficient processes for handling such requests, which creates backlogs and unnecessary costs. They waste resources duplicating work.

There are exceptions. Consider these two progressive emergency communication centers that handle 9-1-1 calls for the Las Vegas Metro and the City of Westminster (Colorado) police departments.

The Las Vegas Metro PD is the eleventh largest metropolitan police department in the nation, covering an area of 7,560 square miles and serving a population of 3.5 million (45 million if you include tourists). By contrast, the Westminster PD has a force of 184 officers, and covers a 33 square mile suburban Denver area at the foot of the breathtakingly beautiful Rocky Mountains (that's home to 112,000 residents). The LVMPD Communications Bureau takes about 1.5 million 9-1-1 calls a year; the Westminster Communications Center fields around a quarter of a million. It's perhaps not surprising then that the LVMPD also handles more audio reproduction requests, some 400 requests a month compared to Westminster's typical workload of 75.

While on the surface, the two departments are vastly different, they have one key thing in common: Both have made significant efficiency gains by using evidence management technology to work smarter and faster. This technology (NICE Inform Organizer

in these cases) not only saves time and cuts down on manual processes, it also eliminates duplicate work.

"We process audio reproductions for a variety of requestors—detectives, prosecutors, citizens, the fire department and the media," explains Communications Supervisor Karin Marquez, for the City of Westminster (CO) Emergency Communications Center. "We often receive duplicate requests for the same audio recordings and sometimes additional CDs are needed at a later time."

"Before we deployed the new tool, we would have to re-create the incident recordings each time," she adds. "This took a lot of time away from our supervisors because they'd have to research the audio request all over again. We knew we had done the work already but there was no way to replicate it."

LVMPD's Fason expresses a similar concern. "I could receive a request from a detective for an internal investigation and my colleague could receive a subpoena request for the same case records. Typically, one in every four requests for evidence we receive is for the same recordings. Prior to implementing our new technology, we were not able to save or keep track of our incident reconstruction work. This resulted in our team members having to duplicate efforts when multiple requestors needed records for the same case."

ONCE AND DONE— ELIMINATING DUPLICATE WORK

It all starts with a work order to find the pertinent calls related to a case. Once the 9-1-1 and radio call are retrieved, they're saved in an electronic case folder. When multiple parties request the same audio reproduction, records custodians can simply retrieve the original reproduction, without having to do the same work all over again.

"Being able to quickly search by case name or number, and make a new distribution literally takes just a couple of minutes and saves so much time," says Marquez.

The key, according to Marquez, is to develop an agency standard when creating, naming and tagging incident folders in the tool. For example, Westminster uses the CAD event type for the incident name; the case number (if there's a case assigned), and if a case isn't assigned, the CAD event number, for the designated incident number; and for the incident description, a combination of the date, time, and location of the incident. These folder tags make it easier to go back and find the incident folder and associated contents later.

The LVMPD organizes its incident folders using CAD event numbers. "Our CAD system issues an event number whether it's just an incident or an arrest. We use these numbers to record and save evidence. Under each CAD event number, we also create subfolders to separate phone calls from radio traffic, and even use subfolders to note calls where a supervisor or a suspect was recorded," explains Fason.

The ability to retain incident recordings in a tagged virtual case folder has been a huge time-saver for the LVMPD. "We save tons of time not having to duplicate work when we receive requests for recordings for the same case," says Fason. "We've improved our efficiency by twenty-five percent and we can be sure that each party receives the identical set of recordings, whether it's an in-house request or a subpoena. That way there's no error or question regarding any evidence we've provided."

"It really does help eliminate duplication of work," asserts Marquez. "If you've already created the audio reproduction, you simply go in and do a search. It saves a lot of time because vou don't have to recreate the incident itself. I'm all about anything we can do to create efficiency because we're all overloaded. We're all doing more work than we probably need to be doing."

Marquez also points out that while most of the time it's important to provide identical reproductions to various requesting parties, there are exceptions—and the technology accommodates those too.

"There are instances where a citizen and an in-house detective may request the same 9-1-1 call," said Marquez. It's possible to copy the entire reproduction from the incident folder, and then make and save another copy where a portion of the call is redacted. The detective gets access to the complete incident, while the citizen may get a redacted version of the call.

TECHNOLOGY THAT ENABLES TEAMWORK— GET MORE DONE TOGETHER

Most 9-1-1 centers have multiple audio records custodians who manage records requests. For example, the LVMPD has two researchers who handle all of the incoming evidence requests, and at the City of Westminster, four supervisors, including Marquez, share the load.

In addition to eliminating duplicate work, the technology also helps audio records custodians work together better to get more done. The incident reconstruction process can be handed over from one researcher to another.

"Being that we are only a two-person research department and we only work three days in common, sometimes my colleague



will do work when I'm absent and vice versa," says Fason. "This technology has been very beneficial in helping us share our workload. One person can pick up where the other left off and continue the research without wasting time. It's easy to review what has been done on a case and add to the records as needed. This is especially helpful for largescale events such as the 2014 shooting of the two police officers. It took us about a week to gather all audio recordings from that incident, and it required teamwork, as other subpoenas needed to be processed at the same time. This would have been truly difficult to accomplish before."

Marquez also relates a child abduction and homicide case that occurred in Westminster in 2012 that was similarly complex and drawn out. "From the time that the child went missing to the time that we had a suspect in custody was 21 days, so you can imagine everything that was unfolding. We

had hundreds of people working the incident and new audio coming in every day, starting with the original 9-1-1 call and radio traffic, and tips coming into dispatch. All of these audio recordings needed to be retrieved, organized, and added to the case."

To make matters even more complex, Marquez says that during those three weeks there were numerous requests for the audio reproductions from detectives, media, the DA's office and the FBI, which all needed to be distributed and tracked. All of this was handled seamlessly with the new technology.

ELECTRONIC RECORDS REQUEST FULFILLMENT

This technology is also helping agencies shed paper in favor of electronic delivery of essential information required for records requests.

Additional multimedia information, which could only previously be reproduced on paper, can now be added to the Incident folder and shared electronically-for example, Mobile Data Terminal (MDT) records, CAD system call slips and Automatic Vehicle Location (AVL) records.

"One of the really cool features is that it can be a central repository for different kinds of evidence," says Marquez. "So of course, you have the audio reconstruction content (essentially the 9-1-1 calls and radio traffic) but you can drop related material in the folder as well, for example the CAD event chronology, photos, a witness statement, reports, and other documents. In the past, detectives would have just gotten a CD of the audio and paper copies of the CAD notes separately, which often exceeded 20 pages. It's great to be able to send them everything in one neat package."



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OUT WITH THE OLD, IN WITH THE NEW—MORE WAYS TO SHARE INFORMATION

It used to be that all audio reproductions were copied on CDs for sharing, but new technology now offers more ways. Of course 9-1-1 centers can still rely on the old standby of burning CDs, but now they can also email links to incident folders or individual audio files, and even provide direct secure access through password protection. "If it's a subpoena request, or an attorney request, then we'll burn the set of recordings on a CD and distribute it that way," says LVMPD's Fason. "That's how we handle it for any external parties. For our detectives, we email audio as a windows media file."

Whereas the LVMPD does not use the direct access method, the City of Westminster uses this option routinely to distribute incident folders and their contents to some detectives.

Prior to implementing the new tool, Marquez says that detectives received .wav file audio recordings on CDs. Now detectives can access incident folders directly, provided they have assigned access rights.

"I like that we have different options to choose from," says Marquez. "I create the audio reproduction, put it in the incident folder, and give the detective access so he or she can: review the incident exactly as it unfolded; add evidence items to the incident timeline; add reports, photos, CAD notes, and any other documentation needed; and then make their own CD, and distribute it. Everything is permissions based and every action is tracked for chain of custody."

While Marquez gives detectives direct access to the system, she still makes use of CDs for fulfilling external and other requests.

"For the citizens out there, they are requesting just the 9-1-1 call(s) and CAD notes, so we just send a CD with the .wav file and a paper copy of the CAD chronology."

Where more information would be helpful, but direct access is not a viable option, Marquez says it's possible to distribute the entire incident folder and its contents, along with an executable file for the media player (with or without a password), either on a CD or via a shared network drive.

When a recipient receives the CD, he or she can open up the file, replay the audio recordings and view associated documents exactly as they appeared when created. But the recipient does not have access to the actual evidence management system and cannot edit or add to the content or incident folder. Marquez uses this stop gap method to distribute incident reproductions to internal affairs and investigators who don't have direct access to the system.

She also uses this method to provide the fire services with audio reproductions after every structure fire (so they can go through a debriefing process), although instead of placing the incident folder and audio recordings on a CD, she emails them.

"It took me a while to actually remember what our day-to-day work life was like before we had this technology, all of the steps it took to create an incident, and all of the duplicate and manual work we had to do, because we've had it for so long," says Marquez. "But I absolutely love it. I don't know where we'd be without it."

Linda Haelsen is the Marketing Communications Manager for NICE Public Safety. She has over two decades' experience in the public safety industry.

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By Neil Horden

he infrastructure of every technology system—9-1-1 PSAP implementations, computer aided dispatch systems, trunked land mobile radio—will eventually get to the point where a significant portion of the software and hardware will need to be replaced for continued, reliable operation. In almost every case, the current vendor will offer an "upgrade," at what seems to be a bargain price compared with replacement of the entire system. These upgrades are typically handled as directed procurements (or sole-source) to the original vendor, since in most cases only that vendor is capable of providing the upgrade.

This type of sole-source procurement often begins with an unsolicited proposal from your current vendor. While these proposals are useful to understand the vendor's perspective on the shortcomings of your current system and provide some insight into the current state of technology, they are rarely a good starting point for a procurement contract.

You, as the procuring agency, are faced with several challenges:

- First, determining whether an upgraded system, versus a system replacement, is actually the best fit for your current and future needs.
- Second, determining if the upgrade is offered to you at a fair price.
- Third, determining if the contract in its entirety (terms and conditions, division

of responsibilities and costs, acceptance of risk, etc.) is appropriate and equitable (or even acceptable).

Far too often, the focus is on the price and the other two issues are ignored until the decision has been made. But, if the current vendor's proposal is not the best starting point, what is?

Every procurement, whether a new system implementation, a system replacement or an upgrade, should start the same. This common starting point is a thorough requirements-analysis process. Through requirements gathering and analysis, you will be able to catalog and clarify the many interrelated needs of your organization. You will also be able to evaluate the current environment in a more accurate manner, having gathered all of the

pertinent assessment information. Analyzing the environment includes a thorough review of the existing systems and equipment, which often yields valuable system-use information such as how the system is used and what features and functions are critical.

Additionally, information on the anticipated lifespan and maintainability of each critical piece of the existing system is captured. This is especially important if an upgrade is being considered. Since an upgrade, by its very nature, relies on some portion of the existing system, understanding the remaining life and maintainability of that equipment is critical. Much of the cost savings anticipated through an upgrade can be lost if some of the remaining equipment does not have sufficient reliable life remaining. When a piece of the upgraded



Every procurement, whether a new system implementation, a system replacement or an upgrade, should start the same. This common starting point is a thorough requirements-analysis process.

system cannot be maintained for the anticipated system life, you are forced to rely on additional "rolling upgrades" at an unknown long-term cost.

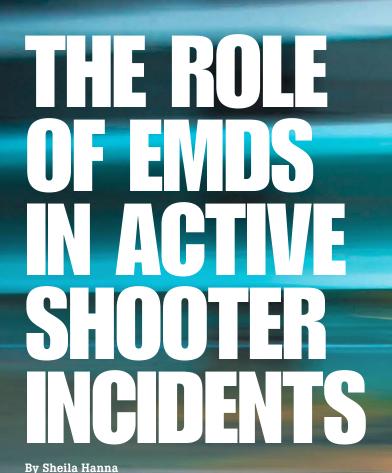
A proper requirements analysis will help you quickly find the best path forward. It may show that the best choice is a system replacement to address your needs through the implementation of a new system, replacing the entirety of your current system. Or, it could show that simply an upgrade to your current system is all that is needed, replacing obsolete equipment and updating software thereby providing a refresh and life extension to your current system, and saving money by retaining significant existing assets. Once this decision is made, the requirements can be developed into a document detailing exactly what is needed.

Some may feel that if their conclusion is to procure a system upgrade, they have wasted the analysis work that lead to that result. This is not the case. With the development of your requirements, independent from your vendor's influence, you are able to ensure that the specific equipment features and functions upgraded match your needs.

Even if you select a directed procurement from your existing vendor as your upgrade method, you will benefit by starting from your requirements, not their assumptions. This requirements-analysis process reduces the chance of spending funds on equipment and features that are not needed or upgrading existing equipment that has relatively little remaining life.

By taking your organization through a well-structured requirements-analysis process, you will have a much better understanding of the use and anticipated lifespan of your overall system. This information will allow you to analyze the cost of any upgrade over its anticipated useful life and compare that with the cost of a system replacement. Not only will going through this process provide you with more confidence in your decision, it will also give you the hard data to justify your investment. No matter which path forward you select, you will make the most informed decision.

Neil Horden is Chief Consultant for Federal Engineering, Inc. and an APCO Commercial Advisory Council member.



istorically a lot of the training made available to telecommunicators for active shooter incidents involves defining an active shooter and describing what an active shooter might look like or how they may act before and after the incident. And most of the time in this same class you were probably taught the phases of an active shooter incident. All of these areas must be understood prior to focusing on discipline-specific training during an active shooting incident. We will take a quick glance at each field responder's responsibilities during this type of incident, and then we will look at the responsibility for one area in the communication center, the emergency medical dispatcher's role.

For most jurisdictions, an active shooter incident will primarily fall under the responsibility of law enforcement personnel. Law enforcement is ultimately responsible for the response coordination, but their primary initiative is to stop the shooter as quickly as possible and ensure the scene is safe for EMS and fire to move in and assist the victims.

Although fire service personnel will also assist with injuries and manpower where it is needed, they respond to these incidents primarily to do what they are trained to do, put out fires. You may recall the assailants

at Columbine High School brought close to 100 incendiary devices with them. The assailant in Webster, New York, used fire to set his ambush. The terrorists who attacked the U.S. Consulate in Benghazi, Libya, also used fire as a weapon. And the largest improvised incendiary devices ever used in this type of incident were the planes on 9/11.

Unfortunately, these type of incidents result in many injuries and deaths; EMS is responsible for attending to those who are injured or need medical attention as quickly as possible. The number of paramedics and ambulances dispatched to more frequent calls is usually defined by the number of wounded. In an active shooter incident, the number injured will not always be known when the initial call for service is received. So the saying that is well known in the communication centers, "when in doubt, send them out" can also include this type of call. Send as many units as you can unless the number injured is confirmed and units are sent based on agency policy and procedure.

Most active shooter incident response starts in the communication center. Every position held in the center has a



responsibility when this call for service comes in. The call-taker(s) is responsible for gathering as much information as possible from the caller and relaying it to the dispatcher who will then broadcast it to the field responders. The information collected and communicated is crucial to the safety of the victims and responders.

Some agencies use universal telecommunicators meaning the call-taker is also the radio dispatcher. And other agencies have specific job positions that are performed by different individuals such as call-taker, law enforcement dispatcher, EMD dispatcher and fire dispatcher. Regardless which setup your agency employs, if you fill one of those positions, it is important to understand your responsibility during an active shooter incident.

Now let's focus on the EMD dispatcher and their responsibilities. Depending on the agency policy and procedure, the duties of the EMD dispatcher and the EMS response may be different. EMS dispatchers need to

know the policy and procedure for the local responder regarding multiple-patient transports. Does one patient equal one ambulance or can ambulances transport multiple patients at one time? In addition, the dispatcher may be responsible for notifying appropriate EMS supervisors.

Moving forward from the policies that an EMS dispatcher needs to know, they must also be aware of the procedure implemented. We will look at several methods currently used in agencies across the United States, and one document that was produced with the intent to change how first responders respond to active shooter incidents.

One response protocol widely used among many agencies is referred to as the "traditional approach". In this approach, the call comes into the communication center, and the information is relayed to the radio dispatchers. Upon receiving this information, the EMS dispatcher will alert the responders by stating the problem, the location AND the "staging" location. The staging location is a particular area that is safely away from the incident but close enough that EMS can respond quickly after the scene has been secured. The purpose for the staging response is to ensure the responders, in this case, EMS, minimize the threat of being injured themselves.

The staging area can be determined by law enforcement, EMS or the dispatcher. This decision is typically outlined as part of the agency policy. If the decision is made by field responders, then the staging location will be communicated back to the dispatcher to document and relay to other responders. If the staging decision is made by the dispatcher, then it must be documented and relayed to those responding. Law enforcement will contact the dispatcher when it is safe for EMS to come on the scene and then the dispatcher transmits the information to EMS responders.

The traditional method is also used on several other call types for EMS. For example, psychiatric calls are considered dangerous calls and most agencies require that law enforcement secure the scene before EMS can provide care. This method is known to work and serve its purpose.

In April 2013, just a few months after the active shooter disaster on December 14,

2012, at Sandy Hook Elementary School in Newtown, CT, the Joint Committee to Create a National Policy to Enhance Survivability from Intentional Mass Casualty and Active Shooter Events was convened by the American College of Surgeons (ACS) in collaboration with the medical community and representatives from the federal government, the National Security Council, the U.S. military, the Federal Bureau of Investigation, along with governmental and nongovernmental emergency medical response organizations (APCO International was not a part of this committee). The group was charged with producing a protocol concept document for a national policy that would enhance survivability from active shooter and intentional mass casualty events. The paper provided by this group is referred to as the Hartford Consensus I.

The Hartford Consensus states "Military experience has shown that the number one cause of preventable death in victims of penetrating trauma is a hemorrhage. Tactical Combat Casualty Care (TCCC) programs, when implemented with strong leadership support, have produced dramatic reductions in preventable death."

Some of the recommendations from this committee state the initial actions to control hemorrhages should be part of the law enforcement response, and knowledge of hemorrhage control needs to be a core law enforcement skill. Maximizing survival requires an updated and integrated system that can achieve multiple objectives simultaneously.

In addition, the document recommends an integrated response to active shooter incidents by following the actions of the acronym THREAT

- Threat suppression
- · Hemorrhage control
- Rapid Extrication to safety
- Assessment by medical providers
- Transport to definitive care

The Hartford Consensus consists of four different reports with recommendations and calls for action to improve survival from active shooter events. The basis of survival stems from the use of THREAT and a high level of integrated response by law enforcement, fire/rescue and EMS along with 9-1-1 communications staff.

After the release of the *Hartford Consensus* report, many agencies and organizations began implementing or recommending procedures that would focus on getting to the victims faster. Listed below are the top three approaches:

- Tactical Emergency Medical Support (TEMS) – This approach links EMS staff with law enforcement officers while moving through the HOT zone.
- Tactical Combat Casualty Care (TCCC)

 This approach is when law enforcement is trained to provide medical techniques in the HOT zone.
- Rescue Teams This approach is when law enforcement, fire department and EMS all pod together in the HOT zone.

Many agencies today use one or more of these approaches when responding to an active shooter incident.

The final approach we will discuss is the Active Shooter Response: The Rapid Response and Treatment Model (R2TM) developed by Sgt. Craig Allen of the Hillsboro Police Department and Engineer Jeff Gurske of the Hillsboro Fire Department. Using data collected on active shooter incidents, this approach understands the shooter is either already dead or kills himself when law enforcement shows up so getting to the shooter does not always take priority. If shooting is still going on, it is a priority but if it is not, then taking care of the wounded within the golden hour is

first priority or equal priority with neutralizing the shooter.

R2TM borrowed two military concepts "Forward Operating Base (FOB)" and "Casualty Collection Point (CCP)."

- Forward Operating Base (FOB) Established by the first officers on the scene. This is NOT the incident command post. The FOB is the location for incoming officers to receive instructions on where to go and hold ground –not search. While this area is held by officers, additional officers drag and carry the injured to the Casualty Collection Point (CCP).
- Casualty Collection Point (CCP) A secure location within the HOT zone where a warm zone is embedded. Armed

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officers stand watch while EMS triages the patients. All patients are brought to this location by officers in the HOT zone.

These two areas need to be declared quickly to the radio dispatchers for all responders. The EMS dispatcher has the responsibility to ensure that the CCP is reported either by the first benchmark, which is 7 minutes, or the second benchmark, which is 14 minutes.

Another critical component of this approach is establishing the ingress and egress location that will allow immediate transportation to a hospital.

A shift in focus from neutralizing the scene first to attending to the victims first or at least the same time as the scene is being neutralized will require the 9-1-1 center to be a part of the integration response as well as active in the training exercises. Furthermore, the EMS dispatcher will be responsible for coordinating EMS personnel to the CCP location and the ingress and egress location.

Each approach comes with pros and cons. Regardless of which approach your agency uses, the most important point is that a plan is in place and training is completed on a regular basis that includes ALL first responders.

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Sheila Hanna, RPL, is the Education and Training Administrator for APCO International. She can be reached at hannas@apcointl.org.



CDE EXAM #44546

- In most jurisdictions an active shooter incident will primarily fall under the responsibility of which responder?
 - a. EMS
 - b. Law Enforcement
 - c. Fire Service
 - d. Coroner
- 2. Fire service responds to active shooter incidents to just put out fires.
 - a. True
 - b. False
- Until the number of injuries is confirmed during an active shooter incident it is best to dispatch all available ambulances.
 - a. True
 - b. False
- 4. This approach includes a staging area for EMS until the scene is secure:
 - a. Tactical Emergency Medical Support
 - b. Tactical Combat Casualty Care
 - c. Traditional
 - d. Rescue Team
- 5. This approach links EMS staff with law enforcement officers while moving through the HOT zone:

- a. Tactical Emergency Medical Support
- b. Tactical Combat Casualty Care
- c. Traditional
- d. Rescue Team
- This approach is when law enforcement is trained to provide medical techniques in the HOT zone:
 - a. Tactical Emergency Medical Support
 - b. Tactical Combat Casualty Care
 - c. Traditional
 - d. Rescue Team
- The location in the HOT zone where a warm zone has been embedded and where all victims/patients will be brought to by law enforcement is the
 - a. Staging area
 - b. Forward Operating Base
 - c. Casualty Collection Point
 - d. Incident Command Post
- 8. Threat suppression, hemorrhage control, rapid extrication to safety, assessment by medical providers and transport to definitive care is:
 - The series of techniques used by EMS on scene of an active shooter incident.

- An integrated response to active shooter incidents, remembered with the acronym "THREAT."
- c. A law enforcement response to apprehend the shooter.
- d. A and C
- 9. What is the Hartford Consensus?
 - a. A federal law for first responders during an active shooter incident.
 - b. An approach to an active shooter incident.
 - A protocol concept document for a national policy that will enhance survivability from active shooter and intentional mass casualty events.
 - d. A document developed by Hartford College students on active shooter incidents.
- 10. A CCP location must be reported to the EMS dispatcher how many minutes after law enforcement arrive on scene?
 - a. The benchmarks are 7 minutes and 14 minutes
 - b. The benchmarks are 10 minutes and 20 minutes
 - The location is not reported to the EMS dispatcher
 - d. The benchmark is 4 minutes to 10 minutes

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PREVENTING BURNOUT

By Kimberly D. Turner

urnout" is a word we hear or say often when discussing our work as public safety dispatchers and telecommunicators. As a communications manager, I'm concerned about burnout for my staff and myself. There are three questions to ask before formulating a plan to address the problem of burnout—what is it, how does it affect me and what can I do about it for myself and my staff?

WHAT IS BURNOUT?

Simply put, burnout is a condition that affects individuals in the helping professions who experience the long-term, chronic stress that comes from the responsibility of providing assistance to those in need. The term was coined in the 1970s by American psychologist Herbert Freundenberger.

Burnout may lead to emotional and physical exhaustion, which can appear to others as cynicism and detachment. However, for those who experience burnout, it generates internal feelings of ineffectiveness and lack of accomplishment.

If you've been part of a communications team, chances are at some point you have observed burnout in one or more coworkers or have personally felt this way. The concept of burnout is familiar, but the consequences of it may not be so obvious. Getting to the point of being burned out is a process that happens slowly over an extended period of time; so much so that we do not notice the warning signs until we are near or over our capacity for handling stress.

The beginning stages are both physical and emotional. Common symptomology includes exhaustion, insomnia or difficulty sleeping, inability to concentrate, susceptibility to illness, loss of appetite, anxiety, sadness or depression, anger and physical symptoms like headaches, shortness of breath or gastrointestinal pain.

In 2008, Roberta Troxell studied 497 telecommunicators in the Midwest and determined that nearly 15 percent were at risk of burnout. The next significant study was in 2012 by Pierce and Lilly. Their study of 171 dispatchers found that nearly 22 percent were at risk of developing post-traumatic stress disorder (PTSD). These studies validate what we observe daily in our workplace. The question remains: How do we notice burnout before it becomes a genuine problem?

The first step to preventing burnout is knowledge.

INITIAL BUILD-UP

In the control room, there are small signs that burnout is beginning to simmer in your employees. One of the subtle signs is the dispatcher who is always in a mad rush just before the start of their shift. You know the one—the dispatcher who has too many bags, too many snacks and just a minute to spare before they are due to start their shifts.

They may crack sarcastic jokes with just enough of an edge for you to laugh but also question whether there is a hint of cynicism or meanness. Sometimes, it is the opposite—they don't engage with anyone on their shift

unless it is necessary. Don't mistake someone who is naturally quiet as someone who is detached. Being emotionally detached is a specific mindset where one is dissociated or numb. Such detachment is consistent with burnout.

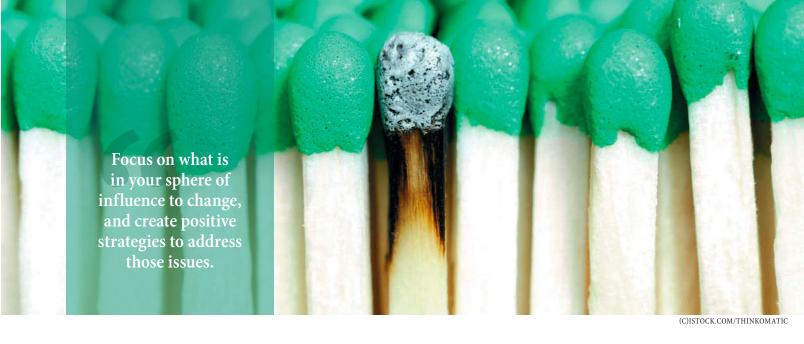
Emotional numbing is a coping mechanism employed to avoid anxious or stressful situations, and—let's face it—our work is organically stressful. We can never escape stress, regardless of what we do. However, we can learn to manage it in a positive and productive way.

As dispatch professionals, we must understand that many things in life may be the root cause of feeling this way and it is not necessarily work. However, our work environment is perfectly positioned to exacerbate these feelings. The National Institute of Health identifies three symptoms considered to be signs of burnout: exhaustion, alienation from work-related activities and reduced performance. The organic nature of control room operations does little to mitigate these symptoms.

Operations take place in a vicious cycle of understaffing, which leads to overtime, which, in turn, causes staff to become robotic in their work. Ultimately, performance suffers.

PREVENTION & MITIGATION

The first step toward preventing burnout is knowledge. When we understand what ails us, we can begin taking proactive measures



to prevent negative outcomes. As managers, we fall into the trap of mandatory overtime and believe it is a reasonable expectation of our employees. The overtime that helps lead to physical exhaustion—one of the symptoms of burnout—is something we have grown to accept.

How many administrators are advocates of prioritizing recruitment efforts for dispatch staff? Yes, we face barriers in the form of sworn executives who may not advocate on our behalf. Yet, we also fail to position ourselves to be effective spokespersons for our profession, as most administrators are not aware of the negative effects of burnout on our dispatch staff.

Remembering that each call is unique and that each caller's concerns are important to that individual helps us to stay in the moment and not become emotionally numb. A large part of dissociation happens when our compassion tank has run dry.

Recognizing this before we are completely checked out is significant in preventing burnout. There are many small, tangible things we can do to, as I call it, "fill our tank." We can do this by literally stopping to smell the roses in the parking lot before our shift or while on break. I always try to remember to smile when I pass someone in the hallway, laugh with my shift partner or make a list of three things that I am grateful for that day. Being mindful and present in our thoughts and actions will help keep our tank full which, in turn, helps to keep us engaged and present in our work tasks. These are very small things that pay large dividends.

Of course, these options appear unrealistic when we are faced with a tenured, cynical dispatcher whose performance begins to wane and are forced to deal with it because of work performance or complaints. Recognizing that burnout may be a contributing factor is not an excuse for undesirable behavior or poor performance. However, it is an opportunity to provide positive solutions.

As managers or directors, we are tasked with viewing burnout from a global perspective. One way to fill our employees' tanks is to create mechanisms that legitimize their participation in decision-making processes. For example, form a workgroup or committee that is comprised of all levels of your dispatch staff.

The workgroup is tasked with identifying problematic organizational concerns and providing solutions. Your supervisory team may be a separate workgroup to address issues specific to management. Provide formal time to meet with the representatives of each group and work in partnership to create a more productive work environment. Actively committing time, resources and encouraging positive employee engagement are significant steps towards reducing burnout. We, as managers, play an important role in our overall organizational health.

THE ROAD FORWARD

The most effective solution is to empower employees by creating a feedback loop that enables them to contribute their thoughts and ideas about workplace functions, policies and procedures. In other words, provide your staff a voice in operations while recognizing their contributions can be an aid and catalyst for increased employee engagement, thus mitigating part of the burnout cycle.

Personally, take stock of your real feelings. Categorize those things that create stress into separate lists identifying those things you can control and those that you cannot control. Focus on what is in your sphere of influence to change, and create positive strategies to address those issues. When you change your mindset, you change your life. Instead of being exasperated at someone for dialing 9-1-1 for a non-emergency, remember that you are a resource and can help someone in their time of need.

Our role is not to judge whether their cry for help is legitimate. Our role is to identify and provide resources for those who require help because the public trusts us to be the resource. Shifting our mindset so that we operate from a position of power instead of weakness is an influential elixir to prevent burnout because it is a reminder of our value as professionals and positive contributors to our society.

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Kimberly D. Turner, MPA, has served the public as a law enforcement professional for the past quarter century as a police officer, communications manager and business owner, and she is a Master Instructor certified by the Commission on Peace Officer Standards and Training (POST).

CDE EXAM #44547

- 1. Burnout is something that affects
 - a. Every profession
 - b. People in the helping professions
 - c. Only public safety telecommunicators
 - d. Us only physically
- 2. The term "burnout" was coined by
 - a. Herbert Freundenberger
 - b. Herbert Hancock
 - c. Herbert Hoover
 - d. Herbert Gronomeyer
- 3. Burnout may appear as
 - a. Cynicism
 - b. Detachment
 - c. Physical exhaustion
 - d. All of the above
- 4. If you're experiencing burnout you may feel like
 - a. You love your job
 - b. You can't accomplish anything
 - c. You're on a great team
 - d. You're truly effective at work
- 5. Burnout is something that
 - a. We notice immediately
 - b. Happens spontaneously

- c. Happens slowly over an extended period of time
- d. We know is happening but we ignore
- 6. The symptoms of burnout include
 - a. Insomnia or difficulty sleeping
 - b. Sadness or depression
 - c. Inability to concentrate
 - d. All of the above
- 7. Emotional numbing is a coping mechanism
 - a. Used to avoid conflict
 - b. Used to avoid our boss
 - c. Used to avoid anxious or stressful situations
 - d. Used to do the work of a public safety dispatcher
- 8. The National Institute of Health identifies three symptoms considered to be signs of burnout:
 - Exhaustion, participate in too many work activities, reduced performance
 - Well rested, alienation from work-related activities, increased performance

- Tired, participate in too many work activities, increased performance
- d. Exhaustion, alienation from work-related activities, reduced performance
- 9. The first step toward preventing burnout is
 - a. Eliminating overtime
 - b. Increased staffing
 - c. Recruiting new employees
 - d. Knowledge
- 10. A manager or director may help mitigate staff burnout by
 - a. Making top-down decisions
 - b. Having employees participate in decision-making processes
 - Understanding that there's nothing we can do to prevent burnout
 - Nothing; dispatchers will always be burned out because of the context of the work

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PRODUCT CATEGORY INDEX

ALERTING, NOTIFICATION	
& SIGNALING	31
ANTENNAS	31
Base Station	31
In-Building	31
ASSOCIATION, ORGANIZATIO	
& GOVERNMENT AGENCIES	31
BROADBAND, WIRELESS	
& NETWORKING SYSTEMS	31
COMBITEDS SOFTWARE	
COMPUTERS, SOFTWARE	24
& DATA SYSTEMS	
& DATA SYSTEMSAVL/GPS	31
& DATA SYSTEMS	31
& DATA SYSTEMS	31 31
& DATA SYSTEMS	31 31 31
& DATA SYSTEMS	31 31 31
& DATA SYSTEMS	31 31 31 31
& DATA SYSTEMS	31 31 31 31
& DATA SYSTEMS AVL/GPS Commercial Services GIS/Mapping MDTS Mobile Applications Paging/Messaging Equipment.	31 31 31 32
& DATA SYSTEMS AVL/GPS Commercial Services GIS/Mapping MDTS Mobile Applications Paging/Messaging Equipment. Public Safety Infrastructure	31 31 31 32 32
& DATA SYSTEMS AVL/GPS Commercial Services GIS/Mapping MDTS Mobile Applications Paging/Messaging Equipment Public Safety Infrastructure Software	31 31 32 32 32
& DATA SYSTEMS	31 31 32 32 32

CONSULTING & SERVICES	3
Computer	3
Construction Services	3
Consulting & Services	3
Engineering	
Facility Design	3
Frequency Coordination	3
Language Interpretation	
Systems/Services	3
Legal	
Licensing	3
Public Safety Technical Consulting.	3
Publications	3
Satellite Services &	
Subscriber Equipment	
Staffing	
System Design	
Training	3
DISPATCH SYSTEMS	
& EQUIPMENT	34
Audio	3
CAD	3
E9-1-1 Systems &	
Location Equipment	3
Headsets	3
NG9-1-1/VOIP	3
Telephone	3
Time Stamp/Synchronization	3
Voice Logging/Recorders	
TOTAL OTAL MARKET AND A STATE OF THE STATE O	

FLOORING	35
FURNITURE/CONSOLES	35
POWER SYSTEMS	21
& EQUIPMENT	
Batteries	35
RADIO SYSTEMS & EQUIPMENT	25
Accessories	
Accessories Conventional/Trunked	
Gateways	33
Microwave Systems	25
& Equipment	
Mobiles/Portables	
P25	
VOIP/ROIP	35
TOWER SYSTEMS	
& EQUIPMENT	35
Buildings/Shelters	
Combiners	
In-Building	
VEHICLES, SYSTEMS	
& EQUIPMENT	35
	35

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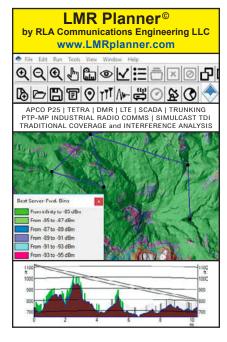
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Davlynn Racadio

Maui Police Department, Hawaii

By Jennifer Kirkland

hey say no man is an island, and that's certainly true in 9-1-1—even if you happen to live and work on one! That's Davlynn Racadio's experience, and she'll be the first to say that teamwork is the key to success.

Davlynn is the administrative supervisor for Maui Police Department's communications division. Maui County is made up of three islands: Maui, Molokai and Lanai. Molokai has their own PSAP, and Maui County dispatches police, fire and EMS for the island of Maui as well as fire and EMS for the island of Lanai. Maui County averages approximately 10,000 9-1-1 calls per month. This workload is handled by 39 telecommunicators and six supervisors, although they have 17 open positions at this time.

As the administrative supervisor, Racadio is responsible for ensuring the team has everything they need to do their jobs, although she describes it as "head gofer" and says it with pride. "Anything they need, I get," she says in outlining her role supporting her team. "We have to be able to rely on ourselves and each other. Flying in support and personnel takes a while." So she makes sure that the telecommunicators have all the resources, tools and training they need to handle any emergency.

Racadio was born and raised on Maui. She liked it so much that she stayed to raise her family, which includes her husband and three boys. She also enjoys spending her free time with her two grandchildren, a 10-year-old girl and a 5-year-old boy.

She joined the Maui Police Department nearly 30 years ago, and has been in her current position for 12 years. She radiates a positive and caring attitude. "I have a smile on my face nearly every day. When I go to work, I'm always thinking 'what's going to happen today, and what can I do to improve it?"

Having experienced a tragic personal loss, she knows what it's like to be on the citizen side of the phone, calling for help. She says, "My goal is to make sure my people

have everything they need, so if it was their family member calling, they have what they need to help." She loves her job and is fiercely protective of her team. "They call me either 'Mom' or 'Auntie,'" she says with pride, and they know she has their backs. She loves being able to drop whatever she's doing and go on the floor to help anyone in need. She will stand behind them and place a hand on their shoulder so they know they aren't alone. "It's very rewarding to be able to stand there quietly and see the situation brought under control. Sometimes it is just a gentle reminder that we are a team and we support each other."

Those relationships are a big part of 9-1-1 operations in the state of Hawaii. Racadio said that, statewide, the PSAPs have great relationships. Most have different CAD systems, but all PSAPs in Hawaii are on the same radio system, and can patch into each other. Their phones are capable of transferring calls back and forth between the islands, so any misrouted calls can be easily routed to the correct PSAP. Hawaii's 9-1-1 Board is unique in the sense that it is made up of state, county and private industry representatives. They meet regularly to foster relationships and handle issues that come up. Racadio is proud to represent the Board at 9-1-1 Goes to Washington and various other events around the nation, including the national APCO conference.

Racadio also fosters relationships between her telecommunicators and responders, facilitating ridealongs between the two. In addition to building rapport, the ridealongs help telecommunicators with area familiarization. Many street names are in Hawaiian, not English, and many tourists who call for help don't know where they are or can't pronounce the street. Racadio knows that the more familiar they are with these, the better telecommunicators can assist.

Despite her nearly 30 years in the business, Racadio isn't ready to retire—far from it! She loves meeting people, talking



"I have a smile on my face nearly every day. When I go to work, I'm always thinking 'what's going to happen today, and what can I do to improve it?"

to them and learning from them. Maui Police Department is currently building out their backup site; once that's complete, Racadio hopes to help renovate their current site. She's currently working with the 9-1-1 Board to collect 9-1-1 surcharges on prepaid phones. She'd like to work on a minimum training standard for the state of Hawaii. She's also looking forward to seeing her center fully staffed. When asked about the best part of her job, Racadio said, "I love what I do. I'm very lucky I have the support of my executive staff to do this." It sounds like the Maui Police Department is very lucky to have Davlynn Racadio working for them! •

Jennifer Kirland, RPL, ENP, is Operations Support Supervisor at Vail Public Safety Communications Center and a member of the APCO Editorial Committee and the Professional Development Committee. She can be reached at jkirkland@vailgov.com.





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APCO's Project 43 Report and How to Make It Work for You

PCO's recent report "Broadband Implications for the PSAP: Analyzing the Future of Emergency Communications" is intended to help public safety telecommunicators, PSAPs and others in the public safety community prepare for the evolving broadband communications technologies that will impact PSAP operations. But what does this really mean for those working in the field?

As the report dives into several topics such as cybersecurity, technology, staffing and operations, it focuses mainly on how communications centers—particularly you, the person on the headset—are going to be affected by changes from NG9-1-land what they can do to prepare. As the report states, "The human element is the value that public safety telecommunicators add regardless of the technology available to them. Ultimately it is the experience and expertise of telecommunicators that best ensure a successful response." While we are moving into a new era for PSAPs, the one element that remains the same is you, the telecommunicator.

The report also notes the importance of training, stating that "Training, while too

often the victim of budget cuts and realignments, is absolutely key in the success or failure of any public safety operations." The report goes on to recommend that "9-1-1 authorities should prioritize funding for the initial and ongoing training that public safety telecommunicators deserve, as an investment that is necessary to provide quality services to the public and emergency responders."

So how can you leverage the information contained in the report? Regardless of your position, your job is going to change with the introduction of new technology such as texting or video and the development of the national public safety broadband network. The best way to prepare is to begin making small changes, whether it is within your training programs, your personal training habits, operational aspects of your PSAP or passing along this report to others in your agency so that you can begin to develop strategies to address the impacts of these changes.

Each section of the report contains a set of recommendations. These are the action items for all PSAPs. Some of them are small

changes that can be implemented immediately, and others are more long term. For example, in the operations chapter, recommendations focused on your PSAP's quality assurance/quality improvement program, and one recommendation is to include, "Update pre-scripted 'interview' questions for each public safety discipline (police, fire, EMS)." Other recommendations may require more resources, for instance, "PSAPs can expand career opportunities by crafting new positions and staffing options" or "consider more flexibility in hiring, including looking to other public safety disciplines for candidates that did not end up completing the recruitment process, but may be interested in public safety telecommunication as a career."

The objective is not to get overwhelmed, but to begin by taking components of the report and applying them to your agency. Ultimately, Project 43 is meant to serve as a "starting point to guide additional efforts to serve the public safety communications community." This includes you, the telecommunicator, and all those on the frontline.

To view the report online, visit www. apcoP43.org. ●



Pages From the Past

ystems operations must... be as modern as possible, taking advantage of all developments, operational and administrative as well as technical," wrote John H. Atkinson, assistant communications supervisor for the county of Santa Clara, California, in his March 1956 APCO *Bulletin* article, titled "Let's Modernize."

One such operation Atkinson offered as an example of contemporary efficiency was logging: "The status of units is logged on a small ticket about one and a quarter inches wide and three

inches long, with a hole in the top. Across the console top are a series of pegs. The unit's status is logged on the ticket, time-stamped, and hung on his peg. Using this method, a quick glance will tell the immediate status of each mobile unit."

Though the mid-century method seems antiquated compared to today's operational standards, telecommunicators will surely agree with Atkinson that keeping systems operations "as modern as possible" is not only important to public safety communications, but to the public we serve.

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