INTERNATIONAL ASSOCIATION OF EMERGENCY MANAGERS

IAEM Bulletin

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IAEM 2020: Visioning the Future of Emergency Management

2020

Nov. 13-18, 2020 Long Beach, CA

What IAEM Is Doing to Help You

Message to IAEM Members Regarding Dues During COVID-19 Response

Apr. 9, 2020

Dear IAEM Members,

The International Association of Emergency Managers' leadership understand that members need their Association and its resources most during times of crisis. IAEM will not abandon any emergency manager member because they have not had time to process an invoice for their membership dues. Members whose membership dues are currently in the queue for renewal or cancellation will receive an additional 90-day grace period. This applies to all memberships to be paid by June 30, 2020, and includes any memberships that expired in March 2020.

Extending the grace periods may create an interruption in IAEM's cash flow, but we realize that people, businesses and jurisdictions around the world are grappling with a much more severe economic impact. IAEM's leadership have been good stewards of the Association's resources, and as a result, IAEM has a reserve fund that will bridge the gap.

We know the COVID-19 response involves emergency managers in all aspects of the field, from local, state, tribal, and federal, to healthcare, college/university, private and non-profit partners, and consultants. We applaud the work you are doing throughout the world in your many roles in this global response. Through these measures, we will keep IAEM membership and our EM community together to weather this pandemic.

Please let us know if there are additional ways we may serve you during these difficult times.

Sincerely,
Beth Armstrong, MAM, CAE
IAEM CEO

IAEM-USA Past President Nick Crossley, CEM (left), and IAEM-USA First Vice President Judd Freed, CEM (right), met with FEMA Administrator Pete Gaynor at FEMA Headquarters on Mar. 5, 2020.

How IAEM Is Helping You

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IAEM Response to Pandemic

IAEM has taken the following actions to support its members:

■ Analyzed data on status of dues collections and comparative 2019 revenue data; changed ClearVantage programming and all dues renewal messaging to add 90 days to the grace period for those whose invoices are due through June 2020. Reinstated 126 whose membership was cancelled in March 2020.

■ Coordinated with hotel and other conference-related partners in the hospitality industry to minimize the impact on IAEM due to changing plans for meetings and conferences.

■ Established an illness hotspot monitor used by tens of thousands of emergency managers.

■ Coordinated with Apple, Microsoft, UCF and others to fund the above and establish it as a longer-term robust portal for future crises.

■ Maintained a high level of media relations, handling multiple daily press inquiries.

■ Arranged and helped the IAEM-USA Disaster Cost Recovery Caucus prepare and produce three webinars to date, with four more webinars planned, and a companion FAQ document addressing COVID-19 costs;

■ Worked with organizations asking to partner with IAEM on educational content delivery related to COVID-19, including the Naval Postgraduate School's Center for Homeland Defense and Security (CDHS) and the nonprofit group Climate Central. Launched a survey Apr. 2 to inform a webinar series with CHDS. Patnered with CHDS and NEMA on the first two webinars in that series (see page 31), and partnered with Climate Central on

two as well. The COVID-19 pandemic has created opportunities to accelerate distance learning to support you during these trying times. We appreciate those who participated in the survey to determine topics of interest, as you navigate the pandemic's consequences in U.S. cities and states. Thank you for being part of the latest initiative in our ongoing collaboration to support the educational needs of the IAEM membership.

■ Established a process, created, and pushed out messaging to connect programs and organizations needing extra work force with available student talent, and are coordinating with Georgetown University to add resources to this effort. This arrangement is available to all IAEM members worldwide.

■ Revised IAEM certification-related deadlines and current work plans for applicants, commissioner recruitment and those in the sponsored U.S. FEMA Grant cohort.

■ Worked with the U.S. National Weather Service to help address sheltering messaging related to severe weather given contagion concerns.

Additional Actions

■ **Beth Armstrong, IAEM CEO**, has worked with our partner associations, such as National Emergency Management Association and National Association of Counties, to share information pertinent to emergency managers during the pandemic.

■ **Thad Huguley, IAEM Government Affairs Director**, has worked with partner organizations, such as DHS/FEMA, the White House, the National Emergency Management Association and the National Association of Counties, to collect and disseminate pandemic information. He also successfully worked with partners on Capitol Hill to signifi-

cantly boost EMPG funding as part of the U.S. CARES Act.

■ **Dawn Shiley, IAEM Communications & Marketing Manager**, has worked with close to 20 journalists (most of whom kept looking for more referrals) to find subject matter experts among the IAEM membership to be interviewed on COVID-19.

■ **April 2020 Issue of the IAEM Bulletin**: This issue of the Bulletin is a special focus issue on "Black Swan Events: Pandemics." At the time that the 2020 topics were selected by the IAEM Editorial Committee and approved by the Board, the "coronavirus outbreak" was not officially a "pandemic" yet.

■ **Creation of COVID-19 Resources page on the IAEM website**. This page, created on Mar. 4 and located at www.iaem.org/resources/COVID-19, is continually updated, with new resources or news that centers around providing resource and news links useful to emergency managers during the pandemic. There is so much information posted that we'll soon be transforming the page into a web section of its own to make it easier to locate what you need. IAEM members are invited to suggest additions.

■ **IAEM-Canada held a Mar. 19 webinar** on "Pandemic Risk Communication & Business Continuity Planning," with the recording posted.

■ **A FEMA PrepTalk** on "The Next Pandemic: Lessons from History," was held on Feb. 20, 2018. IAEM is a partner with FEMA on PrepTalks, and recordings of the PrepTalk and the audience Q&A are posted on the COVID-19 Resources and News page. ▲

From the IAEM-USA President

These Are Unprecedented Times

By Teri Smith, CEM, CPM, IAEM-USA President

On behalf of the IAEM-USA Board of Directors and our staff management team, I want to take this moment to recognize that these are unprecedented times. We are in the midst of a growing pandemic with COVID-19, and while it affects all of us, it affects some more than others.

For many of us, this is the first experience with a pandemic in our professional careers. Even for those of us practicing for longer than that, it is arguably the most impactful disease outbreak we have seen.

We have been closely monitoring the spread of COVID-19 throughout the United States, following guidance from the CDC and local health authorities, while consulting with member experts to ensure that we have the right plans and resources in place to safeguard your health and well-being.

Greatest Asset

Our greatest asset is you! Nothing is more important. The ongoing public health response strategy is to contain the outbreak and prevent sustained spread in the United States. To minimize unnecessary risk and out of an abundance of caution, IAEM-USA took the extra measure of postponing our annual board retreat. With the COVID-19 situation evolving quickly, we believed we needed to act decisively in order to minimize risk and do our part to slow the spread of this outbreak across local communities.

Constantly Evolving Situation

We are monitoring COVID-19 closely as it evolves, always putting health and safety first. When it is appropriate and safe for all, we will coordinate a new date to conduct our business.

We recognize that COVID-19 is evolving so rapidly that response today may be different from response tomorrow or next week. We are committed to providing updates to you. **Please check IAEM.org/ resources/COVID-19 frequently for** the latest resources and guidance on COVID-19, **including an illness tracker.**

Our hearts are with our members who are in the midst of this crisis, and we wish everyone health and safety. Make sure and take care of yourself! Practice good health habits that help your immune system work effectively: get appropriate sleep; manage stress; drink plenty of fluids; and eat nutritiously.

Looking Forward

If items come up that you think warrant our attention, or that you have questions or concerns about, please do let us know. We will do our best to address your concerns honestly, quickly, and directly. You can reach me at USAPresident@ iaem.com. ▲

– Teri

IAEM-USA Conference Chair Mike Gavin, CEM (left), and IAEM-USA First Vice President Judd Freed, CEM (right), find a new use for their IAEM logo bandanas.

CEM® Corner
Sample Questions: Exercising Continuity Plans for Cyber Incidents, Part 2

By Daryl Lee Spiewak, CEM, TEM, MEP, Lead Trainer for the CEM® Commission, Chair of the IAEM Editorial Committee, and Past IAEM President (2003-2004)

Last month we began our discussion on Resilient Accord – Exercising Continuity Plans for Cyber Incidents (IS-523), one of the new source documents used in the new version of the AEM®/CEM® exam. This month we will continue our discussion with an overview of cybersecurity.

Definition

According to IS-523, cybersecurity is "the protection of information and property from theft, corruption, or natural disaster while allowing the information and property to remain accessible and productive to its intended users." The definition tells us that cybersecurity applies to more than just the physical computer systems themselves. It also applies to the data contained therein, as well as the ability of the organization or entity to maintain the "confidentiality, integrity, and availability" of their computerized systems.

Know that the computer systems in the definition above, often referred to as *cyberspace*, are "the interdependent networks of Information Technology (IT) infrastructures that include the Internet, telecommunications networks, computer systems, and embedded processors and controllers in critical industries." So, we see that our cybersecurity efforts will encompass a lot more than just the PCs, laptops, and servers with which we are familiar.

Managing Risk

Procedures for managing the cybersecurity risk are similar to previous discussions we have had regarding risk – the Threat, our Vulnerability to that threat, and the Consequence should that threat occur. The formula for calculating risk, according to the US Department of Homeland Security and FEMA is: **Risk = Threat x Vulnerability x Consequence**.

A cyber threat can present itself from a variety of causes. Most of us will immediately think of the human threat caused by hackers, terrorists, criminals, and foreign intelligence services. Few consider human errors and equipment failures. Then what about natural hazards, such as floods, earthquakes, fires, winter storms, tornadoes, and hurricanes? They also are a threat to the cyberspace in which our systems operate and should be included in our threat and hazard identification risk assessment (THIRA) and mitigation planning.

Emergency managers should work with their IT staff to identify the threats and mitigate against them to reduce vulnerabilities and enhance resilience.

Remember, too, experience has demonstrated that "fixing one vulnerability often opens up additional vulnerabilities, telling us we are only as strong as our weakest link." So be thorough.

Don't forget those mobile systems. As we are expected to do more quicker, we rely on various mobile systems, including apps, to stay connected and do our work. They need to be addressed in our risk management program too – physical and cyber protection.

Because of our interconnectivity, cascading failures are a huge risk.

When one part of our cyberspace fails, it could easily result in multiple failures. For example, one mobile cell phone gets a computer virus or malware. It then connects to the organization's internal network, which becomes infected. Other computer equipment that connects to the infected network also becomes infected. Systems crash, and operators get locked out of control systems. People can no longer communicate over the network; citizens cannot connect and obtain or provide information; and other equipment begins to fail as control mechanisms no long function. The cascading effects can be horrendous if not properly mitigated against.

Cyber Threat Consequences

The consequences of a cyber threat can be huge. Many will recall Y2K and the fears that event caused. The world invested billions of dollars over years to mitigate against that threat, and it worked. But what if it didn't? Think about that.

Our "physical and cyber infrastructures are inherently intertwined, and a disruption in one can have implications on the other." Many are familiar with private data being hacked and made available for sale or visible on the Internet. The news reports this type of cyber event way too often.

Attacks on our cyberspace can *threaten the public health or safety*. Consider a hacker changing a government or company web page and posting false or incorrect procedures for people to follow.

CEM® Corner

These attacks can *undermine public confidence*, thus not follow recommendations, procedures, protocols, or orders of elected officials. They can *negatively impact local and national economies* by disrupting supply lines, hurting banking and other financial organizations, and creating panic buying of supplies, leaving store shelves bare. Finally, cyberattacks can *diminish the security posture of the Nation* through the actions outlined above and through compromising the decision process and ability of our elected and appointed officials to act on our behalf.

As with other threats, all cyber risk can't be removed. But we can plan for it and take appropriate prevention and mitigation actions to reduce the negative consequences of the risk. Emergency managers should ensure that their organization's/entity's continuity plans address their cyber risk, then train on the plan and exercise it with an eye towards constant improvement and risk reduction.

Practice Questions

Here are two core-type questions for our analysis in this article.

1. Which of the following statements is TRUE regarding cybersecurity?

a. Cybersecurity is the Threat x Vulnerability x Consequence.

b. Cybersecurity is the process used to identify, control, and minimize the impact of uncertain events.

c. Cybersecurity is the increasing frequency, sophistication, and scale of cyber incidents.

d. Cybersecurity is the protection of information and property from theft, corruption, and natural disasters.

This question is asking you to know the definition of cybersecurity. *Response a* is the formula we use to calculate risk from a specific threat. Therefore, Response a is not true. *Response b* might be correct on a first look, until we recall this is the definition of risk management. Therefore, response b is also untrue. *Response c* is a description of the trend the world is experiencing in cyber events. So, this response is also incorrect. *Response d*, then, by the process of elimination, appears to be the correct response to this question, but we should still review it. Upon review, we see that it is indeed correct, though the definition presented could have included the requirement to have our information technology system to remain accessible and productive to its intended users. Therefore, the only correct response is **d.** See IS-523 - *Resilient Accord – Exercising Continuity Plans for Cyber Incidents*.

2. Physical and cyber infrastructures are inherently intertwined, and a disruption in one can have implications on the other. Which one of the following statements is TRUE regarding Cyber Consequence Trends?

a. Cyber Consequence Trends threaten public health or safety.

b. Cyber Consequence Trends enhance public confidence.

c. Cyber Consequence Trends positively impact local and national economies.

d. Cyber Consequence Trends improve the security posture of the Nation.

This question is asking you to know about cyber consequence trends and their impact, and then identify the true statement from a list of four possibilities. *Response a* appears true, because a cyberattack can threaten the public's health or safety for a variety of reasons, the least of which is propagating false or dangerous information. Let's review the other options first before selecting this response. We see that *Response b* is not correct because a cyberattack could easily reduce public confidence if they are receiving incorrect information, changing information, or no information. *Response c* appears to be correct at first, because a cyberattack could result in more work and contacts to recover from it. However, on closer inspection, we come to the conclusion that it isn't totally correct because a cyberattack could easily cost an organization a large amount of resources to repair and it could totally disrupt the entire economy of an organization, city, state, or nation. *Response d* is incorrect, because the trend of increasing and more disruptive cyber trends actually decreases the security posture of the Nation. Therefore, the only correct response for this question is **a.** See IS-523 - *Resilient Accord – Exercising Continuity Plans for Cyber Incidents*.

When reading the questions and responses, be sure you understand exactly what the question is asking of you, and read each response before selecting the correct one. It is too easy to get distracted and select a response that appears to be correct at first glance, but is not the correct response for the question being asked.

This ends the second of our discussions on Exercising Continuity Plans for Cyber Incidents. Next month we will complete our discussion by focusing on a Continuity/Cybersecurity Working Group. As usual, please send any questions you have about the examination or the certification process to me at info@iaem.com , and I will address them in future articles. ▲

Call for IAEM Certification Commissioners: Class of 2023
Deadline for Applications: Extended to Aug. 1, 2020

■ Download complete Call for Commissioners here.

■ Download Chart of Commissioner categories here.

■ Candidates interested in serving on the Certification Commission should submit the following information to IAEM Program Manager, Kate McClimans (KMcClimans@iaem.com), by the **extended deadline of Aug. 1, 2020**.

The IAEM Certification Commission is looking for candidates to fill at least four commissioner openings for the Class of 2023, serving from Jan. 1, 2021 to Dec. 31, 2023.

Duties of Commissioners

The Certification Commission conducts electronic reviews using the online system. Every other month, commissioners are expected to review, on average, 12-20 applications, based on volume, within a 30-day window. Interested applicants must be detail oriented, responsive via email and phone, and plan to devote approximately 30 hours per review month (180 hours yearly) to online reviews. Commissioners also draft notification letters to candidates so commissioners must possess clear, concise writing skills.

The Certification Commission has one in-person meeting per year as well as quarterly conference calls lasting between 1-2 hours to discuss policy and procedure changes. Occasionally, commissioners may be asked to serve on a short term ad hoc working group related to a topic of discussion on the Certification Commission. IAEM is prepared to cover the travel costs for the in-person meeting.

We are specifically looking for individuals representing the Emergency Management fields of: **State**, **Military**, **Private**, **Local**, and **Not-for-profit**. However, any interested USA CEM® is encouraged to apply as we are looking to identify people who are willing to serve as alternates to represent each EM category should seats become available mid-term. The Chart of Commissioner categories can be found here.

Qualifications

Commissioners must be current CEM®s, and successfully recertified at least once, with a demonstrated knowledge of emergency management, desire to serve, ability to work without bias and maintain confidentiality as well as the credibility of the AEM®/CEM® credential. Lifetime CEM®s are not eligible to serve as Commissioners.

Applicants should ensure they have access to a computer without security limitations to access zip, pdf, .msg, jpeg, gif, .mov, PowerPoint, and Word files. Access to publisher is a benefit. Users should be using the current version of any of the major browsers (latest Firefox, Chrome, Safari or IE). Interested individuals should identify themselves as being computer savvy and have a willingness to learn how to use the online application portal.

Strong Applications Will Demonstrate Desired Criteria

Strong applications will provide examples to demonstrate the following desired criteria:

■ Articulates how one's own experience in emergency management translates into being a good Commissioner.

■ Ability to meet time commitment required by the Commission.

■ Ability to work in an unbiased and confidential manner.

■ Demonstrated commitment to promoting the IAEM Certification Program.

■ Experience using digital/online tools.

■ Ability to work as a member of a team.

■ Clear, concise writing skills and attention to detail.

Information to be Provided by Candidates

Candidates interested in serving on the Certification Commission should submit the following information to IAEM Program Manager, Kate McClimans at KMcClimans@iaem.com, by **June 1, 2020**:

■ **Letter of intent** – expressing desire to serve as a commissioner as well as willingness to devote the necessary time to participate in online reviews and commission meetings.

■ **Personal commissioner qualities** – a short narrative (maximum of two pages) describing the qualities the applicant will bring to the commission. Include the date of CEM® initial certification and recertification(s).

■ **Qualification(s) to serve** – up to a one-page description of the qualifications for the category(ies) of participation to be considered as described in the chart of Certification Commissioner categories. Application must clearly indicate which category the candidate's **current** employment represents.

■ **Current resume**.

■ **One letter of reference from current supervisor** – to verify and support Commissioner criteria as well as to show support for the time commitment.

■ **One letter of reference from a current CEM®** – to illustrate professionalism as an emergency manager and commitment to IAEM certification program. Additional letters of support may be submitted to help highlight candidate's attributes. **NOTE**: If candidate's supervisor is also a CEM®, only one letter is required as long as the reference is able to address both bullet points.

Incomplete applications will not be considered. Upon receipt, candidate will receive confirmation that information was received by IAEM HQ. Late submissions may be held over for the following year. Candidates will be notified of the results this fall.

New Incentives

1. The in-person meeting in 2020 will occur as a pre-conference event at the IAEM Annual Conference in Long Beach, California, on Nov. 14. Travel and a night of lodging will be covered by IAEM for new Commissioners to attend training.

2. All Commissioners who successfully complete one term of three years will have their next recertification fee waived, if not covered by their employer. ▲

Extension of Commissioner Application Deadline to Aug. 1

IAEM is extending the deadline to apply for an open position on the Certification Commission. Due to the COVID-19 pandemic, applications will be accepted until **Aug. 1, 2020**. Application details can be found on the IAEM website on the Certification News page or on page 6 of this issue. Contact Kate McClimans at KMcClimans@iaem.com with any questions. ▲

CEM® News

Meeting Deadlines for Application/Exam Process

Due to the demands of COVID-19 related duties, certification candidates concerned about meeting a deadline in the AEM®/CEM® application/exam process should contact IAEM Headquarters staff at info@iaem.com.

We recognize that your priority and focus is responding to the pandemic at this time, and IAEM staff will provide a response and further details to each request received. ▲

**Learn about the CEM® Program and apply to be a
Certified Emergency Manager
or Associate Emergency Manager
candidate at
www.iaem.com/CEM**

Illness Monitor for U.S. Hot Spots Now Available

If you have not opted in to receive email from IAEM Headquarters, you may have missed the news that the Illness Monitor for U.S. Hot Spots is now available.

As the coronavirus (COVID-19) outbreak continues to spread around the world and in the United States, information is a key element needed by emergency managers for planning. **We want to make you aware of a resource developed by IAEM member Eric Kant, in partnership with IAEM and NEMA**.

Based on the portal activated during the past four years to provide consolidated open source information during hurricane responses, the Illness Monitor for U.S. Hot Spots is

updated regularly with the latest trending illnesses and information relative to the COVID-19 outbreak.

The portal provides:
■ A real-time illness monitor;
■ A COVID-19 FAQ, which charts cases; and
■ a COVID-19 GIS Hub.

A short video tutorial demonstrates how the site provides value to users. Thanks to Sitscape, the portal has rapid visual interactive Exploratory Data Discovery (EDA). With just a few mouse-clicks, users can create visually engaging and highly interactive visualizations of data from Sickweather and SABER.

Questions about the portal may be directed to UnitifedPortal@TrustedOps.com. ▲

IAEM Annual Conference News

Two Speaking Opportunities Still Available

There are still opportunities to be a speaker at the IAEM 68th Annual Conference, even though the breakout session submission deadline has passed.

Call for Abstacts for Poster Showcase
Submission Deadline: Apr. 24, 2020

AEM is now accepting abstracts for the Poster Showcase to be held at the IAEM 68th Annual Conference & EMEX in Long Beach, CA. IAEM's Poster Showcase is an information-sharing event.

Participants have an opportunity to convey to a wide audience the significance of their research project, practice, or general findings to practitioners and scholars in the emergency management community. Choose to participate in a competitive division or non-competitive division.

All participants will showcase their poster in a special presentation session on Wednesday, Nov. 18, 2020. Participation earns credit towards the IAEM Certification Program under *Professional Contribution Category F, Speaking*.

Learn all the requirements and how to submit in the Poster Showcase Guidance. View the recorded webinar on Tips for Poster Showcase here.

The deadline to submit is Apr. 24, 2020, at 11:59:59 p.m. CST. ▲

Feedback from 2019 Poster Showcase Participants

"I will definitely participate again! It is a great way to share your research and network with other EMs."

"Loved how the poster display at the IAEM Annual Conference is in a high-traffic location. Attendees were always looking at them during breaks."

"As a student, it was a great way to get public speaking experience and showcase my research!"

"The coach/mentor process was top notch! It provided another set of eyes, someone to share my ideas with, and helped me focus my efforts into a poster. I was very confident about presenting."

Feedback from Conference Attendees Who Were Present at the 2019 EMvision Talks

"I believe the EMvision Talks embody what IAEM is all about. It's an opportunity for emergency managers in the field to discuss trends and new ways to bring value to the field."

"These are my favorite, always excellent!"

"Fabulous array of speakers and topics."

"Outstanding presentations! One of the best features of the conference."

Opening Soon: Call for Speakers for the EMvision Talks

AEM's EMvision Talks are modeled on the well-known TED™ Talk format. The EMvision Talks provide a forum for people to share a personal connection to an idea, experience or passion related to emergency management, leadership, communication, community engagement, or other related topics.

Talks are limited to seven minutes and will be held live on the plenary stage on Tuesday, Nov. 17, 2020, at the IAEM 2020 Annual Conference in Long Beach, California.

Learn the requirements and how to submit here. **Call opened Apr. 6 and closes May 8, 2020, at 11:59:59 p.m. CST**.

View the EMvision Talks from the 2019 annual conference. ▲

Call for IAEM Scholarship Commissioners: Class of 2022
Deadline to Apply Is June 30, 2020

The IAEM Scholarship Commission is seeking candidates to fill eight openings in the Class of 2022, serving from Jan. 1, 2021, to Dec. 31, 2022. The Scholarship Commission is appointed by the IAEM-USA Board of Directors to conduct the business of the Scholarship Program. The **major duties** include:

■ Guide and participate in the annual scholarship awards process. The Commission reviews past application procedures to provide beneficial updates and guidelines prior to an application period. Online application reviews are conducted annually, and commissioners are expected to review, on average, 20-30 applications, based on volume, within a 30-day window. Interested applicants must be detail-oriented, responsive via email and phone, and possess clear, concise writing skills.

■ The commission holds monthly meetings to conduct the business of the commission. Eleven meetings a year are held in the GoToMeeting portal. One in-person meeting is conducted at the IAEM-USA Annual Meeting, and commissioners are encouraged to attend. Occasionally, commissioners may be asked to serve on a short-term ad hoc working group related to a topic of discussion on the Scholarship Commission.

■ Assist with fundraising and marketing efforts.

■ Recommend program policy changes and status to the IAEM-USA Board of Directors.

Commissioner Attributes

■ A commissioner should have an appreciation of students and the study of emergency management.

■ A commissioner should understand and have an appreciation for the emergency management career field.

■ A commissioner should possess experience in the field of emergency management and have demonstrated longevity. (This attribute is not necessary for the IAEM student member representative and may not be relevant to the past scholarship recipient representative if the recipient is a recent graduate with little experience.)

■ A commissioner should have proficiency in the industry.

■ A commissioner should be able to attend meetings, conduct reviews, assist in commission projects, and help with fundraising.

Open Positions

We are specifically looking for individuals to fill specific seats on the Commission. However, any interested individual is encouraged to apply, as we are looking to identify people who are willing to serve as alternates to represent each category within the Commission should seats become available mid-term. The chart of commission categories may be found here.

The following positions are open in the Class of 2022, serving from Jan. 1, 2021, to Dec. 31, 2022:

■ Scholarship Program Donor.

■ IAEM-Oceania Council Representative.

■ IAEM-USA Council Representative.

■ Member-at-Large, Global (Must be an IAEM member and not be a member of the USA Council).

■ Member-at-Large, USA.

■ Past Scholarship Recipient.

■ Private Sector Industry Representative.

■ Student Member Representative (must be an IAEM member and a current student).

How to Apply

To apply to be an IAEM Scholarship Commission member, you must submit an application packet to IAEM Scholarship Program Director Dawn M. Shiley, shiley@iaem.com, by **June 30, 2020**. The packet must include:

■ **Letter of Intent**:

♦ Expresses your desire to serve on the Commission.

♦ Indicates that the applicant will be able to devote the necessary time to conduct annual application review, attend meetings, and help with projects and fundraising (at least 60 hours per year)

♦ Indicates the Commission position (or positions) that you are qualified to fill and why.

■ **Current Resume** (Limit to two pages maximum).

Strong applications will provide examples to demonstrate the following desired criteria:

■ Articulates how own experience in emergency management translates into being a good Scholarship Commissioner.

■ Ability to meet time commitment required by the Scholarship Commission.

■ Ability to work in an unbiased and confidential manner.

■ Demonstrated commitment to promoting the IAEM Scholarship Program.

■ Experience using digital/online tools.

■ Ability to work as a member of a team.

■ Clear, concise writing skills and attention to detail.

Book Review

Three Seconds Until Midnight

By Daryl Lee Spiewak, CEM, TEM, MEP, IAEM-USA Editorial Committee Chair

The title of this book brings to mind the nuclear Doomsday Clock, representing the likelihood of a manmade global catastrophe. In 2020, that clock is set at 100 seconds until midnight. The premise of this book tells us we are much closer to a global catastrophe from a pandemic, in 2019, than we are from nuclear war; only three seconds away from global catastrophe.

Authors Dr. Steven Hatfill, MD, Robert Coullahan, CEM, and Dr. John J. Walsh, Jr., Ph.D., go into great detail explaining how woefully unprepared the USA (and the world) is to respond to a global pandemic of the scope of the 1918 Influenza Pandemic that killed an estimated 50 million worldwide and 675,000 in the USA. This is apropos, because much of what they discuss and recommend is highly applicable to what the world is going through right now as we respond to the coronavirus pandemic infecting the world's population.

The book consists of 30 chapters, 936 pages, making it a long one to read. However, the prose is easy to read, the discussion very interesting, and the recommendations very valuable, which makes it difficult to put down.

The material is well-researched and documented, so the reader can go back to the source for verification and further research on topics of interest. Links are included in various chapters to download current documents and plans. If you are like me, you will find yourself absorbed in the story line and taking copious notes to research later as well as to apply to current pandemic plans.

This story is so much more than a simple comparison of our state of preparedness in relation to a global pandemic event similar to the one that occurred in 1918. Historical events provide a foundation and reference point for the remainder of the book. While this is a critical part of the book, it isn't the only important part. For me, the most important part of the book was the recommendations for improvement in our preparedness to enhance our ability to respond to the next global pandemic event. Readers will encounter many areas with which all emergency managers, medical personnel, and leaders at all levels should become familiar.

The first part of the book provides a short, but interesting medical lesson. It describes viruses, various flu viruses, viral diseases, and pandemics in terms that are easy to understand. Then there is a discussion of the historical threat of flu pandemics. The story goes on to describe the world's infrastructure complexity and how pandemics will negatively impact them just because of how they are constructed and how they operate.

The next part is one I found very interesting because it dealt with the state of pandemic planning in the USA. Here the authors go into the history of pandemic planning, with special emphasis on planning and preparedness activities post 9-11. One area particularly appropriate now is the concept of home medical care. This became mandatory back in 1918, as local hospitals became overwhelmed and were unable to meet medical surge requirements. Medical experts and leaders at all levels are telling us to perform these same tasks again now to prevent overwhelming our hospitals from the coronavirus. The authors describe the dangers involved and offer recommendations to reduce those dangers.

Additional major problems with pandemic preparedness are then discussed. The major problems include travel, travel restrictions, and the potential lack of truthful reporting by the government and the national media.

As interesting as all this is, the most valuable part of the book is the last section. This section discusses new solutions for pandemic preparedness. It includes discussion and recommendations on medical surge capability, an improved national pandemic influenza response plan, improved epidemic surveillance and monitoring, NORTHCOM operations, public affairs management, emerging threats and national security, the pandemic fusion center, and the concept of viral forecasting. Take notes here, and apply them to your own pandemic plans.

The book is available on Amazon in both paperback and Kindle editions. I highly recommend that all emergency managers read this book, take notes, and refer back to it periodically. It will assist you to greatly improve your own pandemic response plans, and it will provide many ideas for exercise objectives. ▲
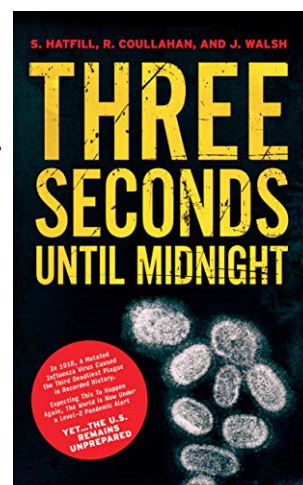
IAEM in Action

IAEM and Harvard NLPI held a Think Tank on "The Future and Challenges in Emergency Management for 2020 and Beyond" on Mar. 4, 2020. Left to right: FEMA Administrator **Pete Gaynor, CEM**; New York City Emergency Management (NYCEM) Commissioner **Deanne Criswell**; Moderator **Richard Serino**, distinguished visiting fellow, Harvard NPLI, and a senior advisor at MIT's Urban Risk Lab; and **Chelsea Firth**, IAEM producer. The discussion focused on current challenges the EM field faces and where speakers see the field going. *View the Think Tank Recording*.
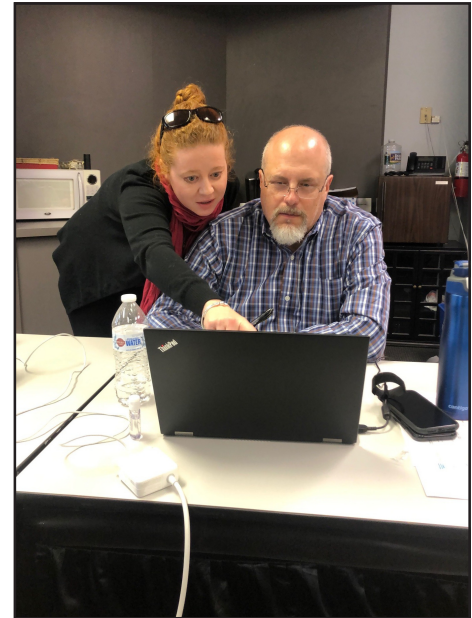
EMAP Executive Director Nicole Ishmael and IAEM-USA First Vice President Judd Freed, CEM, who also serves as EMAP Treasurer, met at IAEM Headquarters on Mar. 5, 2020, to work with staff on EMAP budgeting and related matters.

IAEM-USA First Vice President Judd Freed, CEM, and IAEM-USA Past President Nick Crossley, CEM, met with Aaron Davis and Johanna Hardy of the U.S. House Transportation and Infrastructure Committee on Mar. 4, 2020, to discuss various emergency management-related legislative proposals pending in the committee.

IAEM-USA First Vice President Judd Freed, CEM, and IAEM-USA Past President Nick Crossley, CEM, met with Alexa Noruk and Chris Mulkins of the Senate Homeland Security Committee on Mar. 4, 2020, to discuss the role that local emergency managers have in responding to the coronavirus (COVID-19) outbreak.

Disaster Zone

How and When to Brief in the EOC

By Eric E. Holdeman, Senior Fellow, Emergency Management Magazine,
blog at www.disaster-zone.com

Briefings in an activated EOC come in all shapes and sizes. In truth, there are more bad briefings than there are good ones. Briefings are not meetings, facilitated discussions or roundtables. If you hear a good briefing, you will recognize it immediately.

Most of what I share here will apply to almost every briefing scenario, but admittedly there can be exceptions to the rule. First and foremost, a briefing must provide the information that everyone needs to know to set the stage for what has happened and is happening. It allows everyone hearing the briefing to get the "world picture" of the event and then act accordingly within their role.

Personally, I like to have briefings take place using a map. This provides a visual sense of space and timing to what is being said.

Start the briefing with the national situation. I've found this idea to be confusing to some. What else is happening in the country/ state/region that might impact your event and the resources that are available? If your disaster isn't the Number 1 priority, then knowing that and sharing it allows people to have a better expectation for what resources might be coming or being withheld. The same applies to telling everyone what is happening in your jurisdiction. The current COVID-19 is a perfect example of the need for briefing the national and even the world's situation.

Then address what is happening in adjacent jurisdictions. We live in an interconnected world, and to understand the size and scope of an event, you need to include those cities, counties and states you call neighbors. It also means that the map you are briefing from needs to extend beyond the borders of your jurisdiction.

Next, I believe in briefing the weather, no matter what type of event you are dealing with. The weather is a variable that can significantly impact your response and recovery operation.

Two more key elements must always be covered when briefing an operation: logistics and the supply of resources. Much of a disaster response is about moving people and things to where they are needed, so it's critical that the location (map) and routes (map) of logistics be covered.

The other element to always cover is communications. First of all, address the status of communications with all parties engaged in the disaster response. If everyone has good communications – great! If there are problems, point them out, and of course, review what communications channels are being used for the various aspects of the operation.

For most disasters, briefings might take 10 minutes at most. For more complicated and extensive ones, you may need a bit more time to cover everything. To accomplish the above, you need to have just one person doing the briefing. Do not do a round robin around the room for people to add details.

The frequency of briefings is another matter. Establish a briefing schedule so those working in other rooms will know when to be in attendance. Early in a disaster, you might have a very quick briefing every hour or two, as the details of what has happened become known. Once a rhythm is established, these can be cut back, depending on the circumstances and how dynamic the event and circumstances dictate. Last, I believe in a "ring the bell" briefing when something significant has just happened that everyone needs to know about. These are quick announcements, e.g., "The second tower has collapsed." And don't forget to point to the map, so people know where events are happening. ▲

This article originally appeared in Emergency Management Magazine in 2014.

April 2020 Feature Articles – "Black Swan Events: Pandemics"

**The IAEM Bulletin, which is a benefit of IAEM membership, is in its 37th year
of providing information, resources, and ideas for IAEM members.
Invite your colleagues to check out the two free sample issues at www.iaem.org/Bulletin.**

IAEM Jobs Board Adds Category for COVID-19 Related Jobs: Contact IAEM to Post at No Cost

Do you need short or long-term employees related to COVID-19 response and recovery? Are you searching for employment and willing to fill a position needed to respond to the current pandemic?

IAEM has enhanced its Jobs Board to assist members and others in their search for jobs and job applicants for jobs related to COVID response. There is now a category on the home page of the IAEM Jobs Board for COVID-19 jobs. Look under the categories at the bottom of the page.

If you know of an open position related to COVID-19 in the emergency management field, we will post it at no cost. Please reply or email your listing to Chelsea Firth, Chelsea@iaem.com.

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IAEM members who read the *IAEM Bulletin* frequently play a key role in selecting, purchasing, and using emergency equipment, supplies, products and services.

Make sure your advertising dollars are reaching this audience.

The 1918-1919 Influenza Pandemic as a Reference

By Kay C. Goss, CEM

Personal Connection

A close member of my family, a male aged 31, contracted and survived that flu. It was a matter of great family and community pride; he was a local folk hero. I was given the many details from an early age. He served as district plant chief for Southwestern Bell Telephone Company in Oklahoma City, and was promoted to national security communications for WWI. In this capacity, he spent a lot of time at Fort Sill, Oklahoma, working with the Army Command, setting up and servicing their internal and international communications.

He was quite concerned about national security, because the United States needed to present a positive and strong view to the world, especially during the war. He observed many people wearing masks, but viewed them as ineffective.

His mother was a practicing Christian Scientist, so he did not receive any medical assistance, but took leave from his job and went to Roseburg, Oregon, for the summer to reside with relatives for recovery and the much-needed moral support. It was clearly not to go to a place to avoid the pandemic.

The Corvallis Times indicates that the list of quarantined homes, listed in the newspaper every day, quoted Dr. Emil Washington in his memoirs from his medical practice at the time of the pandemic:

"Whole families would be sick at the same time, and a mother or father would get up in the cold to care for some other family and then the next day they would be congested, turn blue, cough and spit blood all over the room, and die. It was awful, the number that died during that epidemic."

First U.S. Case

The first U.S. case publicly reported in the U.S. was at a military base in Kansas on Mar. 11, 1918, so one assumption/theory was that the travel between that base, Fort Sill, and Europe had brought the virus to the United States.

President Succumbs

The most prominent case was President Woodrow Wilson, who was suspected of having contracted that flu in 1919, while in Paris to sign the Treaty of Versailles. He was in fact in ill health for the rest of his tenure as president and the rest of his life. He had a stroke soon after a slight recovery. The First Lady is said to have run the White House and the government for the last year of his invalidity.

Wilson was born in Staunton, Virginia. He was especially sensitive to state and local governments during his administration, as he was the inventor of the city manager plan of local government, which he designed for his birthplace community, governor of New Jersey, president of Princeton University, and a professor of public administration. The Woodrow Wilson Presidential Library, in Staunton, Virginia, has an interactive program on Wilson and the pandemic.

Origin and Name

Although many referred to the origin as the Spanish Flu, my family did not. The CDC refers to it as the "1918 H1N1 virus." Scientists are unsure of its actual origin, and the United Kingdom, France, and China have been mentioned, as well as the United States. At least 50 million people died worldwide, with some estimates as high as 100 million. The CDC refers to it technically as the H1N1.

Virginia After Action Glimpse

The *Richmond Times,* in celebrating the 100th anniversary of the flu pandemic, told of a gentleman who went home early from work feeling poorly in Roanoke, suffering chills and fever, and died the next day about noon. The *Times* indicated that 4,000 people in Roanoke contracted that flu during 1918-1919, 85 of whom passed away in 31 days, as related in *The Hidden History of Roanoke* by Nelson Harris.

Interestingly, black deaths in Roanoke were much less than white deaths, percentage-wise, as black doctors were not recruited to serve in the segregated U.S. Army at that time, so they were still in their hometowns and available to see patients. (Later, military services were integrated by President Harry S. Truman.)

CDC Data

The Centers for Disease Control and Prevention placed the estimate of deaths in the United States from this pandemic at 675,000 out of a total population of over 103 million. In fact, the only time in history in which the population has decreased in the United States is between 1918 and 1919. Many of those who survived retained physical impairments.

Quick Pandemic Response, 1918-1919

Pandemics have occurred every 30-40 years since the 16th century, so it was always known that "It is not a question of "if but when."

1918-1919 Influenza Pandemic

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Parts of the response 102 years ago were like other past and present pandemics:

■ coordination between different levels and branches of government;

■ improved communications regarding the spread of influenza, hospital surge capacity, mass dispensing of vaccines;

■ guidelines for infection control;

■ containment measures, including case isolation and closures of public places;

■ disease surveillance; and

■ employed approaches that each had varying degrees of success.

National and Local Response

Postal workers, Boy Scouts, and teachers were enlisted to provide educational materials to the public to teach health precautions. Mail carriers distributed educational materials on their routes. Boy Scouts distributed posters to stores, offices, and factories. Teachers, out of work due to the closing of schools, volunteered for health education campaigns, according to contemporary accounts.

One other aspect of campaigns in various urban communities was to rid shared drinking cups, the precursor of the water fountain, as well as roller towels, used to dry hands after washing. Horses were the most prevalent transportation mode. Many communities canvased homes where teachers learned if anyone was sick, needed to see a physician, or needed food. In some cases, setting up public kitchens, children's homes, and emergency hospitals for these cases.

Lessons Learned

The New York Times opined recently that the single most important lesson for the 1918-1919 pandemic is that containment works. Governor Andrew Cuomo and Mayor Bill DeBlasio have somewhat differing views and are openly sharing those, especially on quarantining. The bottom line is: which is most destructive, fear or the disease?

Population and Disease Counts

The U.S. population was 103,208,000, and the current count is 331,002,651 people. For the 2018-1919 flu, the percentage of deaths was .06% of the total population, although we don't have an exact count of those contracting the disease. The federal tax receipts in 1918 were $3,645,000 and outlays were $12,677,000, leading to a federal deficit of $9,032,000, due to expenses of WWI.

The CDC estimates that about 500 million people, or one-third of the world's population, became infected with this virus. The number of deaths was estimated to be at least 50 million worldwide, with about 675,000 of those deaths in the United States. Mortality was high in people younger than five years old, 20-40 years old, and 65 years and older. It is often referred to as the "W Curve."

The high mortality in healthy people, including those in the 20-40 year age group, was a unique feature of this pandemic. People in their 20s and 30s bore the brunt of the disease, and services dominated by the vigorous and the young – health care aides, nurses and doctors, the military, the police, sanitation services, and the Red Cross – were hit the hardest. The emergency management profession per se did not exist.

Applicability to Current Challenge

While the 1918 H1N1 virus has been synthesized and evaluated, the properties that made it so devastating are increasingly understood, but still somewhat nebulous. With no vaccine to protect against influenza infection and no antibiotics to treat secondary bacterial infections that can be associated with influenza infections, control efforts worldwide were limited to "non-pharmaceutical interventions," such as isolation, quarantine, good personal hygiene, use of disinfectants, and limitations of public gatherings, which were applied unevenly.

The emphasis was on person-to-person care, even though it was very highly contagious and very work-intensive.

Instructive Takeaways

■ The pandemic was much worse than realized at the time. Official counts are based only on people receiving treatment. Therefore, the current pandemic may be much worse than we currently know.

■ The 1918-19 flu was deemed much more deadly than COVID-19. It was estimated that 675,000 died, but the total may have been much higher. That may very well be true today.

■ Diagnoses were not available in many areas, due to medical doctors serving overseas in WWI. Some rural areas may now be suffering undiagnosed fatalities.

■ No test kits were available in 1918; that is also true – to a lesser extent, at least initially – now.

■ Communication was challenging, with few radios and no television or Internet. Morse Code was initiated in 1847, Western Union in 1851, and radios began being used

Pandemic Influenza – The Essence of a Black Swan Event

By John J. Walsh, Jr., Ph.D., Co-Director, Program in Disaster Research and Training, Vanderbilt University Medical Center

Nassim Nicholas Taleb, in his book *The Black Swan, The Impact of the Highly Improbable*, asks, "Why do we keep focusing on the minutiae, not the possible significant large events, in spite of the obvious evidence of their huge influence?" He goes on to state, "Black Swan logic makes *what you don't know* far more relevant than what you do know."

From the emergency management perspective, and for that matter all response sectors, we often handle "routine" emergencies and disasters with extraordinary efficiency and effectiveness. It is those outliers and catastrophic disasters that challenge our systems, protocols and operational theories – which give emergency managers, and often the public, cause to speculate what could have been

1918-1919 Influenza Pandemic

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commercially around 1900, so those formed the main avenues of communication for the government and very limited high-income areas, with very limited access for the larger community. The growth of these avenues of communications proceeded with urgency after the pandemic subsided.

■ Emergency managers will have much to offer in lessons learned from the current pandemic, and new technologies and new processes at all levels will be open for upgrades. Indeed, our profession, our communities, and our nation can be stronger and better prepared going forward. ▲

done differently to mitigate the outcome. We only have to observe what is going on now with the response to the COVID-19 virus and what enormous tasks are being required at all levels of government and the private sector. Many of us in the emergency management profession have seen it coming for years, but our system of national response never truly grasped the enormity of the effort and commitment required to fully prepare for an event along the lines of the 1918 pandemic influenza.

Lessons Learned from the Past?

A true pandemic influenza is one such event that will challenge all of our preparedness processes at most levels of societal infrastructure. Although we have had several pandemics within the past 100 years, the last major one occurred in 1918. With few exceptions, most of us have never experienced the results of such devastation and mortality in our communities that occurred during the 1918 pandemic influenza. History is our only real blueprint for planning for such an event. The scientific reality is that until the strain of influenza has been identified and a vaccine produced to counter its effects, the only real reliance we have is to implement good non-pharmaceutical intervention (NPI) practices in our homes, schools, and work places.

In theory, the U.S. response system is a bottom-up process. With limited resources in manpower and money, and often with specific equipment needed during a pandemic influenza, local community response may be severely impacted.

In large Black Swan events, such as pandemic influenza or coronavirus, planning and implementation takes on a much different set of dynamics than the normal recurring emergencies that we are more generally used to addressing. Stressing all aspects of our infrastructure is not something we have experienced as a society.

The unknown factors are numerous, and their full impact leaves huge gaps in our capabilities and capacities: locally, regionally and nationally. In some cases, pandemics affect society psychologically. Many of the pandemic dynamics may create challenges addressing staffing issues, supply chain processes, manufacturing and services capabilities, and a host of issues that can adversely affect our nation's infrastructure.

Planning for Black Swan Impacts

Black Swan events require planning processes designed for thinking "outside the box." Taleb defines Black Swan events as consisting of three attributes: rarity, extreme impact, and retrospective predictability. It is the third attribute that has many shaking their heads, wondering what was missed. The question among many professionals and emergency management theorists remains: do we plan for the everyday emergency or for that once-in-a-lifetime Black Swan occurrence?

Politicians may say they have it all covered, whereas those responsible for making policies may hedge their bets, so to speak. Whatever

Pandemic Influenza – The Essence of a Black Swan Event

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your philosophical bent, emergency managers do not always have the luxury of playing it safe. In retrospect, we have history and the scientific understanding of pandemic phenomena providing us with a knowledge of what needs to be accomplished for a prepared society.

Preparing our communities at the local level will most likely be the single common denominator that contributes to providing our communities with the measures for surviving the effects of a pandemic influenza. Today, we continue to rely on the same non-pharmaceutical interventions that were utilized over 100 years ago. They may be somewhat effective if used properly; however, reliance on those interventions alone does not speak well for innovation, creativity, and scientific advancement after a century of forewarning.

As a society, we can and should do much better. Today we face the consequences of the COVID-19 virus in the midst of an overly political sensitized environment where politics has overtaken common sense and scientific knowledge. Political hubris cannot replace sound strategic planning for dealing with a potentially serious challenge to our communities and our nation.

Preparing for Optimum Resiliency

At this writing, the full impacts of COVID-19 are just beginning to be felt around the world. Black Swan events do not always have to result in negative consequences. They can be positive as well. Our response is growing, and with it comes the opportunity to better learn and better prepare for future, similar events.

Although we know many of the dynamic factors that present during a pandemic, we must be willing to think beyond what we are comfortable with when responding to emergencies. It is a time for preparing for optimum resiliency to be applied with common sense and effective planning built to withstand unusual circumstances.

Our government is faced with and is responding to circumstances of historic proportions. In the months and years to follow, we will have the opportunity to research, assess and analyze the events and operations of the preparedness and response attributed to the COVID-19 outbreak.

It will be the responsibility of the emergency management community to contribute in a substantial way to that analysis. Emergency managers are uniquely positioned to offer constructive criticism, positive critical thinking, and intuitive insight into the future research and reports addressing the events of 2019-2020. Our Black Swan event is ongoing.

Let us learn from our mistakes, learn how to be better prepared, and realize that Black Swan events can and do occur with significant impact to our society, our lives and the world environment. Planning for these types of events is a reality and requires rethinking our approach to events of substantial impact. ▲

Call for Articles for the June 2020 IAEM Bulletin
Article Deadline: May 20, 2020
Special Focus Issue on "Black Swan Events: Cybersecurity"

Cyber incidents are happening and will continue to occur. Our world is unique, and we have to embrace the reality of where we are and be ready to manage any emergency that arises.

To survive and thrive, we must think in new ways, share resources, and work with new partners to forge new successes. We need to be ready to consider "non-traditional" solutions.

Technology is vulnerable to cyber hacks, and the damage could be a whole lot more than the incidents we have already experienced. What have we learned from events that have already occurred to prepare our communities to face future cyber incidents? How will be the challenges of cyber incidents become opportunities?

The IAEM Editorial Committee is seeking articles on the subject of "Black Swan Events: Cybersecurity." Article length is 750 to 1,500 words. Please read the author's guidelines if you have not previously submitted an article or if you are not familiar with the IAEM Bulletin. Article submission deadline is May 20, 2020.

To find out about additional future special focus issues, visit the IAEM Bulletin web page. Remember, the Bulletin is a monthly publication. Articles are sought on a wide variety of topics of interest to EM professionals for the issues that are not special focus issues. The Editorial Committee will continue to consider articles about the COVID-19 pandemic. ▲

Black Swans – Preparing for Pandemic and Biological Threats in 2020

By Robert C. Hutchinson

In 2013, the article "Black Swans – Preparing for Pandemic and Biological Threats," asked many important and timely questions regarding our level of preparedness for a serious pandemic from a novel pathogen or another biological threat. Unfortunately, the critical discussions and issues identified in the article faded as quickly as the national interest in the serious pathogen du jour.

The newest coronavirus has generated massive international and national concerns, actions and outcomes, but what will be different seven years from now? Hopefully, the result will be lasting and sustainable planning and preparedness for these black swan events.

So-called Black Swans

Nassim Nicholas Taleb, in his 2007 best-selling book *The Black Swan*, identifies a black swan event as one that is often difficult to predict with wide-spread ramifications. He describes it as a:

"Highly improbable event with three principal characteristics: it is unpredictable; it carries a massive impact; and, after the fact, we concoct an explanation that makes it appear less random, and more predictable, than it was."

According to Taleb, humans have certain psychological limitations that prevent us from foreseeing these events, but later believing that they are perfectly predictable after they occur. How often are we surprised by the significant incident or disaster that was completely predictable, but we quite frankly ignored the threat due to limited resources, competing priorities, wishful thinking or willful blindness? Much too often.

Coronaviruses

In 2012, the coronavirus of concern was **Middle East Respiratory Syndrome (MERS)**, with its high mortality rate of approximately 30-40%. The international concern was that MERS would spread across the world in a fashion similar to **severe acute respiratory syndrome (SARS)** in 2003, with its mortality rate of approximately 15%. MERS has not gone away, but it fortunately did not spread as greatly as was feared at the time. In 2020 so far, the illness of massive concern has been the novel coronavirus disease 2019 (COVID-19).

The overall public health and national security threat from biological threats has not been reduced or controlled, but likely has increased with the constant expansion of world travel, trade and population. The impact of a severe pandemic influenza/pathogen could be greater than that of a conventional terrorist attack or war.

It has been estimated that an H1N1 influenza virus strain, known as the Spanish Flu, killed more U.S. soldiers during the winter of 1918-1919 than died on the battlefield in World War I. The infamous pandemic influenza killed an estimated 20-100 million people worldwide, a significantly larger number than the estimated 15 million that died during World War I between 1914 and 1919.

From One Extreme...

The threats from pandemics and inadequate preparedness are not new, particularly to the IAEM reader. **In June 2013, the *IAEM Bulletin* asked the critical question: "Is our country prepared for an emerging pandemic threat, such as a novel coronavirus?"** The answers were not reassuring, especially in the area of screening and quarantine procedures. It was predicted that the virus would surely test our medical detection and surge capacity capabilities to a level that might demonstrate insufficient planning and preparedness in an all-hazards environment. The article continued to forecast that one of the first lines of defense, and possible failure points, would be the initial screening and identification of the virus in time to utilize designated quarantine and isolation procedures and practices to contain the spread of the virus. The 2013 article asked two vital questions:

■ Are we adequately prepared to utilize federal or state ordered quarantine or isolation procedures with very little notice at a border, medical facility, screening location or city limit?

■ Do you have comprehensive plans and resources to support this rather unique and very infrequently executed mission?

In 2014, we had another opportunity to assess our preparedness and capabilities with the **Ebola virus outbreak**. With a mortality rate of 25-90%, Ebola required immense respect and immediate action. Unfortunately, that serious public health warning shot did not result in significant and enduring changes in planning and preparedness for screening, quarantine and numerous

Preparing for Pandemic and Biological Events in 2020

other concerns. It appeared to be quite the opposite.

In January 2015, the *IAEM Bulletin* discussed the lessons learned or lost from the Ebola outbreak. There was intense debate and confusion about quarantine and isolation laws and policies, especially with the early state quarantine guidance announced in New Jersey, New York and Maine. This very rarely considered and implemented practice was the cause of great conflict, confusion, media hype and political posturing.

The temporary quarantine of a nurse in New Jersey after returning from West Africa ignited a firestorm of controversy regarding laws, policies, procedures, risks and priorities. The later quarantine of the nurse at her residence in Maine only expanded the confusion and controversy due to her actions and statements. After what can be best described as a media circus, Maine later reached a settlement with the nurse allowing her to travel freely in public rather than quarantine.

Yale University law students filed a class action lawsuit against the State of Connecticut for their implementation of quarantine procedures for Ebola. The complaint was reportedly seeking unspecified damages for those forced to stay inside their homes for up to three weeks for their well-being and the safety of others.

Lawsuits were not only limited to quarantine issues during the 2014 Ebola outbreak. A nurse who contracted Ebola while working at a Dallas, Texas hospital filed suit against her employer for not providing appropriate training and equipment for the extremely rare disease. The hospital settled with

her. **As discussed in an *IAEM Bulletin* article in October 2011, the failure to properly plan, train and prepare enhances liability considerations in the world we live in**.

The concepts of screening and quarantine appeared to be more of a political issue than a public health one at that time. With the very limited number of Ebola-infected persons in the United States, due process and civil rights conversations shaped the discussion and political skirmish without the greatly needed change. We did not address the key issues. It was just too hard with the media attention and political consequences. Sadly, it was another lost opportunity to forge a way forward for the next threat with lessons learned.

In July 2015, the IAEM Bulletin once again addressed the topic of quarantine enforcement and legal liability. The article identified numerous topics for consideration to assist in the design and execution of a policy, plan or exercise with a medical, law enforcement and public health focus prior to the next consideration of quarantine execution and enforcement. There were potentially serious legal, political, financial and social ramifications for ignoring these known threats then, as we see clearly today.

...To Another

As of the writing of this article in mid-March, quarantine procedures for the current public health threat of COVID-19 were implemented under existing laws and regulations. Fortunately, the initial federal quarantine was easier to implement since the limited number of subjects were apparently quite happy to comply in order to receive swift transportation back to the United States from China or depart an unexpectedly extended stay on a cruise ship. The analysis of the

lessons learned from this utilization of quarantine will be extremely beneficial and hopefully result in strong and lasting formal policy, plans and procedures at all levels of government.

We should not think that we have completely resolved the massive quarantine challenges at the border. Enforcing larger general quarantines at the border or functional equivalent of the border (airports and other locations) may be a little more challenging to accomplish for compliance and proper execution. The screening and quarantining of non-compliant passengers or illegal border crossers will result in a myriad of new challenges, issues and lawsuits. There will be unexpected and unmet surge capacity issues for resources for numerous agencies and organizations, not to mention sensitive subjects such as use of force guidance.

Requests or orders to stay at home or shelter in place can be tricky to enforce. Interstate and intrastate quarantines would be even more difficult. They were not easy to execute in the 1800s and early 1900s with a smaller, less mobile population. However, this does not mean that we can continue to ignore them. These no-notice quarantines will be required at some point and time to control a truly dangerous threat from spreading across the state, nation or world. It is another wicked black swan we choose to ignore at our own peril.

Lessons Not Learned

Although we can never be completely prepared for every public health or homeland security threat and its multifaceted cascading consequences, the current challenges that we are experiencing

"You Can't Handle the Truth" – The Myth of Disaster Panic

**By Walter S. Topp, OCEM, Former Administrator,
Cuyahoga County Office of Emergency Management**

The headlines screamed "Panic Buying at Local Markets." But the photos showed hundreds of shoppers calmly lining up and waiting patiently to buy emergency supplies that they thought they might need during an evolving public health emergency.

Certainly, some hoarding was going on. And it seems that many folks may have overestimated their need for bathroom tissue.

But panic? Unreasonable fear? Was there rioting? Looting? Did people assault each other to get the last precious roll? No, not at all. In fact, they were far better behaved than the shoppers who jammed the home electronics department at the Big Box Store on Black Friday.

Today's behaviors in local markets demonstrate people preparing for the unknown by making the best decisions they can with the limited information available to them. But that didn't stop this paper – and many, many others – from using the term "panic buying." After all, everyone knows that Americans panic at the slightest hint of danger, except they don't.

Likelihood of Mass Panic Is Vanishingly Small

Seventy years of disaster research has shown repeatedly that people faced with real emergencies do not panic. In fact, following an exhaustive review of more than 700 individual studies of disaster behavior, researchers at the University of Delaware Disaster Research Center said the likelihood of mass panic during an emergency is "vanishingly small." Standing in line to purchase cleaning supplies, bottled water, non-perishable food items – and

even toilet paper – when supplies are likely to run out is hardly panic.

Unfortunately, the failure to understand how people actually respond to emergencies isn't confined to headline writers and Hollywood producers. Far too many professionals who should know better – emergency managers, public safety chiefs, elected officials, newspaper editors, and others – also believe that Americans will react irrationally at the first sign of real danger. Worse, these officials act on their mistaken beliefs, often making bad situations worse.

It's Just a Movie

The idea of people panicking when in danger is ingrained in popular culture. We've seen it in dozens of disaster movies, but evidence of panic during real emergencies is virtually nonexistent. At the same time, examples of survivors behaving in rational and sometimes inspiring ways is plentiful.

Not only do people not panic in emergencies, frequently they do the opposite. In the minutes, hours, or sometimes days before professional help arrives, survivors become first responders. They rescue trapped victims, provide first aid, and share their food, water and shelter.

■ In 1997, at the **Beverly Hills Supper Club fire**, which killed 165 persons, hundreds of survivors evacuated burning rooms in an orderly fashion, *even as the rooms filled with hot, choking smoke*.

■ In 1979, nearly 150,000 people evacuated the area around the **Three Mile Island nuclear plant** following an accident that caused a partial meltdown of a reactor core. Public safety officials, *who had*

issued contradictory reports throughout the accident period, provided little direction or guidance, beyond advising people to evacuate, yet the actual evacuation proceeded smoothly with no evidence of panic or other irrational behavior.

■ At a 1989 air crash at Sioux City, Iowa, which killed 112 passengers and crew, survivors exited the plane as they were instructed to do. Many assisted other passengers and, according to the fire chief, "were instrumental in saving additional lives."

■ On 9/11, thousands of people calmly evacuated the **World Trade Center towers** *after the buildings had been struck by aircraft and were burning uncontrollably*. There were multiple reports of people assisting other people down the stairways throughout the evacuation process.

Accurate Information Reduces Likelihood of Panic

An unfounded fear of stoking panic can cause persons in authority to withhold critical information, to devote resources to unnecessary security functions rather than to other critical tasks, and to fail to make effective use of available and willing citizens in providing assistance to members of their community. When panic does occur, it is almost always when people find themselves in great peril, believe that escape is possible but see the escape route being closed, and feel helpless and on their own. Few disasters meet these criteria for any significant length of time. And the act of providing helpful and accurate information actually reduces the likelihood of panic.

"You Can't Handle the Truith" – The Myth of Disaster Panic

Withholding information from the public can cause multiple problems. It can stop people from taking effective action, reduce trust in leadership, and lead people to turn to inaccurate sources for guidance. As crisis communications expert Bruce Hennes notes, "the truth always comes out."

The lesson for government officials and leaders of private sector organizations is clear. In emergencies, true panic is rare. People will respond to emergencies in rational and often altruistic ways. If they know what to do, they will do it.

Your best course of action at all times is to be honest and transparent and provide people with the information they need to protect themselves and their communities. Without clear, timely, and credible information from sources they trust, citizens will seek information from whatever source is handy and loudest.

Building trust takes time. Unfortunately, for a variety of reasons, public trust in government officials is low. During the early days of COVID-19, the public received widely contradictory messages from official sources. It should hardly surprise us that people assumed that they weren't being told the truth, and acted in ways that were less than optimal.

We shouldn't be leaving it up to the public to sift through competing narratives to find the essential nuggets of truth. Stockpiling toilet paper is one thing. Cleaning out stocks of masks and other essential supplies that are desperately needed by health care workers is another.

As emergency managers, we are clearly not responsible for the loss of public trust that we see in America today. But we need to do everything we can to mitigate it and reverse it. During COVID-19, public health officials have done an outstanding job of presenting accurate information, though their efforts have been seriously undercut at times by others. We need to make sure that when the next disaster occurs, we will be the reliable source of accurate, credible, and timely information that the public needs.

For communications guidance, we can look to the CDC's Crisis Communications Manual:
- Be first.
- Be right.
- Be credible.
- Express empathy.
- Promote action.
- Show respect. ▲

About the IAEM Bulletin

The *IAEM Bulletin*, the official newsletter of the International Association of Emergency Managers, is published monthly by IAEM to keep members abreast of association news, government actions affecting emergency management, research, and information sources.

The publication also is intended to serve as a way for emergency management colleagues to exchange information on programs and ideas. Issues from the past five years through the present are available in the members-only IAEM Bulletin Archives.

The *Bulletin* is distributed electronically via the members-only archives to emergency management officials each month, representing all levels of government, industrial, commercial, educational, military, private, nonprofit, and volunteer organizations.

Publishing an article in the *IAEM Bulletin* may help you to meet IAEM's certification requirements. If you haven't written an article lately, or at all, for the *IAEM Bulletin*, check out the author's guidelines. ▲

Preparing for Pandemic and Biological Events in 2020

could have been more manageable if we had chosen to learn the numerous lessons of our recent and distant past. COVID-19 will not be the last pandemic threat from a serious novel pathogen that we will face. It may end up being yet another warning shot like Ebola, SARS, MERS or H1N1 (so far) for a larger and more dangerous pathogen to come – with super-spreaders and a much higher mortality rate than COVID-19.

The greatest impact of COVID-19 may be what we have done to our society, economy and overall public well-being due to our delayed and ill-prepared initial response. Planning, preparedness and response matter so that these public health threats are not treated as black swans each and every time. They are predictable, but sadly so are our repeated failures to comprehensively plan and prepare well before such events. We can do better. ▲

Severe Weather Preparedness in a Pandemic: Should We Sound the Sirens for a Drill?

By Robert Dale, PEM, Emergency Management Planner/Meteorologist,
Ingham County Office of Homeland Security and Emergency Management, Michigan

The COVID-19 outbreak ramped up in conjunction with the time of the year when multiple states started their severe weather safety weeks. For example, Michigan's Severe Weather Awareness Week occurred Mar. 22-28, 2020, in the midst of the state's "Stay Home, Stay Safe" order. Ohio and Indiana also held their preparedness weeks around the same time and were some of the first states to close schools and businesses, keeping many people at home.

Perceived Social Impacts

The preparedness weeks include a day when a simulated statewide tornado warning is pushed out to the public in order to have homes, businesses, schools, and other facilities formally practice their tornado sheltering plans. However, this year Indiana, Ohio and Wisconsin decided to cancel their drill days. In Indiana, that discussion began among the National Weather Service offices and then continued with core partners and the state's emergency management office.

They were concerned about the perceived social impacts of the sirens being activated and the fear or anxiety a test activation could cause.

My feelings as a local emergency manager and meteorologist were that many Michigan residents spend the winter piling stuff in the basement or storage area, and await spring cleaning time to empty them out. (Guilty!) I felt that it made more sense to have people find out at 1:00 p.m. on a Wednesday afternoon during a drill that they need to clean out their safe space, versus being faced with an inadequate safe space at 1:00 a.m. on a Friday morning with a tornado bearing down.

Also, since schools and most businesses were closed, many families would be together to do a drill for the first time (as Michigan only does an afternoon statewide drill, with no evening option like some states.)

Upon hearing the decisions made by neighboring states that they were canceling, I consulted the

Michigan State Police Emergency Management and Homeland Security Division and the local National Weather Service office. At that time they were still on track for the drill as scheduled. I headed to Facebook and asked for opinions on the Weather and Society * Integrated Studies (WAS*IS) forum. There were some who brought up the potential for increased anxiety due to the sound of the sirens, but lacked hard evidence to back it up (understanding that the uniqueness of this situation is certainly a factor for a lack of research.)

Tom Bedard, a meteorologist at AccuWeather, wrote that people "can't set aside our normal preparedness activities out of consideration for the current disaster, because the complacency that only one disaster can occur at a time is deadly." Others observed that performing the test drill is an activity that people can do to prepare for a possible tornado, thereby reducing their overall disaster risk.

After consulting with all of the emergency managers in Ingham County, and finding out that all media outlets in the state were still going to interrupt their broadcasts at 1:00 p.m. with an alert, we decided to move ahead with the drill while increasing our public messaging ahead of the sirens. We pushed out multiple messages via Facebook, Twitter, and our mass notification platform starting a week in advance. These notices reminded people of the siren activation and provided educational materials for children of all ages. We suggested families print out the documents (NWS Owlie
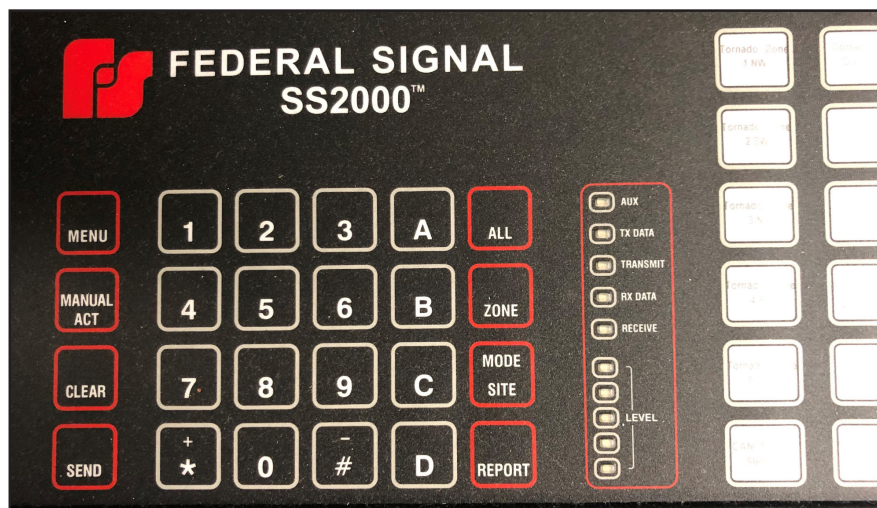
Siren controller.

Severe Weather Preparedness in a Pandemic

Skywarn learning pages) and use them for a quick lesson when the sirens sounded. There had been discussions of using the WEA Public Safety category at the time the sirens were to be activated as a reminder, but we eliminated that since a WEA Public Safety alert had gone out just two days prior for the governor's "Stay Home, Stay Safe" order.

Public response to that messaging was overwhelmingly positive. Around 40,000 Facebook views only resulted in two people who were upset, and they worked at essential businesses still functioning who somehow interpreted this to be a mandatory drill. One called our office because she was worried it might cause stress to those who don't get our public notices. To cover that angle, we made a special push to all local media outlets reminding them that our county would be activating sirens. They all made special notice during their broadcasts and social media posts for several days ahead of the drill.

The siren activation went off without a hitch, and the only complaints afterward came from those who were indoors and couldn't hear it, those who were in areas of the county not covered by sirens, and those in other counties who were upset that their county didn't activate.

So Why Am I Bringing This Up? Two Reasons…

■ **Community Shelters**. Community shelters are a critical ingredient for tornado response in many regions of the country, especially in areas where basements are not available or where many structures are not capable of withstanding strong winds. However, mass gatherings are not allowed during the coronavirus outbreak because of physical distancing recommendations, and some communities are not allowing their shelters to be used as a result. The Alabama Department of Public Health (ADPH) recommends "that your first priority should be to protect yourself from a potential tornado." Dr. Kim Klockow-McClain wrote that if "people are used to going to someone else's house to shelter, what is their COVID plan going to be?"

However, at the same time, she notes that most people survive even the strongest of tornadoes if they are in a sturdy structure. Klockow-McClain examined damage following the 2013 Moore, Oklahoma EF-5 tornado and found that "even in the worst of the damage, 98 percent of people survived in well-built homes." There are many things to consider in this combination of a threat to public health and storm safety, and emergency managers should consult with public health officers and their local meteorologists to fine tune the messaging for community and individual sheltering.

If you have community tornado shelters, will you still open them as usual? If so, are you sure you will have personnel who will staff the shelter, knowing they will likely be in an environment with COVID-19? If you decide to not open shelters, what alternatives exist? How will you broadcast the closure to mobile home residents to let them know the shelter is not an option? Now is the time to develop those plans ahead of an actual warning.

■ **Hurricane Preparedness**. Another aspect to consider is hurricane preparedness. While it only takes one hurricane to cause a disaster, early projections indicate that this year will be another in a string of above-normal seasons.

Given the likelihood that coronavirus will still require physical distancing, here are considerations:

■ What do evacuation plans look like if hotels are closed?

■ Where do you shelter people (especially for an extended time) with adequate physical distancing?

■ Will shelters even be allowed to open up, and if so, will you have the necessary number of volunteers willing to staff them?

■ For shelters that are open, how will you provide Personal Protective Equipment (PPE) for staff? How will you monitor the health of everyone involved for the virus? What will you do with those who are exposed but asymptomatic? What will you do for those showing symptoms of coronavirus?

Enhance Messaging and Find New Ways to Handle Community Outreach

All of these questions need to be answered now. For those who considered pulling back on their normal preparedness messaging because of worries about COVID-19 anxiety, realize you need to *enhance* your messaging! Find other ways to do community outreach since you likely will not be able to host those types of events this season. When you answer the above questions, communicate that information frequently to the public so they are informed on what to do in these unprecedented times.

One final consideration is your cooling center program for extreme heat days this summer. In many jurisdictions, that involves setting up senior centers, shopping malls, hospitals, and other public or private venues with air conditioning for the public to utilize. Many of the people using these cooling areas are from demographics highly vulnerable to the coronavirus. How will you handle that? ▲

Coronavirus Disease (COVID-19) in America

By Cathy Carter Dempsey, Huntsville, Alabama

Emergency managers and public health officials are making sure their preparedness plans for mass health care emergencies are well set, now that the novel Coronavirus Infectious Disease of 2019 (COVID-19) is in America. On Mar. 1, 2020, President Donald J. Trump proclaimed a Declaration of a National Emergency concerning COVID-19, due to the severity of the American outbreak. It is time to act, including providing accurate information to the public and taking prevention measures, so we do not allow a virus that we have little knowledge about at this time to spread needlessly.

Social Distancing and Non-Essential Jobs/Travel

We must support and incorporate the Presidential guidance for social distancing in our personal and professional lives. We should set a good example nationwide by demonstrating our commitment to social distancing in order to save lives. State governors and city leaders are implementing public health orders requiring residents to stay at home and shop only for essentials at places like grocery stores, pharmacies, gas stations, and banks (many of which are limiting access, hours, and number of transactions of certain items allowed).

Non-essential workers are encouraged to stay home, with few exceptions. Only essential personnel, such as police, fire/rescue, health services, transit, critical infrastructure, and other workers in businesses considered essential for the health, safety and welfare of residents, should show up for work. The United States borders with Mexico and Canada are closed, as a collaborative and reciprocal initiation or joint decision, for non-essential travel, such as tourism or recreational in nature. There are other international travel restrictions in place meant to help contain the spread of COVID-19.

The World Health Organization (WHO) officially declared that COVID-19 could be characterized as a pandemic on Mar. 1, 2020, due to the worldwide spread of this new disease. "This is the first pandemic caused by a coronavirus," WHO Director-General Tedros Adhanom Ghebreyesus said at a briefing in Geneva. It is the first time since H1N1 *(swine flu)* in 2009 that the WHO has called an outbreak a pandemic.

Officials in Washington, D.C., deployed the Strategic National Stockpile, a reserve of emergency equipment and supplies meant to supplement shortages during a public health crisis, for some emergency items. President Trump invoked the Defense Production Act (DPA) on Mar. 18, 2020, which is a set of emergency powers that gives the federal government the ability to ramp up production of direly needed medical supplies such as N95 respirator masks, surgical masks, medical gloves, gowns, eye protection, ventilators, and other equipment.

Nature of Preparedness

Emergency managers and other officials know that *preparedness* is a continuous cycle of making plans and organizing to better implement those plans. There is training available geared specifically to handle situations such as mass health care emergencies, which often culminates with exercising to make sure the plans, organizational skills, and training were sufficient. Helpful lessons learned and corrective information is garnered during the exercise evaluation process. Emergency managers and health care departments must take actions now to ensure their readiness to respond to COVID-19, typically with an all-hazards approach. It is difficult to predict well in advance when measures such as mass sheltering or mass care will arise, so checking supplies and readiness now is essential. We also must consider prevention actions that may stem this coronavirus dilemma.

Dr. Michael T. Osterholm, director of the Center for Infectious Disease Research and Policy at the University of Minnesota, stated, "I suspect there are a number of additional cases [of COVID-19] in this country that are transmitting this virus, just like we were seeing in other countries. Absence of evidence is not evidence of absence."

Simply put, just because a person with this coronavirus may be asymptomatic does not mean the person is not spreading COVID-19. Typically, people who are showing cold or flu symptoms are the patients who are medically tested, but an asymptomatic person is not likely to get tested for COVID-19. Therefore, emergency managers should encourage members of their community to seek medical attention from their primary care physician if they have symptoms, so that timely diagnosis of patients will not only save lives, but also prevent the spread of COVID-19. Inform symptomatic residents to stay away from hospitals (including emergency

COVID-19 in America

rooms) unless the potential COVID-19 symptoms are severe. Call ahead before walking into a medical facility, in order to receive admission instructions to prevent endangering other patients and to minimize exposure to healthcare personnel.

■ **Provide health care services' contact information for organizations that have free or reduced cost care and testing for community members who are financially limited**. The poor will have difficulty purchasing preventative non-pharmaceutical supplies (household disinfectants and sanitizers), and other home-care items such as over the counter (OTC) medications, tissues, etc. Possibly, the food banks, charity organizations, or places of worship in your jurisdiction can help with those special needs. Emergency officials may also need to attend to reports of hoarding of essential COVID-19 health care and prevention supplies to help enforce legal actions regarding potential price gouging. Check your local ordinances.

■ **Encourage folks to get their flu vaccines**. Know that if a patient contracts the flu, then their immune system will be somewhat suppressed, which would make that person more at risk of death if they soon afterward contract COVID-19 or develop pneumonia. We could relieve part of the burden on our health services in advance of a more deadly COVID-19 pandemic by having more people get their flu immunizations now.

Scientists cannot easily cultivate the human coronavirus in laboratories *(unlike the rhinovirus)*, which makes it difficult to gauge the impact of coronavirus on our population. As a result, it is difficult to estimate the continued impact COVID-19 will have on our national economy – which has already taken blows – and on our public health. We must not use language that would cause panic or create an atmosphere that politicizes a serious health care issue.

COVID-19 Vaccine Development

It seems that a COVID-19 vaccine is in the initial stages of research and development, but due to testing and other concerns, such as safety and manufacturing issues, it may take a year or more before the coronavirus vaccine will be made available to the public. Coronavirus antibodies formed in humans after a bout with COVID-19 disease do not appear to last a long time, so it seems possible to catch the same coronavirus again just a few months after an initial infection. Hopefully the dedicated work being done now by scientists and doctors will soon provide us with antiviral medication or other lifesaving treatments, which must pass randomized control trials in humans before the treatments become available.

Symptoms and Treatments

COVID-19 can cause cold- or flu–like symptoms, usually two to fourteen after infection, and may be mild but can vary from person to person depending upon which strain (L- or S-) of the virus infected the person. Upper respiratory symptoms, such as sneezing and runny nose are common, but this novel coronavirus tends to exhibit more lower respiratory symptoms, such as cough and/or shortness of breath.

There is no cure for COVID-19 at this time, so the treatments include self-care with over-the-counter (OTC) medications. These might include OTCs for pain and fever and/or OTC cough or flu medications as recommended by a doctor, pharmacist or other healthcare professional. Adequate fluid intake is important to reduce the risk of dehydration, and supplemental oxygen may be necessary in more severe cases. People who have a hard time breathing on their own due to COVID19 may need a respirator and medical care.

Cover coughs with your elbow or tissues and throw away the tissue – preferably in a covered receptacle with a plastic bag. Studies indicate COVID-19 is mostly contagious via respiratory droplets, which are inhaled or land in mouths, noses and eyes, and to a lesser degree by touching contaminated surfaces. EMS must be prepared with appropriate PPE to transport more severe cases of COVID-19 to hospitals where medical support can be provided for potential organ failure.

Most deaths so far due to COVID-19 occurred in people who had suppressed immune systems, including many elderly patients with prior existing health conditions. Encourage people in your community to maintain a good immune system by getting adequate rest, avoiding overexertion, eating balanced meals, avoiding smoking or smoky areas, reducing stress, and drinking plenty of water. Avoid other people if you are not feeling well, and be sure to report to those who have been around you if you discover you have COVID-19. Tap water seems safe to drink, and so far, COVID-19 has not been detected in wastewater. However, this health crisis is so fluid and dynamic that keeping abreast of daily information is essential. Human coronavirus has been found alive in the feces of infected people.

Social distancing at this time is by choice for some, and by local, state and federal guidelines or ordinances

COVID-19 in America

for many, but the less we are around other people, the less likely we are exposed to the potential of contracting COVID-19. If you must be near another person try to maintain a personal distance of six feet (two meters), and avoid physical contact such as handshaking. Handwashing for at least 20 seconds (between the fingers, under the nails, and over the back of hands) with soap and warm water. Use hand sanitizers with a high alcohol content average of 60-70% when handwashing is not available.

Soap and water are still the best method for cleaning hands and washing away the contaminated soap by thorough rinsing, so conserve your supply of hand sanitizers to use when washing is not available. Use detergent or soap and water to clean prior to disinfecting surfaces, so that the disinfectant has greater impact on the virus. This will also conserve the limited supply of spray, liquid and wipe disinfectants.

One of the best and least expensive cleansers for hard surfaces is to mix 1/3 cup of bleach per gallon of water. If you must travel, work in an office or other public place, or socialize publicly, you may want to consider bringing along disinfectant sanitizing wipes/sprays to disinfect common surfaces. These could include seat belts, table trays, desks, chairs, door handles, phones, desks, stair rails, faucets, shopping cart handles, light switches, and other frequently touched surfaces.

Studies performed by the National Institutes of Health's Rocky Mountain Lab in Montana now show that COVID-19 can persist for three hours in the air, 48 hours on stainless steel and some other hard surfaces, 24 hours on cardboard, and up to 72 hours on hard plastics such as polypropylene.

Use of Masks

Masks are only as effective as the person wearing the mask, in terms of proper use and fit, so please seek training for proper safe use of a mask. The N95 masks are appropriate and crucial for use by professional health care workers and our first responders to protect them from COVID-19 respiratory droplets produced when an infected person sneezes or coughs.

Lesser surgical masks may offer some limited protection in the sense that a mask may remind you to not to put your possibly contaminated hands on your mouth, nose, face, or eyes. And do not touch the mask, which may be contaminated, and then touch other surfaces without decontaminating your hands first. At this time, it is recommended that everyone wear masks, not just those have symptoms.

The Centers for Disease Control and Prevention (CDC) maintains a good website at www.cdc.gov, providing updates about COVID-19 and information so people can learn how to take care of themselves. A second good source is www.cisa.gov/coronavirus.

Conclusion

Emergency managers should review plans, coordinate closely with local health officials, and recommend that community members look at the CDC and WHO websites. Persuade people to update immunizations, and provide community members with other essential information, including accurate data as updates to COVID-19 are made available. It is essential that emergency managers and public health care officials stay informed so they can answer questions about COVID-19 in a professional, knowledgeable, and calm manner. If we all work together to contain the spread of this virus, we will be successful saving lives. Let's do this together. ▲

COVID19	SEASONAL ALLERGIES	FLU
• DRY COUGH	* RUNNY NOSE	* FEVER OR FEELING
• FEVER	* STUFFY NOSE AND/OR	FEVERISH/CHILLS
• SHORTNESS OF BREATH	SNEEZING	* COUGH
	* WHEEZING OR SHORTNESS	* SORE THROAT
	OF BREATH	* RUNNY OR STUFFY NOSE
	* DRY COUGH	* MUSCLE OR BODY ACHES
• LESSER SYMPTOMS FOR	* RASHES	* HEADACHES
COVID19 MAY INCLUDE:	* FATIQUE (TIREDNESS)	* FATIQUE
• ACHES & PAINS	* HEADACHE	* SOME PEOPLE MAY
• NASAL CONGESTION	* ITCHY, WATERY, OR PUFFY EYES	HAVE VOMITING AND/
• RUNNY NOSE	* ITCHY NOSE, THROAT, AND EARS	OR DIARRHEA, THOUGH
• SORE THROAT	(KEEP IN MIND *"ITCHINESS"* FOR	THIS IS MORE COMMON
• DIARRHEA	ALLERGIES, BUT NO FEVER WITH	IN CHILDREN THAN
	SEASONAL ALLERGIES AS WITH	ADULTS
• EMERGENCY WARNING SIGNS	COVID19)	
FOR COVID19:		
• WORSENING DIFFICULTY	THIS LIST IS NOT ALL INCLUSIVE. PLEASE CONSULT YOUR MEDICAL	
BREATHING	PROVIDER. IT IS IMPORTANT TO NOTE THAT NOT EVERYONE WITH	
• PERSISTENT PAIN OR	FLU HAS A FEVER. NOT EVERYONE WITH COVID19 EXHIBITS	
PRESSURE IN THE CHEST	SYMPTOMS, SO IT IS POSSIBLE FOR A CARRIER OF COVID19 TO	
• NEW CONFUSION	APPEAR ASYMPTOMATIC.	
• INABILITY TO AROUSE		
• BLUISH LIPS OR FACE		

Symptoms.

The Role of First Responders in a Pandemic

By Jim Dudley, Retired as Chief of Operations, San Francisco Police Department, now Professor for Criminal Justice and Emergency Management, San Francisco State University

The media blitz around COVID-19, also known as the coronavirus, has created fear that has manifested into significant economic impact, contributed to hate crimes, and resulted in food and supply hoarding. A multi-disciplinary response is necessary to address all the concerns that accompany a biohazard incident. The Incident Command System (ICS) structure is essential to determine roles and responsibilities of each responding agency. It is also important to identify leadership and command for specific incidents. There are roles to be assumed by law enforcement, fire personnel, and public health departments.

Post-9/11 Fears About Threats of Biohazard Releases

Post-9/11, there were fears about threats of biohazard releases in gathering areas, sporting events, and along public transportation lines. Threats included dispersal through active and passive means. Improvised explosive devices (IEDs) called for a response led by police and fire. Biological threats, which included the release of anthrax and ricin, called for a public health-led response.

Scenarios were created and exercises conducted to understand local agency preparedness, response, mitigation, and recovery capacities. In cases where public health or fire were lead agencies, law enforcement maintained a presence as force protection and to help protect other first responders. Fears included prophylaxis distribution centers being overrun or looted. A similar response should be reviewed or prepared for this latest health hazard.

Public Health as Lead in Biological Threats

We must learn from the planning efforts post-9/11 efforts and turn them towards COVID-19, the latest threat. At this early juncture, little is known about the transmission, incubation periods, and lethality of COVID-19. The Centers for Disease Control (CDC) is the lead agency in helping understand and identify the threat, and will pass along information to state and local agencies in determining the appropriate response and recommendations regarding identification, quarantine and isolation measures.

The CDC also makes recommendations on effective personal protective equipment (PPE) for first responders. At the time of this article, the CDC has made preliminary and cursory recommendations for first responders, including the wearing of disposable gloves, gowns, respiratory protection by means of an "N95 mask or higher" and eye protection.

The Law Enforcement Role

If anyone questions the role of law enforcement in regard to COVID-19, we should remember lessons learned from previous threats and disasters. Law enforcement members are tasked with preventing looters and identifying, deterring, or capturing those who seize opportunities during disasters for their own advantage. Law enforcement is key in protecting those tasked with mitigation and response efforts. Law enforcement had a tremendous response after Hurricane Katrina in 2005. A detailed report from the University of South Carolina remains an excellent guide to recalling lessons learned as they directly related to law enforcement.

Force Protection and Use of Force Policy Considerations

Law officers may be summoned to provide support and protection at shelters, hospitals and dispensary locations when panic ensues. Perimeter security will be an issue if isolation orders are given by the department of public health. Agencies must prepare line officers with adequate protective gear, including the best suitable respiratory protection, whether by mask or by way of – in extreme cases – Powered Air Purifying Respirator (PAPR) devices. Fit-testing for appropriate levels of respiration protection must be done early in the process, since every member must be individually tested and fitted.

Agencies should prepare or review policies and guidelines regarding levels of force that may be used to restrict the movements of contaminated individuals. Line officers should have a clear understanding of the guidelines long before confronted with individuals seeking to self-evacuate.

Officers may be asked to provide escorts, guard supplies and medicine, or protect pods from the Strategic National Stockpile. This is another area of critical need for personnel when supplies may become short. Agencies should determine personnel priorities and identify priorities before they arise.

The Fire/EMS Role

Fire departments will contribute critical resources by providing immediate response and transportation for non-ambulatory patients

The Role of First Responders in a Pandemic

requiring aid. EMS personnel will provide critical care and transportation. Fire agencies must have the capacity to respond to biological threats with protective gear and equipment, and will be the primary decontamination authority along with the public health agency.

Communications and Plans

It is expected that the primary first responders have plans in place to respond to multi-agency hazards. Agencies must meet to ensure that protocols are current and that key policy leaders are identified. National Incident Management System (NIMS) compliance and adherence will ensure that all local and state agencies are on the same page and that important federal resources will be made available through NIMS.

FEMA is another resource for training, education and tip sheets. The FEMA pandemic guidelines publication through the Department of Homeland Security has profession-specific guidelines suitable for distribution and briefings.

Communications plans should be updated to include checks of current 24/7 contact information and to assess call-back plans for return of personnel, as necessary. Considerations should include when to activate agency Emergency Operations Centers (EOCs), Department Operations Centers (DOCs) and Executive Leadership groups. The CDC maintains a website with weekly alerts and information, and should be checked for updates. A template for a Pandemic Influenza Continuity of Operations Plan can be found on the FEMA website.

Agencies should take care to convey preparedness plans for line staff, including priority vaccinations when they become available, to be prepared and assured that they can adequately protect their personal homes and families, in order to be able to respond for duty. As the DHS pandemic guidebook suggests:

■ **Create clear lines of communications**. "Brief early, brief often." Keep communication lines open, and pass along information. Meet with public health and other agencies to assess risks and interagency response planning. Once determined, agencies should follow NIMS and ICS protocols by standing up an Emergency Operations Center as a central location for news and information vetting and disseminating, to prevent conflicting information from being released. Every affected agency should have a representative at the EOC to advise on protocols, control conflicts, and to disseminate information back to their respective agency. Risk assessments should be given to personnel to reassure them with accurate and timely information.

■ **Identify adequate and appropriate Personal Protective Equipment and gear (PPE)**. "Dress the part." Wear appropriate PPE protective gear. Direct personnel to leave their homes in a clean work uniform, bag clothes after shift, and continue to rotate clean clothes for duty.

■ **Protect the workforce**. "We're all in this together." Support each other, and get vaccinated once vaccines are identified and distributed. Prioritize line staff, and encourage distribution to their families as well. "Fireproof your family." Agencies should allow personnel to take care of their families, in order to be comfortable and assured to be able to report for work.

■ **Identify your agency's key priorities and Continuity of Operations Plan**. "Triage your workload." Determine and prioritize the needs of your community, should personnel staffing be affected by sick officers. Review and prioritize calls for service with emergency dispatch operations. Review plans for custody transportation, booking and housing. Meet with public health and EMS to determine appropriate strategies to deal with symptomatic prisoners.

■ **Train personnel**. "Keep your distance." Train personnel on what to look for and how to maintain safe distances, allowing trained medical personnel to assist those affected. Officers should be able to recognize symptoms and know where to seek assistance for themselves or others. Have quarantine plans in place, and convey the plans to personnel. Conduct infection control roll call training that identifies key information and risks to officers.

■ **Establish clear rules of engagement and use of force (UOF) guidelines**. Review force protection and UOF policies for perimeter security at health care facilities and for forced movement of infected individuals/quarantined individuals. The information should be included at roll call training for agency personnel. The EOC should disseminate policies across multiple disciplines (law, fire, health, EMS) for clear understanding.

■ **Be part of a unified team for external communications**. Establish a media team across disciplines. This is expected as part of the EOC. Social media should be addressed through the media team for clear and deconflicted information flow.

■ **Leaders should model the desired behavior**. "Come out with your hands clean." As EMS1 resident expert Rob Lawrence advises, "Wash your hands, wash your hands, wash your hands." Ensure that

Get Ready for the COVID-19 Mass Vaccination Campaign

By Tom Russo, MA, CEM

Emergency managers have their hands full with social distancing, containment, accurate messaging and case counts, but it is also critical that a task force or healthcare coalition initiate plans for mass vaccination. The last mass vaccination campaign was in 2009 for the H1N1 pandemic. Then, the public got weary of the CDC pre-campaign information roll-out over the summer. By the time clinics opened, interest had waned, and millions of doses were wasted. Don't count on that as your jurisdiction's contingency plan!

Thus far, the COVID-19 response has followed that used for SARS (Severe Acute Respiratory Syndrome) in 2003. COVID-19 behavior is quite similar to that of SARS, without the benefit of vaccine. The response was contained by means of syndromic surveillance, isolation, strict quarantine enforcement of contacts, and with community spread, community-level quarantine.

Currently, the risk remains low for most Americans but age (older) and underlying conditions remain a predictor of mortality, as with SARS and MERS (Middle East Respiratory Syndrome). Underlying health conditions become the basis for

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The Role of First Responders in a Pandemic

leaders are visible and are in visible support of the workforce. Appropriate leaders should represent the agency at multi-disciplinary meetings and the EOC, to ensure that their agency is appropriately represented and to prevent "mission creep." ▲

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establishing priority groups for a mass vaccination campaign.

Vaccine Availability and Distribution

COVID-19 vaccines are in the works, and in all likelihood, will result in a vaccination campaign. While CDC guidance to state departments of public health (DoH) is sparse, conversations have begun. Members of the President's COVID-19 Task Force, when asked, announced that vaccine will not be available for at least 12 months. However, *Time Magazine* reported that the pharmaceutical firm, Moderna Therapeutics, recently produced batches of COVID-19 vaccine and is in the process of having it tested.

Regardless, COVID-19 vaccination guidance will not come until the vaccine is manufactured and tested, and that process includes three tedious phases of clinical trials and the determination of distribution logistics. But do not wait for guidance to explore strategies that will be used for a COVID-19 campaign. The H1N1 model used in 2009 is most likely to be repeated with COVID-19 vaccine distributed through state DoHs. Also remember that DoHs do not have the manpower to implement mass vaccination. Thus, partnerships with private-sector healthcare facilities will be crucial and contracts used to reach targeted, high-risk priority groups, just as they did in 2009. Emergency managers may recall that children and young adults were at greatest risk and therefore were the primary targets for vaccination. But what comes after the identification of target groups? Healthcare facilities that can serve

as vaccination clinics will be identified, including open and closed PODs (point of distribution) as well as personnel who can vaccinate.

Crisis Standards of Care

The Institutes of Medicine (IOM) published *Crisis Standards of Care* in the aftermath of Hurricane Katrina and in anticipation of a pandemic. Ironically, H1N1 was around the corner, but the IOM model is helpful as coalitions begin to review pandemic plans. Today, IOM has expanded guidance for most members of a healthcare coalition and warrants a review by its members.

Depending on the crisis level that results from the COVID-19 pandemic (test kit demand is an indicator), the level may determine to what extent an "all hands on deck" vaccinator corps may be needed. IOM defines *Crisis Standards of Care* "as a substantial change in usual healthcare operations and the level of care it is possible to deliver, which is made necessary by a pervasive (e.g., pandemic influenza) or catastrophic (e.g., earthquake, hurricane) disaster." Unmitigated, COVID-19 could result in a national emergency of significance and warrant the use of crisis standards of care.

In general, IOM guidance outlines conventional (daily operations), contingency (temporary surge), and crisis. The latter is considered when normal operations are overwhelmed and operations fall outside the traditional scope of practice of practitioners. Healthcare facilities experienced these scenarios in the aftermath of landfall for both Hurricane Katrina (New

Get Ready for the COVID-19 Mass Vaccination Campaign

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Orleans) and Hurricane Sandy (New York and New Jersey).

Vaccination Facilities

A shift has occurred in the availability of both public and private healthcare facilities over the past decade, and mass vaccination must be reviewed in that context. For H1N1, DoHs contracted with hundreds of healthcare facilities that served as clinic sites, ranging from urgent care centers, healthcare systems, physician-practice groups, community-health centers and pharmacies, to name a few, in both open and closed POD formats. Even schools served as vaccination sites. Remember, public health established priority groups targeted children and young adults in 2009. School-based clinics were a priority, but that may not be the case for a COVID-19 vaccination campaign.

In a recent report (March 2020) by the Health Research Institute, healthcare system makeup gas changed since the 2009 H1N1 pandemic. The number of hospital-based emergency rooms decreased, while the bed count per 1,000 people decreased by 8%. The good news is that urgent care center numbers exploded by 43% from 2013 to 2018. Equally informative is that inpatient days per 1,000 decreased by 10%, while outpatient visits are up 10%. Coalition logisticians should brainstorm with coalition members to identify local facility resources, and urgent care centers become a tremendous resource.

Today, pharmacy chains have stepped up big time, with participation in not only the annual seasonal influenza campaign but equally in public health emergencies. Many DoHs in 2009 were unaware that pharmacists had been trained as vaccinators and had yet to be fully integrated into vaccination campaigns. After a decade, pharmacies have demonstrated strong community ties and see their participation in events of this nature as community service, filling the void of a contracting public health nurse corps.

Yet, we must not forget sole-owned pharmacies in rural areas. For example, public health departments in South Carolina partnered with rural pharmacies, contracting a vaccination "strike team" to staff a clinic, providing nurse, vaccine, supplies, and clerical staff to document the vaccination process.

While facilities with adequate support amenities are essential, do not discount multiple distribution methods, whether your task force depends on drive-through, fixed facilities or some mix of strategies. A mass vaccination campaign is the perfect opportunity to test those closed and open POD memorandums of agreement held by public health partners.

Finally, another critical workforce change over the past decade is that within the emergency management profession – the establishment of college-based emergency managers. Now is the time to bring that emergency manager into the COVID-19 response framework, establishing the college as a POD whose healthcare facility can serve as a vaccination site. The bonus is if a college has a nursing degree program. Nurse educators = vaccinators!

Vaccinator Corps

This article has named disciplines whose scope of practice (i.e., pharmacists) could fill the ranks of the vaccinator corps needed for a mass vaccination campaign. As your coalition's work group begins to identify resources, consider stratifying those resources along the crisis standards of care continuum. Remember H1N1 was mild, and therefore, the response did not move beyond the "conventional" phase. But public health would have been tasked significantly if H1N1 had become more virulent.

A strategy introduced in South Carolina during H1N1 was vaccination "strike teams." Simply put, the concept was based on first responder strike teams but adapted to public health mass vaccination efforts. The strike team was nurse-led, where three nurses are paired with two administrative staffers. The team can vaccinate 100 prospects in a six-hour day. Vaccination strike teams were used in schools, rural clinic sites, and senior centers. This strategy was extremely useful in identifying daily staffing needs as clinic sites were scaled up to meet the expected demand on a given day at a predesignated vaccination clinic.

To be prudent, identify a variety of manpower sources to meet vaccination surge demands. For example, consider the Medical Reserve Corps, hospital-based nurses, contract nurses, EMTs, and, of course, all public health nurses to perform vaccination.

Contract nurses are typically part-time and/or retired who enjoy this work and get recruited for the seasonal influenza campaign. Their backgrounds include hospitals, schools, and public health. Also, look to the lead public health immunization nurse manager to prepare and deliver just-in-time training to update members of the vaccinator corps on the COVID-19 vaccine, while also reviewing correct needle stick procedures. In South Carolina,

Get Ready for the COVID-19 Mass Vaccination Campaign

nurses who were registered with the MRC were covered by the state's liability insurance. Add this check to your "to do" list as you develop your list based on gaps in preparedness.

Outside-the-Box Vaccination Strategies

Early planning provides a time frame that helps alternative "systems" work collaboratively, removing barriers to accessing critical resources, such as nurse vaccinators or even allied health professionals who perform needle sticks but whose license limits where they can practice.

For example, phlebotomists stick humans daily, but are not licensed in all states to vaccinate or can do so only under the direction of a supervising clinician. EMTs are well practiced with needle use, but licensure prohibits them from vaccination. What's the process in your state to work through these challenges? In 2009, county EMTs were recruited to serve as vaccinators in a closed POD to vaccinate the county's public safety personnel. Of course, this practice was approved by the state medical control officer and overseen by local medical control, but it worked quite effectively.

Dentists stick, but are confined to the neck up. Veterinarians stick animals, but could they be used in an overwhelmed system? They probably could, if licensure and regulatory limitations have been addressed. Of course, these may be "crisis" situations, but now is the time to think contingency as well as crisis.

During H1N1, one community-based hospital system in South Carolina offered to vaccinate children in the public schools of their service region. Hospital nurses were registered as MRC vaccinators, and the hospital covered their workers' comp insurance. The state department of health provided training, vaccine, supplies, and clerical support. This resulted in a tremendous partnership, but one the for-profits were unable to replicate.

Summary

The intent of this article is to encourage coalition planning now and agitate bureaucracies to work through the barriers of law, regulation and licensure, a strategy used to supplement public health COVID-19 testing with that of the private sector. Remember, H1N1 infectious rates were mild. A recent *Bloomberg Opinion* wrote that comparing fatality rates (COVID-19 modeling) could be 35 times worse. The IOM model stratifies crisis response for best-case and worse-case scenarios, and becomes a structured planning strategy for a COVID-19 vaccination incidents of significance. ▲

CHDS, NEMA, and IAEM Webinar Series on Resilience After the Current Global Pandemic

CDHS, NEMA, and IAEM Webinar, Part 1: "Lessons and Observations from Front Resilience Professionals"

Part 1 of this series took place on Apr. 22, 2020. If you missed it, you can view the presentation on the **webinar recording page**. In Part 1, panelists focused on lessons and observations from the frontline from resilience professionals. **Anne Miller**, director, Colorado Resiliency Office, discuss what states and local partners are doing now to collaborate for recovery and how they will put resilience planning into practice. **Dr. Stewart Sarkozy-Banoczy**, managing director, North America/ Global Strategic Partnerships Lead, Global Resilient Cities Network, provided a "report from the frontlines" and discussed considerations for short-long term resilient recovery and keeping the "resilience dividends" as we balance many cascading effects. **Glen Woodbury**, director, CHDS, moderated the discussion.

CDHS, NEMA, and IAEM Webinar, Part 2: "Personal, Organizational, and Community Resilience"
Apr. 29, 2020, 2:00-3:00 p.m. EDT

There is still time to **register online** for this webinar. In Part 2 of this two-part CHDS-NEMA-IAEM webinar series, the focus will center on personal, organizational, and community resilience. **Dr. Jackson Nickerson**, subject matter expert, Center for Homeland Defense and Security, and Frahm Family Professor of Organization and Strategy, Washington University, will discuss individual and community resilience, including: how to make good decisions, apply brain science, and remain resilient in the stress of a global pandemic. **David Kaufman**, subject matter expert, Center for Homeland Defense and Security, and vice president and director, Safety and Security, CNA, will delve into lessons learned from community resilience and preparing for a "new normal." **Glen Woodbury**, director, CHDS, will moderate.

Getting Ahead of COVID-19

**By Ashlee Delventhal, CEM, CM,
Director of Resilience and Critical Infrastructure Programs for Tidal Basin**

Two months ago, we were watching China cautiously, while going about our normal lives. Business trips and vacations were still being booked, weddings were planned, and tickets to concerts and festivals were bought. One month ago, we knew COVID-19 was going to impact our lives, but most of us still didn't fully accept what lay ahead. Afterall, such things happen to "other people" in "other places."

Fast forward to the present, and our lives have changed seemingly overnight. Schools are closed and moved online; restaurants, gyms, and movie theatres are shut down; conferences are being cancelled; and grocery stores across the country struggle to maintain their inventory of certain products. The current situation is difficult for even the most seasoned emergency managers and public health officials to absorb. Many have described it as overwhelming and are taking things one day at a time. However, looking ahead at some of the following items will ensure emergency managers are prepared to tackle the weeks and months to come.

Prepare for Cascading Effects

So far, the response to COVID-19 has been primarily viewed as a public health response; however, the secondary or cascading effects have a much broader reach. In a natural disaster, cities and counties will typically activate resources based on their emergency operations plans. While most organizations have activated parts of their emergency plans, the primary areas of focus to date have been on healthcare and internal continuity of operations.

Ultimately, the needs of the community for mass care, public information, and unmet needs will grow as we move into the phase of greater infection rates and more closures. Emergency managers should be talking with their partners now to identify resources and determine roles and responsibilities. Important partners to bring into the conversation include chambers of commerce and the private sector, in addition to traditional public safety, healthcare, and internal government departments.

Another aspect that will impact operations is the activation of Emergency Operations Plans (EOPs) for a separate, simultaneous incident. In the first part of March, Tennessee faced major damage from tornadoes; the Salt Lake City area had its largest earthquake since 1962; and a suburb of Denver called for wildfire evacuations. We are nearing severe weather season with COVID-19 as a backdrop. Communities should ask themselves how they will manage a similar event under pandemic conditions. In planning for these, there should be particular focus on mass care activities, taking the implications and precautions associated with COVID-19 into account.

Volunteer and Donations Management

Spontaneous volunteers, donations, and grassroots movements are a part of any large response, and COVID-19 is no exception. A quick look at Nextdoor and Facebook proves these efforts have already begun in most communities. While such initiatives are an excellent way for neighbors to support one

another, they can morph into an emergent assistance network that is not integrated into the larger operational picture. Emergency managers should, at the least, be aware of these groups and their activities within their communities to ensure they are not caught off guard in the future.

Document, Document, Document

On Mar. 13, 2020, the President declared the ongoing Coronavirus Disease 2019 (COVID-19) pandemic of sufficient severity and magnitude to warrant an emergency declaration. This declaration makes available to state, territorial, tribal, local government entities, and certain private nonprofit (PNP) organizations, Public Assistance (PA) funding to help defray the costs associated with the ongoing response to COVID-19. Costs potentially eligible for reimbursement under this declaration are those expenses that fall under the FEMA Category B, Emergency Protective Measures expense category, and will be subject to a 75/25 cost share. The federal government issued a nationwide declaration, under which states, tribal, and territorial governments do not need to request separate emergency declarations.

This means organizations should be documenting everything they do, use, or spend. All costs associated with the event should be cost-coded for easier tracking. Costs to capture include labor, supplies, and equipment associated with an organization's preparation for, response to, and recovery from the

Getting Ahead of COVID-19

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COVID-19 pandemic. Sign-in sheets and logs prove to be especially useful for personnel and equipment, and resources may be tracked through an emergency management software system and on Incident Command System (ICS) forms, such as the ISC 213 RR or another jurisdiction-specific document.

An important consideration is tracking donations and volunteer time, as these can often be used to offset the 25% local cost share. Documenting these activities is important even if an organization does not believe they will be requesting or be eligible for FEMA PA. Such decisions often change as events progress and more costs are incurred. See specific FEMA information online. For frequently asked questions, visit the FEMA PA FAQs page.

Finally, it is important to know that a vendor may be able to help provide oversight and advocacy through the PA reimbursement process. Vendor costs are eligible for reimbursement under this declaration. FEMA allows you to sign an emergency 90-day contract with a firm to help get you started in the reimbursement process. During that time, you must release an RFP that meets all the requirements of federal procurement as defined under 2 C.F.R. § 200.317-32.

Plan for Recovery (Now!)

At some point, we will emerge from this and begin to understand our "new normal." There will be many conversations over what went well and what should be improved. A best practice is to capture after-action items throughout the event. Items identified in March may not be remembered in April. A running log of successes and improvements will be beneficial later, as will the practice of conducting hot washes and debriefs periodically throughout the event. A significant amount of information will be lost if this is left until the end.

Possibly the most significant lift will be long-term community recovery leading to sustained resilience. The effects from COVID-19 will change our communities and our lives for years to come. There will be great opportunity for recovery in its wake. Long-term recovery needs may mirror those of traditional disasters in many ways but could be larger in scale. Mental health and economic recovery will likely be among the greatest needs.

Identify recovery goals for the next one year, three years, and five years. Determine what success will look like. You will then be able to pinpoint objectives and tasks to achieve that success. It is important to recognize that this initiative is much broader than emergency management and will require involvement from government, private sector, and nonprofit alike.

Summary

One final recommendation is to take care of ourselves. This is a marathon, perhaps even a triathlon given the potential for multiple and varied events, but it is certainly not a sprint. We will be working on this for a long time. Food, hydration, rest, and emotional care are critical. This event will be extremely difficult, but it will define our careers. Some will burn out and move on; others will carry the experience gained into every future event they face.

We are faced with an unprecedented situation, with a broader reach than any of us have experienced. Traditionally, emergency managers respond to localized events in their communities or deploy to another one, yet this event has touched every country in the world. Having awareness of and planning for challenges now will allow for a smoother path of recovery and community resilience — until we are confronted with the next emergency that will inevitably require our efforts and attention. ▲

Visit the IAEM COVID-19 Resources and News web page.

COOP and Coronavirus: the Lack of Planning, the Challenges of Implementing, and the Lessons Learned

By Kyle S. Lopez, MPA, AEM, Emergency and Continuity of Operations Planning Coordinator, Colorado Department of Public Health and Environment

It is not difficult to find glaring examples of how the Coronavirus (COVID-19) pandemic has dramatically affected the world and turned so many of our normal routines upside down. From overwhelmed medical systems and lack of personal protective equipment (PPE) to economic turmoil and political ambiguity, COVID-19 will forever leave its mark in global history. COVID-19 has caused governments of all levels across the United States, and for that matter the world, to implement emergency policies that restrict travel, limit social interaction, and change or suspend normal business operations for almost all sectors.

For many of us who work in the emergency management field, the Continuity of Operations (COOP) is likely a familiar term and a topic with which we have some experience, at least partially amongst all the other duties we are often juggling. However, while COOP may be a very familiar concept to emergency management practitioners, for those outside of our field, COOP may be something outside their experience.

This is where the true challenge of successfully implementing a COOP plan lies. Having a plan, and having a workforce that is educated on the intricacies of the plan and are actually capable of implementing it, are two very different things. Ask yourself the following questions:

■ When was the last time your agency had an organization-wide COOP training in accordance with the TT&E program and/or MYTEP?

■ Does your agency leadership have a solid understanding on lines of succession, delegations of authority, and essential functions?

■ When was the last time your agency had an organization-wide COOP exercise that had functional elements and truly pushed the capabilities of your staff or the Emergency Relocation Group (ERG)?

■ Are there laws, ordinances, or policies that require routine COOP updates? If yes, how thorough and accurate are those updates?

■ What is the general organizational attitude regarding COOP? Is it taken seriously and prioritized, or is it just another plan collecting dust on a shelf or perhaps filed in a virtual limbo on an internal drive?

A Lack of Pandemic Centric Continuity Planning and Guidance

Now ask yourself the following questions that are more on point to the issue:

■ Does your agency's continuity plan have a dedicated pandemic section or annex?

■ If yes, does that section include concepts of social distancing, teleworking, shiftwork, workspace dispersing, and enhanced hygiene?

■ Were the decisions your organization made to alter normal business operations to COVID-19 part of the plan (at least the general concepts), or did your agency have to develop them just-in-time based

on the latest guidance from public health experts?

■ If your agency activated the COOP plan due to COVID-19, how did it go?

If the answers you come up with are less than desirable, you are not alone. The simple fact of the matter is that pandemic planning, specifically pandemic COOP planning, has not had the attention that it truly deserves.

When examining all of the COOP resources available, like many other emergency management resources, it is clear that continuity planning should be done using an "all-hazards" approach. Indeed, *Continuity Guidance Circular 1 (CGC 1) Continuity Guidance for Non-Federal Governments (States, Territories, Tribes, and Local Government Jurisdictions) July 2013*[1], *Continuity Plan Template and Instructions for Non-Federal Entities and Community Based Organizations August 2018*[2], and *Continuity Guidance Circular February 2018*[3] all state the need for an all-hazards approach in continuity planning. However, despite the best intentions of the all-hazard approach being called for in continuity planning, the stark reality is that pandemics are but a mere blurb in the continuity planning doctrine and are far overshowed by natural disasters and man-made threats. Consider how limited the resources are that assist emergency management practitioners as they build and implement continuity plans that can adequately address pandemics. *Continuity Guidance Circular February 2018* barely has one

[1] FEMA. Continuity Guidance Circular 1 (July 2013).
[2] FEMA. Continuity Plan Template and Instructions for Non-Federal Entities and Community Based Organizations (August 2018).
[3] FEMA. Continuity Guidance Circular (March 2018).

COOP and Coronavirus

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paragraph on continuity pandemic on page 8, and the Emergency Management Institute (EMI) has one Independent Study (IS) course on the subject which has not been updated since Oct. 31, 2013[4].

Additionally, FEMA's Continuity Resource Toolkit only provides a few pandemic resources, such as the telework exercise template and the *Continuity Planning for Pandemics and Widespread Infectious Diseases* brochure which mentions the *National Strategy for Pandemic Influenza* dating back to May 2006[5]. Moreover, *NFPA 1600 Standard on Continuity, Emergency, and Crisis Management* barley mentions pandemics under the category of biological hazards[6]. The Centers for Disease Control and Prevention (CDC) and the Assistant Secretary for Preparedness and Response (ASPR) have also not provided much in the way of continuity planning resources with a pandemic focus other than referencing FEMA resources, policy directives, executive orders, and providing continuity plan templates[7,8]. For the few resources that are provided, most focus on pandemic influenza, not novel viruses.

Finally, the DRI International Business Continuity and Healthcare Continuity programs have historically not mentioned pandemics in their training outlines[9]. The lack of quality in-depth guidance for emergency management practitioners to draw upon in the develop-

ment of robust pandemic sections/annexes to their continuity plans is problematic for two reasons:

1. It creates uncertainty as to what to account for in the planning process; and

2. It demonstrates a lack of urgency or importance for pandemic focused continuity planning.

Both of these problems are detrimental to creating organizational buy-in and, ultimately, the creation of a quality pandemic-focused continuity plan that can be successfully implemented. If COVID-19 has shown us anything, it is the need for better guidance so we can in turn produce better plans, thus allowing us to truly increase our levels of resilience.

The Challenges and Lessons

When any agency activates its continuity plan during a real incident, challenges are bound to occur. Below are four particularly challenging areas that arose during the activation of the CDPHE continuity plan during the response to COVID-19. I would recommend any continuity professional be vigilant of these challenges and ensure their continuity plan adequately addresses them. Some of them may sound obvious and relatively simple, and they very well may be. However, in the midst of a disaster such as a global pandemic, sometimes our sight of even the most obvious and simplest things can get lost in the "fog of war."

■ **Personal preparedness of agency employees**. What is an organization but the people who staff it? Shifting staff to remote

operations, suspending in-person services, and implementing agency-wide telework procedures in a short period of time is highly challenging. Going forward, we must do a better job at educating all staff on the importance of personal preparedness, providing clear guidance and resources on how to become personally prepared, and either revising policies or creating incentive programs that actually promote employees to not just talk about it, but *do* it. In addition to taking personal preparedness actions, all staff need to create a "business go-bag" complete with chargers, personal electronic devices, office supplies, important documents, and whatever personal effects they need to compete their duties. Do not assume that all employees can change their workspaces easily and quickly, especially if they spend the majority of their time in their dedicated workspaces and if they lack the necessary equipment to work remotely.

■ **Help staff understand technology, and expect technical issues**. Rapidly shifting staff to telework from their homes or offsite areas presents the sudden need to utilize unfamiliar technologies. Developing easy-to-use directions or cheat sheets with screenshots that are available to all staff is essential. Additionally, be prepared for your IT staff to become overwhelmed with requests for assistance as staff members experience IT problems.

Developing a FAQ or troubleshooting sheet and posting it where employees can easily access it can

[4] FEMA. EMI IS-520: Introduction to Continuity of Operations Planning for Pandemic Influenzas (October 2013).

[5] FEMA. Continuity Resource Toolkit: Continuity Planning for Pandemics and Widespread Infectious Diseases National Continuity Programs, July 2018 (March 2020).

[6] NFPA. NFPA 1600 Standard on Continuity, Emergency, and Crisis Management (2019).

[7] CDC. Pandemic Influenza Healthcare System Preparedness and Response (November 2016).

[8] ASPR. Continuity of Operations (September 2019).

[9] DRI International. Business Continuity and Healthcare Continuity (2020).

COOP and Coronavirus

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take a significant burden off your IT staff. With an increased amount of usage for various software programs, your agency may not have enough software licenses for all users.

Moreover, an increased amount of staff using VPN and phone lines can cause networks to slow down or suddenly become inoperative. Save your work often; have a USB flash drive on hand; and don't underestimate how reliable a simple pen and notepad can be. Depending on the type of software and number of licenses, you may have to develop a work schedule that limits staff to a set number of users for specific time frames. Most importantly, take care of your IT staff, because they do amazing work and make the lives of your staff a lot easier.

■ **Emergency management staff may understand COOP, but do not assume that other staff do**. COVID-19 has caused plenty of uncertainty and constantly changing conditions. As a result, anxiety and stress are in abundance. As emergency management practitioners we may be more accustomed to these situations; however, many of our fellow staff members may not. It is important to talk with your colleagues about COOP and describe to them how your agency continuity plan functions. Even if your agency has had trainings and exercises in the past on COOP, do not assume that staff fully remember it or the finer details of the plan. Consistent communication is vital. When COVID-19 ends, strongly consider increased COOP trainings and exercises for your entire agency and all of the stakeholders/partners your plan includes. While most government agencies are required to have

TT&E programs for their COOP with minimum standards, they may not be good enough to ensure that staff truly know how to efficiently and effectively implement the plan.

Despite our best intentions, let's face it: we are all susceptible to complacency and can get rusty if we don't keep our skills sharp. Laws, regulations, and policies may be on the books that require robust COOP planning, but even they are only as good as the degree to which they are adhered to and enforced.

■ **Understand that your agency policies will change and may need to become very flexible**. If you work for a governmental agency, you are probably surrounded by a plethora of statutes, regulations, executive orders, departmental policies, rules, and standard operating procedures. In normal times, all of these can be challenging to navigate and follow, let alone in a disaster. When staff are shifted to alternate sites or assigned to telework, be prepared to make exemptions to policies that may restrict certain staff these options based on length of tenure or seniority. Additionally, be prepared to temporarily reassign staff to alternate supervisors for at least day-to-day functions, which may require them to be part of alternate teams or divisions.

Managing a remote workforce can be challenging for some supervisors, so work with your human

resources department to develop tools and best practices that can help both supervisors and subordinates adjust to teleworking or having staff relocated at alternate sites. Finally, while we should all do our best to follow all applicable policies and procedures, it is vitally important for emergency management staff to work with agency leadership and human resources staff to examine exemptions and flexibility to policies.

Conclusion

COVID-19 has upended so many of our normal routines, and in doing so, it has shown our strengths and our gaps. Continuity plans need to have better pandemic-focused sections/annexes that are given more attention, updated more frequently, and exercised more intensely. The guidance for pandemic focused continuity planning is sparse at best. However, emergency management and public health can change that by working together collaboratively to create refreshed guidance that can help us all craft better plans. We as emergency management professionals have to do more to educate our leadership and colleagues on continuity, advocate harder for our agencies to expect individual employee preparedness, and not lose sight of the simple challenges as we strive to solve the more complex ones. ▲

EM Calendar

Visit www.iaem.org/calendar for details on these and other events.

Apr. 29	2:00-3:00 p.m. EDT. CDHS, NEMA, and IAEM Webinar, Part 2: "Personal, Organizational, and Community Resilience." See details on page 31.
May 12-13	San Francisco Bay Area UASI: Third Annual Mass Notification Seminar, University of California, San Francisco, CA. This is now an online rather than an in-person event.
June 1-4	22nd Annual Emergency Management Higher Education Symposium, National Emergency Training Center (NETC), Emmitsburg, MD.
June 15-17	Campus Safety Conference 2020 – WEST, Las Vegas, NV.
July 12-14	Campus Safety Conference 2020 – EAST, Bethesda, MD.
July 26-28	Campus Safety Conference 2020 – TEXAS, San Antonio, TX.
Aug. 19-20	FEMA 2020 Dam Failure Life Loss Consequence Workshop, Washington, DC.
Aug. 24-28	New Jersey Emergency Preparedness Conference, Harrah's Waterfront Conference Center, Atlantic City, NJ.
Nov. 13-20	**2020 IAEM Annual Conference & EMEX, Long Beach, CA**.

IAEM 2020 Annual Conference & EMEX
"IAEM 2020: Visioning the Future
of Emergency Management"
Nov. 13-18, 2020
Long Beach, California

Visit the event website.
New information is being added regularly to the
IAEM conference site. See Conference News on page 8.

IAEM 2020: Visioning the Future of Emergency Management

International Association of Emergency Managers

2020

Nov. 13-18, 2020
Long Beach, CA

New IAEM Members: Feb. 16-Mar. 15, 2020

IAEM-ASIA

Amalraj Muraleedhara
Sarmma
Ernakulam District,
Kerala, India

IAEM-JAPAN

Masaharu Nakagawa
Ishinomaki
Japan

IAEM-CANADA

Canada Alberta Region

Folajimi Olaolu Ajibola
St. Albert, AB

Mark David Courtney
St. Albert, AB

Robynne Shinae Ikesaka
Fort McMurray, AB

Paul Prevost
Lacombe, AB

Mariana Wambeck
Edmonton, AB

Chakanaka, Zinyemba
Edmonton, AB

Canada Atlantic Region

Kasey McDermott
Upper Rawdon, NS

Canada British Columbia

Duncan Webb
Vancouver, BC

Canada Ontario Region

Aimey Lee Lyne Dupuis
Hanmer, ON

Wasim Iqbal Ahmad Khan
Mississauga, ON

Canada Prairie Region

Capt. Maxime Rivard
Winnipeg, MB

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Tomas Agustin Boetto
Cao, Spain

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Dr. Beyene Moges Agizie
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IAEM-USA

USA Region 1

Nicolle L. Amaral
Wareham, MA

Elyse Butterworth
Dracut, MA

Larry D. French, Jr.
Boston, MA

Edward Minyard
Nottingham, NH

USA Region 2

Sanah Afzal
Fresh Meadows, NY

Kishla A. Askins
Bordentown, NJ

Craig Bonney
Brooklyn, NY

Kurt M. Caminske, Sr.
Sayville, NY

Christopher Jared Longo
Howell, NJ

Zachary Neuhaus
Reisterstown, NY

Brian Owens
Troy, NY

Wendy M. Pulley
Oxford, NY

USA Region 3

Takeisha Allen
Wilmington, DE

Kara Rae Buckmaster
Prince Frederick, MD

Donald E. Clark
Severna Park, MD

Ronald A. Culmer III
Washington, DC

Matthew Exley
Lewisburg, PA

Diego R. Fernandez Otegui
Newark, DE

Kayla Gordon
Pittsburgh, PA

Steve Lynd
King George, VA

Anna C. McCann, CEM
Caldwell, WV

John Paras
Arlington, VA

Alexander Peterson
Murrysville, PA

Stephanie Robinson
Bowie, MD

Chris Simpson
Philadelphia, PA

COL Alicia G.B. Smith
Alexandria, VA

Kevin Thelen
Indiana, PA

Andrew Whitehead
Middletown, MD

Please welcome these new IAEM members!

New Members

USA Region 4

Anthony Barrick
Wilson, NC

Eugene Christian Elliott
Grantsboro, NC

Benson Wood Jackson I
Berea, KY

Sheneka R. Kirlew
Fort Lauderdale, FL

Yohann Kurzweil
Plantation, FL

Jason Lehman
Conway, SC

Melissa Lopez del Castillo
Miami, FL

Stefan Morgan III
Johns Island, SC

Kyle Derrick Reese
Arlington, TN

William Daniel Rochester
Moncks Corner, SC

Lisa Terry
Whittier, NC

USA Region 5

Jamie Fitzgerald-McNelis
Burnsville, MN

CDR Joseph H. March
Carmel, IN

USA Region 6

Kenneth Bell
Rowlett, TX

Brian A. Crawford, CEM
Shreveport, LA

Hope Breaux Davila
Beaumont, TX

Willie J. Davis, Jr.
San Antonio, TX

Chris Earp
Pflugerville, TX

John M. Findley
Addison, TX

Greg Hoffnung
Humble, TX

Jesse Manford LeGros, Jr.
Galveston, TX

Danielle Maples
Bossier City, LA

Abigail Marquez
Dallas, TX

USA Region 7

Brandon Myers
North Platte, NE

Nicholas Russo
Waynesville, MO

USA Region 8

Thomas Buettner
Fountain, CO

Lindsey R. Means
Orem, UT

USA Region 9

Dr. Nancy A. Brown
Santa Rosa, CA

Jacob Choe
Ewa Beach, HI

Robert Delgadillo
Santa Clarita, CA

Angie M. Gibson
Ukiah, CA

Michael J. Iwashita
Honolulu, HI

Edmund Stephen
Sikorski III
Milpitas, CA

USA Region 10

Geoff L. Bowyer
Portland, OR

Tiffany C. Brown
Astoria, OR

Eric Lee Donner
Olympia, WA

Zachary C. Gates
APO, AE

Marie Harris
Puyallup, WA

Please welcome these new IAEM members!

IAEM Bulletin 2020 Editorial Calendar

At least four times a year, the *IAEM Bulletin* includes a special focus section with feature articles on a selected topic of interest to emergency managers. The other eight issues of this monthly publication include articles on a wide variety of topics related to emergency management.

Daryl Spiewak, CEM, and Valerie Lucus-McEwen, CEM, co-authored the page 1 article in the March Bulletin kicking off our 2020 special focus issues of the *IAEM Bulletin*. The first three special focus issues will focus on these specific types of black swan events: pandemics, cybersecurity, and crumbling infrastructure. **Note**: Article submissions on other types of black swan events are welcome for use in the eight general interest issues of the *Bulletin* (and of course, any articles on topics of interest to EM professionals). The fourth special focus will be on the IAEM Annual Conference theme, "IAEM 2020: Visioning the Future of Emergency Management."

Here is the editorial calendar for 2020:

April 2020 IAEM Bulletin
Article Deadline: Mar. 20, 2020
"Black Swan Events: Pandemics"

We can't wait until a pandemic occurs, but we can look at what we have learned in order to be prepared. Articles could look at past incidents that offer lessons in how to best prepare. Specific topics could be: H1N1, SARS, MERS, or Spanish flu. How best can we learn how to prepare for a virus that is new? What can we learn from what has already happened with the coronavirus? As emergency managers, we learn from what has happened in the past to help us plan

for the future. Events and incidents have precipitated change over the decades. Emergency management has a long and impressive history of major accomplishments through its professional growth. Events and incidents have precipitated change over the decades. Consider the improvements you have experienced and witnessed, as well as the failures.

June 2020 IAEM Bulletin
Article Deadline: May 20, 2020
"Black Swan Events: Cybersecurity"

Cyber incidents are happening and will continue to occur. Our world is unique, and we have to embrace the reality of where we are and be ready to manage any emergency that arises. To survive and thrive, we must think in new ways, share resources, and work with new partners to forge new successes. We need to be ready to consider "non-traditional" solutions.

Technology is vulnerable to cyber hacks, and the damage could be a whole lot more than the incidents we have already experienced. What have we learned from events that have already occurred to prepare our communities to face future cyber incidents? How will be the challenges of cyber incidents become opportunities?

August 2020 IAEM Bulletin
Article Deadline: July 20, 2020
"Black Swan Events: Crumbling Infrastructure"

Many of us are facing the challenges of crumbling infrastructure, including power grid failure, weakened dams and bridges, and general aging of the infrastructure as a whole. How do emergency managers prepare their

communities when the potential disaster has not yet occurred? Share your experiences in an article for this issue. What did you and your community learn from an event that occurred due to crumbling infrastructure? It is more obvious than ever that our world is rapidly changing. How will we learn to operate in an environment that is unlike anything in our past? Will technology be our friend or an obstacle? Where are the opportunities for growth, development, change and synergy as we move into the future world of emergency management?

October 2020 IAEM Bulletin
Article Deadline: Sept. 20, 2019
"IAEM 2020: Visioning the Future of Emergency Management"

The last special focus issue in 2019 will be based on the theme of the IAEM 68th Annual Conference & EMEX, "IAEM 2020: Visioning the Future of Emergency Management," to be held Nov. 13-18, 2020, in Long Beach, California. Your article should be related in some way to the overall conference theme. The October 2020 IAEM Bulletin will be our "conference issue." ▲

> "A **black swan** is an unpredictable **event** that is beyond what is normally expected of a situation and has potentially severe consequences. **Black swan events** are characterized by their extreme rarity, their severe impact, and the practice of explaining widespread failure to predict them as simple folly in hindsight." – *Wikipedia*
>
> **How do you prepare for a crisis that hasn't occurred yet? How do you deal with fear of the unknown?**

Email Karen Thompson, editor, if you have any questions.