



**Special Edition: FDSOA**

# BACK STEP TALKS

**SERIES III ISSUE II FEBRUARY 2024**

## Fire Dept. Safety Officers Association (FDSOA) Conference

During the week of January 14-19, 2024, the Fire Department Safety Officers Association (FDSOA) hosted its annual conference in Phoenix, Arizona. The Maryland Fire Chiefs Association (MFCA) provided scholarships to six individuals to attend this event. This special edition of Back Step Talks is dedicated to sharing what we learned by attending the FDSOA Conference. You will hear from each of the attendees as they share their experience by attending one or more of the educational sessions and identify



what were some of the key takeaways that they learned by attending. By sharing this information with you, we hope that you too can learn from the experience we gained from attending the conference.

Attending the conference were:

- David Lewis, Odenton Volunteer Fire Company, Chairman/MFCA Health and Safety Committee
- Joseph Chornock, Germantown Volunteer Fire Department
- Jon David Black, Fruitland Volunteer Fire Company

- Richard Brooks, Norrisville Volunteer Fire Company
- Fawad “Chip” Gul, Germantown Volunteer Fire Department
- Joseph “Dino” Pignataro, Goodwill Fire Company, Centreville, MD
- David Lewis, Odentown Volunteer Fire Department.

The primary conference events were held on Tuesday and Wednesday, January 16 and 17. The keynote address was presented by Dr. (Chief) Rich Gasaway, who has been a visitor

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## Fire Dept. Safety Officers Assoc. (FDSOA) Conf. (cont)

and presenter to Maryland on multiple occasions. Be sure to check out our feature article on Chief Gasaway's presentation in this issue of Back Step Talks.

Another feature of the conference was the Thursday presentations, titled NERDSTOCK. NERDSTOCK completes the vision of the Science Alliance to bring researchers and first responders together to learn about the research activities being conducted on responder health

and safety and provide feedback to these researchers on what is important to them. See the feature article in this issue that highlights the presentations offered at NERDSTOCK.

The conference was sponsored by a number of vendors who were on-hand to discuss their efforts in responder health and safety through product enhancements, health and safety services, and information dissemination. It was great to interact with these vendors and

gather an understanding of their products and services and how we can use them in our departments to improve health and safety.

Please take the time to read this special edition of Back Step Talks and share it with the members of your department. As always, we welcome your feedback on what we have presented and how you find it useful to your department and its members. Reach out to use at [safety@mdchief.org](mailto:safety@mdchief.org).

## Here is What the Attendees Said

The Maryland Fire Chiefs Association sponsored six members to attend this year's Fire Department Safety Officers Association (FDSOA) conference in Phoenix. Here is what they had to say about the conference:

**Fawad "Chip" Gul:** It was an enlightening experience that provided valuable knowledge and best practices in fire safety, emergency response, and the overall well-being of first responders. I am excited about the potential changes and improvements that we can implement as a result of this experience.

**Dave Lewis:** I found this experience to be richly rewarding

and gathered considerable information that I hope to use in helping others establish a healthy and safe work environment as part of the emergency services. We thank the MFCA for sponsoring our attendance at the FDSOA conference. Much can be learned by attending and sharing.

**Richard Brooks:** This was truly a great opportunity with valuable programming for any Safety Officer. The point of this entire conference was firefighter safety. The catch phrases abound: Water good-air bad, Know your construction, Zero visibility kills. Each one is driven by a passion for us all.

**Joe Chornock:** This conference was loaded with excellent presentations and networking opportunities. The members that attended took advantage of everything the conference had to offer. There is so much information to be shared. I really want to thank the MFCA for allowing us to attend this seminar.

**Dave Black:** This conference was one of the best that I have ever attended. The ability to network with Health & Safety Officers from across the country and meet with researchers who strive to improve the Health & Safety of those working in the fire service was remarkable.

# The Sinister Seven: Deadly Situational Barriers

The attendees of this year's Fire Department Safety Officers Association's Health and Safety Conference in Phoenix got to experience a keynote address unlike any that I've ever been a part of. On Tuesday morning, Dr. Richard Gasaway delivered an interactive program titled: "The Sinister Seven: Deadly Situational Awareness Barriers Every Incident Safety Officer Needs to Know." His keynote immersed the participants in an exercise designed to demonstrate the challenges of developing and maintaining situational awareness.

Dr. Gasaway started off by explaining that many responders believe if they pay attention and keep their heads on a swivel they will, automatically, have good situational awareness. Gasaway called this the "Situational Awareness Fallacy" and explained the process to develop and maintain situational awareness is much more complicated.

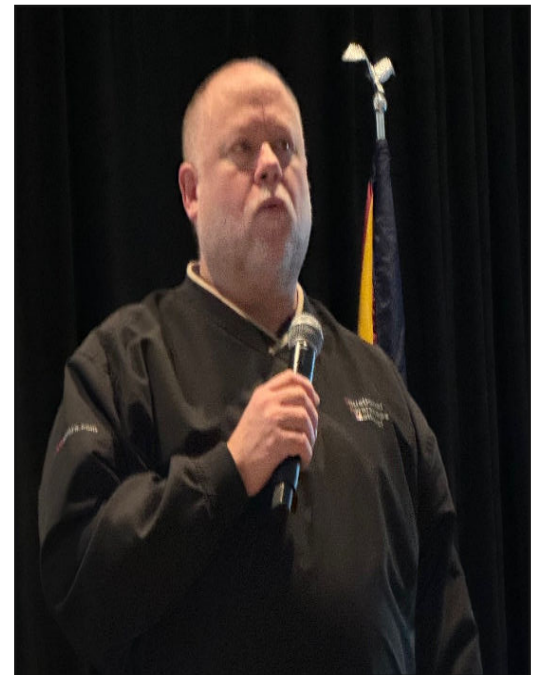
He explained humans are subject to error and we tend to oversimplify the process and we tend to be overconfident in our ability to develop and maintain situational awareness. And to back up what he was saying, Gasaway guided the conference attendees through an exercise that created an unbelievable situational awareness meltdown.

To be fair, before starting the demonstration, Dr. Gasaway warned the attendees that by the end of the exercise some of them were going to go blind. Some would go deaf. Some would answer questions by telling lies (but they would not realize they were lying). Some might hallucinate and others would lose track of time. Everything he warned us would happen – happened! And the amazing thing about it, the entire exercise only took about 30 seconds.

## Sinister 7 Situational Awareness Barriers

- **Task Fixation**
- **Multitasking**
- **Confabulation**
- **Time Distortion**
- **Distraction**
- **Short-Term Memory Overload**
- **Auditory Exclusion**

If you've never had the opportunity to attend one of Dr. Gasaway's programs, he has a way of creating audience engagement unlike no other. It was so refreshing to participate



*Dr. Rich Gasaway*

in an interactive keynote address that was more than a speaker standing at a podium and clicking through a Power Point slide deck.

By the time the presentation was done, it was clear to everyone that situational awareness is so much more than paying attention and keeping your head on a swivel. I am confident his keynote created an indelible memory for everyone who attended as we learned about the sinister seven situational awareness barriers: task fixation, multitasking, distraction, short-term memory overload, confabulation, auditory exclusion and time distortion.

Submitted by

Joseph Chornock



# The Five Reads



On January 14-18, 2024, I had the opportunity to attend the FDSOA Health & Safety Conference in Phoenix, Arizona. This was truly a great opportunity with valuable information for anyone serving as an Incident Safety Officer (ISO). While the main conference began on Tuesday, the opportunity for additional learning was presented in the form of pre-conference seminars. I chose to attend "The 5 Reads" on Sunday morning, presented by Trevor Shea and Adam Hoster.

**The 5 Reads are:** Risk, Smoke, Building, Firefighters, and Hazardous Energy. These

markers lay out the daily plan of an Incident Safety Officer at the scene of an incident. Clearly every incident does not need to be a fire. Each topic does not need to apply to every incident. But not addressing the 5 Reads can lead to catastrophic events, including firefighter injury or death.

**Risk:** Firefighters have an inherent toleration for risk. We accept risk as "part of the job" and have no fear in the face of risk. However, risk may lead to a catastrophic event – firefighter death. Managing risk as a process of Identification, Evaluation, Prioritization, Mitigation, and Monitoring. One

of the keys to reducing LODDs is changing our view of risk and adopting a culture of "Risk a little to save a little, Risk a lot to save a lot, but Risk nothing to save nothing."

**Smoke:** The substance of the presentation was how and why do we read smoke. The process of reading smoke includes understanding how to read the volume, velocity, density, color, influencing factors, and predicting fire behavior. Tactical decisions and strategies are based significantly on reading smoke. The Incident Safety Officer (ISO) must develop an understanding of how to predict a hostile fire event. Hostile fire

## The Five Reads (cont)

events include flameover, flashover, explosive growth, and backdraft. Any of these has the potential to lead to a catastrophic event. The ISO bears significant responsibility to the Incident Commander (IC) and all personnel operating on the scene to clearly convey the potential for any hostile fire event and make recommendations on the actions required.

**Building:** We must all have an in-depth knowledge of building construction, especially with the changes over the last few decades and the increased risk that modern construction presents to firefighters. We must learn to classify a building by type, era, use, and occupancy. Plan for the incident based on the following rule: Rule of 2-4-6. 2k sq ft, 2 stories, 2 attack lines. The rule expands

to 4 and 6 stories. We must also judge collapse potential. Space and distance are needed for your safety. The safe zone or collapse zone is 1.5 times the height of the structure.

**Firefighters:** Know your firefighters. Ensure that they are physically and mentally prepared for fire combat. Have they received the required rest? Are they prepared for the task assigned? Does the scene support the mission? Is rehab prepared? Are EMS staff on scene? Is rehab and hydration addressed by department SOP's? The response to these questions is critical for the safety of personnel operating at the scene.

**Hazardous Energy:** Energy is the accumulation of time. As a fire burns in a structure the fire creates smoke and energy.

Energy is looking to escape the building. Firefighting strategies must be selected to allow the release of energy from the building. Tactical ventilation and water flow are key to controlling energy on a fire scene.

The instructors were well prepared and presented in a clear and well-paced rhythm. While the topics presented in six hours were complex, the information presented was valuable. The time invested by the participants yielded excellent benefits created by the open dialogue and the wisdom of the experience in the room.

Submitted by:

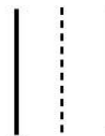
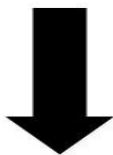
Richard Brooks



[Five Reads](#)

- **Risk:** Identification, Evaluation, Prioritization, Mitigation, and Monitoring
- **Buildings:** Type, Era, Use, Size, Related Hazards and Predicting Collapse
- **Smoke:** Volume, Velocity, Density, Color, Influencing Factors, and Predicting Fire Behavior
- **Hazardous Energy:** Thermal, Mechanical, Wind, Chemical, Electrical, Water
- **Firefighters:** Capabilities, Mental and Physical Status

# The Five Most Dangerous Places



One of the workshops that I had the opportunity to attend was “The Five Most Dangerous Places”, presented by Chief (ret.) Forest Reeder, Tinley Park, IL. The workshop discussed the 5 most dangerous areas where fire crews are most at risk. The five most dangerous areas were described as above the fire, below the fire, in the same compartment as the fire, in compartments on either side of the fire, and on the roadway.

In order to ensure our own safety, each of us needs to understand the hazards of each of these dangerous areas and limit our time in these zones only to what is necessary to accomplish the tasks. Always plan an exit strategy. We often advise homeowners to practice EDITH (Exit Drills in The Home). We need to have our own EDITH plan so that we can quickly and safely exit one of these danger zones should conditions change.

I found it interesting that the fifth danger area is not a fire related area but noted as a danger on the roadways. Each year, first responders are killed, and apparatus destroyed by incidents occurring along the nation’s roadways. The reader is directed to the Cumberland Valley

Volunteer Firefighters Association’s Emergency Responder Safety Institute (CVVFA/ERSI) for more information and on-line training for operating at roadway incidents visit [Responder Safety.com](http://ResponderSafety.com)

Chief Reeder emphasized the point that in today’s hostile fire environment, the Incident Safety Officer should be designated as the Incident Survival Officer. As you review many of the NIOSH line-of-duty death (LODD) reports, it is reflected that the LODD could have been avoided had an Incident Safety Officer been assigned.

The Incident Safety Officer, upon arrival at a fire scene, should assess the situation using the following benchmarks:

1. What mode/strategy are the crews in? Does it match the risk level?
2. What tasks have been assigned? (in progress, completed, remaining)
3. Are the mode/tasks getting the job done? Is it time to leave and change modes?
4. Are tactical benchmarks being achieved? (fire attack, all clear, under control)

5. Are safety systems in place?
6. Do you know who is inside and on top of the hazard zone?
7. Are communications being used effectively?
8. Practice the “5 Reads” (see Richard Brook’s article in this issue of Back Step Talks)

Being assigned as the Incident Safety Officer is not easy. You may be unpopular because of your actions. You will be tired after the incident because you are constantly monitoring what is going on (and what is not going on). But if you do your job, you will achieve success and ensure that everyone goes home, nobody gets hurt, and excellent service is delivered.

Submitted by  
David Lewis



[5 Dangerous Places](#)

# Look Ma, No Hands!!!

One of the fun and exciting events that I had the opportunity to experience while at the FDSOA conference was to ride in a fully autonomous and driverless Waymo vehicle. Waymo LLC has been developing the technology necessary to support autonomous vehicle operations and now operates fleets in Phoenix, San Francisco, Los Angeles, and Austin. The service in the Phoenix area includes Scottsdale, for a coverage area of 180 square miles.

My journey began with attending Jack Sullivan's presentation on



Roadway Safety. At the end of his presentation, he included a discussion of the evolving increase in autonomous vehicles. Supporting Jack's presentation were two representatives from Waymo and one from Aurora. Aurora is operating fleets of autonomous and driverless freight delivery trucks in 7 regions of the U.S.

Following Jack's presentation, we were offered the opportunity to ride in a Waymo vehicle and visit their Phoenix Operations Center. While I admit I was a little apprehensive at first, the ride was smooth, and I felt safe in the vehicle the entire time. It was comforting as the vehicle slowed down in traffic, keeping a safe distance and stopping at all red traffic signals and stop signs. There was even one point that a pedestrian seemed ready to step into the roadway and the vehicle slowed until it detected that the pedestrian was not entering the roadway.

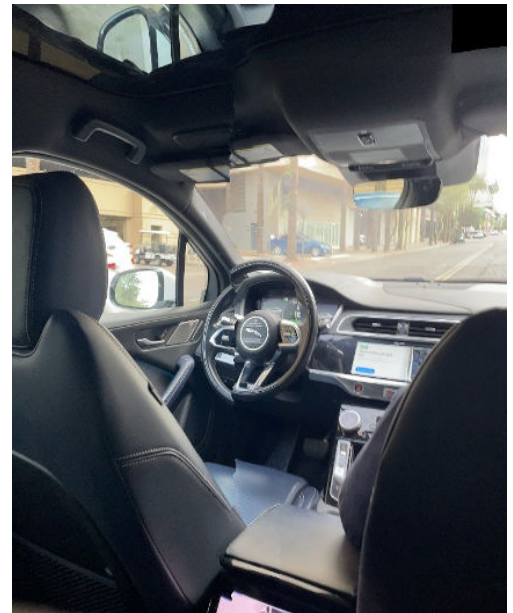
Once we got to the Operations Center, Jack and I had an opportunity to ask questions about the operations of the vehicle and what first responders needed to know if encountering a vehicle involved in a roadway incident. Waymo operates a staffed command center that monitors each vehicle and is able to immediately dispatch a service vehicle should one of the autonomous vehicles have a problem. The vehicles also can detect when it is time to come to the service center for charging or other maintenance details. We witnessed about ten cars come in during our visit to the Operations Center.

It was good to be able to experience the operation of these autonomous driverless vehicles firsthand. As part of

Cumberland Valley Volunteer Firefighters Association's Emergency Responder Safety Institute (CVVFA/ERSI), Jack and others have been closely monitoring these technologies to gain an understanding of how they operate and what first responders need to know. It is your responsibility to learn and understand these new technologies BEFORE you encounter them on a roadway incident.

Submitted by

David Lewis



[WAYMO.COM](https://www.waymo.com)



[Aurora.Tech](https://www.aurora.tech)



[Responder Safety.com](https://www.responder-safety.com)



# Look, Listen, and Feel—It's Not Just for Breathing

One of the presentations offered at the FDSOA conference was entitled "Look, Listen and Feel... it's not just for breathing", presented by Chief Robert Delagi (ret.) of Suffolk County, NY. Chief Delagi discussed how providers of Emergency Medical Services (EMS) are at great risk if not taking action to ensure scene safety and protecting themselves and their crews on EMS responses.

Our environment has changed since the introduction of EMS as a mission focus for emergency services providers. We regularly hear of news reports of EMS providers being attacked on scene and even in the back of the unit during transport.

**Fact:** EMS is an Unsafe Profession. The fatality rate for EMS Providers is 3x the national average, and non-fatal injuries are 5x higher than other health care providers. EMS providers are 7x more likely than the average health care worker to miss work because of an on-the-job injury.

Remember Day 1 of your EMT class? You were taught that your first actions when arriving on-scene at an EMS incident must always be "BSI – Scene Safety". We need to take a new approach for scene size-up and safety. Scene size-up doesn't start when you get there. You

need to think about the type of call while enroute to the scene, and based upon your feeling, instincts, and what you see when you arrive. Size up doesn't end after arrival, it's a constant process throughout the incident.

While it is common for all fire responses to have a designated safety officer, the same does not hold true for EMS responses. Crews often work alone in pairs of two and only have fire service backup on certain types of calls. These crews are primarily responsible for patient care and are challenged by having to also monitor scene security. Crews should practice Crew Resource Management (CRM) where each crew member has the responsibility to maintain situational awareness and report any threats to other crew members.

We need to become more aware of our surroundings on the incident scene and be prepared to immediately withdraw if our safety has become compromised. Remember that your safety is the highest priority and withdrawal from the scene is not considered patient abandonment. However, it is critical that you fully document in the Patient Care Report the reason why you left the patient's side for your own safety. It is also important that the crew return to the patient once the

scene is declared safe for you to return.

**Look, listen, and feel** is not just for assessing the patient's breathing. It should also be used for assessing scene safety. **Look** at the body language, the verbal tone, and where you are standing as compared to the patient's location. **Look** for movement warning signs like a nervous twitch, people that are pacing back and forth, people who are rising or standing on the balls of their feet, the patient that removes clothing like a shirt or jacket, the patient that moves towards an object that could be used as a weapon. Be cognizant of the patient that invades your personal space. **Listen** to what the patient and the bystanders are saying. Are they threatening your safety in any way? What does the tone of their voice say about their temperament?

**Feel** the environment. Is it friendly, or are the patient or other bystanders a possible threat? If it doesn't seem right, know your way out. Ensure that the door is opened/unlocked. Never let the patient or bystanders stand between you and your primary escape routes. Don't back yourself into a corner! The crews should always act as a team, agree on a verbal distress word. Always retreat together and this is not a time for a discussion. It is so important to



## Look, Listen, and Feel—It's Not Just for Breathing cont

maintain situational awareness of your surroundings and your location on the scene.

Providing EMS coverage has become a significant percentage of today's emergency services

response profile. Not only has our response volume increased, so has the threat to personal safety.

By practicing safe operating procedures and crew resource management, we can become

better aware of our surroundings and return from the call safe and unharmed.

Submitted by

Joseph Chornock

## The Value of Conducting After-Action Reviews

As a service, we tend to do things the way we always have in responding to the typical incidents that we run day to day. We run automatic alarms, collisions, structure fires and we tend to do things by a response policy or in some cases, training received, and experience shared by senior members.

However, we are often reminded that there is no such thing as a "routine incident." At any given incident, something may not go as policy or planned tactics dictate. But fortunately, most times, we walk away with a victory, a leak is stopped, a fire gets put out, and we pack up and return to quarters. These are known as "accidental successes."

The concept of an After-Action Review (AAR) was originally conceived to review large loss incidents to learn how to mitigate these types of incidents in the future. Those are now commonly referred to as a "Post Incident Analysis" and provide an in-depth review into a large-scale incident.

Today, AAR's are more commonly used to review even the simplest of incidents. The AAR is a daily, incident driven, non-judgmental, learning tool that anyone from the single piece unit officer up to the person in command, can utilize to review the call you just handled. Sometimes, we refer to these as "kitchen table chats", "tailboard chats", or even "back step talks" (note the reference to the title of this newsletter).

Designed to be quick and objective, the AAR will show, regardless of whether the call ended well or was not of the desired outcome, what worked well, what didn't work as expected, and what we can do to overcome any shortfalls in the future.

After each call, gather responding units or if a single piece response, your crew and ask the questions identified in the box to the right.

Completing an objective AAR after each incident will give you the opportunity to review

crew performance, training, policies and practices utilized, and assist you in determining your strengths and shortfalls. AAR's are a valuable tool to help make your department and crews stronger. Submitted by:

J.D. "Dino" Pignataro

- What was our mission?
- Had we planned for this event?
- Were there any gaps in our planning?
- What went well?
- Did we have the resources to handle this event?
- Did we do all we could to make this a successful operation?
- What could have gone better?
- Did we see any unsafe behaviors?
- Did our training prepare us?
- What could we have done differently?
- If you ran the same incident today what would be done differently?
- Who needs to know?
- What needs to be fixed?

# NERDSTOCK

## NERDSTOCK – Where Science Meets the Station

The final day of the FDSOA conference was labeled NERDSTOCK. This themed day was established at last year's conference to provide researchers with an opportunity to present some of their studies and results to the fire service community. NERDSTOCK is a product of the Science Alliance. The Science Alliance was formed by a group of researchers who sought to establish a relationship between the fire service and the researchers who conduct studies on the health and wellness of first responders.

Too often, research dollars are spent without the fire service hearing about, providing input, or benefiting from the results. In recent years, there has been a closer relationship between research and the fire service thanks to the National Fallen Firefighters Foundation (NFFF) and the development of the National Fire Service Research Agenda. An annual symposium is held by NFFF to review the

research agenda and the report that follows contains the recommendations of the fire service on areas where research is needed.

The FDSOA NERDSTOCK agenda was delivered in a lightning round format where each researcher was given 20 minutes to discuss their topic. The following topics and speakers were presented at NERDSTOCK 2024:

“Rethinking Hiring and Retention”, By Dr. Michael Cunningham

“Sleep”, by Dr. Joel Billings

“Mental Health Screenings”, by Dr. Marc Kruse

“FRESH – First Responder Health & Safety”, by Dr. Denise Smith

“PFAS”, by Dr. Farzaneh Masoud

“COVID Long”, by Dr. Sue D-Isabel

“Concussion & TBI”, by Captain Chris Fleming



[Science to the Station](#)



[Life Safety Initiative #7](#)



[Research Agenda Report](#)



**988** SUICIDE & CRISIS  
**LIFELINE**

**11**

The number of fallen firefighters through February 26, 2024.

[US Fire Administration](#)

**3**

The number of 1st responder suicides through February 26, 2024.

[Firefighter Behavioral Health Alliance](#)