

# Maryland EMS News

For All Emergency Medical Care Clinicians

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July 2019

## CHEMPACK Updates

The CHEMPACK Program is a federal project that places nerve agent antidotes where they can be quickly accessed for use in EMS and hospital settings. In Maryland, the

CHEMPACK is managed jointly by MIEMSS and the Maryland Department of Health (MDH) in partnership with the US Department of Health and Human Services (HHS).

There have been recent changes in the formulary, so MIEMSS has updated and streamlined the CHEMPACK guidance (see pages 5 and 6). The updated algorithms incorporate the addition of midazolam for treatment of severe nerve agent exposure and seizures.

As a reminder, the CHEMPACK is a resource available for use by all EMS jurisdictions and hospitals in Maryland. A request should be considered by an EMS incident commander or hospital clinician whenever an incident presents the possibility that available on-scene or hospitals' chemical nerve agent antidotes will not be sufficient.

All requests for the CHEMPACK are made to SYSCOM/EMRC by radio or phone 800-648-3001. The requested nerve agent antidotes will be delivered to the scene or hospital by aviation or ground transportation.

## Region I 2019 Hall of Fame Inductions

On July 18, 2019, four individuals were inducted into the Region I (Allegany and Garrett Counties) Emergency Medical Services Hall of Fame. The individuals who were honored included James Dawson, from the George's Creek Ambulance Service; Allen Ruby, from the Flintstone Volunteer Fire Company; Dr. Richard Perry, Garrett County Jurisdictional Medical Director; and Ralph Lichty, from the Southern Garrett County Rescue Squad.

Honorees and guests were treated to a celebration at the Garrett College Career and Technology Training Center in Accident, Maryland, where the ALS Program educates

many current EMS clinicians and those preparing to become Paramedics. Inductees received a plaque and a commemorative MIEMSS challenge coin.

Nominations for the Region I Hall of Fame are accepted all year long by the MIEMSS Region I EMS Advisory Council. Nominees are then voted on by the council, and up to 10 nominees who have demonstrated outstanding contributions to the Region I EMS System are inducted into the Region I EMS Hall of Fame. For more information on the Region I EMS Hall of Fame, contact the MIEMSS Region I Office at 16 South Broadway in Frostburg, or phone 301-895-5934.



*Pictured left to right: Dwayne Kitis, MIEMSS Region I and II Administrator; Jonathan Dayton, AGCVFRA Vice President; James Dawson, Inductee, George's Creek Ambulance Service; Allen Ruby, Inductee, Flintstone Volunteer Fire Company; Dr. Richard Perry, Inductee, Garrett County Jurisdictional Medical Director; Dr. Ted Delbridge, MIEMSS Executive Director; Dr. Timothy Chizmar, MIEMSS Medical Director; Dr. Janelle Martin, MIEMSS Region I Medical Director. Absent from the photo: Ralph Lichty, Inductee, Southern Garrett County Rescue Squad. Photograph courtesy of Doug Beitzel.*

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# Maryland–National Capital Emergency Response System and Prince George’s County Fire/EMS Department Design a Command Officer Professional Development Program

A capability is the ability to complete a critical mission or function through a set of tasks, at a specific time, under a set of conditions, to a set standard.

Building a capability is a long and arduous process. Moreover, sometimes the direction can be ambiguous and unclear, but when the results are achieved, the victory is sweet.

The Maryland-National Capital Emergency Response System (MDERS) supports the integration of police, fire/EMS, hospitals, public health, and emergency management for coordinated response to emergency incidents. Through strategic planning, information sharing, training and exercising, and equipment acquisition, MDERS creates response capabilities. One such capability is the recent collaboration of MDERS with the Prince George’s County Fire Department/EMS (PGFD) in the development of the Command Officers Professional Development Program (COPD).

In 2017, PGFD participated in capability development workshops. Each workshop assessed the department’s ability to respond to an active shooter incident. This process followed the Homeland Security and Exercise Evaluation Program (HSEEP) framework. Each workshop group responded to a set of facilitated questions to identify needs in the areas of planning, organizing, training, equipping, exercises, and evaluating (POETEE).

A report from the workshops was developed and presented to key PGFD leaders. The results identified three areas of need. First,

PGFD supervisors and managers require clear direction on policy related to their response to active violent incidents. Second, personnel require more situations and repetitions (scenarios and practice) to build experience, confidence, and to enhance their decision-making capacity at emergency incidents. Finally, workshop participants identified that they wanted localized training. It was important for them to have learning opportunities at their respective fire stations.

Working with MDERS staff, tabletop exercises were developed. These exercises focused on the initial actions of the first arriving units. A set of scenarios were developed, including a single-family home fire, a multi-casualty incident, and a garden apartment fire. The exercise objectives were threefold: incident command, allocation of resources, and medical management of casualties.

More than 100 PGFD personnel participated in this process. The results from the tabletop exercises validated the initial report from the earlier workshops. PGFD leadership then requested that MDERS provide assistance to design a command officer professional development program to address this identified gap.

MDERS strategized with PGFD to establish, goals, objectives, and deliverables. MDERS staff established three PGFD workgroups, each with an individual task, including writing policy, researching equipment specifications, and identifying an appropriate simulation application for the department.

PGFD and MDERS consulted with regional partners for assistance in carrying out those tasks. Representatives from the Montgomery County Fire Rescue Service (MCFRS) and Loudoun County Fire Department (LCFD) provided guidance. This included on-site visits to observe and gather best practice information. These partners also aided in identifying policies, procedures, methods, and lessons learned in command competency programs.

Following those visits, the work groups identified the necessary resources. These included personnel, software, and equipment. Additional research identified simulation software for command competency and incident management that uses simulation to create events that firefighters and EMS clinicians may encounter. It combines real world fire and rescue incidents with gaming elements. This cloud-based, user-friendly application allows members to easily build custom scenarios that can be viewed or shared within the department.

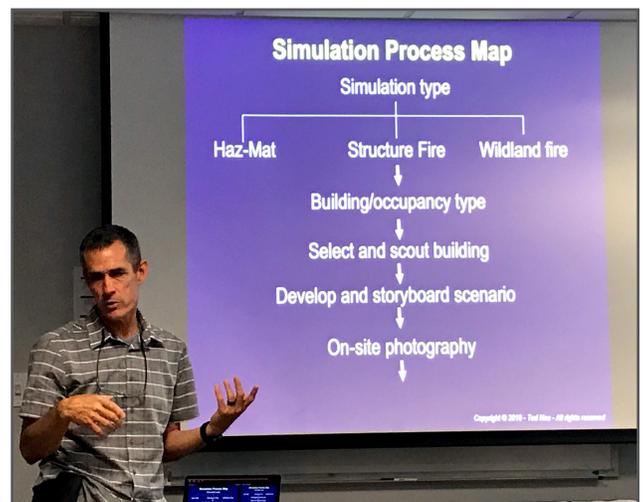
There is a set of knowledge, skills, and abilities (KSAs) required by incident commanders. Among those KSAs is the capability to quickly and effectively manage incidents and allocate resources. The COPD is a success story in moving PGFD forward in incident command, resource allocation, and the provision of training at the station level.

This process required communication, collaboration, and coordination with multiple agencies to deliver on time, task, and target.

*(Continued on page 2)*



The Command Officers Professional Development Program was created as a platform for enhancing the knowledge, skills, and abilities required of incident commanders.



Simulation Process Mapping is one of the many skills covered in the training.



## Upcoming Pediatric Education Opportunities

- August 10, 2019**  
*Pediatric EMS Symposium*  
 Location: Children's National Medical Center, Washington, DC  
 Register online at <https://traumaburneducation.ticketleap.com/>
- September 20, 2019**  
*PRMC Trauma Conference*  
 Location: Ocean City, MD  
 Register online at <https://www.peninsula.org/29th-annual-topics-trauma>
- September 24, 2019**  
*Mid-Atlantic Life Safety Conference*  
 Location: Laurel, MD  
 For more information visit <https://www.fabscom.org/>

For more information, email [pepp@miemss.org](mailto:pepp@miemss.org)

## 2019 Educational Programs SAVE THE DATES

**September 20, 2019**  
*Peninsula Regional Trauma Conference 2019*  
Ocean City, Md.

**September 24, 2019**  
*Mid Atlantic Life Safety Conference*  
Johns Hopkins Applied Physics Lab Laurel, Md.

**November 8, 2019**  
*Meritus Medical Center Trauma Update Winter 2019*  
Robinwood Professional Center, Hagerstown, Md.  
Contact: [ruth.leizear@meritushealth.com](mailto:ruth.leizear@meritushealth.com)

## Licensure and Certification TIDBIT

**Q.** How can I view my itemized continuing education records? All I see are the number of training hours?

**A.** The process is really quite easy when you know where to go. Just follow these simple steps:

- Go to [www.miemsslicense.com](http://www.miemsslicense.com) (Or just click the Provider Login button on the MIEMSS homepage) and log in to your provider account.
- Select Training
- Then select Record
- Verify and correct the date range shown and the Training Level drop down if necessary
- Select Go and your training hour only report will display
- Select the  button found next to the Training Level drop down menu
- A PDF document will then open that shows your itemized continuing education records which you can print or save for your records

To see a picture of the training record page, go to: <http://www.miemss.org/home/EMS-Providers/licensure-info>

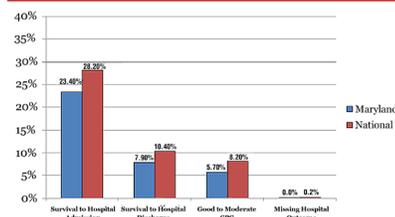
## CARES Corner

### This Month's CARES Tip

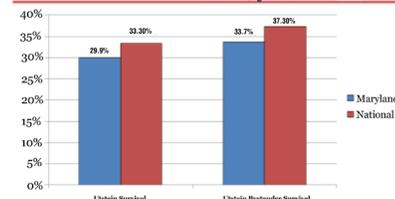
In Maryland, there were 6700 total non-traumatic sudden out-of-hospital cardiac arrests submitted to the CARES registry for Calendar Year 2018. National reports are now available on the CARES website: <https://mycares.net>.

Survival rates in Maryland and Nationally (Source: CARES Registry):

### Survival Rates: Overall Survival



### Survival Rates: Bystander Witnessed Shockable Rhythm



Ustein = Witnessed by bystander and found in a shockable rhythm  
Ustein Bystander = Witnessed by bystander, found in a shockable rhythm, and received some bystander intervention (CPR by bystander and/or AED applied by bystander)



## Maryland–National Capital Emergency Response System and Prince George’s County Fire/EMS Department Design a Command Officer Professional Development Program

*(Continued from page 2)*

PGFD Deputy Fire Chief Brian Frankel stated that, “This is one of the most important steps the department can invest in for the future of our personnel, communities, and region.” MDERS Director Luke Hodgson reflected, “Refining command competency will create a culture of incident management that will be applicable on every incident and will positively impact all of our residents and visitors, while protecting our response personnel.”

If you would like additional information about this program, please contact Mike McAdams, Program Manager, at [Michael.mcadams@maryland.gov](mailto:Michael.mcadams@maryland.gov).



*The Prince George’s County Fire Department/EMS and the Maryland-National Capital Emergency Response System drew upon the knowledge of regional partners, including the Montgomery County Fire Rescue Service and the Loudoun County (VA) Fire Department, in developing the Command Officers Professional Development Program.*

## MIEMSS Communications Phase I Upgrade

MIEMSS’ Statewide Communications System (EMRC/SYSCOM) is a complex network that provides communications among ambulances, medevac helicopters, dispatch centers, hospital emergency departments, trauma centers, specialty referral centers, and law enforcement. This system handles nearly 200,000 radio/phone calls each year with EMS clinicians who are providing emergency care in the field. MIEMSS’ highly integrated communications system, cited as a model for the nation, operates 365 days a year. An effective and reliable communications system is a foundational block to providing EMS and is critical to the success of the EMS system in Maryland and the safety and health of Maryland’s citizens and visitors.

In FY14, MIEMSS initiated a project to upgrade the existing statewide EMS communications system to a highly reliable, next-generation system built on a uniform platform that is IP-based, uses proven and scalable technology, provides geodiversity, and integrates with the State’s 700 MHz radio system (Maryland FiRST). Key objectives include improving system reliability and performance, as well as the elimination of identified vulnerabilities utilizing current technologies.

A significant part of the upgrade project was completed on May 25, 2015, when the EMRC/SYSCOM Communications Center

in Baltimore moved into its newly upgraded and renovated communications center. The upgrades and renovations provided significant improvements to its physical facility and technical systems. Major enhancements to the physical facility include installation of two new HVAC systems in the operations room, installation of separate, redundant cooling systems in the server/equipment rooms, installation of a pre-action sprinkler system, and reconfiguration of the existing FM-200 waterless fire suppression system.

Technological improvements also included installation of new workstation consoles; elimination of the legacy Centracom console equipment, extensive improvements to the generator and UPS power systems serving the critical communication systems; installation of structured cabling, including fiber and CAT 6 cable; and installation of ergonomic console furnishings. Additionally, this effort included installation of the Motorola MCC 7500 Console equipment permitting EMRC/SYSCOM to operate on the State’s new 700 MHz Radio System (known as Maryland FiRST) and communicate with other Maryland FiRST users including Maryland State Police Aviation Command.

Since the EMRC/SYSCOM communication center work was completed, MIEMSS developed NextGen specifications to upgrade

the statewide communications network and contracted a system integrator (SI), through a competitive bid process, to implement the NextGen EMS communications system. The SI, Overland Contracting Inc., began work in May 2018. The upgrade is a multi-year effort, targeted for completion in mid-2022, and is the most significant and important part of the overall communications project.

The upgrade of the network requires an extensive amount of preparatory work. At this time, MIEMSS and the SI have completed over 185 hospital and tower site surveys and 60 path surveys. The site and path surveys permit MIEMSS to detail the existing equipment and capabilities in place today and collect information necessary for the SI to complete a detailed design report (DDR).

A DDR is a document that cohesively outlines the system integrator’s responsibilities, including details on the IP and microwave engineering, configurations, equipment/hardware, software and services. This also includes how the SI will accomplish the work (Implementation Plan and Transition Plan) and a clear and realistic timeline to accomplish the tasks. The DDR documentation, site drawings, site narratives, network plan, and implementation and transition plan were jointly reviewed by MIEMSS and the SI. MIEMSS approved

*(Continued on page 9)*



# CHEMPACK

## Pediatric Nerve Agent Exposure Treatment

### Mild Exposure

Patients who can walk and talk who may present with miosis, rhinorrhea, increased salivation, and nausea

Weight (Kg)	Atropine Dose (IM)
Less than 10 kg	<b>0.5mg</b>
10 kg – 25 kg	<b>1 mg</b>
26 - 50 kg	<b>2 mg</b>
Over 50 kg	<b>2 mg</b>

**May repeat 3-5 minutes until symptoms resolve**

### Moderate Exposure

Patients with mild dyspnea, ataxia, miosis, or muscle cramping

Weight (Kg)	Dose (IM)
Less than 10 kg	Atropine <b>1mg</b> + Pralidoxime <b>600mg</b>
10 kg – 25 kg	Atropine <b>2mg</b> + Pralidoxime <b>600mg</b>
26 kg - 50 kg	Atropine <b>2mg</b> + Pralidoxime <b>1200mg</b>
Above 50kg	Atropine <b>2mg</b> + Pralidoxime <b>1200mg</b>

**May repeat 3-5 minutes until symptoms resolve**

### Severe Exposure

Patients who may have severe respiratory distress, seizures, extreme SLUDGEM (See below)

Weight (Kg)	Dose (IM)
Up to 25kg	Atropine <b>2mg</b> + Pralidoxime <b>600mg</b> + [Diazepam <b>2.5mg</b> ] <b>OR</b> [Midazolam <b>2.5mg</b> ]
26 kg - 50kg	Atropine <b>4mg</b> + Pralidoxime <b>1200mg</b> + [Diazepam <b>5mg</b> ] <b>OR</b> [Midazolam <b>5mg</b> ]
Above 50kg	Atropine <b>6mg</b> + Pralidoxime <b>1800mg</b> + [Diazepam <b>10mg</b> ] <b>OR</b> [Midazolam <b>10mg</b> ]

**May repeat 3-5 minutes until symptoms resolve**

Atropine/ Pralidoxime may come packaged as either DuoDotes, Mark I Kits, ATNAA kits, individual Atropen + Pralidoxime autoinjectors, or in individual medication vials.

Treatment via Atropine & Pralidoxime Autoinjectors is preferred

CANA autoinjectors are not indicated for pediatric patients less than 50kg

### Color Coding and unit amount for Atropens

	0.5 mg auto-injector (blue)
	1 mg auto-injector (red)
	2 mg auto-injector (green) (May not be available in all CHEMPACK caches)

### Pediatric Vial Medication Instructions:

**Atropine** (0.4mg/mL, 20mL): Draw-up medication in 3mL, 5mL, or 10mL syringe as indicated

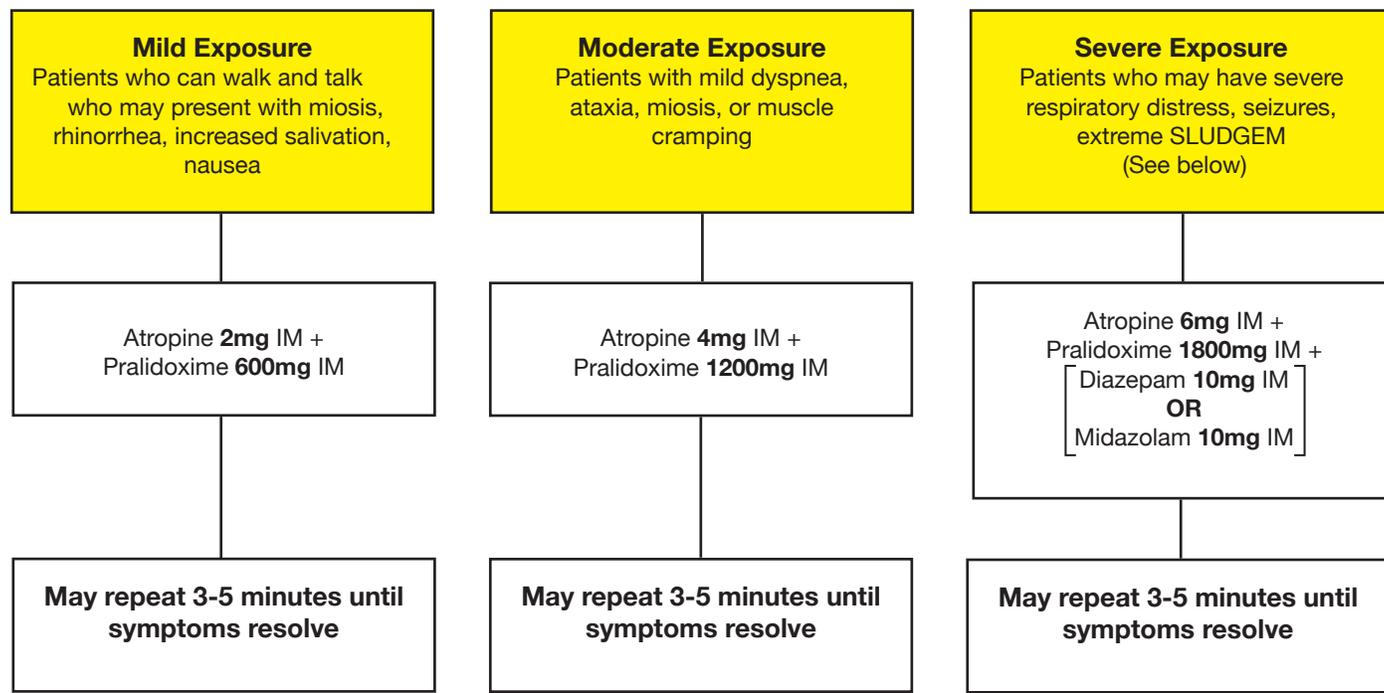
**Pralidoxime** (300mg/ mL) Add 3.3mL of sterile water into a single 1 gram vial, which results in a 300mg/mL concentration. Do not exceed 2mL per IM injection

**Diazepam & Midazolam** (5mg/mL, 10mL) Draw 0.2mg/kg IM to a maximum 10mg

S- Salivation  
L- Lacrimation (tear production)  
U- Urination  
D- Defecation  
G- Gastrointestinal distress  
E- Emesis  
M- Muscle Twitching & Miosis (constricted pupils)

# CHEMPACK

## Adult Nerve Agent Exposure Treatment



**\*\*\*AUTO-INJECTORS SHOULD BE USED FOR ALL ADULT EMS PATIENTS\*\*\***

Medications may come packaged as either DuoDotes, Mark I Kits, ATNAA kits, individual Atropen + 600mg Pralidoxime Autoinjectors, or in individual medication vials

2mg Atropens are not available in all CHEMPACK caches

### Adult Vial Medication Directions:

**Atropine** (0.4mg/ml in 20mL): Draw up medication in 5mL syringe (5mL)

**Pralidoxime** (300mg/mL): For Intramuscular (IM) injection: Add 3.3mL of sterile water into a single 1-gram vial, which results in a 300mg/mL concentration. Do not exceed 2mL per IM injection

**Diazepam & Midazolam** (5mg/mL in 10mL): draw up 2mL in 3mL syringe for IM administration for initial dose of 10mg IM

S- Salivation  
L- Lacrimation (tear production)  
U- Urination  
D- Defecation  
G- Gastrointestinal distress  
E- Emesis  
M- Muscle Twitching & Miosis (constricted pupils)

# 29<sup>th</sup> Annual PRMC TOPICS IN TRAUMA

September 20, 2019

This conference is a one-day educational opportunity to provide current issues and trends related to the trauma patient.

### Objectives

- Discuss current methods of diagnosis and management of patients with traumatic, complex injuries
- Discuss the pre-hospital and hospital practices routinely given to patients with traumatic injuries
- Identify complications related to the care of the trauma patient

### Who Should Attend

Nurses involved in caring for the adult and pediatric trauma patient.

Pre-hospital care Clinicians interested in expanding their knowledge of caring for the trauma patient and related topics.

### Accreditation

This activity has been submitted to the Maryland Nurses Association for approval to award 6.5 contact hours. The Maryland Nurses Association is accredited as an approver of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

### Pre-hospital Care Clinicians

6.5 hours of trauma credits will be awarded at the completion of the conference.



### Conference Location

Clarion Resort Fontainebleau Hotel, 10100 Coastal Highway, Ocean City, Maryland will be the site for Peninsula Regional's 29th Annual Topics in Trauma Conference. The Clarion is Ocean City's finest full-service hotel. The oceanfront hotel with its 40,000-square-foot conference center provides an ideal location for the conference.

### Hotel Accommodations

Rooms have been reserved at a special rate: \$119 for Thursday night and \$149 for Friday night, plus tax for a double until August 22, 2019, so make your arrangements early. Refer to the Peninsula Regional Trauma Conference when making reservations at the Clarion Resort Fontainebleau Hotel, 1-800-638-2100.

### Exhibitors

An array of vendors are expected to exhibit. This is an excellent opportunity to network with available resources.

**Fee:** \$90 for nurses and EMS | \$70 for students.

*All proceeds will go to Peninsula Regional Medical Center Foundation for Trauma Education.*

*Refunds will not be granted.*

*Any dietary food allergies must be arranged prior to the conference. Please contact the trauma department 1 week prior to the conference.*

*While we attempt to keep meeting rooms at a comfortable temperature, layered clothing is suggested.*

*You must attend the entire conference in order to receive your certificate/credit.*



**Conference Schedule >>**

**Register at [www.peninsula.org/topics-in-trauma](http://www.peninsula.org/topics-in-trauma)**

## 2019 PRMC Trauma Conference Schedule

*Track 1 and Track 3 have limited openings. First to register for each will fill the class in the order received.*

<u>Main Room</u>		
	0715-0755	<b>Registration/Breakfast</b>
	0755-0800	<b>Opening Remarks</b>
	0800-0855	<b>Reconstruction of the Mangled Hand</b> Ryan Katz, MD The Curtis National Hand Center
	0900-1000	<b>EZ IO Vascular Access</b> Michelle Pickrel, BSN, Rn, CEN Clinical and Education affairs Teleflex Northeast
	1000-1010	<b>Break</b>
AM Breakout		
<u>Track 1 AM</u>	<u>Track 2 AM</u>	<u>Track 3 AM</u>
1010-1205 <b>Transport Mechanical Ventilation Work Shop</b> Bryan Selvage, BOE, FP-C, CCEMTP, NRP Cecil County College	1010-1105 <b>Concussion, Chronic Traumatic Encephalopathy, and the NFL</b> Sophia Shakur, MD PRMC	1010-1205 <b>Stop the Bleed, Train the Trainer</b> Rachel Carrier, NRP Talbot County EMS
	1110-1205 <b>Pediatric Massive Blood Transfusion</b> Jennifer Fritzeen, MSN, RN, TCRN, CCNS Trauma and Burn Surgery Children's National Medical Center	
	1205-1305	<b>Lunch</b>
PM Breakout		
<u>Track 1 PM</u>	<u>Track 2 PM</u>	<u>Track 3 PM</u>
1310-1505 <b>Transport Mechanical Ventilation Work Shop</b> Bryan Selvage, BOE, FP-C, CCEMTP, NRP Cecil County College	1310-1405 <b>Ocular Trauma and Emergencies</b> Fasika Woreta, MD, MPH Director, Eye Trauma Wilmer Ophthalmological Institute	1310-1505 <b>Stop the Bleed, Train the Trainer</b> Rachel Carrier, NRP Talbot County EMS
	1410-1505 <b>Can you Tell me What Happened? A Child Abuse Story.</b> Susan Ziegfeld, MSN, CRNP-Peds John Hopkins Children's Center	
	1505-1515	<b>Break</b>
	1515-1610	<b>Gone with the Wind-A Case Presentation</b> William Haberlin, MD PRMC

# MIEMSS Communications Phase I Upgrade

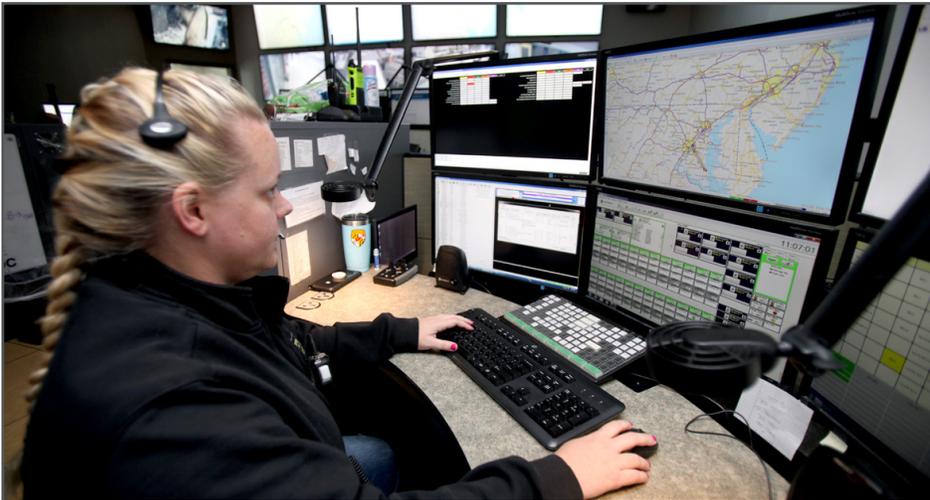
(Continued from page 4)  
the DDR in July 2019, allowing the SI to begin implementing the communications network upgrades. Additionally, MIEMSS and the SI successfully completed a preliminary functional verification test – a small-scale implementation of the planned upgrade – to

ensure the system will operate as specified in the DDR document.

The implementation stage is divided into five phases, primarily based on EMS region. Phase 1, starting now, encompasses Southern Maryland (EMS Region V). Each phase must be successfully completed before the next

phase begins. Each phase typically includes replacing unlicensed microwave links with licensed links, installing new licensed microwave equipment where needed, installing new core equipment, and replacing antiquated communications and network gear. Once all the equipment in a phase has been installed and approved, MIEMSS conducts a 30-day parallel operation of the new system while the old system remains operational. The new system must operate properly without interruption during this period in order for the phase to be approved and the old system be decommissioned. Phase 1 is targeted for completion in mid-2020.

At the end of the project, MIEMSS will have a highly reliable, next-generation communications system that is built on a uniform platform, is IP-based, and uses proven and scalable technology meeting or exceeding current capabilities. Additionally, the system will support geo-diverse operations, be fully functional from continuity of operations (COOP) locations, and fully integrated with the State's 700 MHz communications system (Maryland FiRST).



The EMRC/SYSCOM handles nearly 200,000 radiophone calls with EMS clinicians in the field each year. The highly integrated communications system has been cited as a model for the nation.

**MIEMSS, Maryland EMS News**  
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**Governor Larry Hogan**  
**Lt. Governor Boyd Rutherford**

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