



Maryland Emergency Medical System Operations Fund Hearing

**Senate Budget & Taxation Committee
February 9, 2016**

**House Public Safety & Administration Subcommittee
February 10, 2016**

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State of Maryland

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Good afternoon. On behalf of the State Emergency Medical Services (EMS) Board, I would like to thank you for the opportunity to discuss the status of the Maryland Emergency Medical Services Operations Fund (MEMSOF). I also want to thank Ms. Ruff of the Department of Legislative Services for her comprehensive analysis of the MEMSOF and its future.

The Maryland EMS System is a coordinated statewide network that includes volunteer and career EMS providers, medical and nursing personnel, communications, transportation systems, trauma and specialty care centers and emergency departments. Maryland's EMS system has long been recognized as a national model. The State Emergency Medical Services Board, whose members are appointed by the Governor, oversees the statewide EMS System and reviews and approves the budgets of four of the entities supported by the MEMSOF.

The MEMSOF provides critical support to Maryland's EMS System. The MEMSOF supports public safety, EMS, fire and rescue services throughout every part of our state. For more than 20 years, the MEMSOF has provided vital resources for our statewide EMS system and ensured its financial stability. The viability of the MEMSOF is key to sustaining the statewide system that responds so well to the emergency needs of Maryland's citizens. The MEMSOF is supported by a surcharge on vehicle registration fees that was initially created in 1992. Because the surcharge is not sensitive to inflation, it has required periodic increases to ensure MEMSOF viability. Funding from a surcharge on moving violations provides additional MEMSOF revenue.

As the analyst points out, however, certain upcoming expenditures will require careful implementation to ensure that they do not negatively impact MEMSOF viability. The long-planned upgrade to the MIEMSS Statewide EMS Communications system is critical to day-to-day EMS operations across the state. Similarly, the likely increased fuel and maintenance costs for the Maryland State Police Aviation Command helicopters will ensure that the Command's fleet remains fully operational and ready to respond to emergency calls from across the State.

On behalf of all the MEMSOF-funded entities, the State EMS Board thanks the General Assembly for its strong and continued support of our statewide system. We look forward to continuing to work with the General Assembly to ensure that the MEMSOF is able to continue to provide the necessary support for the operation of Maryland's statewide EMS system. Thank you.



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Good afternoon. I am Dr. Kevin Seaman, Executive Director of the Maryland Institute for Emergency Medical Services Systems (MIEMSS). I want to thank Ms. Ruff for her very thorough analysis.

MIEMSS coordinates all components of the statewide EMS system in accordance with policies set by the State EMS Board and Maryland statute and regulation. MIEMSS' areas of responsibility include providing medical oversight, coordinating and supporting EMS educational programs, operating and maintaining a statewide communications system, designating trauma and specialty centers, licensing and certifying EMS providers, licensing and regulating commercial ambulance services, and participating in EMS-related public education and prevention programs.

One of MIEMSS' most critical functions is the operation of our Statewide EMS Communications System. MIEMSS' emergency medical communications system is a complex network that provides communications among ambulances, medevac helicopters, dispatch centers, hospital emergency departments, specialty referral centers and trauma centers. Through this system: 1) EMS providers connect with physicians and hospitals to receive direction for the care of emergency patients; 2) hospitals are notified of patients being transported to their emergency departments; 3) medevac helicopters are dispatched to transport critically injured and ill patients; 4) hospital capacity for emergency patients is tracked in real-time; hospitals are notified of significant events and provide information to the state on their available resources; 5) a Biological Agent Registry secondary access point is maintained; 6) responders can request and receive antidotes for chemical poisoning; 7) federal, state, and local agencies can access the State's Health and Medical Dashboard; 8) MIEMSS and MSP jointly coordinate all aircraft activity supporting EMS, search and rescue, and law enforcement activities; and 9) MIEMSS functions as the off-hours contact point for DHMH. The MIEMSS communications system handles nearly 400,000 radio / phone calls each year with EMS providers who are providing emergency care in the field. The hub of the communications system is located at the MIEMSS building in downtown Baltimore.

The existing MIEMSS communications equipment has had an impressive history of reliability for many years; however, at 25+ years of age, several of the major

communications components are well beyond their expected lifetime, and there is genuine concern for that a large-scale system failure will occur at some point. These include:

- REDCOM Cross-Patching System – The REDCOM switch provides all radio and telephone cross-patching for EMRC operations from EMS providers in the field to hospital emergency departments, specialists, and other critical contacts. There are four REDCOM switches in use. One handles all operations in Western Maryland (EMRC Regions 1 & 2), one for the Eastern Shore (Region 4), one for central Maryland (Region 3), and one for Region 5. Failure of a REDCOM switch will cause catastrophic loss in communications for EMS providers in its area. There is no internal redundancy to each REDCOM switch. Loss of a power supply, or any one of the circuit boards, will cause the switch to fail. This is very old electronics, and significant failure is inevitable. Although the agency maintains an inventory of spare parts, the availability of spare parts for the REDCOM is very limited.
 - Equipment failure would result in loss of all medical consultations for EMS providers.
- Siemens Analog Telephone System – The Siemens Analog Telephone System is the primary telephone interface that handles telephone communications coming into the EMRC/SYSCOM that are critical to medical and law enforcement response involving public safety and EMS care for severely injured or ill patients. The system permits speed dialing of key agencies and patching of multiple phone lines.

The system operates using 1986 technology; there are very few spare parts that remain available. Each new failure at this point presents a risk that telephone connectivity to hospitals and other critical medical support resources will no longer be able to be accessed quickly. Currently, single-button speed dial allows fast connection between a given EMS unit and a medical resource. Due to the difficulty in obtaining spare parts, we have been unable to obtain replacement of a bad card on the System, and Siemens has indicated that it may not renew the maintenance contract on the system due to its age.

- Equipment failure would result in loss of telephone interface with EMS, First Responders and the public.
 - Equipment failure would result in loss of ability to receive telephone call requests from PSAPs or to call MSP Aviation hangers.
- The JPS Voter System – When a field unit calls in, this device monitors that radio channel on all surrounding towers and presents the best signal to the operator for reliable inbound communications. It then routes the operator’s transmission back to the selected tower so that the field user can hear the outbound response. This equipment is of similar vintage and is exposed to the same risk of failure without access to adequate spare parts. JPS voters do NOT have backups; equipment failure could result in any of the following:
 - Loss of access to a radio tower site on any channel, yielding an area without any radio coverage for the failed channel.

- Loss of access to an EMRC CALL radio channel, limiting the ability of EMS units in the field to access EMRC operations for support.
- Loss of access to an EMRC MED radio channel, limiting the ability of EMRC to handle more than one incident at a time in a Region.
- Loss of access to a SYSCOM channel, creating a region where Medevac helicopter communications are degraded or non-existent.

Current Status

Work on the project began in 2013. Earlier this year, MIEMSS completed the first part of the project -- the renovation of its EMRC / SYSCOM facility in Baltimore. EMRC/SYSCOM operations went “live” in the new, renovated operations center on May 27, 2015. MIEMSS and MSP Aviation Command Staff are now fully operational in the upgraded EMRC/SYSCOM Communication Center. An advantage of the new facility is the integration of Maryland FiRST 700 MHz Communications System into our operations.

The next phase of the Statewide EMS Communications System Upgrade is the design, procurement and implementation of a statewide, interoperable, IP-based voice communications system based on proven and scalable technology, and meeting and exceeding the capabilities of the current systems. This is the most significant and important part of the overall Communications project and has three major components:

- Perform a detailed network analysis of the existing communications systems and provide written documentation of the results.
- Develop the NextGen specifications to meet the operational requirements identified in the “Communications System Recommendations” report¹.
- Develop the RFP necessary to procure a System Integrator to perform the upgrade to the statewide EMS Communications network to the specifications.

The continued viability of the MEMSOF is of vital importance to our ability to complete the upgrade to our statewide EMS Communications System. MIEMSS looks forward to continuing to work with the General Assembly to ensure the long-term viability of the EMS Operations Fund.

¹ DiDonato Consulting Services, Inc. *Communications System Recommendations*. Annapolis, Maryland. October 27, 2011.



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COLONEL
WILLIAM M. PALLOZZI
SUPERINTENDENT

February 9, 2016

TO: Maryland Senate, Budget and Taxation Committee

FROM: Major Frank B. Lioi, Assistant Chief, Special Operations Bureau, Aviation Command

SUBJECT: Written Testimony, MEMSOF Budget, February 9, 2016

- The Maryland State Police Aviation Command completed a successful 2015, having completed the transition of all sections to the new AW139 airframe in February. 2015 represents the first full calendar year of operation in the new aircraft at all sections. We have learned a great deal during this time, to include how the aircraft performs in our mission profile, and this information will greatly assist us in the future in planning maintenance as well as managing the budget required to maintain the fleet.
- The new airframe continues to prove its worth in its performance on several recent high-profile missions each demonstrating the significant value of a multi-mission capable aircraft and a highly-trained flight crew. The ability to move between multiple mission scenarios within a single model of aircraft and within a single crew is unique to the Maryland system, and this ability has yet to be replicated successfully in the commercial air medical transport industry. Indeed, as the Federal Aviation Administration (FAA) continues to regulate the industry through best practices and on-board safety equipment requirements, the procurement of the AW139, supported by the General Assembly, has enabled the MSPAC to meet and exceed all FAA requirements well in advance of their implementation schedules.
- Last year, my testimony introduced the procurement of a Flight Training Device (FTD) which is under construction at AgustaWestland in Italy. The FTD is intended to dramatically reduce the flight time on the aircraft fleet by allowing Aviation Command pilots to conduct up to 75% of their annual training without operating a live aircraft. The device is projected to save millions of dollars over its life span when compared to operating an aircraft for training, or outsourcing training to a commercial simulator. I am pleased to report to the committee that the FTD construction is proceeding according to schedule. The device will be ready for pre-delivery inspection in May 2016, and delivery is expected in July 2016. Installation and FAA certification will take approximately 2 months, and we expect the device to be in full operation in the fall of 2016.
- Coincidental to the delivery of the Flight Training Device is construction of the Aircrew Training Facility at Aviation Command Headquarters at Martin Airport in Baltimore County. The construction project is being handled by the Department of General Services, and we gratefully acknowledge their support and assistance thus far. I am pleased to report that bidding for the building construction closed just last Friday, February 5, and awarding is anticipated to occur this week. The project goes before the Board of Public Works on March 9, and subsequently construction will begin. We anticipate the building to be substantially completed to coincide with the FTD delivery and installation in July 2016.

"Maryland's Finest"

SUBJECT: Written Testimony, MEMSOF Budget, Fiscal Year 2017

- MSPAC continues to pursue a Master Services Agreement with several vendors across four (4) functional areas of aircraft maintenance. This process, pursuant to an independent study of our Maintenance Operation, will have pre-negotiated costs competitively bid for select aviation maintenance services. With a contract in place for these services in advance, task orders for outsourced maintenance activities when necessary can be implemented immediately in lieu of lengthy individual procurement processes. The end result will mean reduced aircraft unavailability and increased section availability. We are currently finalizing the RFP with the Department of Budget and Management, and expect this RFP to be published later this month. The ultimate goal is to have Master Services Agreements in effect to coincide with the expiration of original helicopter warranties occurring this year.
- Regarding the budget before you today, MSPAC applauds the hard work of the MEMSOF Coalition members, the EMS Board, the Department of Budget and Management, and the Department of Legislative Services in its preparation and analysis. Accordingly, the Aviation Command intends to maximize the resources provided in the FY 2017 budget in order to continue to provide the best possible airborne multi-mission services available in the world to the Citizens of Maryland.



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MARYLAND FIRE AND RESCUE INSTITUTE

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**Maryland Fire and Rescue Institute
University of Maryland, College Park**

**Steven T. Edwards
Director**

The Maryland Fire and Rescue Institute (MFRI) a part of the University of Maryland since 1930, is the state's comprehensive training and education system for the emergency services. The Institute delivers quality fire and EMS training programs to every jurisdiction of the State and on average MFRI trains approximately 34,000 students each year.

The Maryland Fire and Rescue Institute operates a main training facility located in College Park, and has six regional training centers strategically located throughout the state. The regional training centers are located in Aberdeen, Cresaptown, Mt. Airy, Centreville, Princess Anne, and LaPlata.

MFRI training programs are essential with regard to a fast and efficient response to fire, rescue, and EMS emergencies. There is no effective response to emergencies in this state without a training program to prepare the responders to deal with the emergency situation and to protect themselves from the danger of being a firefighter or emergency medical provider.

Given that many of the emergency response personnel in Maryland serve as volunteers, the expenditures for training programs may be one of the best investments in the state. It should be noted, that before a volunteer can even begin to contribute to their communities they must receive proper training. If this training is not available, the service is lost.

In many areas of the state, MFRI represents the sole training source for fire, rescue, and EMS personnel and as such it is important to continue current classes and broaden the curriculum where feasible. For many of the reasons stated above, MFRI training courses are in high demand throughout the state. Unfortunately, there are more training classes requested than the Institute can provide.

MFRI is attempting to meet these demands, but our ability to do so is directly related to the financial resources available within the EMSOF. The funding that has been granted to the Institute in the past several years has been directly applied to increasing the number of students and the quality of MFRI training programs.

Due to changes in the manner in which Emergency Medical Technicians are tested regarding National Registry certifications, MFRI has had to make major adjustments to its current EMT training programs.

- Purchase student access to the MyBradyLab interactive training program to provide students with increased activities and practice tests.
- Additional lead instructor responsibilities and support instructors added to the 165 hour EMT course.
- Additional training for instructors and enhanced accountability for student success.
- Acquiring new test banks for EMT course module examinations.

MFRI is beginning to see improved student test scores based on the enhanced teaching activities and resources and we expect that the National Registry test scores will improve as well.

MFRI stands ready to continue its important work of preparing the fire and EMS personnel of the state for the ultimate challenge and asks for your consideration in having adequate resources allocated within the EMSOF fund to do so.

TESTIMONY

THE MARYLAND EMERGENCY MEDICAL SERVICES OPERATING FUND

(MEMSOF)

Senate Budget and Taxation Committee

February 9, 2016

Submitted by:

Karen E. Doyle

Senior Vice President, Nursing and Operations

R Adams Cowley Shock Trauma Center

University of Maryland Medical Center

Good afternoon Mr. Chairman and members of the committee. I am Karen Doyle, Senior Vice President for the R Adams Cowley Shock Trauma Center, University of Maryland Medical Center. I am seated here today with my esteemed colleagues and as part of the coalition supporting the Maryland Emergency Service Operating Fund (MEMSOF). We are also partners along with our elected officials in ensuring safety and care of Maryland citizens.

MEMSOF has been a cornerstone of this State's capability to provide every citizen a broad and uncompromised safety net. As a special protected fund, it allows the system to respond instantaneously to the variability of Maryland's political and economic fortunes.

As established by State law, the R Adams Cowley Shock Trauma Center is the core element of the State's Emergency Medical Services System and serves as the State's Primary Adult Resource Center (PARC) for the treatment of trauma. Specifically, the law mandates Shock Trauma to serve as (a) the State's primary adult trauma center, (b) the statewide referral center for the treatment of head, spinal and multiple trauma injuries, (c) the regional trauma center for Region III and the southwest quadrant of Baltimore City, and (d) the statewide referral center for patients in need of hyperbaric medical treatment.

The R Adams Cowley Shock Trauma Center is the State's only trauma hospital. It serves as a vital statewide clinical resource and uniquely maintains an around-the-clock state of readiness in its dedicated trauma resuscitation unit (TRU), operating rooms and recovery rooms. Over the past nine years, Shock Trauma has diverted zero patients seeking access directly from the scene. The facility and its staff are organized for on-demand access and treatment of the State's most critically ill and injured patients to a degree unparalleled anywhere in the system. The MIEMSS PARC designation represents the State's highest level of capability and



readiness. As a result, the Shock Trauma Center has unique operating and financial requirements that distinguish it from any other Maryland trauma center and are the basis for State operating support.

Stand-By Costs

As a trauma hospital, Shock Trauma is designed expressly for the emergency care of significantly injured patients from resuscitation to discharge. Shock Trauma has 24-hour, 7-day a week attending coverage for trauma surgery (in-house), critical care (in-house), anesthesia (in-house), orthopedic surgery and neurosurgery. There are teams of physicians and nurses dedicated to insuring that the most severely injured patients are treated by attending physicians during all hours of the day and night. Projected costs for 2016 are \$5,125,185.

The Shock Trauma Center has always received financial support from the State for operating and capital expenses. State operating support for Shock Trauma has averaged \$3.2 million annually.

In addition to the OR Stand-by Costs, the R Adams Cowley Shock Trauma Center faces unfunded mandates for being the Primary Adult Resource Center for the State of Maryland. Annually, expenditures include costs for an alternate landing zone, outreach and prevention programs as well as training and education requirements.



MARYLAND STATE FIREMEN'S ASSOCIATION

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**Senate Budget & Taxation Committee
February 9, 2015**

**House Public Safety & Administration Subcommittee
February 10, 2015**

Good Afternoon,

My name is Stephen D. Cox and I am the Past President and Legislative Chairperson of the Maryland State Firemen's Association (MSFA). The MSFA is a statewide organization that represents 362 member companies and over 25,000 volunteer fire, rescue and emergency medical services personnel across this great state. We serve as the voice of the volunteer Fire, Rescue and Emergency Medical Services on statewide issues and support programs to promote the growth of volunteerism in our communities.

I am pleased to present the MSFA testimony in support of the Maryland Emergency Service Operating Fund (MEMSOF).

Maryland has an Emergency Medical Services (EMS) system that is second to none. The effectiveness of this system is due to the partnerships formed by the agencies you see represented in front of you today. When an emergency occurs, the system is activated and Emergency providers, many of whom have been trained by the Maryland Fire & Rescue Institute (MFRI) quickly respond. Patients are transported by ambulance or the Maryland State Police Aviation Command helicopter to the appropriate facility through a process overseen by the Maryland Institute for Emergency Services Systems (MIEMSS). The most seriously injured will be transported or transferred to trauma centers like our very own R. Adams Cowley Shock Trauma.

Funding the MEMSOF is vital to all our agencies. Our volunteer companies work hard to raise funds to sustain emergency operations in our communities; however, carnivals, raffles, breakfasts and suppers along with other fundraising activities alone cannot provide sufficient funding to meet the requirements for operational expenditures, apparatus and equipment purchasing, as well as maintenance or required upgrades. We rely on local and state government assistance to meet our financial needs. In return, we provide a state of the art emergency services system that is cost efficient and sensitive to the needs of every community.

MEMSOF includes \$15 million in funding to the Senator William H. Amos Fire, Rescue and Ambulance Fund. This fund helps our local volunteer companies meet their operational needs for fire and rescue equipment and building improvements. This funding is of great assistance to our volunteer companies in order for them to provide service to their communities.

The MEMSOF also includes our Volunteer Company Assistance Fund (VCAF) which allows companies to borrow funds from the MSFA at a low interest rate to purchase new apparatus and upgrade their facilities. We have departments currently operating with apparatus that exceeds its expected service life of 15 – 20 years and other departments are in fire stations aging between 50 to 75 years old or older without receiving any substantial improvements over the life of the facilities.

Our member companies provide service in many communities twenty-four hours a day, seven days a week on a volunteer basis, thereby saving the local jurisdictions millions of dollars each year from their budgetary requirements. Volunteers represent 80% of the state's emergency services and dedicate countless hours to protect our communities and use fund raising capabilities to purchase apparatus, equipment and facilities. This is especially important in these difficult economic times that are being experienced by government, member companies, members and private citizens.

Thank you for giving me the opportunity to address you on this very important matter. We ask for your favorable consideration in having the MEMSOF funds continue to assist our volunteer Fire, Rescue and Emergency Medical Services personnel of Maryland with their needs enabling them to provide the best service to their communities and the citizens of this great State.

Sincerely,

Stephen D. Cox