



Maryland Institute for Emergency Medical Services Systems
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State of Maryland

**Maryland
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Good afternoon. The Maryland Institute for Emergency Medical Services Systems (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 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.

We appreciate the opportunity to present MIEMSS' FY 2016 budget request and to brief the committee on several programmatic aspects of interest. MIEMSS and the Emergency Medical Services Board are very appreciative of the General Assembly's interest and support of MIEMSS and our Statewide EMS system. The analysis by Laura Vykol is comprehensive and focuses on several important matters. We thank her for her hard work, as well as that of the Department of Budget and Management and Taylor Murray, MIEMSS' DBM budget analyst.

MIEMSS 2016 budget does not include funding for new initiatives. Like other state agencies, MIEMSS is carefully budgeting and focusing its state resources to meet the broad mandates of the EMS law and improve the EMS system.

We would like to provide an update on several of our initiatives.

MIEMSS Communication System Upgrade

- **DLS requests that MIEMSS update the budget committees on the status of the communication system upgrade, explain why this renovation has caused delay to the project, and discuss whether further delay is anticipated at this time.**

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; 5) hospitals are notified of significant events and provide information to the state on their available resources; 6) a Biological Agent Registry secondary access point is maintained; 7) responders can request and receive antidotes for chemical poisoning; 8) federal, state, and local agencies can access the State's Health and Medical Dashboard; 9) MIEMSS and MSP jointly coordinate MSP, commercial and allied public safety aircraft activity supporting EMS, search and rescue, and law enforcement activities; and 10) MIEMSS functions as the off-hours contact point for DHMH. The MIEMSS communications system handles nearly 365,000 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.

In 2011, the MIEMSS communications system was evaluated and certain components were determined to be obsolete and in danger of failure. To address the risks and vulnerabilities associated with the EMS Communications System, MIEMSS has undertaken a comprehensive upgrade of the communications system. We very much appreciate the support of the General Assembly in helping to secure the funding that is needed for this endeavor. The comprehensive communications system upgrade includes five components:

1. Capital Project – 1800 Pair Cable - Elimination of a significant single point of failure (an 1800 pair copper cable) and implementation of a SONET Ring (Synchronous Optical Networking) to provide diverse paths (fiber and microwave) for critical EMS communications coming into our EMRC / SYSCOM (Emergency Medical Resource Center / System Communications) facility. This work has been completed.
2. Renovation & Refurbishment of EMRC / SYSCOM – The facility renovation work (non-technical) on the new EMRC/SYSCOM Communication Center is nearly complete. Facility upgrades include installation of two new HVAC systems in the Operations Room and installation of separate, redundant cooling systems in the Equipment Room; installation of a pre-action sprinkler system and reconfiguration of the existing FM-200 waterless fire suppression system; installation of the new workstation consoles; and extensive improvements to the power systems serving the center to assure sufficient supply and availability of generator and UPS power to critical systems; installation of structured cabling including fiber and CAT 6 cable; installation of ergonomic console furnishings; and general efforts to identify and eliminate risk which included relocating water pipes away from critical communication equipment and identifying and correcting roof leaks.
3. Integration of the State 700 MHz Radio - Deployment of State's new 700 MHz Radio System (known as Maryland FiRST) radio console equipment in EMRC/SYSCOM is currently underway as a follow-on to the facility renovation work. The MFiRST Motorola MCC 7500 Console will permit us to operate on the MFiRST and communicate with other Maryland FiRST users including Maryland State Police Aviation Command. Ensuring an integrated, interoperable communications system is essential to providing a coordinated response to the severely ill and injured. In addition to permitting MIEMSS to communicate on the MFiRST System, the Motorola MCC 7500 provides a new platform for some of our legacy systems. Some of our old equipment was operating well past its expected useful life and becoming increasingly difficult to service. We anticipate completion of this work and initiating operations in the new center on May 27, 2015. This is an important, but not final step, as legacy systems remain in-place and in use that will be addressed as part of the Statewide EMS Communications System Upgrade Project.
4. Upgrade of the Statewide Communications System to Next Generation Technologies - Next Generation technologies are those that built upon modern, proven systems and equipment, meeting current industry standards and are typically IP (internet protocol) based. Implementing such a system will eliminate known vulnerabilities, improve system reliability, add redundancy, and improve integration and interoperability with other systems such as 911 centers. It will also enable MIEMSS to conduct communications operations from anywhere in Maryland and not be physically anchored to any specific location. The upgrade of the system is a complex undertaking that must be seamless to system users, and the system must remain fully functional during the upgrade without lost calls for emergency services. Currently our consultant, DiDonato Consulting Services, continues to work on gathering and validating existing system data. The system analysis, a foundation component of the new system specification, requires an extensive amount of work as the MIEMSS Communications System is statewide, complex and involves identification and assessment of over 300 communications sites. At this time Network Connectivity Maps have been submitted to MIEMSS for review with final submission of the Network Analysis pending results of the MIEMSS Map Review along with two RFPs for review and comment – one to acquire a network test firm to gather detailed network throughput parameters and the other is the system upgrade specification document. System Upgrade specifications, both Draft and Final, are due in mid-2015. Once the final specification is approved MIEMSS will release an RFP to acquire a System Integrator to perform the upgrade. The RFP is planned for release in November of 2015 with an award

date anticipated in early 2016. The entire project should be finished in 2018, with the bulk of the work occurring in late 2016 and throughout 2017.

5. Identification of a Geo-Diverse Back-up Facility – A final goal of the Communications Project is to identify a site to function as a backup center to EMRC/SYSCOM at the MIEMSS’ office in Baltimore. Once the Communications System upgrade is completed, we hope to identify an existing emergency communications center, such as a state agency like MEMA or SHA, or a 911 center that has space, is equipped with necessary network connectivity to support IP telephones, radio operations and would provide a tertiary backup server location.

This multi-component Communications Project is a complex undertaking, particularly since our EMRC/SYSCOM communication center must remain operational 24/7. The project has required a significant commitment of Communication Engineering Services personnel as they ensure the ongoing and seamless operation of our statewide communications system while the renovation and upgrade work is proceeding. We are on time and on budget for the facility renovation, our projected timeline for the overall project needed adjustment due to unanticipated delays resulting from the SYSCOM/EMRC Renovation / Refurbishment and supporting our state and local communication system partners. Our 2016 budget request seeks an additional communications technician, the addition of which will greatly aid our staff in completing necessary communications tasks.

Project Costs (excluding Capital Project – SONENT Ring)

Fiscal Year	Actual Expenditure	Budget	Carry Forward to Future Year
2013	\$ 344,010	\$ 1,073,683	\$ 729,673 (to FY 14)
2014	\$ 1,680,887	\$ 3,226,950	\$ 1,546,063 (TBD)
2015	\$ 2,000,000 (est.)	\$8,555,803	\$ 6,555,803 (TBD)
2016		\$ 37,500	
2017		\$ 12,500	

Emergency Medical Response System of the National-Capital Region

- **DLS requests that MIEMSS provide further detail on the ERS program and discuss current and anticipated program funding.**

The Emergency Response System (ERS) of the Maryland-National Capital Region supports the integration of the multiple disciplines, agencies, and jurisdictions involved in both routine and significant emergency responses. This initiative involves both Montgomery and Prince George’s Counties. A Steering Committee, comprised of leaders from fire, rescue, EMS, law enforcement, emergency management, public health, and healthcare systems, maintains an ongoing list of target capabilities necessary to ensure optimal response coordination. Based on the direction provided by the Steering Committee, a dedicated staff works with local authorities to build those capabilities by providing strategic planning, information sharing, training, exercises, project management, and equipment acquisition.

The ERS is entirely grant-funded by the federal Urban Area Security Initiative (UASI). UASI is a program designed to enhance resilience in metropolitan areas that face unique threats by virtue of being a heavily-populated urban center. The National Capital Region receives approximately \$50 million in total annually from this grant. In the most recent federal grant year, Fiscal Year 2014, Maryland-NCR ERS received a total of \$6.38 million. Of this, MIEMSS received \$1.68 million to provide personnel and associated infrastructure support for the program. An additional \$964,000 was provided to MIEMSS to fund all training and exercises delivered through the ERS program. MIEMSS was also awarded an additional \$532,000 to support three of its programs, including the Digital Emergency Medical Services Telephone (DEMSTEL) project, installation of phone lines to

allow EMS providers to speak to hospitals in DC, and a mobile application to assist providers in delivering patient care. The remaining \$3.2 million that was awarded to the ERS program was provided directly to Montgomery and Prince George's Counties to procure equipment necessary for building the capabilities that are managed by ERS. The success of Maryland ERS has garnered a great deal of support, evidenced by the 1,400% increase in program funding over the past four years.

MIEMSS plays a critical role in supporting the infrastructure of the ERS program. As the fiduciary agent for the grant, MIEMSS is responsible for intangible procurement, such as personnel, services, and training and exercise programs. Through the administration of the grant funds, MIEMSS employs a full-time staff dedicated to supporting the ERS program and the numerous stakeholders. Employees include a Director, two Project Managers, two Logisticians, two Critical Healthcare Facility Coordinators, two Instructional Designers, and two Medical Reserve Corps Coordinators. These personnel are embedded in Montgomery and Prince George's Counties and provide direct support to the agencies while coordinating with the overall ERS effort.

Maryland ERS works closely with multiple entities within the National Capital Region to contribute to regional coordination. In cooperation with the ERS programs in neighboring Northern Virginia and the District of Columbia, the Metropolitan Washington Council of Governments, and the various Regional Emergency Support Function Committees, Maryland ERS has been successful in enhancing response and operational capabilities that cross jurisdictional and disciplinary boundaries to ensure preparedness for all possible emergencies.