

D53T00
Maryland Institute for Emergency Medical Services Systems

Operating Budget Data

(\$ in Thousands)

	<u>FY 16</u> <u>Actual</u>	<u>FY 17</u> <u>Working</u>	<u>FY 18</u> <u>Allowance</u>	<u>FY 17-18</u> <u>Change</u>	<u>% Change</u> <u>Prior Year</u>
Special Fund	\$14,841	\$15,967	\$24,924	\$8,957	56.1%
Adjustments	0	0	-35	-35	
Adjusted Special Fund	\$14,841	\$15,967	\$24,890	\$8,923	55.9%
Federal Fund	2,183	2,355	2,444	90	3.8%
Adjusted Federal Fund	\$2,183	\$2,355	\$2,444	\$90	3.8%
Reimbursable Fund	529	504	561	57	11.3%
Adjusted Reimbursable Fund	\$529	\$504	\$561	\$57	11.3%
Adjusted Grand Total	\$17,552	\$18,826	\$27,895	\$9,069	48.2%

Note: Includes targeted reversions, deficiencies, and contingent reductions.

- The fiscal 2018 allowance for the Maryland Institute for Emergency Medical Services Systems (MIEMSS) increases by nearly \$9.1 million, or 48.2%. Special funds account for 98.4% of the increase, which is largely attributable to the \$8.7 million provided in the allowance to implement the long-awaited upgrade to the agency's communications systems.
- The allowance includes one contingent reduction to eliminate a supplemental payment to the State pension system in fiscal 2018. The estimated impact to MIEMSS would be a \$34,565 reduction.

Note: Numbers may not sum to total due to rounding.

For further information contact: Rebecca J. Ruff

Phone: (410) 946-5530

Personnel Data

	<u>FY 16 Actual</u>	<u>FY 17 Working</u>	<u>FY 18 Allowance</u>	<u>FY 17-18 Change</u>
Regular Positions	95.00	94.00	94.00	0.00
Contractual FTEs	<u>14.62</u>	<u>19.60</u>	<u>20.00</u>	<u>0.40</u>
Total Personnel	109.62	113.60	114.00	0.40

Vacancy Data: Regular Positions

Turnover and Necessary Vacancies, Excluding New Positions	4.22	4.49%
Positions and Percentage Vacant as of 12/31/16	8.00	8.51%

- There is no change to the agency’s regular position complement in fiscal 2018. Contractual employment increases by 0.4 full-time equivalents.
- At the end of calendar 2016, MIEMSS had a total of 8 positions vacant, equating to 8.5% of its workforce. This is approximately 4 more vacancies that what will be needed to meet fiscal 2018 budgeted turnover. Included in these vacancies is 1 executive director position, which has been vacant since September 2016. **MIEMSS should comment on when it anticipates filling the executive director vacancy.**

Analysis in Brief

Major Trends

Maryland Trauma Care Continues to Exceed the National Norm: Maryland continues to demonstrate consistent outcomes above the national norm as measured by the survivability rate of trauma care center admissions.

Issues

Emergency Department Overcrowding is a Growing Concern: In calendar 2016, the measures evaluating emergency department (ED) overcrowding and the number of reported hours in which a hospital was experiencing a yellow or red alert, increased by 35% and 52%, respectively. This has a direct impact on emergency medical services (EMS) availability and response times, as well as patient care. Data is not currently available to evaluate the specific impact overcrowding has on Maryland patients. MIEMSS is convening a workgroup in March 2017 to review the increase in ED diversions with the goal of developing a comprehensive statewide plan to address the issue. Additionally, MIEMSS is part of an initiative to implement Mobile Integrated Healthcare (MIH) programs, in an effort to reduce unnecessary use of 911 and unnecessary transports to hospital EDs for minor medical complications. **MIEMSS should discuss its role in combating the issue of emergency room overcrowding and any data collection necessary to evaluate the issue. Additionally, MIEMSS should comment on its role in expanding and implementing MIH programs. The Department of Legislative Services (DLS) recommends the adoption of committee narrative directing MIEMSS to work with the Health Services Cost Review Commission to evaluate the impact of hospital overcrowding on EMS response times and Maryland’s patient population and develop a plan for resolving the issue. Additionally, DLS recommends that MIEMSS submit a report to the budget committees exploring the potential for expanding MIH programs, including a cost-benefit analysis of the program, and potential solutions to the lack of secured funding.**

Recommended Actions

1. Adopt narrative directing the Maryland Institute for Emergency Medical Services Systems to evaluate the impact of hospital overcrowding on emergency response times and patient outcomes and develop a plan for resolving the issue.
2. Adopt narrative requesting an evaluation of current Mobile Integrated Healthcare programs and the potential for expansion.

D53T00 – Maryland Institute for Emergency Medical Services Systems

Analysis of the FY 2018 Maryland Executive Budget, 2017

D53T00

Maryland Institute for Emergency Medical Services Systems

Operating Budget Analysis

Program Description

The Maryland Institute for Emergency Medical Services Systems (MIEMSS) oversees and coordinates all components of the State's emergency medical services (EMS) system, in accordance with State statute and regulations. MIEMSS provides guidance on medical direction, conducts EMS educational programs, licenses commercial ambulance services, and participates in EMS-related public education and prevention programs. Chapter 592 of 1993, known as the EMS Law, established MIEMSS as an independent State agency under the direction of the EMS Board. Prior to Chapter 592, MIEMSS was housed within the Department of Health and Mental Hygiene (DHMH) and, subsequently, the University of Maryland, Baltimore.

Chapter 592 also established the EMS Board, consisting of 11 members appointed by the Governor to serve four-year terms. The EMS Board oversees the State's EMS plan and appoints the executive director of MIEMSS, who serves as the administrative head of the State's EMS system. The EMS Board prepares an annual budget proposal, taking into account the estimated income of the Maryland Emergency Medical System Operations Fund (MEMSOF), MIEMSS' primary fund source, and budget requests from MIEMSS and other agencies that participate in the State's EMS system.

MIEMSS coordinates a statewide EMS system that includes over 30,000 licensed or certified EMS providers. MIEMSS works to integrate the delivery of pre-hospital emergency care with the State's 48 hospital emergency departments, 11 trauma centers, specialty referral centers, primary stroke centers, and perinatal centers.

The EMS system is divided into five regions:

- Region I: Allegany and Garrett counties;
- Region II: Frederick and Washington counties;
- Region III: Central Maryland, including Baltimore City;
- Region IV: the Eastern Shore; and
- Region V: Metropolitan Washington.

MIEMSS operates a complex network communication system that facilitates communication between ambulances, helicopters, dispatch centers, hospital emergency departments, trauma centers, and law enforcement. The communications system includes (1) the Emergency Medical Resource Center (EMRC), which is a medical channel radio communications system that links EMS providers

in the field with hospital-based medical consultation; and (2) the System Communications Center (SYSCOM), which is responsible for helicopter dispatch and monitoring of the transport of critically ill or injured patients by helicopter to area hospitals. The MIEMSS communication system handles nearly 400,000 telephone and radio calls annually.

Performance Analysis: Managing for Results

1. Maryland Trauma Care Continues to Exceed the National Norm

A key goal of MIEMSS is to provide high-quality, systematic medical care to individuals receiving EMS. The agency measures the achievement of this goal by maintaining the system’s trauma patient care performance above the national norm and monitoring the survivability rate of patients that are admitted to a trauma center, as shown in **Exhibit 1**. Since the measure was first reported in calendar 2009, the likelihood of survival for an individual admitted to a Maryland trauma center has exceeded 96.0%. Most recently, the survivability rate experienced a marginal decrease from 96.7% to 96.4% between calendar 2014 and 2015.

Exhibit 1
Trauma Care Performance
Calendar 2009-2015

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Maryland Trauma Patient Care Exceeds National Norm	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Survivability Rate for Trauma Center Admissions (%)	96.5%	96.5%	96.6%	96.7%	96.3%	96.7%	96.4%

Source: Maryland Institute for Emergency Medical Services Systems

Fiscal 2017 Actions

Section 20 Position Reduction

Section 20 of the fiscal 2017 budget bill required the Governor to abolish 657 vacant regular positions and reduce the fiscal 2017 budget by \$25 million. The impact to MIEMSS was the loss of 1 position and \$40,000 in special funds.

Proposed Budget

As seen in **Exhibit 2**, the fiscal 2018 allowance for MIEMSS increases by approximately \$9.1 million, or 48.2%, when compared to the fiscal 2017 working appropriation, after adjusting for the fiscal 2018 contingent reduction to the State pension system.

Exhibit 2
Proposed Budget
Maryland Institute for Emergency Medical Services Systems
(\$ in Thousands)

How Much It Grows:	Special Fund	Federal Fund	Reimb. Fund	Total
Fiscal 2016 Actual	\$14,841	\$2,183	\$529	\$17,552
Fiscal 2017 Working Appropriation	15,967	2,355	504	18,826
Fiscal 2018 Allowance	<u>24,890</u>	<u>2,444</u>	<u>561</u>	<u>27,895</u>
Fiscal 2017-2018 Amount Change	\$8,923	\$90	\$57	\$9,069
Fiscal 2017-2018 Percent Change	55.9%	3.8%	11.3%	48.2%

Where It Goes:

Personnel Expenses

Turnover adjustments	\$123
Overtime	10
Employee retirement (contingent reduction for supplemental pension payment)	-26
Increments and other compensation.....	-98
Employee and retiree health insurance	-107
Other fringe benefit adjustments.....	3

Information Technology

Communication system upgrade – Major IT Project.....	8,650
Increased costs for eMeds and patient tracking software maintenance	160
Communications infrastructure repairs and maintenance	54
Communication system upgrade – maintenance costs.....	-62

Where It Goes:

Other Changes

Replacement vehicle purchases	42
Supply and material purchases	37
Additional rental space for Region V office expansion.....	35
Travel expenses.....	34
Reimbursable fund grant from DHMH to hire Emergency Operations Planner.....	25
CARES subscription.....	15
Contractual employment.....	-13
Other telecommunication expenses	101
Other	86
Total	\$9,069

CARES: Cardiac Arrest Registry to Enhance Survival
 DHMH: Department of Health and Mental Hygiene
 IT: information technology

Note: Numbers may not sum to total due to rounding.

Personnel Expenses

Personnel expenses for MIEMSS decrease by approximately \$95,000 in fiscal 2018. Less funding is provided for employee retirement, increments, and health insurance. This is partially offset by increased funding due to a lower budgeted turnover rate compared to fiscal 2017, which will allow the agency to fill almost half of its 8 current vacancies. An additional \$10,000 in overtime funding is also provided in the allowance, although fiscal 2018 is budgeted over \$60,000 below fiscal 2016 actual expenditures. Overtime is driven primarily by the SYSCOM/EMRC 24-hour operations center. There are 20 operators, split among four different shifts. Because there is a requirement to keep a minimum of 4 seats filled at all times, any time more than 1 operator is on vacation or calls out sick, 1 operator from another shift must fill the empty seat and earn overtime. If there are any position vacancies, this increases the use of overtime. MIEMSS has had more success this fiscal year with filling vacancies quickly, thus reducing the reliance on overtime; however, it is projected that overtime costs for fiscal 2017 will total \$180,000. This is approximately \$30,000 above what is currently budgeted. MIEMSS anticipates covering the overage with cost savings in salaries. In addition, the agency is considering reclassifying 1 vacant secretary position into 1 operator position to further address the overtime issue.

Information Technology

The majority of the increase in the fiscal 2018 allowance is attributable the funding provided to upgrade the agency's statewide communications system. The fiscal 2018 allowance also includes minor funding increases for standard repairs to communications infrastructure, along with an increase in the maintenance contracts for the agency's eMeds and patient tracking software.

Communication System Upgrade – Major Information Technology Project

MIEMSS relies on two primary communication systems to coordinate emergency care in Maryland. The EMRC communications system is responsible for coordinating medical consultation between emergency personnel at the scene and hospital emergency department physicians. SYSCOM is responsible for helicopter dispatch and monitoring the helicopter transport of critically ill or injured patients from the scene to area hospitals.

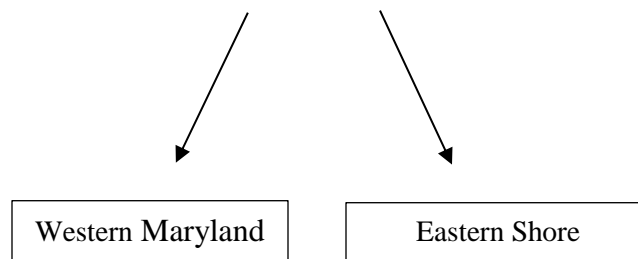
After a fiscal 2012 evaluation found the MIEMSS communication system obsolete and in jeopardy of failure, a conceptual design to replace the system was proposed, which would cost roughly \$12.2 million and take five years to install. It was also estimated that the upgrade would require \$1.6 million annually for maintenance beginning in the second year of the project. **Exhibit 3** outlines the individual components included in the project as outlined in the original recommendation from the 2011 consultant's report. **Exhibit 4** compares the original fiscal and timeline estimates provided in the 2011 consultant's report to the assumptions provided by MIEMSS for the past three sessions. These estimates do not include funding for the Synchronous Optical Networking ring, as this was a project funded through the capital budget and was already underway prior to the final recommendation from the consultant.

The project has experienced significant delays. This is concerning because multiple sources have noted the severity of the risks associated with the current systems' limitations. As seen in Exhibit 4, the consultant's report anticipated the project to be complete in fiscal 2017. The projections provided by MIEMSS during the 2015 and 2016 sessions were consistent with that timeline, although the total cost of the upgrade has increased each year. Due to the protracted timeline for the project, MIEMSS has used annual operating funds, where possible, to complete small upgrades to mitigate the risk of total system failure.

MIEMSS attributes the delay to the reordering of the project components that occurred due to an opportunity to receive equipment from the State that enabled the agency to join the State's new 700-megahertz radio communication system (Maryland FiRST) early in its implementation. MIEMSS opted to accept the equipment and complete the Baltimore City facility renovation before upgrading to the new communications system. During the 2016 session, MIEMSS testified that reordering the project components resulted in over \$1.0 million in cost savings to the MEMSOF because the Maryland FiRST equipment was provided at no cost to MIEMSS. The fiscal estimate provided in Exhibit 4, however, would suggest that that is not the case, as the total cost of the upgrade has increased by \$2.5 million.

Exhibit 3
Maryland Institute for Emergency Medical Services Systems
Communication System Upgrade – Major IT Project
Project Components

1. Replace the existing high-risk telephone cable in downtown Baltimore with a SONET ring.
2. Continue deployment of Digital EMS Telephones to all hospitals and upgrade to an IP-based phone system.
3. Move communications over to a uniform, IP-based platform that offers geo-diverse operations and can be fully functional from any physical site.



4. Select and establish a Back-Up Center location for SYSCOM/EMRC Central facility in downtown Baltimore City.
5. Temporarily relocate SYSCOM/EMRC Central operations to Back-Up Center and renovate existing facility in downtown Baltimore City.
6. Transfer SYSCOM/EMRC Central operations back to Baltimore City location and retain the Back-Up Center in operational standby status.

EMRC: Emergency Medical Resource Center
EMS: emergency medical services
IP: Internet Protocol
IT: information technology
SONET: Synchronous Optical Networking
SYSCOM: Systems Communication Center

Source: Maryland Institute for Emergency Medical Services Systems; Department of Legislative Services

Exhibit 4
MIEMSS Communication System
Changing Assumptions for Upgrade and Maintenance Costs

Fiscal Years	Upgrade Costs Consultant's Projection	Maintenance Costs Consultant's Projection	Upgrade Costs 2015 Session	Maintenance Costs 2015 Session	Revised Upgrade Costs 2016 Session	Revised Maintenance Costs 2016 Session	Revised Upgrade Costs 2017 Session	Revised Maintenance Costs 2017 Session
2013	\$415,136	\$0	\$344,292	\$0	\$344,292	\$0	\$344,292	\$0
2014	2,497,277	1,548,421	1,680,887	0	1,680,887	0	1,680,887	0
2015	9,099,486	1,594,874	8,555,806	1,594,874	406,003	398,785	406,003	398,785
2016	37,500	1,642,720	1,583,563	1,642,720	37,500	1,642,720	0	688,451
2017	12,500	1,692,001	12,500	1,692,001	11,012,500	1,692,001	0	1,704,501
2018							8,650,000	1,742,761
2019							3,400,000	1,795,044
Total Costs	\$12,061,899	\$6,478,016	\$12,177,048	\$4,929,595	\$13,481,182	\$3,733,506	\$14,481,182	\$6,329,542

MIEMSS: Maryland Institute for Emergency Medical Service Systems

Source: Maryland Institute for Emergency Medical Service Systems

MIEMSS completed the SYSCOM/EMRC Central facility renovation in May 2015. The cost of the renovation was higher than the original cost estimate by nearly \$1.1 million. This occurred for a variety of reasons, but is partially attributable to the decision to renovate in-place, as opposed to relocating to a Back-Up Center, as was recommended in the consultant's report.

With the facility renovation complete, MIEMSS shifted its focus to procuring a Systems Integrator (SI) to take full turnkey responsibility for installation, integration, and activation of the new radio communications systems. MIEMSS had released a Request for Proposals (RFP) to retain the SI in August 2016; however, in the best interest of the State, MIEMSS has canceled the current RFP and intends to rerelease within the next month. As seen in Exhibit 4, implementation is currently anticipated to last throughout fiscal 2018, with final acceptance of the new system anticipated for September 2018; however, the need to rerelease the RFP will likely cause slippage in the project schedule.

This project became designated as a Major Information Technology Project in fall 2016. As such, the Department of Information Technology (DoIT) is now providing oversight. Several areas have been identified as medium to high risk for this project including: resource availability; the level of technicality, as this project is very complex and will require a significant amount of infrastructure capacity; requirements for new training, customization, and the ability to interface with new and existing systems; potential resistance from end users who are familiar with the existing legacy application; the level of internal support required by the agency to host the system; complex implementation; and the need to maintain flexibility within the system to allow for future enhancements and changing technologies.

The fiscal 2018 allowance includes nearly \$8.7 million to fund the majority of the implementation costs. MIEMSS estimates that \$3.4 million will be needed to complete the project in fiscal 2019. The estimate provided by DoIT indicates funding needs through fiscal 2020.

MIEMSS should discuss the status of its current radio communication systems operations, in addition to providing a status update on the upgrade project. The agency should comment on when a rerelease of the SI RFP is anticipated and whether the current timeline and fiscal estimates are realistic.

Other Changes

Funding increases for telecommunications, supply and material purchases, and travel expenses are budgeted in line with fiscal 2016 actual expenditures. An additional \$42,000 is provided in fiscal 2018 to replace the State-owned vehicles used by the Field Operations, Medical Director, and Communications units. All three vehicles meet the established criteria for replacement. Federal funds provided through the Metropolitan Medical Response System grant are used in fiscal 2018 to expand the leased space for the agency's Region V office. The additional space is needed to accommodate full staffing in that region.

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Nearly \$15,000 is provided in the allowance so that MIEMSS can participate in the Cardiac Arrest Registry to Enhance Survival (CARES). The CARES was developed to help communities determine standard outcome measures for out-of-hospital cardiac arrest, allowing for quality improvement efforts and benchmarking capability to improve care and increase survival. As of calendar 2015, 16 states were participating in the CARES.

MIEMSS receives an annual grant from DHMH for bioterrorism hospital preparedness. The fiscal 2018 allowance includes \$125,000 in reimbursable funds for the grant, an increase of \$25,000 over the current fiscal year. Some years, the funds are passed through to jurisdictions based on approved projects. In fiscal 2018, a significant portion of the funds will be retained by MIEMSS to hire an Emergency Operations Planner. The agency has indicated its intent to make this a long-term position; however, an increase in staffing is not reflected in the allowance. DHMH receives funding for the grant from the federal government in five-year cycles and has just received approval for the next five years. **MIEMSS should comment on the role and responsibilities of 1 new Emergency Operations Planner, in addition to discussing why the new position is not reflected in the allowance.**

Across-the-board Reductions

The fiscal 2018 budget bill includes a \$54.5 million (all funds) across-the-board contingent reduction for a supplemental pension payment. Annual payments are mandated for fiscal 2017 through 2020 if the Unassigned General Fund balance exceeds a certain amount at the close of the fiscal year. This agency's share of these reductions is \$34,565 in special funds. This action is tied to a provision in the Budget Reconciliation and Financing Act of 2017.

Issues

1. Emergency Department Overcrowding is a Growing Concern

The County Hospital Alert Tracking System (CHATS) is a real-time computerized monitoring system of emergency department status throughout Maryland, maintained by MIEMSS. Hospital emergency departments that are temporarily unable to accept ambulance-transported patients due to overcrowding or hospital overload are identified so that ambulances can be diverted to other, less crowded emergency department facilities.

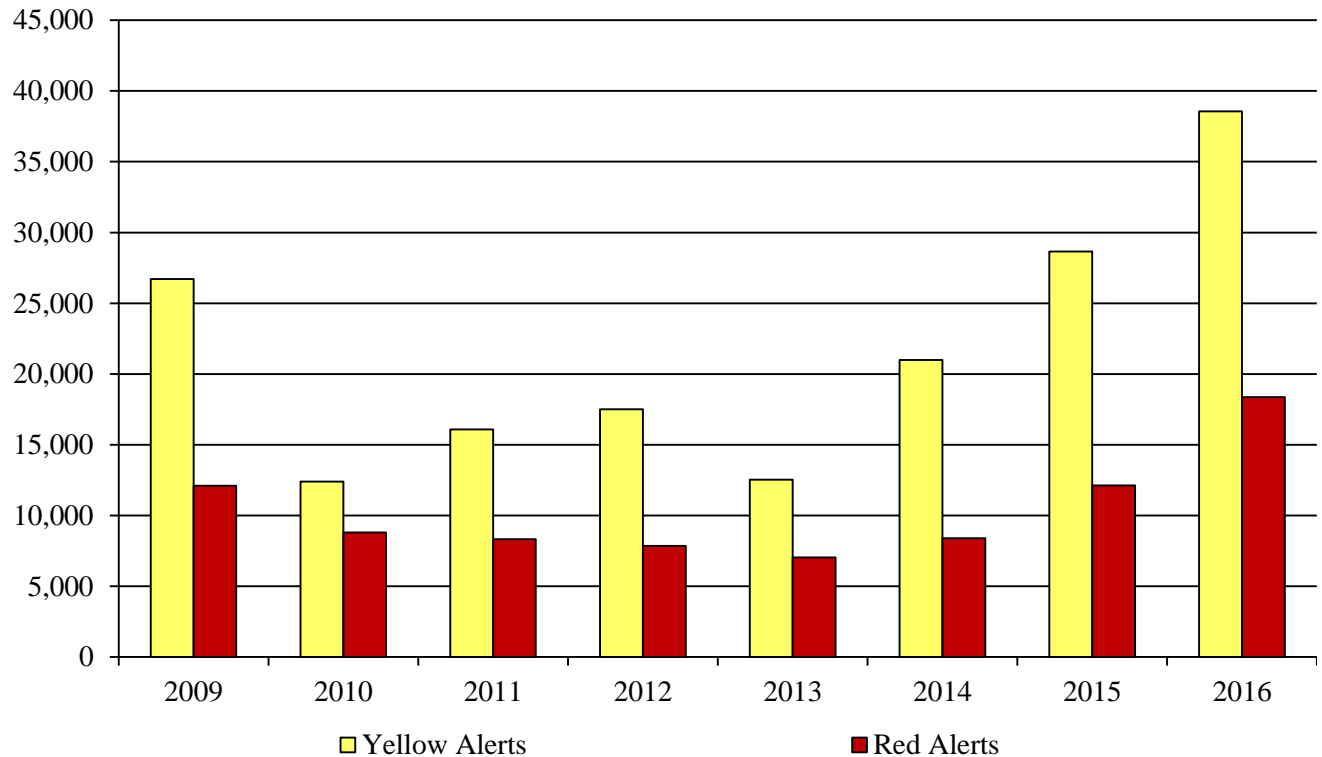
MIEMSS utilizes the CHATS to determine hospital bed availability. While participation is not mandatory, the reporting system aids MIEMSS in diverting ambulances to hospitals with adequate capacity. MIEMSS tracks “yellow” alerts, when an emergency room requests to receive absolutely no patients in need of urgent medical care by ambulance with the exception of certain priority cases, and “red” alerts, when a hospital has no inpatient electrocardiogram-monitored beds available.

Magnitude of the Problem

Exhibit 5 shows the total number of hours of yellow and red alerts across the State from calendar 2009 through 2016. Hospitals in Washington, DC are not included in this chart, though MIEMSS does track and report this information as well. Combined, Regions III and V accounted for approximately 94% of total alerts in calendar 2016.

In calendar 2016, emergency department (ED) overcrowding, as measured by the total number of red and yellow alert hours, increased by 40% to nearly 57,000 operating hours where an ED was unable to accept new urgent care or cardiac patients. Yellow alert hours accounted for 68% of total alert hours in calendar 2016. Individually, yellow alert hours increased by 35% in calendar 2016, while red alert hours increased by nearly 52%. Surprisingly, the increase in alert hours does not appear to be the result of an increase in ED visits. Data from the Health Services Cost Review Commission shows that both hospital admissions and ED visits have been in decline since calendar 2014.

Exhibit 5
Total Hours of Yellow and Red Alerts in the State
Calendar 2009-2016



Source: Maryland Institute for Emergency Medical Services Systems

Causes of the Overcrowding and the Impact to EMS and Patients

According to MIEMSS, many factors influence the level of activity in a hospital ED. Some of the factors currently influencing hospital overcrowding and the increased need for diversions include:

- limited availability of inpatient behavioral health beds and resources, despite an increased need due to rising issues with heroin and other illicit drug use; and
- the State's transition to an all-payer model contract for health care, which impacted hospital reimbursements and caused a shift to more community-based care, resulting in less inpatient resources and ultimately impacting the flow of patients through EDs across the State.

An increase in EMS diversions forces EMS drivers and ambulances to drive to more distant hospitals and wait longer to transfer patients to hospital care. This can decrease ambulance availability and increase response times to 911 calls.

Aside from reporting the alert hours, data is not currently available to evaluate whether response times have increased with the increase in ED diversions. There is also no data to assess the impact ED crowding has on Maryland patients; however, several studies of patients in other areas have shown a relationship between an increase in ED diversions and less desirable patient outcomes, including an increase in mortality rates, time to treatment, and quality of care.

What Can MIEMSS Do?

MIEMSS is convening a workgroup in March 2017 to review the increase in ED diversions with the goal of developing a comprehensive statewide plan to address the issue. Additionally, MIEMSS is part of an initiative to implement Mobile Integrated Healthcare (MIH) programs, in an effort to reduce unnecessary use of 911 and unnecessary transports to hospital EDs for minor medical complications. A typical MIH program involves EMS partnering with local hospitals, health departments, and others to deliver nonemergency services to patients in their home. An MIH program was piloted in Queen Anne's County in calendar 2014. First year data for that program indicated a 35% reduction in 911 transports for the program participants.

MIEMSS notes that the lack of a secured funding source for MIH programs has been a serious impediment to expansion. Current reimbursement models provide that EMS is only reimbursed if the patient is physically transported to a receiving facility.

MIEMSS should discuss its role in combating the issue of emergency room overcrowding. The agency should comment on the potential for gathering the data necessary to evaluate the impact of ED diversions on Maryland's EMS workers and patient population. Additionally, MIEMSS should comment on its role in expanding and implementing MIH programs, including which jurisdictions have MIH programs, the estimated annual cost for operating an MIH program, whether a formal evaluation of the program's effectiveness has ever been completed, and whether the agency has evaluated potential options for identifying a secure funding source for these programs.

The Department of Legislative Services (DLS) recommends the adoption of committee narrative directing MIEMSS to work with the Health Services Cost Review Commission to evaluate the impact of hospital overcrowding on EMS response times and Maryland's patient population and develop a plan for addressing the issue. Additionally, DLS recommends MIEMSS submit a report to the budget committees exploring the potential for expanding MIH programs, including a cost-benefit analysis of the program, and potential solutions to the lack of secured funding.

Recommended Actions

1. Adopt the following narrative:

Evaluating the Impact of Emergency Department Overcrowding: Emergency department (ED) overcrowding increased significantly in fiscal 2016. This has a direct impact on emergency medical services (EMS) availability and response times, as well as patient care. Data is not currently available to evaluate the specific impact overcrowding has on Maryland patients. The budget committees direct the Maryland Institute for Emergency Medical Services Systems (MIEMSS) to work with the Health Services Cost Review Commission (HSCRC) to evaluate the impact of hospital overcrowding on EMS response times and Maryland’s patient population and to develop a plan to address the overcrowding issue. The report is due to the budget committees no later than December 15, 2017.

Information Request	Authors	Due Date
Impacts of ED overcrowding	MIEMSS HSCRC	December 15, 2017

2. Adopt the following narrative:

Mobile Integrated Healthcare Programs: The Maryland Institute for Emergency Medical Services Systems (MIEMSS) is part of an initiative to implement Mobile Integrated Healthcare (MIH) programs, in an effort to reduce unnecessary use of 911 and unnecessary transports to hospital emergency departments for minor medical complications. With the significant increase in hospital overcrowding in fiscal 2016, the budget committees direct MIEMSS to evaluate the impact of existing MIH programs and explore the potential for further expansion. The evaluation should include a cost-benefit analysis of the program and potential solutions to the lack of secured funding for emergency medical services’ participation. The report is due to the budget committees no later than November 1, 2017.

Information Request	Author	Due Date
MIH programs	MIEMSS	November 1, 2017

Appendix 1
Current and Prior Year Budgets
Maryland Institute for Emergency Medical Services Systems
(\$ in Thousands)

	<u>General</u> <u>Fund</u>	<u>Special</u> <u>Fund</u>	<u>Federal</u> <u>Fund</u>	<u>Reimb.</u> <u>Fund</u>	<u>Total</u>
Fiscal 2016					
Legislative Appropriation	\$0	\$15,710	\$2,950	\$279	\$18,938
Deficiency Appropriation	0	0	0	0	0
Budget Amendments	0	147	0	250	397
Reversions and Cancellations	0	-1,016	-767	0	-1,783
Actual Expenditures	\$0	\$14,841	\$2,183	\$529	\$17,552
Fiscal 2017					
Legislative Appropriation	\$0	\$15,826	\$2,355	\$504	\$18,684
Cost Containment	0	0	0	0	0
Budget Amendments	0	142	0	0	142
Working Appropriation	\$0	\$15,967	\$2,355	\$504	\$18,826

Note: Does not include targeted reversions, deficiencies, and contingent reductions. Numbers may not sum to total due to rounding.

Fiscal 2016

The budget for the Maryland Institute for Emergency Medical Services Systems (MIEMSS) closed at approximately \$17.6 million in fiscal 2016, which is nearly \$1.4 million less than the legislative appropriation.

The special fund appropriation decreased by a net of \$869,000. An increase of \$147,000 was provided for employee salary enhancements. This was offset by the cancellation of \$1 million due to delays in the upgrade of the MIEMSS Communication System. With the bulk of the upgrades yet to be completed, maintenance funding for the new system was lower than anticipated.

The federal fund appropriation decreased by \$767,000 in fiscal 2016, as MIEMSS canceled funds from the Emergency Response Grant due to vacancies.

The agency's reimbursable fund appropriation increased by \$250,000, reflecting a grant award from the Maryland Emergency Management Agency to assist local jurisdictions in being prepared for mass casualty incidences.

Fiscal 2017

The fiscal 2017 special fund appropriation increases by \$141,532 due to the realignment of funds from the Department of Budget and Management for employee increments.

Appendix 2
Major Information Technology Projects
Maryland Institute for Emergency Medical Services Systems
MIEMSS Communication System Upgrade

Project Status	Implementation.	New/Ongoing Project:	Ongoing.					
Project Description:	The primary purpose of this project is to upgrade the Maryland Institute for Emergency Medical Services Systems' (MIEMSS) emergency medical services (EMS) radio communications systems and capabilities to meet current and future needs.							
Project Business Goals:	The goal is to have a highly reliable, next generation communication system which is built on a uniform platform, is Internet Protocol-based, uses proven and scalable technology, and integrates with the State's public safety answering points. The upgrade will allow for geo-diverse operations and be fully functional from any physical site, including currently operated locations.							
Estimated Total Project Cost:	\$13,575,000	Estimated Planning Project Cost:	\$1,500,000					
Project Start Date:	December 1, 2015.	Projected Completion Date:	September 2018.					
Schedule Status:	MIEMSS released a Request for Proposals (RFP) to retain a systems integrator (SI) in August 2016; however, the RFP has been withdrawn due to low response. Implementation is currently anticipated to last throughout fiscal 2018, with final acceptance of the new system anticipated for September 2018; however, the need to rerelease the RFP will likely cause slippage in the project schedule.							
Cost Status:	The project is estimated to cost between \$8 million and \$12 million. A more refined estimate is expected once bids for the SI contract have been received.							
Project Management Oversight Status:	This project became designated as a Major Information Technology Project in fall 2016. As such, the Department of Information Technology is now providing oversight. The fiscal 2018 allowance includes \$50,000 for oversight.							
Identifiable Risks:	Medium to high risks for this project include: resource availability; the level of technicality, as this project is very complex and will require a significant amount of infrastructure capacity, new training, customization, and the ability to interface with new and existing systems; potential resistance from end users who are familiar with the existing legacy application; the level of internal support required by the agency to host the system; complex implementation; and the need to maintain flexibility within the system to allow for future enhancements and changing technologies.							
Fiscal Year Funding (\$ in Thousands)	Prior Years	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Balance to Complete	Total
Personnel Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Professional and Outside Services	1.550	8.650	1.625	1.750	0.0	0.0	0.0	13.575
Other Expenditures	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Funding	\$1.550	\$8.650	\$1.625	\$1.750	\$0.0	\$0.0	\$0.0	\$13.575

Appendix 3
Object/Fund Difference Report
Maryland Institute for Emergency Medical Services Systems

<u>Object/Fund</u>	<u>FY 16</u> <u>Actual</u>	<u>FY 17</u> <u>Working</u> <u>Appropriation</u>	<u>FY 18</u> <u>Allowance</u>	<u>FY 17 - FY 18</u> <u>Amount Change</u>	<u>Percent</u> <u>Change</u>
Positions					
01 Regular	95.00	94.00	94.00	0.00	0%
02 Contractual	14.62	19.60	20.00	0.40	2.0%
Total Positions	109.62	113.60	114.00	0.40	0.4%
Objects					
01 Salaries and Wages	\$ 9,178,846	\$ 9,592,769	\$ 9,532,641	-\$ 60,128	-0.6%
02 Technical and Spec. Fees	1,319,569	1,921,558	1,908,332	-13,226	-0.7%
03 Communication	1,524,206	847,985	9,654,903	8,806,918	1038.6%
04 Travel	874,345	679,618	713,530	33,912	5.0%
06 Fuel and Utilities	135,111	134,600	143,077	8,477	6.3%
07 Motor Vehicles	254,287	235,062	247,899	12,837	5.5%
08 Contractual Services	2,621,955	3,897,621	4,051,385	153,764	3.9%
09 Supplies and Materials	161,320	114,237	151,252	37,015	32.4%
10 Equipment – Replacement	216,373	115,004	122,645	7,641	6.6%
11 Equipment – Additional	44,416	26,985	65,015	38,030	140.9%
12 Grants, Subsidies, and Contributions	1,070,454	1,145,000	1,170,000	25,000	2.2%
13 Fixed Charges	151,137	115,504	169,023	53,519	46.3%
Total Objects	\$ 17,552,019	\$ 18,825,943	\$ 27,929,702	\$ 9,103,759	48.4%
Funds					
03 Special Fund	\$ 14,840,951	\$ 15,967,326	\$ 24,924,405	\$ 8,957,079	56.1%
05 Federal Fund	2,182,530	2,354,744	2,444,280	89,536	3.8%
09 Reimbursable Fund	528,538	503,873	561,017	57,144	11.3%
Total Funds	\$ 17,552,019	\$ 18,825,943	\$ 27,929,702	\$ 9,103,759	48.4%

Note: Does not include targeted reversions, deficiencies, and contingent reductions.

**Appendix 4
Fiscal Summary
Maryland Institute for Emergency Medical Services Systems**

<u>Program/Unit</u>	<u>FY 16 Actual</u>	<u>FY 17 Wrk Approp</u>	<u>FY 18 Allowance</u>	<u>Change</u>	<u>FY 17 - FY 18 % Change</u>
01 General Administration	\$ 17,552,019	\$ 18,825,943	\$ 19,279,702	\$ 453,759	2.4%
02 Information Technology Project	0	0	8,650,000	8,650,000	0%
Total Expenditures	\$ 17,552,019	\$ 18,825,943	\$ 27,929,702	\$ 9,103,759	48.4%
Special Fund	\$ 14,840,951	\$ 15,967,326	\$ 24,924,405	\$ 8,957,079	56.1%
Federal Fund	2,182,530	2,354,744	2,444,280	89,536	3.8%
Total Appropriations	\$ 17,023,481	\$ 18,322,070	\$ 27,368,685	\$ 9,046,615	49.4%
Reimbursable Fund	\$ 528,538	\$ 503,873	\$ 561,017	\$ 57,144	11.3%
Total Funds	\$ 17,552,019	\$ 18,825,943	\$ 27,929,702	\$ 9,103,759	48.4%

Note: Does not include targeted reversions, deficiencies, and contingent reductions.