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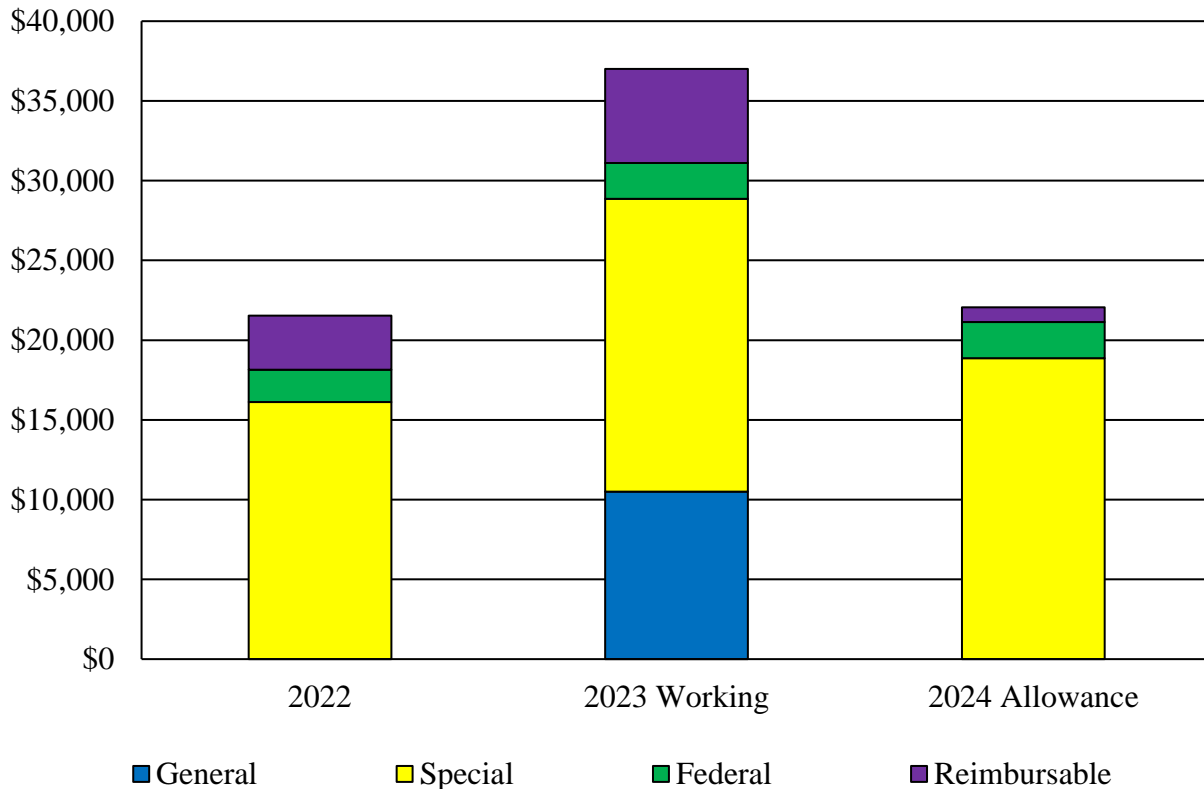
Maryland Institute Emergency Medical Services Systems

Program Description

The Maryland Institute for Emergency Medical Service Systems (MIEMSS) is an independent agency that oversees and coordinates all components of the statewide emergency medical services (EMS) system. The agency is led by an 11-member EMS board, 31-member EMS advisory council, 5 regional EMS councils, and several committees providing guidance on populations with specific health needs.

Operating Budget Summary

Fiscal 2024 Budget Decreases \$15.0 Million, or 40.4%, to \$22.1 Million
(\$ in Thousands)



Note: The fiscal 2023 working appropriation includes deficiency appropriations including this agency's share of a deficiency appropriation budgeted in the Statewide Account within the Department of Budget and Management (DBM). Fiscal 2024 salary enhancements are budgeted in the Statewide Account within DBM.

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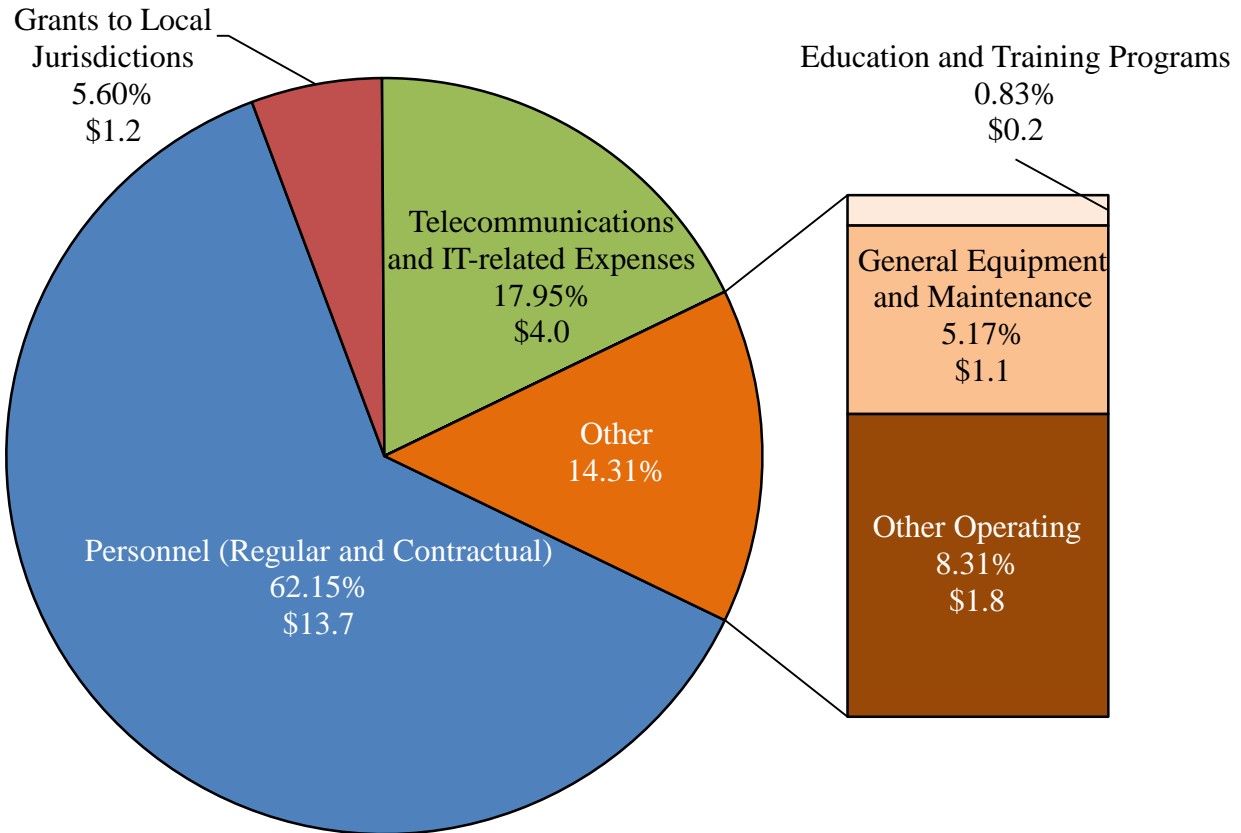
- The decrease of \$10.5 million in general funds in the fiscal 2024 allowance compared to the fiscal 2023 working appropriation is primarily due to one-time pass-through funding to address impending insolvency issues in the Maryland Emergency Medical System Operations Fund (MEMSOF). The funds will be used to support MEMSOF recipients including the Maryland State Police Aviation Command, the R Adams Cowley Shock Trauma Center operated by the University of Maryland Medical System, the Maryland Fire and Rescue Institute, the Senator William H. Amoss Fire, Rescue, and Ambulance Fund for fire and rescue and structure rehabilitation (administered by the Maryland Department of Emergency Management (MDEM)), and MIEMSS itself.

Fiscal 2024 Overview of Agency Spending

The fiscal 2024 allowance of MIEMSS totals \$22.1 million. As shown in **Exhibit 1**, the largest share (approximately 62%) of the fiscal 2024 allowance supports personnel, including 98 regular employees and 20.14 contractual full-time equivalents (FTE). Another significant portion of the fiscal 2024 allowance (18%) is for telecommunications expenditures needed to coordinate the statewide EMS system.

The fiscal 2024 allowance of MIEMSS also includes grant funding totaling \$1.24 million. The largest (\$425,000) supports the provision of automated external defibrillator kits to private and public facilities. Another grant program totaling \$310,000 supports Advanced Life Support training. Also included is \$250,000 in reimbursable funds from MDEM through the U.S. Department of Homeland Security for the Maryland Emergency Response System that, along with local jurisdictions, provides the National Capital region with mass casualty incident response and preparedness capabilities. An additional \$200,000 is for the provision of Naloxone kits for use by EMS personnel on patients suffering from opioid overdose, which is supported through reimbursable funds available from the Maryland Department of Health (MDH).

Exhibit 1
Overview of Agency Spending
Fiscal 2024 Allowance
(\$ in Millions)



IT: information technology

Source: Governor’s Fiscal 2024 Budget Books

Proposed Budget Change

The largest change in the fiscal 2024 allowance is due to one-time general fund support to MEMSOF in fiscal 2023, a decrease of \$10 million. As shown in **Exhibit 2**, excluding that change, the fiscal 2024 allowance of MIEMSS decreases by approximately \$5.0 million compared to the fiscal 2023 working appropriation after accounting for a statewide deficiency related to the 4.5% cost-of-living adjustment (COLA) provided in November 2022. The decrease is primarily due to reduction of 19.48 FTE contractual positions as a result of the expiration of funding for the Critical Care Coordination Center (C-4) (\$4.4 million) while MIEMSS looks for new funding

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sources. The decrease associated with C-4 is partially offset by the addition of 3 new full-time regular employees in EMS Communications Operations. Other substantial decreases relate to the elimination of one-time funding for the Doctor First Mobile Communication System (\$500,000) as well as the end of a federal grant for Emergency Medical Technician (EMT) stipends (\$500,000). The total budget decrease from the above changes is offset by minor increases in spending across operations such as software maintenance, training, and conferences.

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

How Much It Grows:	<u>General Fund</u>	<u>Special Fund</u>	<u>Federal Fund</u>	<u>Reimb. Fund</u>	<u>Total</u>
Fiscal 2022 Actual	\$0	\$16,114	\$2,038	\$3,377	\$21,528
Fiscal 2023 Working Appropriation	10,500	18,357	2,257	5,902	37,016
Fiscal 2024 Allowance	<u>0</u>	<u>18,871</u>	<u>2,264</u>	<u>915</u>	<u>22,051</u>
Fiscal 2023-2024 Amount Change	-\$10,500	\$514	\$8	-\$4,987	-\$14,965
Fiscal 2023-2024 Percent Change	-100.0%	2.8%	0.3%	-84.5%	-40.4%
Where It Goes:					<u>Change</u>
Personnel Expenses					
Employee and retiree health insurance					\$143
Annualization of the 4.5% COLA provided in November 2022					130
3 new positions for EMS communications operations					120
Employees' Retirement System.....					11
Social Security contributions					10
Turnover adjustments					8
Workers' compensation premium assessment.....					-1
Regular Salaries					-9
Transferred positions/reclassification					-20
Overtime earnings					-40
Other Changes					
Travel, primarily out-of-state.....					43
Vehicle purchase, maintenance, and increased fuel expenses.....					38
Data processing, software, and computer Maintenance					37
Telecommunications, including 700 MHz Radio					29
Utilities					12
DoIT services allocation					8

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Where It Goes:	<u>Change</u>
Other expenses.....	2
General equipment and build maintenance.....	-14
Doctor First Backline EMS Mobile Communication System	-500
EMT Stipends from one-time CDC grant.....	-502
Contractual employee primarily due to end of funding supporting 19.48 FTE	
Contract Employees in the Critical Care Coordination Center (C4).....	-4,471
Other changes including \$10 million support for MEMSOF in fiscal 2023	-10,000
Total	-\$14,965

CDC: Centers for Disease Control and Prevention
COLA: cost-of-living adjustment
DoIT: Department of Information Technology
EMS: emergency medical services
EMT: emergency Medical Technician
FTE: full-time equivalent
MEMSOF: Maryland Emergency Medical System Operations Fund
MHz: megahertz

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

Personnel Data

	<u>FY 22</u> <u>Actual</u>	<u>FY 23</u> <u>Working</u>	<u>FY 24</u> <u>Allowance</u>	<u>FY 23-24</u> <u>Change</u>
Regular Positions	95.00	95.00	98.00	3.00
Contractual FTEs	<u>32.59</u>	<u>39.62</u>	<u>20.14</u>	<u>-19.48</u>
Total Personnel	127.59	134.62	118.14	-16.48

Vacancy Data: Regular Positions

Turnover and Necessary Vacancies, Excluding New Positions	5.78	6.08%
Positions and Percentage Vacant as of 12/31/22	13.00	13.68%
Vacancies Above Turnover	7.22	

- Of the 13 vacant positions, 5 positions have been vacant longer than 12 months, and 5 have been vacant less than 3 months. The majority of the vacant positions (9) are in engineering, information technology, or communications.
- The decrease of 19.48 contractual FTEs is a result of the elimination of funding for C-4 as discussed earlier.
- The fiscal 2024 allowance of MIEMSS also includes 3 new entry-level positions in EMS Communications to relieve existing staff and management from excessive overtime and to reduce reliance on contractual staff.

Key Observations

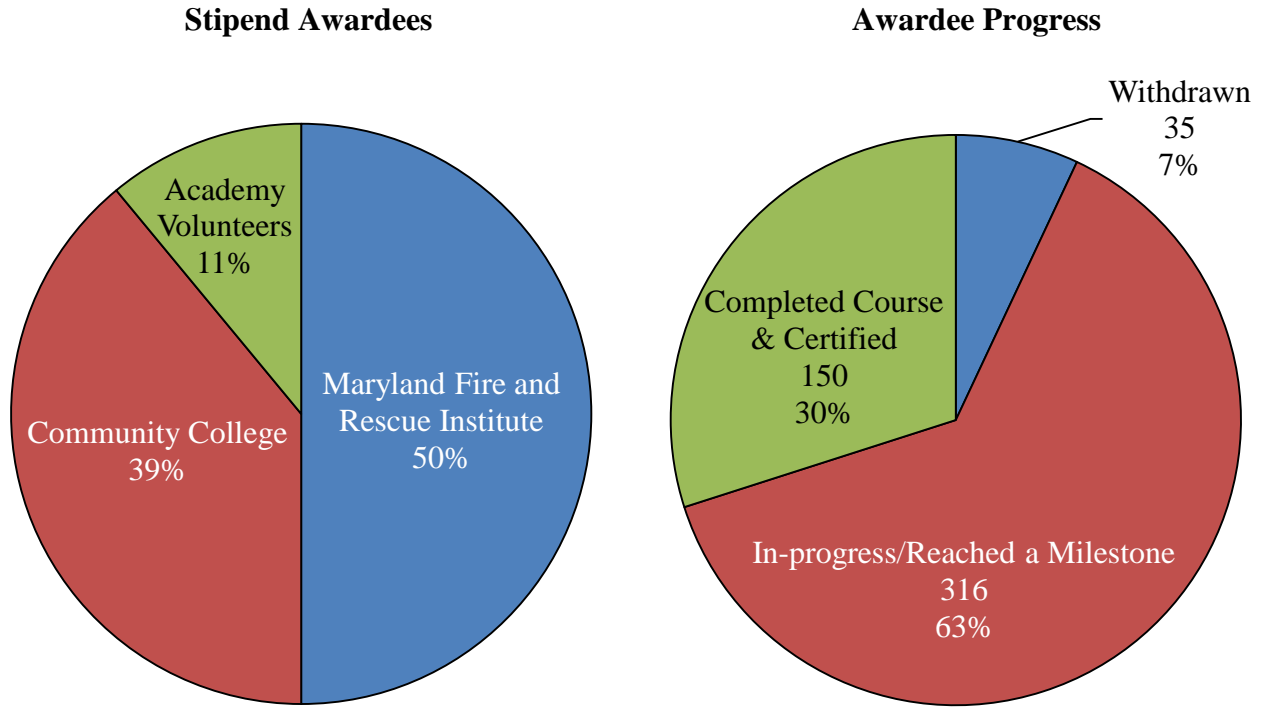
1. EMT Executive Order and Stipend Program

An executive order issued by Governor Lawrence J. Hogan Jr. in January 2022 titled *Augmenting the Emergency Medical Services Workforce* was intended to expand the EMS service member recruiting pool and expand the privileges of certification levels to meet higher volumes of EMS patients resulting from the COVID-19 pandemic. Funding was provided by the MDH Office of Preparedness and Response grant funds (Center for Disease Control (CDC) COVID-19 Workforce Development) through June 2023 for a stipend program to serve 500 students, distributing a series of payments under training milestone conditions for a total of \$2,000 per student. Following these actions, MIEMSS has updated the General Assembly on the impact of these actions on available EMS workers through the most recent annual report, which included this information in response to committee narrative in the 2022 *Joint Chairmen’s Report (JCR)*, and during a hearing before the House Health and Government Operations Committee (HGO) on January 12, 2023.

MIEMSS stated in the annual report that the executive order changes ultimately resulted in over 1,300 new provisional EMS clinicians. In addition, **Exhibit 3** illustrates the stipend awardee source and progress profile numbers reported by MIEMSS at the January 12, 2023 HGO hearing. Out of 500 stipend slots awarded, 35 withdrew, 150 have completed training and become certified, and 316 remain in progress after reaching a training milestone qualifying for payment. Unused funding to withdrawn awardees is being assigned to new awardees on a wait list.

However, MIEMSS reported during the January 2023 HGO hearing that while the yearly total of newly certified EMS clinicians has been on an upward trend over two decades, the number of active EMS clinicians in the State has been decreasing in recent years. **MIEMSS should comment on whether this is unique to Maryland and on reasons for decreasing numbers of active EMTs.**

Exhibit 3
Stipend Awardees and Awardee Progress



Source: Maryland Institute for Emergency Services Systems

2. Nonemergency Medical Transportation Program

Language in the fiscal 2023 Budget Bill restricted \$100,000 in special funds for MIEMSS until a report was submitted on hospital interfacility ambulance transportation for Medicaid patients, detailing both emergency and nonemergency interfacility transport, including the capacity under the current referral process, response time to referral requests, costs under the current system, and recommendations for improving the system. MIEMSS submitted this report on December 28, 2022.

Since 1993, the Nonemergency Medical Transportation (NEMT) program has been funded through grants from MDH to 24 local health departments, excluding Montgomery County. Approximately \$50 million per year is distributed for around 47,000 Medicaid patients. Despite the name, the NEMT program is also designed to serve emergency needs. The NEMT program pays for the costs of interfacility transport of Medicaid patients by ambulance or helicopter as well

as all private forms of transportation. Interfacility transport refers to the ambulance transfer of patients from one hospital to another or the occasional return of the patient home or to a nursing facility. Emergency transport by ambulance or helicopter is covered when needed and initiated through the NEMT system (*i.e.*, not by 9-1-1 call). This includes the provision of basic life support, advanced life support, specialty care, and neonatal transport. Levels of EMS support differ for each of these service levels.

During the 2022 session, hospitals reported delays in obtaining authorization to transport Medicaid patients, a process which requires preauthorization including a signed physician's certification form and eligibility and necessity check. Issues have also been reported with the variability of reimbursement rates across jurisdictions and vendors. There are no standardized rates for NEMT across Maryland counties. The report lists a number of reasons for the different rates, involving different operating hours, licensing fees, ambulance service contract conditions, and differences in rate adequacy across jurisdictions. As part of the effort to improve the service, MDH is planning to procure a new Administrative Service Organization (ASO) (a request for proposals was issued in September 2022) with the goal of streamlining this service, including a fee schedule determined by Medicaid for use by all jurisdictions. The report provides further detail on design plans for this system and how ASO will work with Maryland Medicaid to manage a contract.

ASO implementation is planned to begin in calendar 2024 and occur in three phases. Phase 1, lasting 18 months, will gradually activate service to the nine jurisdictions with 50% of the State's population and 70% of the State's Medicaid enrollees. Phase 2 will bring the remaining jurisdictions online and be considered complete after two months of successful operation. Phase 3 will be three years of statewide operation with a two-year renewal option and includes the incorporation of helicopter transport.

Recommendations in the report included (1) holding coordinating meetings across MDH and stakeholders, including hospitals and ambulance providers; (2) reporting by the ASO on preauthorization times; (3) consideration by MDH on the opportunity to allow retrospective authorization of transfers; (4) coordination between Medicaid and the Health Services Cost Review Commission including how to consider the All-Payer model and Medicare Waiver in determining the appropriateness of transfers; (5) consideration of continuity of care needs in approval of post-operative transfers; and (6) consideration of the impact of a new statewide rate for EMS transport on the business model of commercial EMS in case a low rate results in insufficient service provider participation. **The Department of Legislative Services (DLS) recommends the release of the \$100,000 in special funds restricted pending the receipt of the report and will process a letter to this effect if no objections are raised at the budget hearing.**

3. Hospital Capacity

Critical Care Coordination Center

C-4 was initiated by MIEMSS in December 2020 during a winter COVID-19 surge. C-4 is staffed 24/7 by an EMS clinician and a critical care medicine physician who monitor the availability of critical care resources throughout the State. C-4 serves as a central coordinating group for critical resources throughout Maryland, matching patient needs with available resources elsewhere in the State and relaying information necessary to make patient transfers. The system functions across all five EMS zones in Maryland as well as Delaware, New Jersey, Pennsylvania, Virginia, Washington D.C, and West Virginia. Volume of cases is highest across EMS zones 3 (Baltimore City and neighboring counties) and 5 (Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties and Washington, D.C.).

At a State EMS board meeting October 11, 2022, MIEMSS reported that in the past day, C-4 had received 7 adult and 16 pediatric (non-COVID-19) cases. These resulted in 11 transfers to hospitals, 3 of which were out of state. An emphasis was made on the need for increased pediatric bed capacity to manage increased numbers of pediatric patients with severe respiratory illnesses. As of January 2023, MIEMSS reports fielding over 5,100 calls over the previous 25 months (204 per month or approximately 7 per day), working with over 80 hospitals in Maryland and neighboring states.

Current funding through a CDC grant administered by MDH lasts through June 30, 2023. MIEMSS is exploring new funding options for after this grant ends, and the fiscal 2024 allowance does not continue funding or contractual FTE to support C-4 given the current end date of the grant. **MIEMSS should comment on what options are being explored for the continuation of C-4 funding and estimate an associated funding timeline for fiscal 2024.**

Capacity Alert System and Data

The hospitals in Maryland utilize a system of alert levels that help guide patient deliveries and transfers through the C4 system. **Exhibit 4** provides a table summarizing these four alert levels.

Exhibit 4 Hospital Patient Capacity and Operational Condition Levels

<u>Alert Level</u>	<u>Conditions</u>
Red	The hospital has no ECG monitored beds available. These ECG monitored beds will include all in-patient critical care areas and telemetry beds.
Yellow	The emergency department temporarily requests that it receive absolutely no patients in need of urgent medical care. Yellow alert is initiated because the emergency department is experiencing a temporary overwhelming overload such that priority II and III patients may not be managed safely. Prior to diverting pediatric patients, medical consultation is advised for pediatric patient transports when emergency departments are on yellow alert.
Mini-Disaster	The emergency department reports that their facility has, in effect, suspended operation and can receive absolutely no patients due to a situation such as a power-outage, fire, gas leak, bomb scare, <i>etc.</i>
Blue	Overrides all other alerts. All patients must be transferred to the closest facility per patient needs and hospital capacity.

ECG: electrocardiogram

Note: Patient priority levels are rated as follows: Priority I – Critically ill or injured person requiring immediate attention, unstable patients with life-threatening injury or illness; Priority II – Less serious condition yet potentially life-threatening injury or illness, requiring emergency medical attention but not immediately endangering the patient’s life; and Priority III – Nonemergency condition, requiring medical attention but not on an emergency basis

Source: Maryland Institute for Emergency Services Systems, Maryland Medical Protocols for Emergency Medical Services

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MIEMSS receives a daily report on emergency department occupancy levels by care unit, per region, rates of COVID-19-positive and respiratory illness patients handled by EMS, and a historical graph of total yellow alert hours per day across all five regions of Maryland. The daily hospital report for December 14, 2022, includes a historical report of yellow alert rates from October 1, 2019, through December 1, 2022. The report shows variations in yellow alert rates at several times during this period:

- a low of under 100 hours per day from the initial lockdown period March to July 2020;
- a steady rise to over 900 hours in January 2022;
- approximately 200 hours in February and March 2022; and
- a subsequent rise to a range of 400 to 800 hours in November and December 2022.

Historical data on hospital alert levels according to this capacity rating system is available on the MIEMSS website through a data query tool for the County Hospital Alert Tracking System (CHATS). CHATS data may be downloaded by the region or hospital and over a selected period of time. MIEMSS noted in December 2022 that the CHATS data request tool only accepts small data requests. As of January 17, 2023, the system could not generate a one-month data set for the whole state. **MIEMSS should comment on whether the issue of CHATS data access is being addressed by its IT operations.**

Operating Budget Recommended Actions

1. Concur with Governor's allowance.

Appendix 1
2022 Joint Chairmen’s Report Responses from Agency

The 2022 *Joint Chairmen’s Report* (JCR) requested that MIEMSS prepare two reports. Electronic copies of the full JCR responses can be found on DLS Library website.

- ***Report on Interfacility Transport:*** Language in the fiscal 2023 Budget Bill withheld \$100,000 in general funds until MIEMSS submitted a report on interfacility transport for Medicaid patients. The report was due December 1, 2022, and submitted on December 28, 2022, after an extension request of one month. Further discussion of this report can be found in Key Observation 2 of this analysis, where a recommendation is made to release the held funds.
- ***Staffing Shortages and Effectiveness of EMT:*** Committee narrative requested that MIEMSS include in its annual report a discussion of the expanded role that EMT personnel have played during the pandemic and any ongoing statewide staffing shortages. The annual report for fiscal 2022 was submitted at the start of fiscal 2023 and referenced in Key Observation 1 of this analysis, discussing the progress of the EMT training stipend program.

Appendix 2
Communications System Upgrade
Major Information Technology Project
Maryland Institute of Emergency Medical Services Systems

New/Ongoing: Ongoing								
Start Date: March 2018					Est. Completion Date: July 2025			
Implementation Strategy: Waterfall								
(\$ in Millions)	Prior Year	2022	2023	2024	2025	2026	Remainder	Total
GF	\$0.000	\$0.025	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.025
SF	15.645	0.000	0.000	0.000	0.000	0.000	0.000	15.645
Total	\$15.645	\$0.025	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$15.670

- **Project Summary:** Upgrade statewide communications system from a circuit-switched, analog system operating with unsupported legacy equipment to a modern, Internet Protocol-based communications system.
- **Need:** The existing communications system is over 20 years old and is based on technologies from the 1980s, which has resulted in MIEMSS being advised that only limited aspects of the system will be supported due to age. Other aspects of the current system are based on copper wires that have also been retired, making those aspects unavailable.
- **Observations and Milestones:** The COVID-19 pandemic and resulting restrictions caused project delays extending into calendar 2022. As a result, the spending on the project is expected to continue over the next several years, despite the completion of funding appropriated to the project.
- **Changes:** In December 2020, to address schedule challenges, MIEMSS approved OCI (the vendor) to begin Phase 2 (Western MD and Region III), prior to the completion of Phase 1. OCI delivered the Phase 2 equipment in July 2021 and was working on Phase 2 implementation as of May 2022 when the contract was extended for a completion date in May 2023. As of January 2023, the total project costs are estimated at \$15.94 million.
- **Other Comments:** Funding for the project was provided in full prior to fiscal 2022, and there have been no new funding allocations. Costs are expected to extend into fiscal 2026.

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

<u>Object/Fund</u>	<u>FY 22</u> <u>Actual</u>	<u>FY 23</u> <u>Working</u> <u>Appropriation</u>	<u>FY 24</u> <u>Allowance</u>	<u>FY 23 - FY 24</u> <u>Amount Change</u>	<u>Percent</u> <u>Change</u>
Positions					
01 Regular	95.00	95.00	98.00	3.00	3.2%
02 Contractual	32.59	39.62	20.14	-19.48	-49.2%
Total Positions	127.59	134.62	118.14	-16.48	-12.2%
Objects					
01 Salaries and Wages	\$ 9,958,728	\$ 11,000,123	\$ 11,612,938	\$ 612,815	5.6%
02 Technical and Special Fees	3,815,334	6,511,366	2,090,759	-4,420,607	-67.9%
03 Communication	2,121,391	2,909,997	2,939,013	29,016	1.0%
04 Travel	627,466	741,059	784,041	42,982	5.8%
06 Fuel and Utilities	140,365	128,662	140,424	11,762	9.1%
07 Motor Vehicles	298,845	247,225	284,994	37,769	15.3%
08 Contractual Services	2,661,118	3,377,958	2,390,388	-987,570	-29.2%
09 Supplies and Materials	653,814	136,680	139,902	3,222	2.4%
10 Equipment – Replacement	264,794	212,621	218,321	5,700	2.7%
11 Equipment – Additional	88,895	32,500	32,500	0	0%
12 Grants, Subsidies, and Contributions	717,911	11,235,000	1,235,000	-10,000,000	-89.0%
13 Fixed Charges	179,624	172,570	182,837	10,267	5.9%
Total Objects	\$ 21,528,285	\$ 36,705,761	\$ 22,051,117	-\$ 14,654,644	-39.9%
Funds					
01 General Fund	\$ 0	\$ 10,500,000	\$ 0	-\$ 10,500,000	-100.0%
03 Special Fund	16,113,736	18,085,475	18,871,481	786,006	4.3%
05 Federal Fund	2,037,742	2,217,946	2,264,148	46,202	2.1%
09 Reimbursable Fund	3,376,807	5,902,340	915,488	-4,986,852	-84.5%
Total Funds	\$ 21,528,285	\$ 36,705,761	\$ 22,051,117	-\$ 14,654,644	-39.9%

Note: The fiscal 2023 appropriation does not include deficiencies. The fiscal 2024 allowance does not include salary adjustments included within the Statewide Account in the Department of Budget and Management.