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House Health & Social Services Subcommittee
February 14, 2018

Senate Public Safety, Transportation, and Environment Subcommittee
February 15, 2018

Good afternoon. The Maryland Institute for Emergency Medical Services Systems (MIEMSS) is an independent state agency that 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 2019 budget request and to brief the committee on several programmatic areas of interest. MIEMSS and the Emergency Medical Services Board are very appreciative of the General Assembly's support of MIEMSS and our Statewide EMS system. The analysis by Anne Wagner 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.

The 2019 MIEMSS 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.

In response to the issues raised in the DLS Analysis, MIEMSS provides the following information.

Executive Director Vacancy:

Analyst's Comment: MIEMSS should comment on when it anticipates filling the executive director vacancy and what steps it is taking to fill the position.

MIEMSS Response: The EMS Board has procured the services of an executive search firm that specializes in the recruitment of leaders in healthcare to assist the Board in a nationwide search for a new Executive Director. It is anticipated that a candidate will be brought to the Board for approval within the next four to six months. In the interim, MIEMSS continues to operate under the leadership of its two Acting Co-Executive Directors, Patricia Gainer, the agency's Deputy Director, and Dr. Rick Alcorta, the agency's EMS Medical Director.

MIEMSS Communication System Upgrade

Analyst's Comment: 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 the contract for the SI is anticipated to be sent to BPW and when the selected vendor is expected to begin implementation.

MIEMSS Response: 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. Because much of the equipment of our system is outdated, in 2013, we began a multi-year project to upgrade the statewide system. As we continue work on the upgrade project, the current EMS Communications System remains fully operational. The upgrade and renovation of the EMRC/SYSCOM Communications system went well and was completed in 2015. There were no communications interruptions during the upgrade and renovation. Part of the upgrade and renovation included installation of Maryland FiRST console equipment, eliminating the risk associated with the outdated Motorola Centracom Console risk and enabling MIEMSS communications on the Maryland FiRST System.

MIEMSS continues to support the legacy equipment making repairs as necessary until the upgrade is completed. Agency Communications Engineering staff also continue to make system improvements out of the agency operating budget to mitigate identified risks.

The move to IP based communication operations and the elimination of the remaining identified vulnerabilities will be completed under the System Integrator (SI) RFP portion of the project. MIEMSS initially released the SI RFP on August 29, 2016; after several extensions requested by potential offerors, the final proposal due date was January 24, 2017. After receipt of proposals, and upon advice from DoIT and counsel at the Board of Public Works, MIEMSS cancelled the RFP on February 6, 2017 in the best interests of the State. MIEMSS re-released the Communications System Upgrade RFP on February 27, 2017 with an RFP closing date of June 1, 2017. Upon determination that the proposals met response requirements, MIEMSS completed technical evaluations of the proposals and financial evaluations for those offerors whose proposals were deemed reasonably susceptible for award. The technical evaluation included a thorough review of offeror submission documents, product demonstrations and orals presentations.

Upon completion of the evaluations, MIEMSS entered into contract negotiations to obtain a best and final offer (BAFO). MIEMSS is currently in the process of preparing the final contract for BPW action and anticipates a contract award in March 2018. MIEMSS anticipates work to begin immediately after BPW approval and is currently putting in place the framework for the work to commence quickly. We believe the majority of the work to complete the Communications System Upgrade Project will be accomplished before the end of FY 2021.

Emergency Department Overcrowding

Analyst's Comment: MIEMSS should comment on any efforts to measure the extent of ambulance diversion and whether response times have increased due to ED overcrowding.

MIEMSS Response: MIEMSS is unable to identify with precision instances of ambulance diversion and, thus, cannot measure the extent of ambulance diversion. The eMEDS electronic prehospital patient care data reporting system lacks a data field for recording diversion. MIEMSS will be upgrading the eMEDS system over the next several months to a more advanced version which may assist in efforts to document specific occurrences of diversion as they occur.

MIEMSS believes that ED overcrowding has impacted response times, and some EMS jurisdictions have put in place ambulance dispatch procedures for use during periods of intense ED overcrowding. For example, Prince George's County Fire Department (PGCFD) has developed a "Limited EMS Resource Plan" with two levels that is put into effect in times of high levels of ED overcrowding.

- Level 1 goes into effect when 40% of all transport units are consumed either on calls or waiting to offload patients at hospital emergency departments. At this level, PGCFD directs ambulances to specific hospitals to minimize or avoid delay. Once at the ED, EMS providers complete a shortened patient care report (a full report to be completed at a later time) and offload the patient. While other units return to service, one ambulance unit may remain at the hospital in order to observe the (sometimes multiple) transported Basic Life Support patients waiting on stretchers for an ED bed.

- Level 2 goes into effect when 60% of all transport units are consumed. In addition to the actions taken in Level 1, when operations reach Level 2, the county's dispatch policy changes so that dispatch response to lower acuity calls can be held for up to 45 minutes in order to ensure that higher acuity calls receive a priority response. PGCFD reports that the Limited EMS Resource Plan is used more and more frequently as ED overcrowding has increased, indicating that it is not unusual for PGCFD to be in Limited EMS Resource Plan status twice a day for about 45 minutes – 1 hour at each occurrence.

Analyst's Comment: MIEMSS should comment on any findings related to the impact of recent overcrowding trends on Maryland patients specifically.

MIEMSS Response: There is a substantial body of research on the impact of ED overcrowding on patients. Information on these studies is contained in the JCR ED Overcrowding Report[1] submitted by MIEMSS and the Health Services Cost Review Commission (HSCRC) in December; a summary of this research was cited in the budget analysis. None of the research conducted was specific to Maryland patients per se; instead, the research focused on the effects of treatment delays on patients as a result of ED overcrowding.

Analyst's Comment: MIEMSS should provide an update on implementation of the strategies outlined in the report, including concrete efforts planned for 2018.

MIEMSS Response: The JCR on ED Overcrowding, which was submitted in December 2017 by MIEMSS and the HSCRC, contained the following strategies.

- The HSCRC identified two strategies to incentivize hospitals to improve ED efficiency and patient throughput: 1) adding an ED performance measure in the Quality-based Reimbursement program; and 2) requesting hospital efficiency improvement action plans from hospitals that have poor ED performance measures coupled with reduced patient days.

  At its December 2017 meeting, the HSCRC voted to include the ED measures in the quality program for rate year 2020 for all hospitals, with the possibility of approving an additional risk-adjustment methodology by June 2018. The two ED measures determine the amount of time that elapses between ED arrival to hospital admission, and between the decision to admit an ED patient and the actual admission to the hospital.

  The HSCRC also put in place a process to receive additional quantitative and qualitative information from hospitals that are experiencing the worst ED wait times, through the solicitation of a Hospital Efficiency Improvement Action Plan. The HSCRC notified thirteen (13) hospitals that they must submit a Hospital Efficiency Improvement Action Plan based on their performance on ED wait time measures compared to the State average, high use of yellow alert/diversion, and their excess capacity. Those hospitals are to submit plans to improve hospital throughput.

[1] Joint Chairmen's Report on Emergency Department Overcrowding. The Maryland Institute for Emergency Medical Services Systems and the Health Services Cost Review Commission. December 2017.

- MIEMSS identified four strategies: 1) work with EMS jurisdictions to continue to develop new models of EMS care delivery and assess their utility in reducing ambulance transport of low acuity patients to hospital EDs; 2) work with HSCRC to incorporate/engage EMS for participation in new care delivery programs under the State's Enhanced Total Cost of Care All-Payer Model, including the possibility of shared savings and with the Maryland Department of Health to identify potential opportunities for changes in the Medicaid program to reimburse EMS for new models of service delivery; 3) determine whether the use of Yellow Alerts should be discontinued; and 4) work with EMS jurisdictions to identify a reasonable standard time for ambulance off-load (the time between the arrival of an ambulance-transported patient and the time that the patient is moved off the EMS stretcher).

  MIEMSS is continuing its work with EMS jurisdictions to further develop and implement new models of EMS Care delivery, in particular, Mobile Integrated Health Programs. Key to success of these new models, however, is securing sustained funding for their operation. MIEMSS is working with the Maryland Department of Health, system stakeholders, and Legislators to address this issue during the current Legislative Session.

  MIEMSS is working with each of its Regional EMS Advisory Councils to review the utility of Yellow Alerts. There are varying views on the utility of Yellow Alerts as a mechanism for monitoring and impacting ED overcrowding. Some Maryland hospitals believe Yellow Alerts can provide temporary relief from overcrowding, while others eschew the use of Yellow Alerts altogether. Some EMS jurisdictions are unconvinced as to the utility of Yellow Alerts since the alert status is not uniformly used by all hospitals. The Regional EMS Advisory Councils have a broad membership which includes representatives from jurisdictions, commercial ambulance services, public safety answer points, local governments, hospital administrators, dispatch centers, volunteer and career EMS providers, EMS medical directors, and nurses.

  MIEMSS will work with its Jurisdictional Advisory Committee (JAC) to identify a reasonable standard for ambulance off-load time. Ambulance off-load is the time between the arrival of an ambulance-transported patient and the time that the patient is moved off the EMS stretcher with transfer of care to ED staff. A generally accepted national standard is an off-load time of 30 minutes, yet some jurisdictions in Maryland report off-load times extending to 2 and 3 hours. Delays in ambulance off-load effectively keeps the ambulance out-of-service which can delay EMS responses to other emergency calls in their jurisdictions, decrease Advanced Life Support response to critical conditions, e.g., cardiac arrest, and decrease EMS productivity as EMS crews must wait to hand over care to hospital personnel. Delays in ambulance turn-over can also raise EMTALA concerns. JAC is comprised of representatives from each of Maryland's EMS jurisdictions and is the appropriate forum for addressing this topic.

Mobile Integrated Healthcare Programs

Analyst's Comment: MIEMSS should provide an update on the implementation of the recommendations in the report since its submission in November, including efforts planned in 2018.

MIEMSS Response: Mobile Integrated Healthcare (MIH) programs in Maryland are a cost-effective approach to reducing unnecessary calls to 9-1-1 and ED overcrowding. A key finding of the JCR

report[2] is that MIH programs need sustained, ongoing support which is not possible under current EMS reimbursement policies. Currently, reimbursement for EMS is largely dependent upon the patient being transported to a hospital ED, which is a high-cost environment. MIH programs, in contrast, focus on treating low-acuity, chronic patients in a home or community setting, at a much lower cost. MIEMSS is working with MIH programs, EMS jurisdictions, the Maryland Department of Health and Legislators to address this issue during the current Legislative Session.

We would be happy to answer any questions.

[2] Joint Chairmen's Report. Maryland Mobile Integrated Health Programs Involving Emergency Medical Services (EMS). The Maryland Institute for Emergency Medical Services Systems. November 2017.