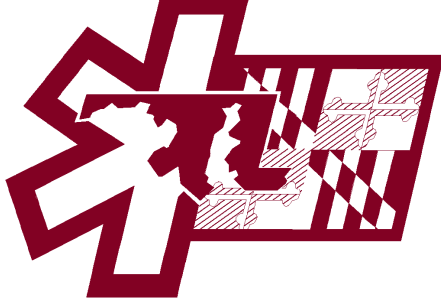


# Maryland EMS News



For All Emergency Medical Care Providers

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Special Edition

## Mobile Integrated Health (MIH) Programs Are Growing in Maryland

In response to increasing health care costs, innovations to health care delivery systems are changing the health care landscape. This is particularly true for emergency medical services (EMS), which has not, traditionally, been considered to function in a primary care capacity within the public health arena. However, many jurisdictions throughout the United States are expanding the role of EMS through innovative programs that are capable of linking patients to preventative health services, reducing 9-1-1 EMS call volumes, and improving the continuity of care from the hospital to the home in order to reduce complications for patients and avoid unnecessary hospital readmissions.

Mobile integrated health (MIH) is one of these innovative models of care and, because it has developed locally by identifying needs unique to individual communities, varies in services provided. The MIH model of health care delivery is the foundation for six programs in Maryland that have embraced this expanded role for EMS, largely to counter the ever-increasing volume of 9-1-1 calls for EMS services and the exploding health care costs associated with this upsurge. For example, between FY 2015 and FY 2016, EMS transports in Baltimore City increased by nearly 5,918 patients, and the city saw an additional 2,972 patient transports between FY 2016 and FY 2017. Total EMS transports for Baltimore City were at an all-time high of 100,984 in FY 2017. Because of the restrictions of reimbursement policies, nearly all of these patients are transported to hospital emergency departments causing overcrowding, or are not transported at all, forcing EMS agencies to absorb the cost of health care treatment.

Maryland's six MIH programs have identified the health care needs of their local communities, ascertained available resources, and created plans and policies that link patients who rely heavily on EMS for non-emergency care with the most appropriate

services, improving the availability of EMS for actual emergency incidents and concurrently driving down costs. Each of these programs are discussed in detail, beginning on page 4.

Throughout the nation, most MIH programs share commonalities in that they seek to improve quality of patient care, increase patient safety, and decrease health care system costs. MIH programs may focus on a specific vulnerable or high-risk community, such as high utilizers of the 9-1-1 system, individuals with complex chronic diseases, or individuals recently discharged from the hospital.

Communities and health systems typically determine what MIH services are needed by conducting a community needs assessment. The needs assessment identifies opportunities to improve population health based on the unique characteristics of the community. The needs assessment will consider population demographics, available health care resources, and data on the current health of the community in order to determine what MIH resources would be most beneficial.

Mobile integrated health requires integration with existing community resources in order to receive patient referrals. Referrals may come from hospitals, primary care providers, public health departments, social services agencies, community health centers, or other human services agencies. Referrals work in both directions, since the MIH program may refer patients to other health and social services organizations to receive care outside of its scope of practice.

According to a 2015 report "Mobile Integrated Healthcare and Community Paramedicine (MIH-CP)" published by the National Association of Emergency Medical Technicians (NAEMT), the most common characteristics of MIH and CP programs are hospital readmission avoidance, managing frequent EMS users, chronic disease management, and assessment of and

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## Future of MIH Depends on Changes to EMS Reimbursement

Demonstrating that Maryland MIH programs can successfully increase access to quality health services while simultaneously reducing health care expenses, EMS and hospital-based costs in particular, is certainly fundamental to ensuring their continued operation. So far, there have been promising results from the current programs that show they are effective in achieving those goals. But the continual success of Maryland's MIH programs is far more complex than collecting and analyzing their individual measures of effectiveness.

Currently, Maryland's MIH programs are funded through a combination of grants, in-kind service donations, such as personnel, office space, or medical supplies and equipment, and jurisdictional or county budgets that are generally funded by tax dollars. Project funds can support expenses like personnel salaries, acquisition of medical apparatus and equipment, and costs generated from patient care. However, continual funding for these MIH programs is not guaranteed for future operations, beyond the limits set by the current funders. Queen Anne's program, for example, is partially funded by a grant set to expire in 2019 and the Salisbury-Wicomico program is currently only funded for its first year of operation.

For the current MIH programs to work, these funding sources are critical because current EMS reimbursement policies do not provide reimbursement for care provided by EMS when the patient is not transported nor when patients are transported to an urgent care center, as is the case under the Alternative Destination Programs. Funding for MIH programs is also not currently integrated into statewide health care initiatives and reform efforts. Securing adequate, ongoing funding is the only way to guarantee the continued operation of these programs.

Toward this end, representatives of EMS systems need to be involved in decision-

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# MIH Programs Are Growing in Maryland

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navigation to alternate destinations. According to this report, the most common staffing changes under an MIH program are modifying clinical staff duties to achieve program goals, followed by having full-time, dedicated, staffing for MIH-CP programs. Modifying clinical staff duties can make use of EMS personnel when they are not responding to emergency requests for service.

Pilot and demonstration projects for MIH-CP programs have been primarily funded by hospitals, according to the NAEMT

report. In addition to hospitals, funding has also been provided by hospice, public health agencies, nursing homes, and physician groups. At the start of 2018, Anthem Blue Cross and Blue Shield made national news by announcing they would begin compensating EMS for treatment of their patients, even if the patient was not then transported to a hospital. This may be the start of private insurance organizations recognizing the value of MIH-CP programs, and providing reimbursement for services to allow program sustainability.

EMS has been continuously evolving since its initial founding, and the evolution of MIH and CP is continuing to redefine EMS. MIH-CP programs enable EMS providers to care for patients in all stages of the disease process and reduce unnecessary utilization of the emergency system. MIH-CP provides a framework for EMS to contribute to the goal of improving patient safety, increasing quality of care, and reducing overall health care system costs.

## *Future of MIH Depends on Changes to EMS Reimbursement*

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making for the future of health care delivery in Maryland. The state's current rate-setting and reimbursement system does not recognize EMS as health care providers in the same way that hospitals and other medical facilities are, meaning EMS absorbs much of the costs for non-emergency health care treatment. This not only increases the financial burden on EMS entities, but also diverts resources away from emergency response needs. Financial incentives such as updated reimbursement policies that enable EMS entities that participate in MIH programs to bill for treatment costs, whether the patients are transported or not, will go a long way toward sustaining these programs. Similarly, securing reimbursement for transport to destinations other than a hospital ED is also key to the future of EMS' participation in new models of health care delivery.

In addition to considering the EMS perspective in future health care policy decisions, integrating these programs into statewide health care initiatives may secure much-needed future funding streams.

In addition to secured funding, establishing health care partnerships across the spectrum of care is critically important for MIH programs to be successful, as the targeted patient populations have needs that lie outside the scope of emergency medical services. This includes EMS participation in and access to the state's health information exchange (HIE) platform, so that comprehensive patient information across all facets of their health care is available. In this way, EMS providers operating within the MIH framework can quickly identify non-emergency services needed by the patient and efficiently direct them to those services, saving costs and improving access to health care.

Maryland's MIH programs are showing promise in improvements to patient health, access to health care services, and overall

cost avoidance and/or reduction. It is more important than ever that these programs continue to operate and that other jurisdictions in Maryland that would like to start an MIH program be able to obtain the funding to do so.

For example, in rural Maryland, the ability to establish and operate an MIH program aligns with the recommendations outlined by the final report of the Workgroup on Rural Health Delivery to the Maryland Health Care Commission: *Transforming Maryland's rural healthcare system: A regional approach to rural healthcare delivery*. The Workgroup identified the critical role played by EMS, nurse practitioners, and health care managers in delivering primary health care to patients who often experience health care barriers due to geographic isolation and/or vulnerable population status. The Workgroup recommended that EMS providers be recognized as health care providers, and not just as transportation services, and that MIH and/or community paramedicine programs can help patients with chronic disease management, behavioral health, and substance abuse recovery services, in turn preventing

hospital admissions and readmissions that drive up costs and negatively affect patients' quality of life.

Senate Bill 682, "The Medical Assistance Program and Insurance – Emergency Medical Services Providers – Coverage and Reimbursement of Services," is currently under consideration by the Maryland General Assembly. This bill, if enacted into law, will allow EMS to bill and be reimbursed for providing health care in a patient's home or other location whether or not the patient is not transported to a hospital ED, and also for transporting a patient to a health care destination other than a hospital ED. The law would apply to Medicaid, health insurers, nonprofit health service plans, and health maintenance organizations. The law would not apply to Medicare, however, since Medicare is a federal program. Securing adequate and ongoing support for new models of EMS care delivery, such as MIH and Alternative Destination Programs, is key to their growth and sustainment. SB 682 may well open pathways for the future of new models of EMS care delivery in Maryland.

## **EMS Providers Essential to Maryland MIH Programs**

It should not be surprising that people who are ill, injured, scared, hungry, or even just lonely reach out to 9-1-1. When an individual does not know where else to turn for help, they know if they call 9-1-1, someone will come. EMS providers may officially operate within a certain scope of practice, but the reality is that they could be called upon to respond to everything from horrific injuries and deadly car crashes to isolated folks who just need to see a friendly face. To be successful, MIH programs depend on linking individuals who are not experiencing life-threatening or emergency situations with the proper resources. In Maryland, there are no better people to be on the frontlines, to be that critical link between community members in need and the resources that can serve them, than EMS providers.

Mobile Integrated Health programs are designed to establish integrated mechanisms of medical and behavioral health care, meaning that providers will help patients connect with the most appropriate resources based on established partnerships across the spectrum of care. In MIH programs, EMS providers are "front and center" in the patient's first contact with health care, regardless of their actual needs.

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# Nationwide: Alternatives to Traditional EMS Response Are Working

In addition to improving overall health, wellbeing, and access to health care and social services for Maryland citizens, the implementation of MIH programs could lead to significant savings for Emergency Operational Programs and for the state. One financial incentive to establish an MIH program is “cost-avoidance” of unnecessary expenses that result from utilizing EMS to provide for non-emergency services. These include EMS operational costs as well as emergency department and inpatient hospital expenses that could be avoided by redirecting certain low acuity patients to primary care physicians, urgent care, or behavioral health services that are more appropriate for their conditions. Throughout the nation, similar programs that explore redefining and expanding the EMS response role are demonstrating significant positive impacts in population health and reducing expenditures.

The CONNECT Community Paramedics program, based in Pittsburgh, Pennsylvania, is a collaboration among EMS departments in Allegheny County, the Congress of Neighboring Communities organization, and the Center for Emergency Medicine of Western Pennsylvania, Inc. Similar to some of Maryland’s MIH programs, the CONNECT program identifies hospital discharged patients and helps them stay out of the hospital by connecting them with financial, medical, housing, utilities, mental health, and social support services. Over two years, the program has enrolled 269 patients, generating an estimated savings of **\$1.8 million** in health care costs.<sup>1</sup>

In Arizona, a statewide initiative to implement community integrated paramedicine (CIP), one of several alternative EMS response models, in multiple jurisdictions has demonstrated promising

reform toward health care cost-savings benefit in addition to overall population health and patient satisfaction in care. With approximately 30 CIP programs operating in Arizona, as of 2016, a movement is underway to identify core quality and performance metrics and promote uniform data collection throughout the state.<sup>2</sup> While this movement for collective, statewide data is underway, local communities are taking initiatives to collect and share their MIH program early results.

One of these communities, the city of Mesa, Arizona, piloted the Community Care Initiative to test prehospital health care models for improving efficiency, cost-savings, and patient outcomes.<sup>3</sup> With dedicated community care paramedic units, advanced practice units, and behavioral health units in place, the multi-partner program also integrated nurse triage, alternative destinations, community outreach, and prevention action call line, among other services like immunization clinics and home safety inspections. The Mesa model estimates a cost-avoidance of about \$2,600 per patient contact for each low-acuity medical patient and \$11,000 per patient contact for each behavioral health patient. EMS data for 2013 indicated approximately 10,000 low-acuity calls were processed, which could, if the model cost-avoidance projections are correct, save the city about **\$2.6 million** in years with comparable EMS system usage.

A similar paramedicine pilot program was initiated in San Diego, California, in the late 2000s. The Resource Access Program (RAP) was the subject of a pilot study by Tadros, et al. (2012) that sought to establish whether the EMS-based RAP intervention reduced EMS and hospital costs over a 31-month period (December 2006 to June 2009).<sup>4</sup> The study tracked 51 enrollees in the

program, who were selected based on their frequency of EMS utilization over a 12-month period. Overall decreases in EMS transports, emergency department encounters, and inpatient admissions were seen in this study population, resulting in a total cost avoidance of approximately **\$314,000** across all health care services.

More recently, in January 2018, the city of Tuscaloosa, Alabama, has moved to expand an earlier mobile integrated health care initiative by partnering with the University of Alabama’s University Medical Center.<sup>5</sup> An earlier version of the city’s MIH program, dubbed the EMS Prevention Program, enlisted University of Alabama School of Social Work students in 2016 to help low-acuity patients who reach out to EMS to find the appropriate services for managing their conditions. The EMS Prevention Program is itself an expansion of Tuscaloosa Fire and Rescue Service’s efforts to reduce non-emergency EMS calls, which they did by 50% in 2014. Estimates of cost-avoidance for the newest MIH program, called Appropriate Care and Treatment In Our Neighborhoods (ACTION), predict a savings of **\$1.7 million** in EMS transportation costs alone, not factoring added savings in emergency room and inpatient hospital costs.<sup>6</sup> Wider cost-saving models predict that the Tuscaloosa–University Medical Center MIH partnership could save six times the dollar amount invested in the program.

There is compelling evidence that programs that incorporate mobile integrated health, community paramedicine, or alternative destination options are dually improving their patients’ social and physical determinants of health and reducing total costs of their health care.

<sup>1</sup> Community Paramedics: Redefining EMS, Michael T. Hilton, MD, MPH, February 07, 2018, via [https://www.medscape.com/viewarticle/892055\\_2](https://www.medscape.com/viewarticle/892055_2)

<sup>2</sup> Crosswalk Project 2016

<sup>3</sup> Mobile Integrated Healthcare 360 Arizona Symposium presentation, MIH in the Fire Service, February 3, 2017

<sup>4</sup> Tadros, et al. 2012

<sup>5</sup> TuscaloosaNews.com, <http://www.tuscaloosaneews.com/news/20180111/city-ua-team-up-on-new-health-care-program>, accessed January 15, 2018

<sup>6</sup> TuscaloosaNews.com, <https://www.tuscaloosa.com/posts/2018/01/11/tuscaloosa-fire-and-rescue-services-and-uas-university-medical-center-partner-to-expand-emergency-response-services>, accessed January 15, 2018



# Profiles of Maryland's MIH Programs

There are currently five mobile integrated health (MIH) programs operating in Maryland; a sixth program will launch in March 2018. Also, there are two alternative destination pilot programs currently under development. Although each MIH program is unique and designed to meet the needs of individual communities, there are also commonalities among them:

- Only patients 18 and older are allowed to enroll.
- Each program targets high-utilizers of 9-1-1 services.
- The programs involve a partnership among at least three health care entities, one of which is an EMS/fire/rescue organization.
- Patients are either directly or indirectly referred to the program (through high-utilizer databases as well as field-referrals).
- Comprehensive physical/mental health inventory and risk assessments are conducted by a medical team during a home visit for each enrolled patient.
- Paramedics and nurses or nurse practitioners generally comprise each home visit team, but this many vary from jurisdiction to jurisdiction.
- Each program connects patients with community medical/social programs that can meet their needs.

- Measures of effectiveness are specified for each program, although they may differ from program to program. These measures include quality improvement goals for quality of care, patient safety, EMS and hospital utilization, patient satisfaction, and costs.

## Queen Anne's Mobile Integrated Health Program

The Queen Anne's Mobile Integrated Health Program is the longest-running MIH program in Maryland to date, being implemented in 2014. It is a partnership among University of Maryland Shore Regional Health, Anne Arundel Medical Center, Maryland Department of Health, Queen Anne's County Department of Health, and Queen Anne's County Department of Emergency Services. With support from CareFirst Blue Cross/Blue Shield, the program has sought to identify community members who lack access to primary health care, whether dealing with a complex chronic illness or social or geographic isolation, and increase their quality of life by connecting them with the services that best meet their needs.

The Queen Anne's Mobile Integrated Health Program relies on several modes to locate and connect with patients who have relied on EMS to provide non-emergency

health and socio-economic services. Early in its operation, the patients referred to the program were identified primarily through health care system databases that indicated high utilization of 9-1-1 and hospital services. Patients are also referred through field providers, freestanding emergency medical facilities, and post-hospital discharge data. Since its inception, approximately 460 patients have been referred to the program, and approximately 200 of those have been enrolled.

Early in the program's operation, 50% of enrolled patients had reported improved health and quality of life within three to six months after enrollment. Since that time, data has been collected and analyzed, with promising results in the program's desired metrics. Twelve months post-enrollment, there has been a 43% reduction in 9-1-1 calls and a 53% reduction in hospital emergency room visits. Nearly half of the enrolled patients, 42%, have received medical education and reconciliation, keeping them on track with their prescription medication needs and keeping them out of hospital emergency rooms. On average, each patient is receiving referrals to six to seven services that help them achieve optimum health, such as medication education and reconciliation, nutrition and food assistance, behavioral health therapies, and substance abuse recovery.

In 2016 a telemedicine component was added to the program that connects enrolled patients with the Shore Regional Health System's Shore Post-Acute Care Clinic PharmD to conduct medication reconciliations and reviews. Dr. Joseph Ciotola, Jr., MIEMSS Jurisdictional Medical Director for Queen Anne's County and county Health Officer, indicated in a recent interview that plans are underway to incorporate primary care physicians, who can better manage patients' conditions over time, into the telemedicine component. If this plan is realized, patients will be able to communicate with EMS providers, PharmD, and their primary care physician simultaneously during home visits.

Says Dr. Ciotola, of the program's enrolled patients, "There has been a significant decrease in reoccurring 9-1-1 calls, all patients have been linked to a primary care physician, and, where it was lacking, their health insurance needs have been met by connecting them with the Maryland Health Exchange." Dr. Ciotola suggests that the cumulative data demonstrates that the county's MIH program is moving patient health care in the right direction. "We are extremely pleased with the positive patient outcomes resulting from the program," he stated, "and the cumulative data

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The Queen Anne's Mobile Integrated Health Program is Maryland's longest-running MIH program. Pictured here are: front left to right, Gail Lundberg - Nurse, Kate Ryan - Addictions Specialist, Melanie Chapple - PharmD, Amy Crooks - Nurse. Middle left to right, Zach Yerkie - Paramedic, Dr. Joseph Ciotola - QAC Health Officer/DES Medical Director, Jason Stubbs - Paramedic. Back left to right, Andrew Hughes - Medic, Alec McLennan - Paramedic, Michael Miller - Paramedic, Jared Smith - MICH Program Manager, Barry Garver - Paramedic. Not pictured in this photo is Amanda Clark - Paramedic. Photo credit - Austin Penn

# Profiles of Maryland's MIH Programs

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supports expectations that the program can help decrease the total overall cost of health care in Queen Anne's County. Mobile integrated health programs are poised to play an integral role in reducing these costs, which in turn will play a considerable role in determining the future of health care delivery when Maryland's new Medicare waiver takes effect."

Queen Anne's County also hopes to integrate a component into the program that will help connect substance abuse and addiction patients, following non-fatal overdose hospital admissions, with peer counseling and other recovery resources.

## Prince George's County Fire/EMS Department

Prince George's County Fire/EMS Department implemented their MIH program in 2016, and partners with Prince George's Department of Health, Prince George's Department of Social Services, Doctor's Community Hospital, Anne Arundel Medical Center, Prince George's Hospital Center, and Washington Adventist Hospital to fulfill its mission. Prince George's County leadership supports the MIH program through dedicated funding in the county's budget. The program will be expanded in FY 2019 to a staff of eight full-time positions.

In this program, a plan for care is generated from the home visit and assessment



The Prince George's County Fire/EMS Department partners include Prince George's Department of Health, Prince George's Department of Social Services, Doctor's Community Hospital, Anne Arundel Medical Center, Prince George's Hospital Center, and Washington Adventist Hospital in their MIH Program. Depicted here, a member of the team administers care to an individual in the program. Photo credit - Kenneth Hickey, Prince George's County Fire/EMS



The MIH program in Charles County is a collaborative effort among the Charles County Health Department, Charles County Department of Emergency Services, and the University of Maryland Charles Regional Medical Center. Pictured here are members of the team, left to right, Pam Gantt – Paramedic, Jennifer Hunt – Nurse, and Wanda Mahoney - Community Health Worker. Photo credit - Suzie Chagnon, Paramedic

that is intended to ensure the patient has continual access to the health care or social services they need. Prince George's County has determined that certain measures of effectiveness have already shown promise in the long-term success of its MIH program. Data for 12 months pre- and post-enrollment show a reduction of 51% in 9-1-1 calls for the 88 enrolled patients, one partner hospital has estimated a cost-savings of over \$120,000 for 12 enrolled patients compared to 6 months pre-enrollment, and the county's Fire/EMS department estimates a cost-avoidance of approximately \$150,000 over four months based on unit responses pre- and post-enrollment.

"The Prince George's County Fire/EMS Department's MIH program has demonstrated significant benefits to our citizens," said Chief Brian Frankel in a recent interview. "The program is filling a social and behavioral health gap that is present in our communities and ensuring access to health care resources to those citizens who need them most. Our program is a form of EMS prevention that ensures our residents have equal access to much needed healthcare resources. This not only improves individual health but the health of our communities as a whole. In the near future, we believe that MIH services in the county will be offered as a primary means for delivering health care in our county."

## Charles County MIH Program

The MIH program in Charles County is a collaborative effort among Charles County Health Department, Charles County Department of Emergency Services, and the University of Maryland Charles Regional

Medical Center. The Charles County program is unique in that their home care teams include a community health worker in addition to a paramedic and nurse practitioner, all of whom work full-time for the program. This community health worker is tasked with keeping enrolled patients engaged in continuing to managing their health care after the initial home visit and assessment.

The Charles County program launched in August 2017 and is funded by the Maryland Community Health Resources Commission to operate for three years. Although the program is still in its early stages, Charles County Chief of EMS John Filer, who is also a member of the Statewide EMS Advisory Council (SEMSAC), indicated notable improvements in patient quality of life and health care operations. Of the 25 initial enrollees in the MIH program, several have now been placed in long-term facilities that can provide the continual care they need. Since the program began, there has been a 74% decrease in emergency department visits and inpatient hospital admissions dropped 84% among the 22 patients who continue to participate. Of note, since the program started, many of these patients have reached out to the community health care worker prior to calling 9-1-1 to help them determine whether emergency services are necessary. The MIH program plans to continually increase the number of patients enrolled each year of its operation.

Chief Filer attributes the program's initial achievements to the compassion and dedication shown by its three employees. "Having people who are impassioned to do this work, to reach out to those who don't have anyone else to

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# Profiles of Maryland's MIH Programs

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turn to," he stated in a recent interview, "is the key to the success of this program." In addition to providing the resources to obtain much-needed medical care, the MIH program has become the patients' indispensable link to a network of support helping them improve their overall wellbeing. Through the MIH program, patients are connected other services like food assistance, that ensure their basic needs are met in addition to medical care. "This is a quality of life program," says Chief Filer. "The things that we take for granted, things that these patients don't have—we can help bridge that gap through our mobile integrated health program."

## Montgomery County Non-Emergency Intervention and Community Care Coordination Program

The MIH program in Montgomery County is designed to combat the increase of about 3,000 in 9-1-1 calls to EMS that occur each year. Montgomery County Fire and Rescue Services (MCFRS), Montgomery County Department of Health and Human Services, Shady Grove Adventist Hospital, Suburban Hospital—Johns Hopkins Medicine, Washington Adventist Hospital, and other facilities have partnered to reduce the number of EMS calls and unnecessary ED visits

by addressing the unique health and social needs for each enrolled patient. The program was launched in 2016, and the home visit component was implemented in March 2017. In the early stages of the program, a 55% reduction in 9-1-1 calls was seen by the limited number of enrolled patients. In addition, data collected for calendar year 2017 indicated a promising reduction of 42% in emergency department visits by 167 enrolled patients.

Montgomery County leadership supports the Montgomery County Non-Emergency Intervention and Community Care Coordination (MCNIC3) Program through dedicated funding in the county's budget, with in-kind nursing services provided by partner hospitals. There are plans to add a full-time social worker to this program in FY 2018.

There are two modes by which the MCNIC3 reaches out to patients to get them enrolled in the program. Most of the patient referrals are made by field providers through their encounters with high-utilizers of the 9-1-1 system. The field provider will identify a possible candidate for the program and contact a case management worker who will determine what services that patient needs. The case management worker will generally stay in contact with the patient until their contact with EMS for non-emergency calls diminish. The second mode involves identifying patients with multiple hospital readmissions. These patients

are identified during monthly meetings between MCFRS and local hospitals, and are assigned a transitional care nurse and paramedic who conduct a home visit for a health and safety review. The paramedic continues to be the patient's primary point of contact until they are in place with the appropriate health and wellbeing services.

Program Manager Captain Jamie K. Baltrotsky is thrilled to see the impact the MCNIC3 program is having on county residents and EMS providers. "This is such rewarding work," she said during a recent interview, "it is wonderful to hear from patients who have benefited from the program how much it has impacted their lives for the better. It is also provides some relief to the EMS providers who have been, for so long now, bridging the gap between these patients and the services they really need."

## Salisbury–Wicomico Integrated FirstCare Team (SWIFT)

This MIH program is a partnership between the Salisbury Fire Department and Peninsula Regional Medical Center designed to incrementally reduce the number of EMS calls received each year over a three-year period. The program launched in October 2017, and has enrolled about 20 patients so far. The City of Salisbury and the Wicomico Health Department also participate in this program, which is only currently funded through its first year of operation.

The collaborators hope to serve about 250 patients, primarily individuals who lack access to health care due to socio-economic factors, over the program's three-year pilot phase. Prospective patients for the program are identified through a quality assurance database search in addition to recommendations from field providers. A paramedic and nurse or nurse practitioner conduct an initial home visit for a health and safety assessment, after which the patients are referred to the appropriate services that can better meet their needs. For about a month after the initial visit, the MIH program stays connected with the patient before they are transferred to a community health care worker.

Salisbury Fire Department's EMS Lt. Chris Truitt had this to say about the SWIFT program: "The biggest impact I have seen is in the feedback directly from the patients." He continued, "They are overwhelmed that there are people who care about them and that they've finally found a way to connect with the medical and social services that they desperately need."



Montgomery County Fire and Rescue Services, Montgomery County Department of Health and Human Services, Shady Grove Adventist Hospital, Suburban Hospital—Johns Hopkins Medicine, Washington Adventist Hospital, and other facilities have partnered to reduce the number of EMS calls and unnecessary ED visits. Shown here are team members with some of their community partners from Health and Human Services and the Mansfield-Kaseman Clinic. Photo credit - Montgomery County Fire and Rescue Services

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# Expanding EMS Response in Maryland: Why the Paradigm Shift?

Population in Maryland is growing at a rapid rate, including in areas that are already densely populated like Prince George's and Montgomery Counties and Baltimore City. More people means greater need for health care services, which are already being stretched to their limits. In the more rural regions of Maryland, the challenges are proximity to health care and social services that may not be easily accessible to the populations that need them. Consequently, citizens looking for help for chronic illnesses or mental health issues are reaching out to emergency medical services, encumbering EMS and hospital systems with non-emergency conditions.

If there is a call to 9-1-1 for EMS, an EMS crew will respond. What happens when the crew reaches the patient depends on a number of factors, which in turn has cost implications for both EMS and hospitals. The vast majority of patients who are treated by EMS are transported to local emergency departments. Historically, health care payers (Medicare, Medicaid, and private insurers) have considered EMS as a transportation benefit – not a health benefit. As a result, EMS is not reimbursed by these payers unless a transport actually occurs. This model makes EMS reimbursement dependent upon transport of patients to hospital emergency departments – a high cost environment for delivery of health care services, particularly for patients with low-acuity or chronic conditions that can be treated in other, alternative health environments. Currently, there is no ability for EMS to be reimbursed for providing services for low-acuity patients at the patient's home or obtaining services for patients in other less costly environments. If EMS responds to a 9-1-1 call and treats the patient who then refuses to be transported to a hospital, the EMS must absorb the costs of treating that patient.

If a patient with low-acuity or chronic illness is transported to an emergency department, the patient often must endure a long wait in the ED before they are treated because hospital EDs are designed to treat the most serious patients first. Non-emergency patients can also contribute to ED overcrowding and ambulance diversion, where ambulances must be redirected to other, less busy hospital EDs. Also, the Emergency Department is a high cost environment for delivery of health care, especially for patients with conditions that could be treated in other, less costly environment. The Maryland Health Care Commission reported the average charge for an outpatient ED visit in FY 2017 was \$1,052.

In Maryland, new models of EMS care delivery, including Mobile Integrated Health Programs and Alternative Destination Programs can provide timely, cost-effective care for low acuity 9-1-1 patients in an appropriate health care setting other than an ED.

Although several of the programs in Maryland are in the early stages of operation, early results from all programs indicate that they have a positive impact on patient well-being and reduce costs. See page 3 for more

information about the actual and projected cost-benefits of these programs.

In addition to the benefits discussed above, MIH and Alternative Destination programs in Maryland will help ensure EMS personnel and apparatus are more available for true emergency incidents rather than being otherwise engaged in treating low-acuity medical conditions better served by alternative services.

## EMS Providers Essential to Maryland MIH Programs

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There are a number of reasons that EMS providers are critical to the success of Maryland's MIH programs. They are already trained to work in austere conditions and out-of-hospital locations, are experts in triaging emergency and non-emergency situations, are widely trusted by the public, are familiar with the available health care resources in their communities, and are sometimes a patient's only connection to health care. Furthermore, public safety EMS providers in Maryland are already required to submit electronic patient care reports (eMEDS), which may soon link to the state's health information exchange (HIE) and/or mined for data used in measuring effectiveness of MIH programs in operation.

Maryland's EMS providers are uniquely positioned to provide health care in environments outside clinical settings, which defines the mission of many mobile integrated health programs. The *EMS Agenda for the Future: A Systems Approach*, envisioned that EMS providers could be at the forefront for addressing issues in access to health care while helping to minimize its associated costs. Maryland EMS leaders agree with this assertion, and are working toward ensuring that EMS providers are included in the future of MIH program development throughout the state.

## Profiles of Maryland's MIH Programs

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Although the program is still in its early stages of operation, Lt. Truitt noted that they have seen a 75% reduction in 9-1-1 calls and 50% reduction in hospital emergency room readmissions by the currently enrolled patients.

### Frederick County Mobile Integrated Health Care Program

Frederick Memorial Hospital, Frederick County Health Department, and Frederick County Fire and Rescue Services are partnering to identify the top utilizers of EMS services in the county. The MIH program, which is expected to be launched in March 2018, is intended to provide structured, multidisciplinary care to those who have chronic conditions and connect others with non-emergency medical needs to the appropriate services and resources.

Funded partially by Frederick Memorial Hospital, Frederick County Fire and Rescue Services plans to fill a full-time position with a

dedicated MIH medic. This medic will conduct an initial home visit to enrolled patients, and then will connect them with the appropriate services at Frederick Memorial Hospital's acute care clinic and those available through the Frederick County Health Department.

EMS Battalion Chief Michael Cole of Frederick County Fire and Rescue Services hopes that the program will help alleviate an increase in volume of non-emergency EMS calls in the county. "We believe," Chief Cole stated in an interview with MIEMSS, "that these patients will benefit from receiving the appropriate care in their home settings rather than in the hospital."

As of January 2018, program administrators have already identified 125 potential patients through eMEDS®, primarily those who have frequent non-emergency interaction with 9-1-1 or chronic conditions that would better benefit from long-term care. Cross-referencing these records with hospital patient records, Fire and Rescue Services has

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# Improving Quality of Life With Mobile Integrated Health

Mobile integrated health, and other similar alternative EMS response and delivery of care programs, offers many benefits, not the least of which are patient health and quality of life. Reducing health care costs and enhancing delivery of services are benefits that contribute to overall patient health.

In Maryland, a surge of 9-1-1 calls and emergency department visits has been seen in densely populated regions, where reduced capacity in health care facilities and staffing shortages are contributing to patients' difficulties in timely access to health resources. Consequently, individuals with chronic health conditions can often use emergency medical services to obtain care in hospital emergency departments, which contributes to emergency department overcrowding.

The mobile integrated health programs in Maryland seek to improve health in their communities so that patients do not have to make unnecessary calls to 9-1-1 or trips to hospital emergency departments. In order to measure how successful they are at improving health and wellbeing, the Maryland programs incorporate quality improvement metrics that target actual patient health outcomes. The National Association of EMTs has developed a quality measurement workbook that indicates certain patient health goals. Some of these goals include

- Better medical inventory, reconciliation, and communication—between patients and their primary care physicians (PCP)—so patients are taking the right medication at the right time for their conditions
- Increase the number of patients who have a documented plan of care with their PCPs

- Increase the number of patients who are referred to appropriate community services for non-emergency conditions or social/behavioral needs
- Increase the number of patients who establish a connection with therapeutic case management services
- Improve systems that promote self-care and self-management of chronic illnesses
- Reduce overall patient visits to emergency departments
- Reduce unplanned patient readmissions to emergency departments
- Reduce patients' length of stay in hospital
- Reduce the number of patients unable to access non-emergency health care and social services due to lack of capacity in those facilities
- Increase patient satisfaction with their health care providers, behavioral health services, and interactions with public safety personnel and other community resources

Many of Maryland's MIH programs incorporate these health care improvement goals in addition to avoiding unnecessary costs and reducing operating budgets.

Sources: [www.NAEMT.org](http://www.NAEMT.org) MIH-CP Measures Group, MIH Measures Workbook

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already identified about 30 patients that they hope to enroll in the program.

### Alternative Destination Programs

A partnership between the City of Baltimore Fire Department and University of Maryland Medical Center is the foundation of Baltimore City's alternative destination program, which is anticipated to launch in 2018. The program developed out of an

analysis showing that one-third of all the city's EMS calls were considered low-acuity. This program will transport certain patients, with their consent, to the University of Maryland Urgent Care Center instead of the emergency department, if their medical conditions are determined to be more appropriate for urgent care based on a nationally-recognized protocol.

A similar program has been developed by Montgomery County Fire & Rescue, in partnership with Holy Cross Health. MCFR response to an apparent low-acuity call to 9-1-1

will include a specially trained nurse who will determine if the patient is a candidate to be transported to Holy Cross Hospital Express Care, instead of the Emergency Department. Like the Baltimore City Program, the patient must consent to be transported to the alternative destination. The program will be implemented in 2018.

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Lt. Governor Boyd Rutherford

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