



Mobile Integrated Healthcare and Community Paramedicine (MIH-CP)

2nd National Survey

How EMS is meeting community health
needs through innovative partnerships,
programs and services

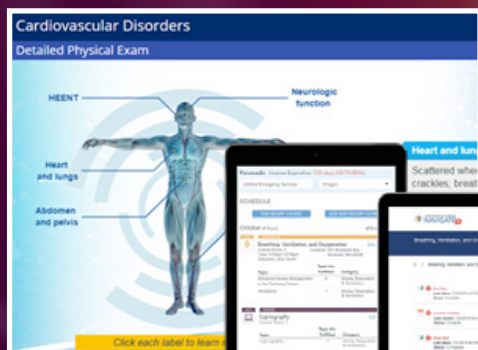


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Mobile Integrated Healthcare and Community Paramedicine (MIH-CP): 2nd National Survey

Image provided by Brandon Thibodeaux



Introduction

Every day throughout the nation, EMS is on the front lines of patient care – answering 911 calls, going into people's homes, providing treatment and seeing firsthand the state of people's lives and health.

Some of these calls to 911 are life-and-death emergencies, requiring quick thinking and skillful action to stabilize patients and get them to the right hospital – whether it's an emergency department or specialized trauma, stroke or cardiac center.

But it's been well documented that many of the calls placed to 911 are not life-threatening emergencies. That's not to say people aren't sick or suffering. Many of these individuals have chronic illnesses, such as congestive heart failure, diabetes and asthma, and don't know where else to turn when their symptoms flare. Others have substance abuse or mental health problems. Others are elderly, frail, isolated or lacking social support, and they're calling 911 because they know EMS practitioners will come.

Research has shown that these patients would be better served somewhere other than emergency departments, which were never intended as a source of ongoing medical management, treatment for addiction or psychiatric crises, or social services. Yet because laws in most

states require EMS to deliver patients to hospitals and only hospitals, and because EMS is paid only for transports, EMS has traditionally been limited in what its practitioners could do to help patients address their complex issues and get on a path to better health.

EMS Solutions

Over a decade ago, forward-thinking EMS agencies began developing new programs designed to meet community health needs, in accordance with the Institute for Healthcare Improvement's Triple Aim: improved patient experience of care, improved population health and reduced per capita cost of healthcare. Called mobile integrated healthcare or community paramedicine (MIH-CP), these programs identified gaps in the healthcare available in the community, and put EMS practitioners to work in addressing those problems. The central premise was that EMS practitioners are trained and trusted medical professionals, available 24/7, accustomed to working in the field and available in nearly every community in the nation. MIH-CP services may include:

- Sending EMTs, paramedics or community paramedics into the homes of patients to help with chronic disease management and education, or post-hospital discharge follow-up to prevent hospital admissions or readmissions.

What is MIH-CP?

Mobile integrated healthcare-community paramedicine (MIH-CP) is the provision of healthcare using patient-centered, mobile resources in the out-of-hospital environment. MIH is provided by a wide array of healthcare entities and practitioners that are administratively or clinically integrated with EMS agencies, while CP is one or more services provided by EMS agencies and practitioners that are administratively or clinically integrated with other healthcare entities.

- Navigating patients to destinations such as primary care, urgent care, mental health or substance abuse treatment centers instead of emergency departments to avoid costly, unnecessary hospital visits.
- Providing telephone triage, advice or other assistance to non-urgent 911 callers instead of sending an ambulance crew.
- Using telemedicine technology to facilitate interactions between patients in their home and medical professionals in hospitals or other locations.

Despite significant hurdles to implementing and financially sustaining these programs, many EMS professionals embraced MIH-CP with enthusiasm. In 2014, NAEMT conducted a [national survey](#) that identified over 100 EMS agencies in 33 states that were offering MIH-CP. Dozens more were attempting to launch programs. As part of healthcare reform efforts to move from a fee-for-service payment model to one that rewarded the value of care provided, the Centers for Medicare and Medicaid's Innovation Center awarded sizeable grants to six MIH-CP programs to pilot, test and measure the results.

Over the last few years, partners including hospitals, home health agencies, hospice agencies, Medicare/Medicaid managed care organizations and private insurers have entered into contractual arrangements with EMS to provide services above and beyond 911 response. In January 2018, MIH-CP took a significant step forward when Anthem BlueCross BlueShield began [paying for treatment](#) without transport in 14 states, including California, Colorado, Connecticut, Georgia, Indiana, Kentucky, Maine, Missouri, Nevada, New Hampshire, New York, Ohio, Virginia and Wisconsin.

Survey Targets

With the continued growth in MIH-CP and the ongoing shift in healthcare toward a system that rewards value, in 2017 NAEMT's EMS 3.0 Committee decided it was time for an updated look at the development and status of MIH-CP in the United States. In preparation for distributing the survey, extensive research and outreach was conducted to identify MIH-CP programs nationwide.

Sources included:

- a datalist compiled in 2014 and periodically updated.
- media reports and Google searches.
- other written materials, such as white papers and research studies, that referenced MIH or CP programs.
- interviews with EMS industry contacts.
- information provided by state EMS offices.
- phone calls and emails to individual EMS agencies.

To determine inclusion as an MIH-CP program, we used the definition for MIH-CP contained in the MIH-CP Vision Statement, spearheaded by NAEMT and endorsed by more than a dozen national EMS and emergency physicians' organizations in 2014. The Vision Statement defines MIH-CP as being fully integrated; collaborative; data-driven; patient-centered and team-based. Examples of MIH-CP activities can include, but are not limited to, providing telephone advice instead of resource dispatch; providing chronic disease management,



Image provided by Brandon Thibodeaux

preventive care or post-discharge follow up; or transport or referral to care beyond hospital emergency departments.

Our search identified over 200 EMS agencies nationwide with currently operating MIH-CP programs. This is not a comprehensive list. With insurance companies, managed care organizations and other partners increasingly willing to pay for EMS to provide alternative services, there are more EMS agencies entering into these arrangements every week.

During our search, we also found a few EMS agencies that are providing what could be considered MIH-CP, but they did not want to label their program as such. Their reasons for not labeling the program ranged from concerns that calling it MIH-CP could open them up to regulatory obstacles, to a belief that MIH-CP is too limiting a term.

Questionnaire Covers All Aspects of MIH-CP

The survey was crafted with the input of the experts from the NAEMT EMS 3.0 Committee. The survey included more than 50 questions asking respondents to describe all aspects of their MIH-CP

program, including program activities, partners, agency demographics, medical direction, funding, revenue, goals and data collection.

The survey was distributed to those agencies that were either known or thought to have an MIH-CP program. During that time, NAEMT continued to do outreach to refine the list of agencies with confirmed MIH-CP programs.

As of November 30, we received a total of 151 responses. Of those, 13 were excluded because they did not have MIH-CP programs; seven were duplicate answers so only one answer from each agency was included; two were anonymous and were excluded, for a total of 129 surveys included in the analysis.

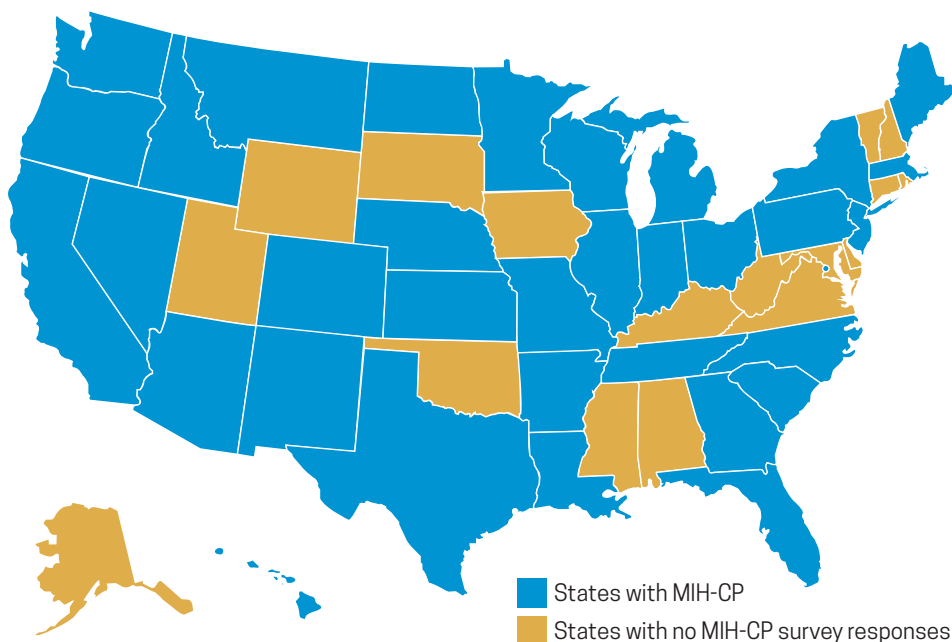
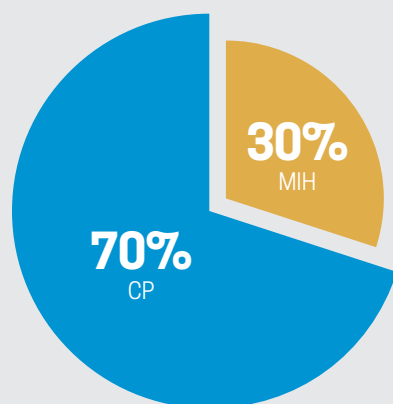
Respondents identified themselves as MIH-CP program administrators or coordinators (44%), program directors (34%), providers of patient services (8%), medical directors (3%) and other roles (12%). About 28% of the respondents said they had answered the 2014 survey, while about the same percent said they had not. Most (44%) were unsure.

MIH-CP Offered in 33 States Plus Washington, D.C.

Total number of MIH-CP program responses:

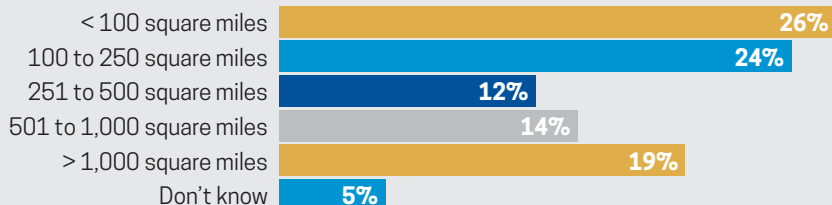
129

Asked to choose whether they offered mobile integrated healthcare (MIH) or community paramedicine (CP), **most respondents characterized their program as community paramedicine.**

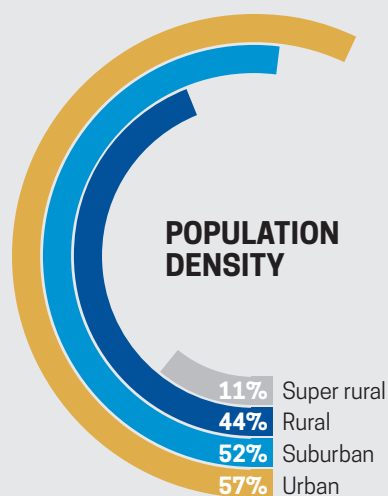


GEOGRAPHIC AREA COVERED

Agency geographic service areas range from compact cities to sprawling rural and super rural regions.



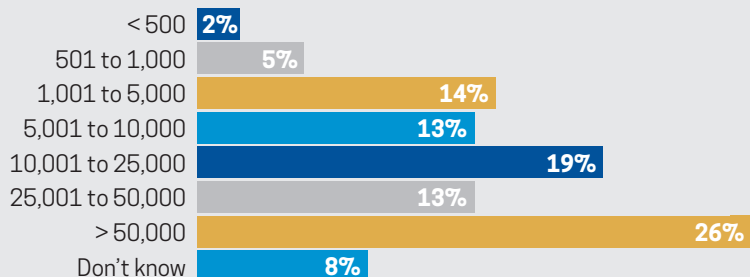
POPULATION DENSITY



Answers do not add up to 100% because agency coverage areas may include more than one community type.

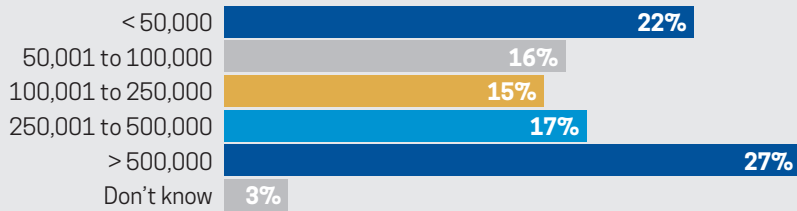
CALL VOLUME

Call volume is also divided among high-volume urban and low-volume rural EMS.

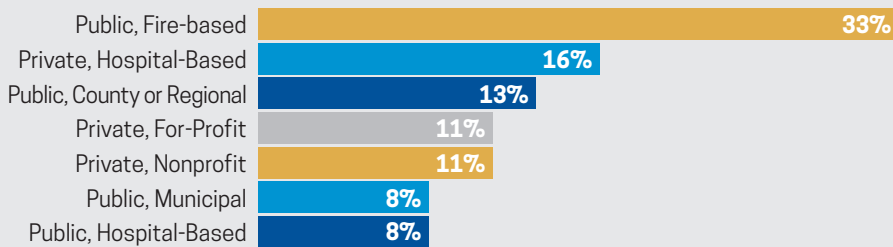


Numbers rounded to nearest whole so may not add up to 100%

POPULATION SIZE



DELIVERY MODEL



The Origins of MIH-CP

Community paramedicine got its start in rural areas of Nova Scotia, Maine and Minnesota, where patients with serious chronic ailments often had little access to primary care and no way of getting to doctor's offices. In some rural communities, EMTs or paramedics were the only medical care available for many miles around. The concept of community paramedicine was to allow paramedics with specialized training to serve as an extension of primary care in rural communities.

In more urban areas, the impetus for community paramedicine and later, mobile integrated healthcare, was often frequent users – people who call 911 again and again, sometimes multiple times a day, straining the resources of the ambulance service and emergency departments alike. These patients often suffer from complex chronic ailments, along with substance abuse or mental health problems. Seeking to find more effective ways of helping frequent users, EMS agencies in cities such as San Diego, San Francisco and Ft. Worth, Texas, launched programs that attempted to navigate these patients to alternative sources of care, and connect them with social services, housing and other forms of community support.



Conducting a Community Needs Assessment Before Launch

MIH-CP programs are not one-size-fits-all, but should be developed to meet specific community needs and avoid duplicating or competing with already existing services. A community needs assessment determines where those gaps are and is an important part of the MIH-CP development process.

About three in four (77%) agencies reported conducting a community needs assessment, while the rest (23%) didn't. This is unchanged from the 2014 survey.

Among those that did do a community needs assessment, the data sources used were wide ranging. Far and away the most common source of data was, unsurprisingly, from the EMS system itself. But it is encouraging that so many agencies were also able to access emergency department, hospital admission and discharge data as well. Only 2% of agencies said they used no external data.

76%

of respondents agree that their MIH-CP program is based on meeting the defined needs of their community

94%

agree that their program fills a resource gap in their local community



Image provided by Brandon Thibodeaux

DATA SOURCES

- 82%** EMS data (such as from electronic patient care reports or dispatch)
- 69%** Hospital admission/discharge data
- 63%** Population demographics
- 62%** Emergency department data
- 50%** Public health data
- 22%** Utilization data from one or more ambulatory care practices
- 10%** Other
- 9%** Law enforcement data
- 8%** Data from telephone system (ACD, etc)

Takeaway: Education Needed on Community Needs Assessments

While 77% of agencies reported doing a community needs assessment, fewer (58%) agreed or strongly agreed that their program is based on a “formal” community needs assessment. The discrepancy in responses may be due to EMS not being familiar with what a formal needs assessment entails. With broad agreement about the importance of MIH-CP meeting local health needs, the survey reveals that EMS agencies would benefit from education on conducting a community needs assessment. A community needs assessment identifies the strengths and resources available in a community, develops an action plan to address specific areas of weakness, and determines who is responsible for executing it.

A community needs assessment may include demographic data, feedback from community partners, focus group discussions, interviews with stakeholders, and telephone or mailed surveys to partners and the community. The action plan typically includes multiple partners, each acting within their area of expertise.

Getting Going: What Does it Take to Launch MIH-CP?

Over the last several years, dozens of EMS agencies have reported that they are in various stages of developing an MIH-CP program. But navigating state and local regulations, forming partnerships with other healthcare entities and payers, and figuring out how to cover the costs is quite daunting. The 2017 survey asked several questions to provide insights into what it takes to get these programs off the ground.

Gathering Data

Respondents reported relying on data from numerous sources to determine their community's need. In the survey, two out of three respondents (67%) said that they experienced no challenges in obtaining the data, while the remainder (33%) said that they did experience challenges. It's well known that patient privacy laws, lack of compatibility among health records systems and other administrative hurdles make data exchange to and from other healthcare entities challenging for EMS.

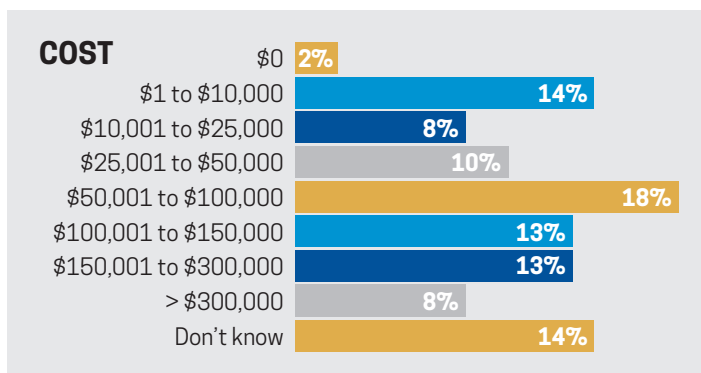
Although two in three respondents report not having any difficulties accessing data, this may be because they only used EMS data in their assessments.

Time to Launch

EMS agencies should expect to spend from 6 months to 2 years developing their MIH-CP plan and putting the pieces in place. 44% of respondents said it took 6 to 12 months to move from planning to implementing their MIH-CP program, while 27% said it took one to two years.

Cost

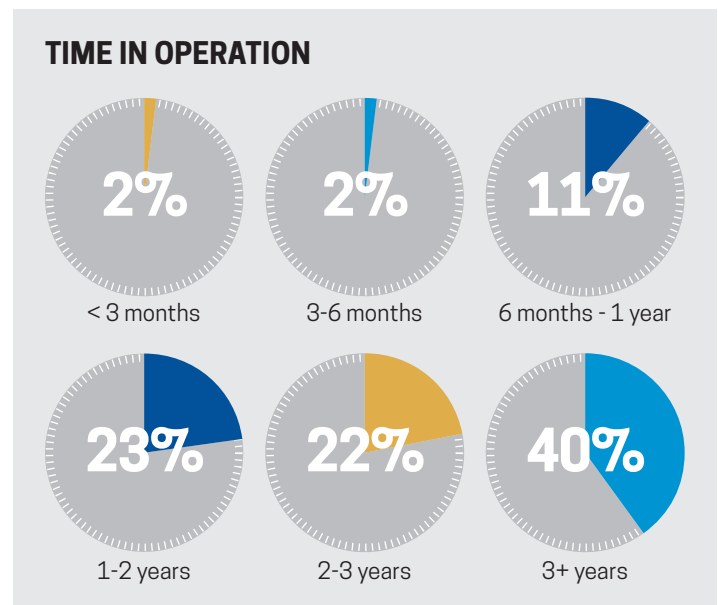
Survey respondents reported a wide spectrum of start-up costs, ranging from zero to over \$300,000. The survey asked respondents to include: staff time for planning, training, use of consultants, and purchasing equipment and vehicles.



Time in Operation

The 2017 survey found far more well established MIH-CP programs than the 2014 survey. At that time, only 21% of agencies reported having an MIH-CP program for two or more years, compared to 62% of respondents in the current survey.

In contrast, 26% of respondents in the 2014 survey had started their program within the last six months, compared to only 4% in the 2017 survey.



Takeaway: Start-Up Help Provided at NAEMT.org

NAEMT has created an online [MIH-CP Program Toolkit](#), which includes samples of forms, documents, program guides and patient handouts that EMS agencies are currently using as part of their MIH-CP program. EMS agencies are encouraged to use the toolkit to develop and operate their own MIH-CP programs.

Additional resources and reading materials, including research papers, case studies and articles are available in NAEMT's online [MIH-CP Knowledge Center](#).

MIH-CP Target #1: Preventing Hospital Readmissions

Hospital bills are a major driver of healthcare costs. In 2010, the Affordable Care Act (ACA) included a provision that sought to decrease high readmission rates among Medicare patients by financially penalizing hospitals that failed to meet certain readmission avoidance benchmarks. These penalties were phased in starting in 2013. According to an analysis by *Kaiser Health News*, about 80% of the 3,241 hospitals CMS evaluated in 2018 will face penalties of up to 3% of their Medicare payments.¹

Hospitals are being penalized for high readmissions for:

- Chronic lung disease
- Coronary artery bypass graft surgery
- Heart attacks
- Heart failure
- Hip and knee replacements
- Pneumonia

With readmission penalties looming for many hospitals, EMS agencies have found interest among hospitals in contracting for MIH-CP services targeted at readmission avoidance.

Commercial insurers are also putting pressure on hospitals to reduce avoidable ED visits and admissions. According to media reports², in 2017 Anthem BlueCross BlueShield started denying some ED claims for visits that were determined to be not emergent after a review. UnitedHealth also recently announced a new policy to review ED visit claims and adjust the most costly claims down if it's determined the code wasn't justified.³

Research suggests that hospitals can lower readmission rates through a multi-pronged approach that includes patient education, clarifying patient discharge instructions, post discharge follow-ups and coordination with patients' primary care physicians, other healthcare providers and community-based organizations.⁴ These are all areas that EMS practitioners can assist with.

78%

of MIH-CP programs target admission/readmission avoidance as a goal.

MIH-CP Target #2: Frequent EMS and ED Users

Many MIH-CP programs had their roots in EMS efforts to manage frequent users. Frequent users strain ambulance services and emergency departments. Some call EMS daily, and even multiple times a day. Many are homeless or indigent, so the care provided is unreimbursed.

One of the earliest programs targeting frequent users started in San Diego. Known as the Serial Inebriate Program, EMS partnered with law enforcement to divert

chronic homeless alcoholics to treatment instead of emergency departments or jail. SIP provided intensive case management and access to services to achieve financial stability and long-term recovery.

What is a hospital readmission?

About 20% of all Medicare fee-for-service patients are readmitted within 30-days of discharge. A hospital readmission occurs when a patient is admitted to a hospital within a specified time period after being discharged from an earlier hospitalization. Medicare defines this time period as 30 days, and includes hospital readmissions to any hospital, not just the hospital at which the patient was originally hospitalized. Medicare uses an "all-cause" definition of readmission, meaning that hospital stays within 30 days of a discharge from an initial hospitalization are considered readmissions, regardless of the reason the person returned. Reducing readmissions for heart attack, heart failure, pneumonia, chronic obstructive pulmonary disease (COPD), elective hip or knee replacement, and coronary artery bypass graft (CABG) are areas of focus. (Source: Kaiser Family Foundation, [Aiming for Fewer Hospital U-turns: The Medicare Hospital Readmission Reduction Program. Issue Brief](#), March 10, 2017.)

78%

of respondents said their programs target frequent EMS users.

¹ Advisory Board, ["Daily Briefing."](#) Aug. 7, 2017.

² Shelby Livingston, ["Hospitals and patients feel the pain from Anthem's ED policy."](#) *Modern Healthcare*, Dec. 2, 2017.

³ Shelby Livingston, ["UnitedHealth tightens reins on emergency department reimbursement."](#) *Modern Healthcare*, March 7, 2018.

⁴ Sunil Kripalani, Cecelia N Theobald, Beth Anctil, Eduard E Vasilevskis, ["Reducing Hospital Readmission: Current Strategies and Future Directions."](#) *Annual Review of Medicine*, 65: 471-485. Published online 2013 Oct 21.

MIH-CP Target #3:

Chronic Disease Management

Chronic disease management typically involves EMS practitioners going into the homes of patients recently discharged from hospitals to ensure that they understand discharge instructions and provide education on self-management of conditions such as congestive heart failure, hypertension, COPD, asthma and diabetes.

“Training in patient chronic disease management is a must. You will find that 70% of patient’s actual needs are not medical in nature, yet must be addressed.”

– Survey respondent

67%

of respondents said their programs target chronic disease management.

MIH-CP Target #4:

Alternative Destinations

Studies indicate that many people treated in EDs could safely be treated in less expensive, and more appropriate, locations. Those destinations could include primary care or urgent care offices, mental health facilities, detox facilities or in their own home, potentially improving the patient's experience of care and saving the system hundreds of millions of dollars each year.⁵

The goal of assessment and navigation to alternative destinations is to get the patient the right care, at the right place, at the right time – which is better for patients and could alleviate ED overcrowding. Alternative destinations can include detox or substance abuse treatment facilities, mental health facilities, urgent care or primary care.

50%

of respondents said their programs include assessment and navigation to alternative destinations.

Takeaway: Do Paramedics Have the Expertise to Make a Determination about Alternative Destinations?

Alternative destinations are one of the more hotly debated aspects of MIH-CP, with some emergency physicians questioning whether paramedics have the expertise to safely and accurately make the determination that a patient does not need an ED. It's important to understand that in MIH-CP, paramedics are not being asked to make these decisions independently for all kinds of patients in all types of circumstances. Alternative destinations are either collaborative decisions made in conjunction with physicians with direct online medical direction, or are determined via specific protocols that apply only to specific groups of patients in narrowly defined circumstances.

As an example: Wake County EMS in North Carolina has a program in which advanced practice paramedics with specialized training can take mental health patients directly to mental health facilities, bypassing the emergency department, where patients tend to languish for hours

instead of receiving prompt psychiatric crisis intervention. Specific criteria regarding mental status, vital signs and overall health must be met for the protocol to be implemented. The project, established in 2009, has successfully avoided hundreds of ED transports.

In other programs, alternative destination decisions are made in consultation with EMS medical directors, emergency physicians, primary care physicians and others, with communication facilitated by paramedics.

Alternative destinations can also be done in accordance with patient preferences. Many patients who call 911 are well-aware they don't need to go to an ED, but they do want someone to come to their home to help them. Many of these patients refuse transport to a hospital, yet EMS has no other option on where to take them. A survey of patients taken by ambulance to hospital emergency departments found that 58% of patients supported transport to alternative destinations for low-acuity conditions.⁶

⁵ Durand AC, Gentile S, Devictor B, et al. "ED patients: how non-urgent are they? Systematic review of the emergency medicine literature," *American Journal of Emergency Medicine*, 2011, 29(3):333–45.

⁶ Munjal KG, Shastri S, Loo GT, Reid D, Grudzen C, Shah MN, Chapin HH, First B, Sirirungruang S, Alpert E, Chason K, Richardson LD, "Patient Perspectives on Alternate Destination Models," *Prehospital Emergency Care*, Nov.-Dec. 2016. 20(6):705-711.

Other MIH-CP Targets

Home health support (45%) – In several states, home health organizations initially opposed MIH-CP, fearing that EMS practitioners providing non-emergent services in patients' homes was encroaching on their territory. But in many locations, these concerns have fallen away due to EMS efforts to build relationships with home health organizations.

One way EMS practitioners and home health agencies work together is through arrangements that send EMS practitioners to the home in the first 24 hours after hospital discharge, to bridge the gap between the patient leaving the hospital and a nurse arriving to provide in-home care. As part of these cooperative agreements, EMS practitioners can also visit the home if a nurse is not available, perhaps late at night or very early in the morning. EMS also makes referrals to home health agencies when they see a patient is in need of ongoing nursing assistance. EMS can also notify home health when one of their patients calls 911. EMS can then provide care coordination with home health in real time.

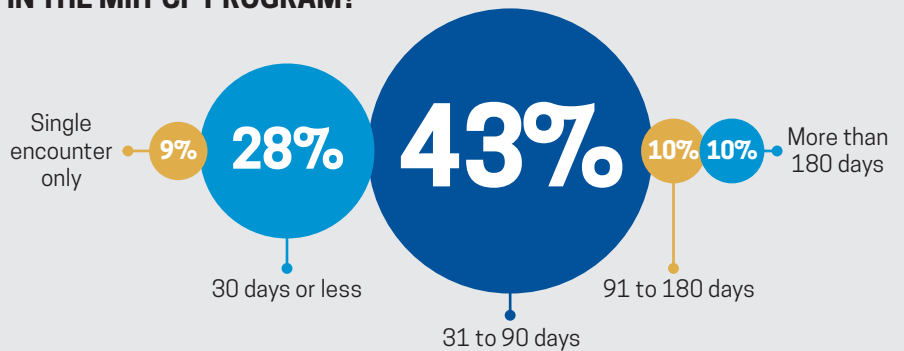
2014 COMPARISON

We compared the results of our new survey with the results of the 2014 survey on questions related to MIH-CP targets and the results were remarkably consistent.

- 75%** Readmission avoidance
- 74%** Frequent users
- 71%** Chronic disease management
- 52%** Alternative destinations
- 45%** Primary care/extender model
- 6%** Nurse triage

Home health and hospice support were not asked about specifically in 2014.

HOW LONG ARE PATIENTS ENROLLED IN THE MIH-CP PROGRAM?



Primary care/physician extender model (45%) – The primary care/physician extender model was pioneered in rural areas, where many people have to travel long distances to see a doctor or a nurse. This is especially difficult for low-income people or those who are sick or elderly. In these areas, community paramedics, sometimes functioning under the license of a primary care physician, go into the home to conduct health assessments, provide education about disease management and connect patients with social services and other community resources.

Hospice support (20%) – Patients nearing the end of life who have enrolled in hospice have agreed that they do not want life-sustaining treatments. Yet a subset of patients in hospice ends up visiting the ED or being admitted to the hospital when they or their family calls 911. These visits can lead to unwanted treatments, revocation of a patient's hospice status, and significant costs for hospice agencies.

Improved coordination and communication between EMS and hospices during 911 calls can prevent avoidable ED visits and hospitalizations for hospice patients. Through these arrangements, hospice patients who call who call 911 for a medical issue related to the patient's hospice plan of care receive a visit from a paramedic who can assess the patient, administer comfort medications and support the family until a hospice nurse

arrives to take over patient monitoring. If the family or the patient still wants to go to the hospital, EMS can handle that as well.

911 Nurse Triage (7%) – Research shows that many calls to 911 are not true emergencies requiring an immediate response from an EMS crew in an ambulance. Several cities, including Ft. Worth, Texas; Reno, Nevada; and Mesa, Arizona; pioneered systems in which calls are screened using established protocols to determine the level of acuity.

A subset of calls determined to be the most non-urgent are transferred to a nurse in the 911 communications center, who then provides telephone advice or navigation to more suitable healthcare resources. The nurse may call a cab or Uber/Lyft to take the patient to an alternative destination if they can't drive because they don't have transportation, or due to an injury or disability. If the nurse determines the call is more urgent than it initially appeared, he or she can dispatch an ambulance. This rarely happens since any call that is even borderline urgent would not be sent to the nurse, but would automatically get an ambulance dispatch.

Other (19%) – Wound care services, opiate overdose follow-up, follow-up on knee replacement patients, and mental health crisis screening and navigation were other targets listed by respondents.

Medical Services Provided by MIH-CP

In the development of MIH-CP, one area that generates discussion is whether EMS practitioners are operating within their scope of practice. Scope of practice is the procedures and actions a healthcare practitioner is permitted to take under their license.

The answer for MIH-CP is yes. All medical procedures conducted by an EMT, paramedic or community paramedic are within the scope of what they are licensed to perform. The main difference is that instead of having to do those procedures only in response to a 911 call, through MIH-CP EMS practitioners can help avoid the need to call 911.



26%

of respondents use telemedicine technology. This is unchanged from 2014.

MEDICAL SERVICES

	911 Response	Post-acute/ Post-discharge Follow-up	High Utilizer Mitigation/ Navigation	On-demand Episodic Request	Admission Prevention
Assessment/history & physical	44%	76%	69%	65%	58%
Post discharge follow-up	11%	80%	56%	57%	62%
Post surgery care	7%	82%	41%	59%	59%
Fall risk assessment/prevention	28%	74%	66%	57%	55%
Ear exams	14%	71%	57%	71%	57%
Prescription procurement	12%	75%	68%	53%	53%
Medication evaluation/compliance	24%	76%	70%	62%	64%
Medication monitoring/administration	30%	72%	64%	67%	57%
Post injury/illness evaluation	18%	74%	61%	70%	57%
Stroke assessment/follow-up	45%	66%	52%	58%	52%
Nutrition assessment/weight check	4%	79%	68%	61%	63%
Hypertension screening/education	23%	77%	69%	63%	63%
Sodium reduction education	8%	80%	58%	57%	62%
Cholesterol screening/education	7%	74%	63%	70%	44%
Diabetes screening and education	20%	76%	72%	66%	61%
Obesity screening/education/weight check	3%	74%	62%	59%	49%
Physical activity assessment/education	16%	73%	64%	61%	56%
Psychological evaluation/behavioral health services	33%	65%	71%	63%	57%
Neurological assessment	48%	71%	58%	61%	57%
Wound care	25%	63%	49%	71%	51%
Foley catheter maintenance	27%	62%	42%	57%	42%
Cancer self-exam education	6%	39%	56%	56%	28%
Blood draw	36%	66%	42%	73%	56%
Glucose check	48%	75%	64%	66%	60%
iStat test	12%	76%	62%	65%	68%
Throat swab culture	13%	40%	33%	80%	40%
Stool collection	11%	47%	42%	74%	42%
Urine collection	8%	61%	34%	87%	50%
Blood pressure check	50%	74%	64%	67%	58%
EKG12-lead test	57%	62%	47%	61%	47%
Peripheral intravenous access	57%	45%	29%	51%	38%
C-PAP	71%	31%	27%	42%	29%
MDI use	29%	70%	61%	64%	52%
Peak flow meter usage	8%	78%	56%	64%	56%
Oxygen saturation check	45%	72%	66%	65%	60%
Capnography assessment	61%	60%	46%	58%	48%

Partnerships Make MIH-CP Work

For MIH-CP to fulfill its mission of providing integrated, collaborative, data-driven, patient-centered and team-based care, partnerships are crucial. MIH-CP partnerships are wide-ranging and varied. MIH-CP programs may receive referrals from partner organizations, or MIH-CP programs may refer patients to partner organizations. Partnerships may be sources of financial support, direction/oversight or collaboration.

According to survey respondents, hospitals are the most common source of referrals to MIH-CP, payments and direction/oversight.



67%

of MIH-CP programs receive referrals from hospitals.

MIH-CP programs also refer patients to partnership organizations. 51% referred to social service agencies, 50% referred patients to home health organizations and 48% to mental health care facilities.

Takeaway: Cultivating Relationships with Payers is Crucial to Sustainability

Only 17% of respondents listed 3rd party payers such as commercial insurance, employers, health management organizations and government agencies as a source of referrals to MIH-CP, while 35% listed care management organizations. Care management organizations often enroll Medicaid patients, and provide treatment and services for low-income families, children and the disabled. Increasing the number of agencies contracted with a broad spectrum of payers to provide MIH-CP is crucial to the financial sustainability of MIH-CP.

To help EMS agencies with this, NAEMT has created an important new resource, [“EMS 3.0: Explaining the Value to Payers.”](#) Each section focuses on a particular stakeholder group, and answers key questions related to cost savings, health outcomes and the potential for revenue generation. EMS practitioners and agencies are encouraged to use the talking points in their discussions with potential partners.

REFERRALS TO MIH-CP

- 67%** Hospitals
- 58%** Physician groups/clinics
- 40%** Home health
- 36%** Social service agencies
- 35%** Care management organizations
- 30%** Law enforcement
- 24%** Mental healthcare facilities
- 26%** Other EMS agencies
- 25%** Hospice
- 23%** Public health agencies
- 19%** Addiction treatment centers
- 17%** 3rd party payers
(such as insurance companies)
- 10%** Nursing homes
- 8%** Urgent care facilities

REFERRALS FROM MIH-CP

- 51%** Social service agencies
- 50%** Home health
- 48%** Mental healthcare facilities
- 43%** Addiction treatment centers
- 39%** Physician groups/clinics
- 39%** Hospice
- 35%** Care management organizations
- 28%** Hospitals
- 25%** Public health agencies
- 24%** Urgent care facilities
- 10%** Nursing homes
- 10%** Law enforcement
- 9%** Other EMS agencies
- 8%** 3rd party payers
(such as insurance companies)

Support From Partners Growing

EMS agency outreach and education about MIH-CP to partners is paying off with increased support for these programs. In one of the most positive signs for the future of MIH-CP, nearly all respondents (95%) agree that support for MIH-CP programs is growing among partners such as hospitals and other healthcare providers. In 2014, 87% agreed that support for MIH-CP programs were growing.



Yet opposition to MIH-CP remains an issue. One in three (36%) agree or strongly agree that opposition from other healthcare providers such as physicians, nurses or home healthcare agencies as a significant obstacle to sustaining or growing MIH-CP. This is about the same as the 2014 survey found.

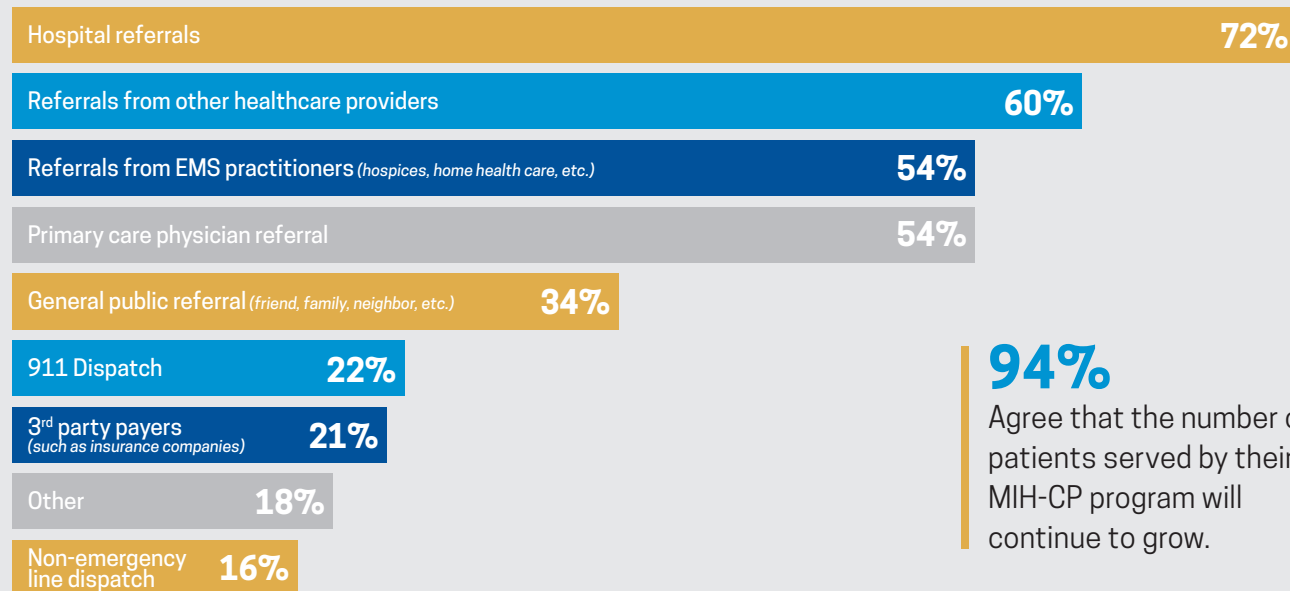
95%

agree that support for MIH-CP programs is growing among partners.

COMMUNITY PARTNERS

54%	Public health agencies
53%	Hospitals
51%	Home health
48%	Social service agencies
44%	Physician groups/clinics
41%	Mental healthcare facilities
38%	Care management organizations
36%	Hospice
35%	Law enforcement
33%	Other EMS agencies
28%	Addiction treatment centers
22%	Nursing homes
16%	3 rd party payers (such as insurance companies)
14%	Urgent care facilities

HOW IS YOUR MIH OR CP PROGRAM MADE AWARE OF PROSPECTIVE PATIENTS?



94%

Agree that the number of patients served by their MIH-CP program will continue to grow.

Who Pays for MIH-CP?

One of the primary barriers to MIH-CP has been a lack of funding or a mechanism to bill for services. The Centers for Medicare and Medicaid (CMS) and commercial insurers categorize EMS as a transportation provider. That means EMS is paid a fee-for-service for transporting patients to an emergency department, not for patient care.

In some communities, such as when EMS is fire department-based or a city or county service, EMS also receives taxpayer support through local government budgets. But there isn't typically a lot of extra money available to support MIH-CP programs.

In recent years, EMS professionals have advocated at the state and federal level for recognition and reimbursement as healthcare providers. By integrating EMS into the healthcare system and adding value to the patient care provided, MIH-CP is helping to support these advocacy efforts.



Image provided by Kevin Rieper/The Baxter Bulletin

Legislative Change

Minnesota was the first state to recognize the role of community paramedics in healthcare and allow EMS to bill Medicaid for MIH-CP services. Since then, several other states have followed suit. (See page 24, MIH-CP and State Law).

According to the National Association of State EMS Officials, Arizona, Georgia, Minnesota, Wyoming, and Nevada have Medicaid plans that reimburse at least some community paramedicine services. Fourteen states have Medicaid plans which enable reimbursement of some treat and no transport calls. Seventeen states have commercial insurance providers (including 14 Anthem BlueCross Blue Shield states starting in 2018) that reimburse some community paramedicine services.

Contracts with Healthcare Partners

Another method of seeking reimbursement for MIH-CP services is through financial arrangements with healthcare partners. These arrangements can take multiple forms: fee for service, fee per patient, fee for enrollment or a fee for taking care of a group of patients. (For example, Acadian Ambulance in Louisiana partners with a Medicaid managed care organization to improve pediatric asthma care.) Some EMS agencies have also entered into shared savings arrangements, in which EMS receives a portion of the cost savings that result from the interventions provided.

The survey found that MIH-CP programs have made some progress since 2014 in identifying sources of revenue to sustain the services provided.

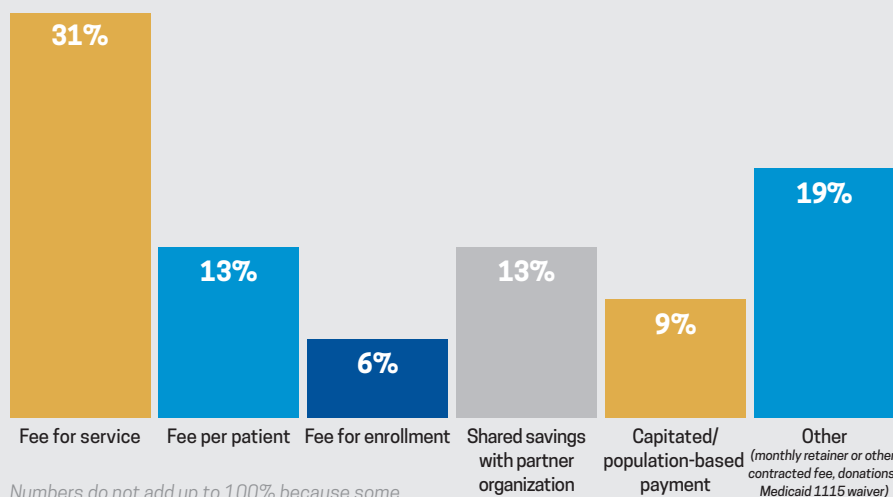
44%

of respondents say their programs generate revenue, up from 36% in 2014.

Yet 36% still receive grants, which isn't a sustainable form of funding, while 30% report no payments.



WHAT ARE THE SOURCES OF REVENUE?



How much revenue, not including grants, does MIH-CP generate?

Another challenge for MIH-CP has been generating sufficient revenue to support staffing, data collection and operational costs to sustain the program. Of the 49 respondents who reported generating revenue, eight brought in less than \$10,000, seven brought in \$10,001 to \$25,000, nine generated \$25,001 to \$50,000, four generated between \$50,001 and \$100,000, three brought in \$100,001 to \$150,000, five estimated their revenue at \$300,001 to \$500,000 and four had revenue of over \$500,000.

These numbers show that some agencies have been highly successful in generating revenue for their MIH-CP programs, but most are bringing in either no revenue or relatively little.

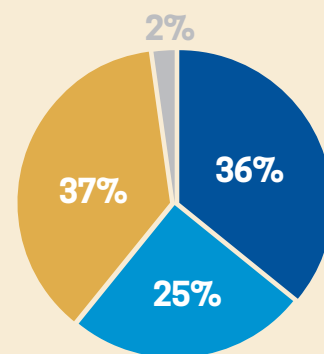
Takeaway: Many agencies see reimbursement/funding as an obstacle, but they are optimistic about future revenue.

There is no question there is a need for additional payment sources for MIH-CP. Asked if reimbursement or funding are significant obstacles, 86% agree or strongly agree, while only 7% disagree. So, while about a dozen agencies have highly developed financial arrangements with partners – and are generating revenue of \$100,000 annually and up – the rest aren't as far along.

Yet there is considerable optimism. 58% agree that MIH-CP will continue to grow as a source of revenue for their EMS agency, while only 16% disagree. This was similar to the 2014 survey results.

Is your program financially sustainable?

There was significant ambivalence in the responses to this question, with the largest group of respondents seemingly unsure one way or another if their programs will have the funding to keep going.



36% agree or strongly agree that their program is financially sustainable.

25% disagree or strongly disagree.

The largest percentage – **37%** – said they were “neutral,” meaning they neither agreed nor disagreed, while about **2%** said they don't know.



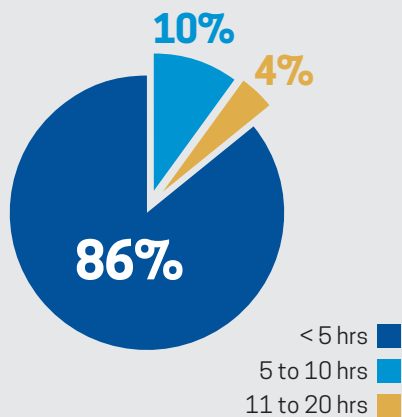
Image provided by Kevin Pieper/The Baxter Bulletin

The Role of the EMS Medical Director in MIH-CP

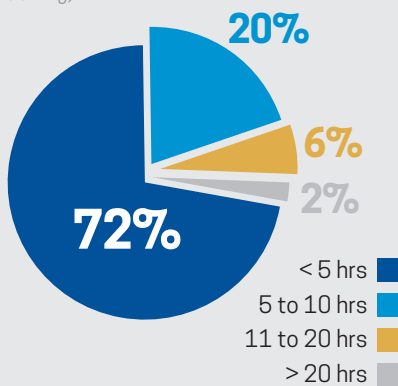
Every EMS agency has a physician medical director, who provides medical oversight of patient care, conducts quality improvement, and develops medical protocols, policies and procedures.

In MIH-CP, the role of the medical director is similar. Asked to describe the role of the medical director, protocol development (88%) topped the list of responsibilities, followed by quality assurance (78%), immediate online medical direction (54%), continuing education (53%), development and approval of care plans (50%), initial training (50%) and healthcare system integration (40%).

Average hours per week spent by EMS medical director on **direct, online medical direction**.



Average hours per week spent by EMS medical director on **offline medical direction/oversight**. (such as protocol development, chart review, education and training)



Direction and Oversight from Other Sources

In addition to the specific roles and responsibilities of the medical director, direction and oversight can come from other sources. Partners may also lend their expertise and resources to provide direction and oversight to MIH-CP programs. Hospitals were most likely to provide direction and oversight, with 26% of respondents saying they received this form of assistance. Next was physician groups/clinics, at 15%. But fewer than 5% of MIH-CP programs reported receiving direction or oversight from any of their other partners.

Asked specifically what other providers offer medical direction, advice or consultation on MIH-CP patient care, 70% said primary care physicians, 40% said specialty physicians and 30% said on-call emergency physicians.

64%

agree their program is fully integrated into the existing healthcare system.



83%

agree that their MIH-CP program is a multidisciplinary practice of medicine overseen by physicians and other healthcare practitioners.

74%

agree that their program is team-based and incorporates multiple providers, both clinical and non-clinical.

97%

believe their program is patient-centric and focused on the improvement of patient outcomes.

MIH-CP Staffing

Clinical Protocol Approvals

EMS is governed by rules and regulations designed to protect patients. Protocols must be approved before implementation by one or more entities, often local medical control and state EMS offices. MIH-CP healthcare partners may also be involved in developing and approving clinical protocols.

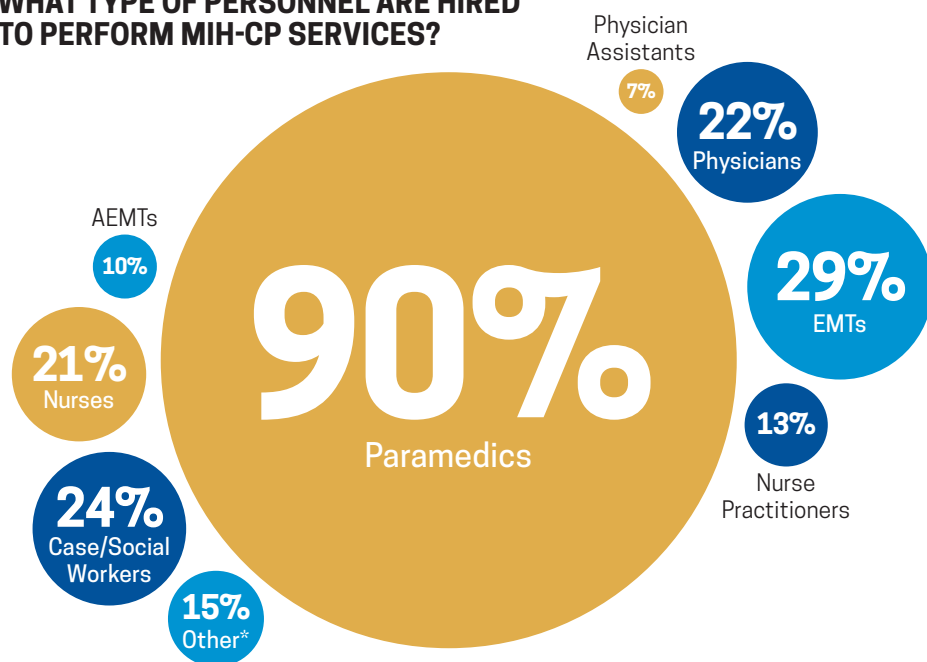
- 63%** Local medical control
- 38%** State EMS office
- 39%** Healthcare partners
(hospitals, physicians)

Staffing

MIH-CP is most often provided by EMS practitioners. EMS practitioners are trusted members of the community who are available 24/7, at all times of the day and night. They're accustomed to working in the field and facing unpredictable weather and working environments that may change with each call.



WHAT TYPE OF PERSONNEL ARE HIRED TO PERFORM MIH-CP SERVICES?



*Pharmacists, social workers, community health workers, mental health clinicians and behavioral health specialists.

9 out of 10

MIH-CP programs use paramedics.

MIH-CP CLINICAL STAFFING

Most MIH-CP programs have one or more dedicated staff members.

- 63%** Dedicated clinical staff
- 10%** All or most agency personnel participate
(no dedicated MIH-CP personnel)
- 27%** Combination of the above
- 11%** Other

Training EMS Practitioners to Provide MIH-CP



While the medical skills performed by EMS personnel participating in MIH-CP are consistent with their emergency response training and experience, the focus and context of their clinical roles are different. The practice of EMS tends to be focused on rapid assessment and stabilization, and transport to an emergency department. In contrast, the practice of MIH-CP is focused on longitudinal assessment, participation in an existing, multidisciplinary, interprofessional treatment plan, and communication with and referral to other members of the treatment team.

Contextually, care shifts from episodic evaluation and care of patients independent of their existing medical care plan to monitoring and adjustment of care as a part of their existing medical care plan.

MIH-CP personnel requirements

Asked what specific training or experience is required of MIH-CP personnel, 88% said field EMS experience.

About one in four programs (27%) require college-based community paramedic education. Several 2-year community colleges across the nation offer community paramedic certificate programs, either in-person or online. A common prerequisite is having an

associate degree and being a paramedic with at least two years of experience.

One in four programs (27%) also require behavioral health crisis intervention training to prepare EMS practitioners to deal with patients in crisis due to mental illness or substance abuse.

About one in five (21%) require critical care training. Critical care paramedics have training in providing advanced patient assessments and invasive care usually during inter-facility transports of seriously ill or injured patients by ground ambulance or helicopter. About 10% of the programs require critical care certification. The exam is offered through the Board for Critical Care Transport Paramedic Certification.

7% require community health work certification. Community health workers have been around for decades in the United States and other countries, but interest in them surged with the healthcare reform movement's focus on moving care out of high-cost hospitals and replacing it with more efficient means of improving patient health. Typically, without a medical background, community health workers are trained to go into the homes of patients and help them manage their health or chronic conditions. A big component of their work is dealing with the social factors

that influence health, such as having safe housing, access to nutritious food and social services, transportation to medical appointments, and education about self-care and managing medical conditions. Community paramedics perform many of these same functions. The difference is that community health workers do not provide medical care, such as medication administration, neurological assessments, blood draws, wound care or any of the 40 or so medical services provided by EMS practitioners via MIH-CP.

Takeaway: Can community health worker certification help MIH-CP gain acceptance?

Community health workers are reimbursed by Medicaid in many states. In 2013, CMS changed a rule about who could be reimbursed through Medicaid for delivering preventive services. Previously, preventive services had to be provided by a physician or other licensed practitioner. Now, other non-licensed practitioners, such as community health workers, can provide and get reimbursed for preventive services, as long as those services are recommended by a physician or other licensed practitioners. This is similar to needing a prescription from a doctor, except instead of medicine, this "prescription" is to receive a specific service from a community health worker, according to a Families USA issue brief published in 2016.⁷

Research shows that community health workers are effective in helping patients manage hypertension, reduce cardiovascular risk factors, achieve diabetes control, manage HIV infection, and get cancer screening.⁸ For those reasons, the U.S. Centers for Disease Control and Prevention (CDC), Agency for Healthcare Research and Quality (AHRQ) and the World Health Organization (WHO) promote the use of community health workers. CHW certification may be a viable route for reimbursement and acceptance of MIH-CP.

⁷ Families USA, "[How States Can Fund Community Health Workers through Medicaid to Improve People's Health, Decrease Costs, and Reduce Disparities](http://familiesusa.org/product/how-states-can-fund-community-health-workers-through-medicaid)," July 2016. <http://familiesusa.org/product/how-states-can-fund-community-health-workers-through-medicaid>.

⁸ Henry B. Perry, Rose Zulliger, Michael M. Rogers, "[Community Health Workers in Low-, Middle-, and High-Income Countries: An Overview of Their History, Recent Evolution, and Current Effectiveness](#)," *Annual Review of Public Health*, March 2014, Vol.35:399-421.

Nearly all programs require some type of additional training for their MIH-CP practitioners.

Clinical training, such as medication administration and chronic disease management, was the most common response, with 87% responding that this training is provided to MIH-CP practitioners. (Up from 66% in 2014).

The next most common training topics were:

- Accessing community and social services resources (73%).
- Patient navigation (69%).
- Patient relations/communications (for example, motivational interviewing) (69%).
- Enhanced patient assessment (58%) .

Smaller numbers offer specialty certification training (35%) and community health worker certification training (15%). 11% said “other training,” including home care training, wound care training, crisis management and community paramedic training.

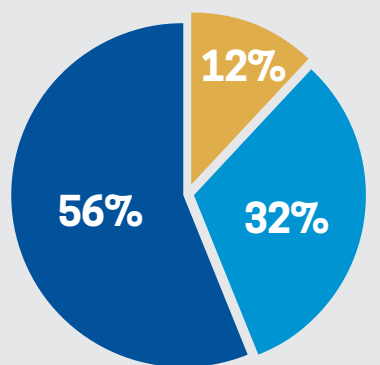


80%

Agree that their program's education and training for MIH-CP personnel is supported and approved by partners.

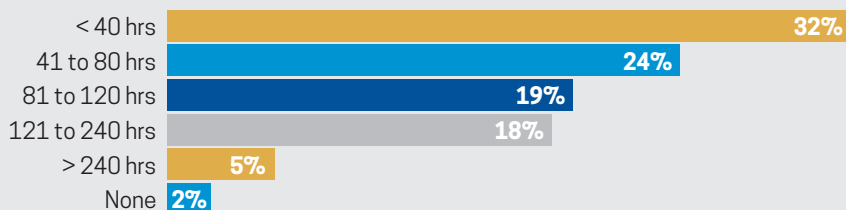
HOW IS TRAINING DEVELOPED?

Most respondents use curriculum developed in-house.

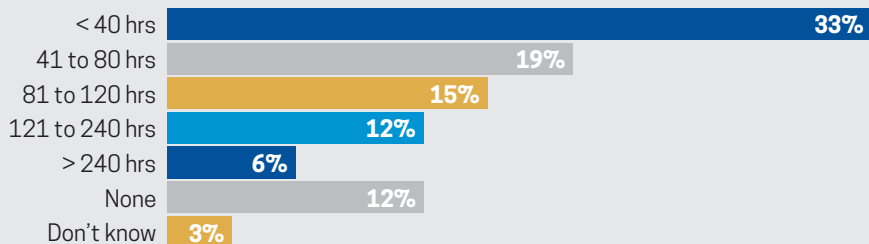


- Staff created training program
- Curriculum from an outside source
- Other (mostly a combination of in-house and outside curriculum, or curriculum created in cooperation with partners)

HOURS OF CLASSROOM TRAINING REQUIRED



HOURS OF CLINICAL ROTATIONS/FIELD TRAINING REQUIRED



MIH-CP is Data-Driven But There is Room for Improvement

Throughout healthcare, payers and policy-makers have put increasing emphasis on the importance of using data to demonstrate which healthcare services have value – meaning they deliver improved patient outcomes for a justifiable cost. EMS leaders running MIH-CP programs understand the need to collect, analyze and share data to show that MIH-CP has value.

92% of respondents have a data collection system for their MIH-CP program, compared to only 8% who don't. This is about the same as in 2014.

How is data on patient encounters collected?

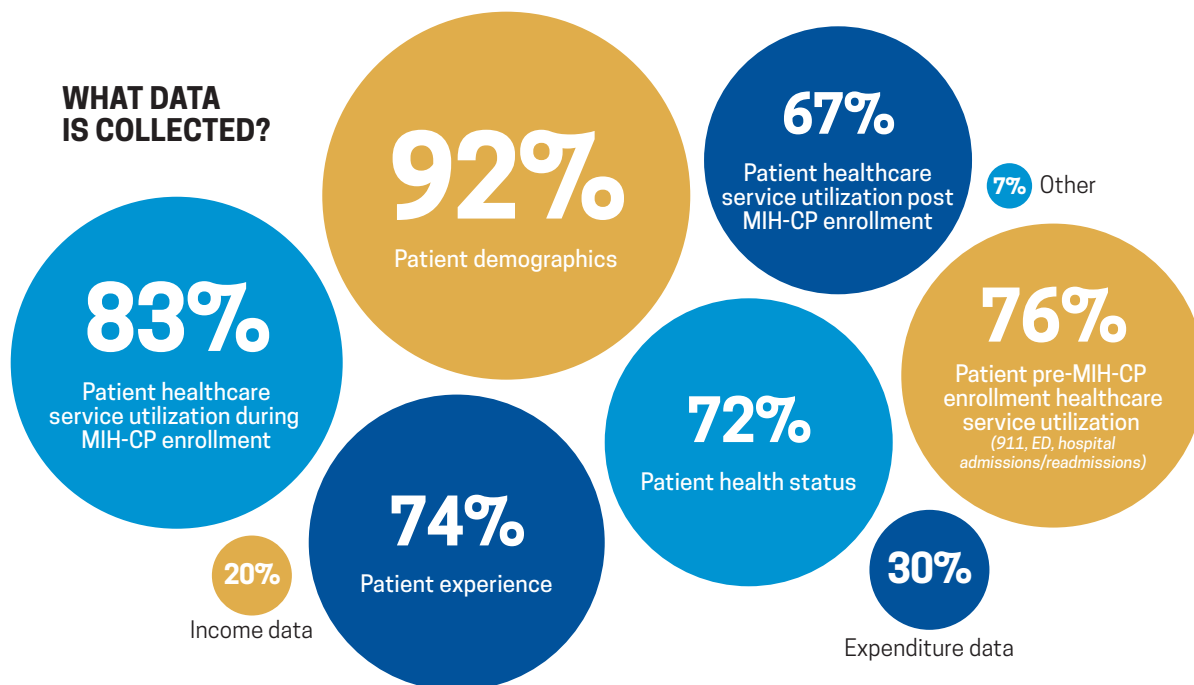
Respondents were asked what method or methods they use to document patient encounters. About half (47%) collect data on patient encounters using EMS electronic patient care reports (ePCR) systems, while 39% use shared electronic patient record systems, such as a hospital or primary care provider (PCP) system.



About one in four (25%) use a commercially available MIH-CP-specific system, 21% use locally developed electronic record systems, such as word processing or spreadsheet software, and 13% collect information manually (pen and paper).

What data is collected?

About 76% collect data on patient healthcare utilization prior to MIH-CP enrollment, while 67% collect data on healthcare utilization after MIH-CP enrollment. This likely indicates that EMS agencies use the information for comparison purposes, to show improvements in patient health and cost reductions.





This has increased since the same question was asked in 2014. At that time, 64% collected pre-MIH-CP enrollment healthcare utilization data, while 56% collected post-enrollment data.

Who is the data shared with?

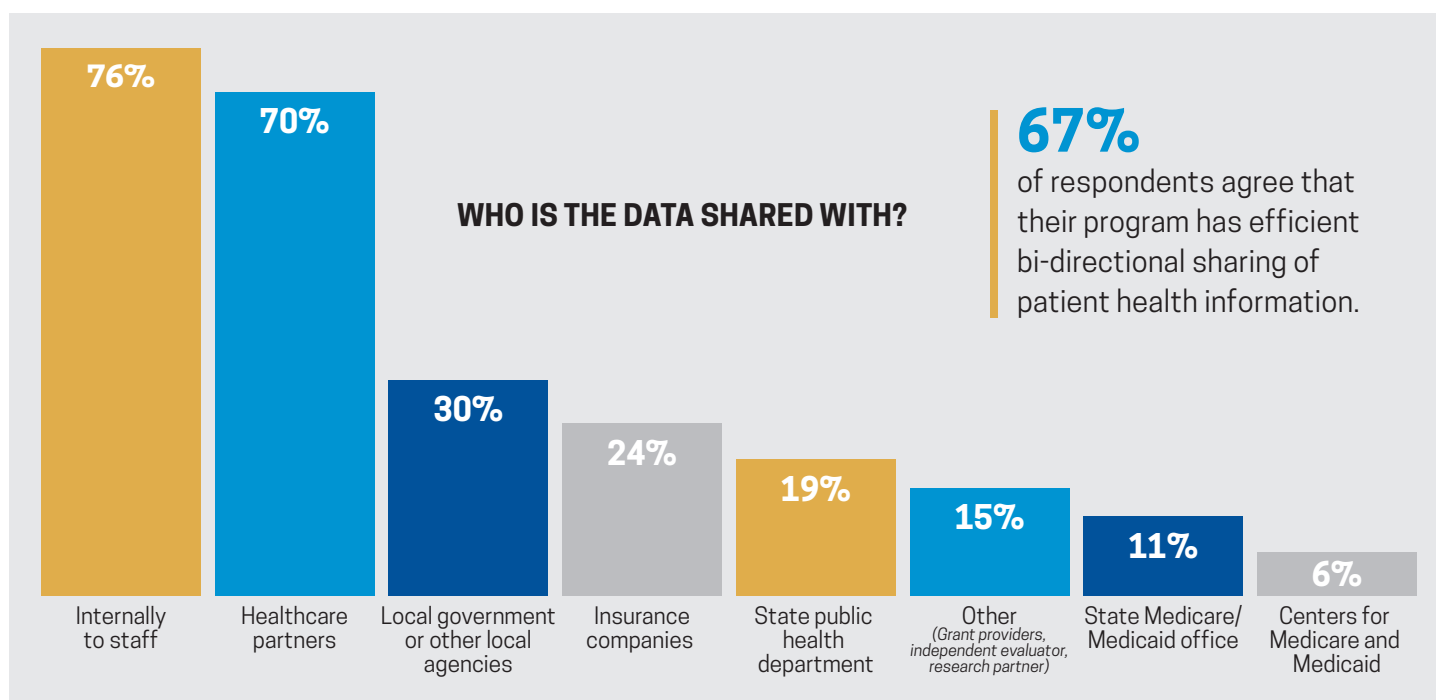
Data collected as part of MIH-CP is most often shared internally with staff and with MIH-CP healthcare partners.

Takeaway: Data exchange advancing in MIH-CP

MIH-CP is predicated on working in partnership with other healthcare providers to achieve the triple aim of healthcare: improved population health, reduced per-capita costs and improved patient experience of care. Achieving this requires data collection, analysis and exchange across all of the entities that provide patient care.

Data sharing in MIH-CP appears to be much better than what occurs in typical EMS emergency response. Two-thirds of MIH-CP respondents (67%) agree that their program has efficient bi-directional sharing of patient health information. That is significantly better than the data exchange reported elsewhere in EMS. A survey conducted in 2016 among EMS agencies about data exchange found that 55% were exchanging *no data* with any other healthcare providers.

Still, MIH-CP programs have room for improvement, especially among the 20% of respondents that disagree that data is being effectively shared to and from healthcare partners. More data exchange will mean all of the partners have the information they need to make the best decisions on patient care and policy.



MIH-CP and State Law

Laws regulating EMS vary from state to state. A challenge for those running MIH-CP programs has been determining if state laws and regulations permit EMS practitioners to provide preventive or non-emergency care in patients' homes.

Because EMS was initially conceived in the 1960s as a means of providing emergency response to reduce deaths on the nation's highways, some states define EMS very narrowly. California statute, for example, says that EMS must respond "at the scene of an emergency" and must transport patients to a hospital. Similar laws on are the books in other states.

Although emergency response is a very important part of what EMS provides, these laws strike many in EMS as ironic. Despite what the laws say, many EMS calls that are part of daily 911 response aren't actually emergencies. Every city and town has people who rely on EMS as part of the public healthcare safety net, knowing that EMS is duty bound to respond no matter what the situation. Many patients also readily receive care in the home but then refuse transport to the hospital. Likewise, EMS in every state provides non-emergency inter-facility transports for patients going from one hospital to another, or to a rehab center, long-term care or hospice facility.



Yet those outdated, restrictive EMS definitions have been interpreted by some state attorneys, state regulators and others as prohibiting MIH-CP.

Not all states have laws that narrowly define EMS, however. In some states, nothing in the state law prohibits MIH-CP. Texas for example, is a delegated practice state, meaning there is no statewide scope of practice for EMS. Instead, individual medical directors determine what medical procedures EMS practitioners can provide – which is perhaps one reason that there are well over a dozen MIH-CP programs in Texas.

And EMS leaders in some states with prohibitive laws have found a way to launch MIH-CP. California permits organizations to apply for approval as pilot programs to study healthcare innovations. Starting in 2015, 13 MIH-CP pilot programs launched in the state, enrolling thousands of patients. Michigan took a similar route, applying for a special status that allowed MIH-CP pilots.

Changing Laws, State by State

EMS practitioners across the nation have been working to change laws that make it difficult for them to participate in filling resource gaps and solving community health problems through expanded services. Part of that effort is advocating for laws that recognize EMS as integral to healthcare, and as such open the door for EMS practitioners to be reimbursed by Medicaid and other payers as healthcare providers.

EMS has made significant progress on the legislative front in multiple states. EMS leaders in Minnesota, Arkansas, Nevada, Nebraska, Missouri, Washington, Colorado, Tennessee, Wisconsin and North Dakota have successfully advocated for laws paving the way for community paramedicine or MIH-CP reimbursement. In 2015, Massachusetts formally established mobile integrated healthcare as a preventive care service to help ensure patients have a coordinated continuum of care and to address gaps in service delivery.



Other states, such as Wyoming, haven't required new statutes but EMS leaders have worked with state officials to create rules about how community paramedics can practice.

Legislation is pending in several other states, including Maine, New York, Connecticut, Idaho, Pennsylvania and California. EMS leaders in those states report varying degrees of support, opposition and interest in the proposed legislation, so whether the laws will be passed remains unclear. (Information in this report about individual state laws or pending legislation may not be exhaustive.)

And even when laws are passed, there can still be barriers to rolling out MIH-CP programs. In Wisconsin, for example, EMS agencies have been told that it will take several years for rules regarding MIH-CP to be developed and implemented.

90%

are sure their program is legally compliant at the federal, state and local levels. This is up from 80% in 2014, indicating that EMS has additional clarity on what is permissible under their state regulations.

64%

agree that statutory or regulatory policies are an obstacle to sustaining or growing MIH-CP.



Image provided by Brandon Thibodeaux

What States Laws Say About MIH-CP

A review of the laws, regulations and policies from 50 U.S. states published in 2017 in *Prehospital Emergency Care*⁹ found that 41 states (82%) had a statewide scope of practice for paramedics, while an additional 3 states had statewide protocols from which a scope of practice can be inferred. Scope of practice is the skills and functions EMS practitioners at different levels can legally perform.

Twenty states (40%) had a clearly defined mechanism for expanding SOP, 16 states (32%) had laws specific to community paramedics. Seven states (14%) allow patients to be transported to alternate destinations. Researchers concluded there is a lack of guidance and consistency from state to state regarding MIH-CP and scope of practice.

NAEMT's survey found that 24% of respondents say their EMTs and paramedics providing MIH-CP have an advanced scope of practice, meaning that EMS practitioners involved in MIH-CP have been approved by an oversight entity to provide services beyond those they would provide as part of normal emergency response functions.

⁹ Melody Glenn, Olivia Zoph, Kim Weidenaar, Leila Barraza, Warren Greco, Kylie Jenkins, Pooja Paode & Jonathan Fisher, ["State Regulation of Community Paramedicine Programs: A National Analysis," Prehospital Emergency Care](#), Published online Oct. 12, 2017. 22:2, 244-251.

Measuring MIH-CP Success

At the time of the 2014 survey, there was almost no published data on patient outcomes, cost-effectiveness or the safety of MIH-CP programs. But over the last several years, this has changed.

Today, there are at least a dozen studies about MIH-CP published in peer-reviewed journals. In addition, individual MIH-CP programs or groups of programs have also shared patient outcome and cost data, which have been published as case studies in major EMS and healthcare trade and policy publications. Here are a few examples.

- An MIH care coordination program involving about 60,000 seniors enrolled in a managed Medicare Advantage PPO demonstrated a significant reduction in inpatient and ED utilization and costs, including a 40% decrease in inpatient utilization, a 37% decrease in inpatient costs, a 21% decrease in ED utilization and a 19% decrease in ED costs. The study was published in *Population Health Management* in 2017.¹⁰
- A study in *Prehospital Emergency Care* found that wait times were significantly shorter for patients taken by EMS directly to mental health facilities rather than EDs. The study involved 226 patients assessed by EMS in the field in Wake County, North Carolina.¹¹
- Having paramedics visit seniors in low-income housing in Ontario, Canada to provide health education, make referrals to community resources, and reduce fall hazards resulted in a reduction in emergency calls, lowered blood pressure, and lowered diabetes risk after one year. The study was published in 2017 in *BMC Emergency Medicine*.¹²
- In California, published outcomes show that the state's MIH-CP pilot programs are proving to be safe and highly successful in reducing costs to Medicare and hospitals, and in improving patient well-being.¹³
- A study in the *American Journal of Emergency Medicine* that included 64 frequent ED users seen by MIH paramedics in Ft. Worth, Texas, found improvements in quality of life, reduced ED transports and reduced hospital admissions.¹⁴

With 88% of respondents agreeing that their programs are data-driven and that data is collected to measure the program's performance and success over time, more studies are sure to follow.



88%

agree that their program is data-driven and data is collected to measure the program's performance over time. (Only 4% disagree).

Takeaway: Tools for Measuring MIH-CP Programs Available

In 2015, leading EMS experts came together to determine what performance and outcomes measures MIH-CP programs could and should collect. With input from over 75 EMS and healthcare associations, the MIH-CP Measures Group published the core measures that EMS agencies operating MIH-CP can use to show value to partners, payers and the community. (The steering committee included Matt Zavadsky of MedStar Mobile HealthCare, Brenda Staffan of REMSA, Dan Swayze of the Center for Emergency Medicine of Western Pennsylvania, Brian LaCroix of Allina Health EMS, Gary Wingrove of Mayo Clinical Medical Transport and Dr. Brent Myers, former medical director of Wake County EMS.)

The measures strategy and workbook can be found under the "outcomes measures" category of the [NAEMT MIH-CP Program Toolkit](#).

¹⁰ Roeper Brooke, Mocko Jonathan, O'Connor Lanty M., Zhou Jiaquan, Castillo Daniel, and Beck Eric H. "Mobile Integrated Healthcare Intervention and Impact Analysis with a Medicare Advantage Population." *Population Health Management*. Published online Dec. 14, 2017.

¹¹ Jamie O. Creed, Julianne M. Cyr, Hillary Owino, Shannen E. Box, Mia Ives-Rublee, Brian B. Sheitman, Beat D. Steiner, Jefferson G. Williams, Michael W. Bachman, Jose G. Cabanas, J. Brent Myers & Seth W. Glickman. "Acute Crisis Care for Patients with Mental Health Crises: Initial Assessment of an Innovative Prehospital Alternative Destination Program in North Carolina." *Prehospital Emergency Care*. Feb 7, 2018:1-10.

¹² G. Agarwal, R. Angeles, M. Pirrie, F. Marzanek, B. McLeod, J. Parascandalo, L. Dolovich. "Effectiveness of a community paramedic-led health assessment and education initiative in a seniors' residence building: the Community Health Assessment Program through Emergency Medical Services (CHAP-EMS)." *BMC Emergency Medicine*. March 8, 2017.

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Survey Responses Mirror Published Studies

The positive results shown in published research mirror what survey respondents say about their level of success in a variety of domains.

Each of these domains shows a **marked improvement** compared to the 2014 survey.

In 2017, 77% rated their program as successful in showing cost savings for defined groups of patients. 74% rated their program as successful in reducing reliance on the emergency department for a defined group of patients.

By contrast, in 2014 only 54% rated their program successful in showing cost savings, while 59% said they were successful in reducing reliance on the ED.

Also in 2014, 25% of respondents said it was "too soon to tell" about the impact of their programs. In 2017, only 11% responded that it was "too soon to tell," indicating that MIH-CP programs have become more established and now have the experience and the data to prove value.

82% Rate their program as highly or somewhat successful in showing positive change in patient overall health status.

77% Rate their program as highly or somewhat successful in showing cost savings for defined group of patients.

73% Rate their program as highly or somewhat successful in reducing 911 utilization among specific groups of patients.

74% Rate their program as highly or somewhat successful in reducing reliance on the emergency department for a defined group of patients.

73% Rate their program as highly or somewhat successful in reducing 30-day readmissions for specific patient groups.

85% Rate their program as highly or somewhat successful in achieving patient satisfaction.

MEASUREMENTS USED TO DETERMINE MIH-CP IMPACT

80% Patient outcomes

79% Decrease in hospital re-admissions rate

75% Decrease in high frequency 911 callers

68% Customer experience surveys

66% Change in patient overall health status

30% Per patient episode cost

7% Other (answers included reduction in falls %, savings to payer in ED visits, preventable admissions and out-of-network care)

“Never quit on a patient. They are accustomed to the ‘system’ giving up and throwing them away!”

– Survey respondent

MIH-CP PROGRAMS REPORT IMPROVED OUTCOMES FOR VARIOUS PATIENT GROUPS

	Highly Successful	Some Success	Little Success	No Success	Too Soon to Tell	N/A
Frequent 911 users	37%	32%	7%	1%	5%	18%
Congestive heart failure as a primary complaint/reason for referral	40%	25%	7%	0%	7%	20%
Substance abuse/alcoholism as a primary complaint/reason for referral	9%	25%	18%	1%	7%	39%
Other chronic diseases (COPD), diabetes, asthma	30%	44%	3%	0%	6%	17%
Terminal illness/hospice	15%	13%	6%	3%	6%	57%

MIH-CP PROGRAMS REPORT LOWERED COSTS FOR VARIOUS PATIENT GROUPS

	Highly Successful	Some Success	Little Success	No Success	Too Soon to Tell	N/A
Frequent 911 users	36%	31%	4%	2%	7%	20%
Congestive heart failure as a primary complaint/reason for referral	31%	33%	5%	0%	13%	18%
Substance abuse/alcoholism as a primary complaint/reason for referral	6%	26%	17%	3%	10%	39%
Other chronic diseases (COPD), diabetes, asthma	28%	41%	4%	0%	10%	17%
Terminal illness/hospice	15%	11%	8%	2%	9%	55%

Advice from the Experts Running MIH-CP Programs

No one knows better what it takes to launch and operate an MIH-CP program than those who have done it. Asked to offer advice to others developing programs, 110 survey respondents offered tips and lessons learned.

Much of the advice related to the importance of community assessments, achieving stakeholder buy-in and learning from other MIH-CP programs was similar to what respondents said in 2014. In 2017, two new themes stood out – the need for a good data collection system to show value, and the importance of ensuring financial sustainability. Here's a summary of the advice from our respondents.

1. Involve stakeholders from the beginning.

“Get the key stakeholders to the table early on to assist in the development of your program. Work closely with home health so they understand you are working together and not in competition.”

“Develop a specific and detailed outreach plan prior to launching an MIH-CP program. We found it to be the most important thing we did. This allowed us to get our system partners invested in our program's success. It assisted us down the road with acquiring data, and it continues to guide our program's direction.”

2. Collaborate and integrate.

“Include other members of the healthcare community in planning. Do the research to find out what your community actually needs, and involve your legal team from the beginning.”

“Do a very thorough community assessment, and begin aligning yourself with partners ASAP. This will include other healthcare organizations but also faith-based groups, community groups and influential persons in your community in any profession.”



“Find out if your community has a healthcare alliance and join it. Get involved in any community events to spread the word of the MIH-CP program.”

3. Be patient and keep at it.

“You have to be a salesman when building the program. Stopping by clinics and hospitals to talk with staff on a regular basis will keep you front of mind.”

“Be patient! This will take an enormous amount of time to become fully operational and have all of the various stakeholders understand and accept the concept.”

4. Start small with clear, achievable goals.

“Starting internally with the high utilizers of your system is the easiest place to make a difference.”

“Have a very specific goal in mind when starting. Work toward that goal and expand as you have success.”

5. Identify sustainable funding sources. Ideally more than one.

“When seeking partner agencies focus on payers and providers that are managing capitated populations.”

“Have multiple funding courses. Do not rely on one pathway alone.”

“Find a way to self-sustain before starting. Do not rely on grants with no plan for sustainable revenue.”

“Understand how government insurance programs – Medicaid and Medicare – work and use them as part of your program.”

“Get involved with the local agencies that deliver Medicaid dollars – in Oregon they are Coordinated Care Organizations (CCOs).”

6. Collect performance and outcomes data.

“A plan for data collection should be one of the primary goals prior to launching a program.”

“Ensure your program has a strong software program to document patient encounters, collect data and measure value.”

7. Learn from others.

“Do your research! Look at multiple programs and ask lots of questions about what they found that worked well, and what didn't.”

“Services looking to establish an MIH-CP program would benefit greatly from utilizing the NAEMT MIH-CP Program Toolkit and seeking advice from other existing MIH-CP services in their state. There are some very organized MIH-CP programs who are willing to assist new programs.”



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Conclusion

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The healthcare reform movement emerged out of the realization that U.S. healthcare costs too much and delivers too little in terms of better patient health. Healthcare is one of the country's largest industries, accounting for 17.8% of gross domestic product (GDP) in 2015 – compared to only 5% of GDP in 1960. Despite spending far more per person than other countries with comparable incomes, Americans' health outcomes are no better, and by many measures are worse. The U.S. has a lower life expectancy and a higher rate of death from preventable diseases than other developed nations.¹⁵

Through MIH-CP, EMS is helping to solve these problems. A growing body of research shows that MIH-CP services reduce costs by avoiding unnecessary hospital readmissions and reducing the over-reliance on EDs. MIH-CP programs improve the health of patients with a variety of chronic conditions such as diabetes, asthma and congestive heart failure, and can help people struggling with substance abuse or in psychiatric crisis get to the facility best suited to help them. Patients also like MIH-CP. The satisfaction scores for patients visited by EMS practitioners working in an MIH-CP capacity are high across the board.

Overcoming challenges

Despite being stymied by a lack of reimbursement, restrictive state EMS laws and occasionally vocal opposition from other healthcare professionals, many EMS leaders have kept moving forward in doing what they believe is right for their patients and communities. They have innovated within their own agencies and communities, plugged away at educating government officials and healthcare partners about what MIH-CP has to offer, trained their staff to step up and do more, and gathered the data to prove value. It's truly remarkable that so many have done this for very little financial reward, and in some cases, at considerable cost.

Their dedication has led to progress. They have changed laws, persuaded groups that were once opposed to MIH-CP to come on board as partners, and established financial agreements with major payers to sustain MIH-CP.

To be sure, there are hurdles – the biggest one being financial sustainability. Only a few MIH-CP programs are bringing in substantial revenue, and many worry about the long-term prospects for their programs without a sure form of

financial support. But it is encouraging that the overwhelming majority of survey respondents see support growing for MIH-CP, believe their programs will enroll more patients, and that revenue will increase over time.

Differences between 2014 and 2017

One of the purposes of this survey was to explore how MIH-CP had evolved since 2014, when the majority of programs surveyed were less than a year old. Interestingly, the 2017 survey found little in the way of differences related to overall goals of MIH-CP, medical services provided, community partners, or the groups of patients/healthcare conditions targeted. This indicates that those who pioneered MIH-CP were on the right track, and that the role of MIH-CP in EMS agencies and healthcare is becoming more firmly established.

One area of marked improvement between 2014 and 2017 is related to data. The 2017 survey found that nearly all MIH-CP programs collect data to analyze performance and outcomes, such as patient healthcare utilization and costs before and after MIH-CP enrollment. In 2014, most programs were just in the beginning stages of determining what data to collect and how to go about it.

The 2017 survey also found that many MIH-CP programs now have enough data to show the value of their MIH-CP program. Cost, safety and outcomes data is essential information that healthcare partners, payers and regulatory bodies want to see. As the body of evidence showing MIH-CP effectiveness builds, so will support for MIH-CP.

¹⁵ Melissa Etehad, Kyle Kim, ["The U.S. spends more on healthcare than any other country – but not with better health outcomes."](#) Los Angeles Times, July 18, 2017.

Many more MIH-CP programs launching

Another difference between the 2014 and the 2017 survey: four years ago, we were confident that the survey had captured the vast majority of MIH-CP programs in the country. In 2017, we know this is not the case. New programs are starting up all the time, and are expanding what they offer as more healthcare partners and payers see value in MIH-CP.

Some of these programs may not go by the name mobile integrated healthcare or community paramedicine. In 2014, there was a strong emphasis on what to call these novel and innovative programs, and how those labels would impact reimbursement, legality and whether MIH-CP was accepted by members of the public, other healthcare professionals and potential partners. Names still matter of course, particularly related to regulatory policies that protect members of the public. In that context, specific definitions, qualifications and protocols are absolutely necessary.

But outside of that arena, the concept of MIH-CP is being considered more broadly – providing emergent, urgent and preventive care is becoming simply *what EMS does* as a fully-integrated, patient-centered, data-driven, value-based component of healthcare.

This is in many ways similar to what was envisioned in the 1996 EMS Agenda for the Future. That landmark document described EMS as “community-based health management that is fully integrated with the overall health care system. It will have the ability to identify and modify illness and injury risks, provide acute illness and injury care and follow-up, and contribute to treatment of chronic conditions and community health monitoring. This new entity will be developed from redistribution of existing health care resources and will be integrated with other health care providers and public health and public safety agencies. It will improve community health and result in more appropriate use of acute health care resources. EMS will remain the public’s emergency medical safety net.”

As one survey respondent put it in words of advice to others starting a program: *“Don’t even worry about a special name for your program. Keep it simple, find a need in your community and find a way to be part of the solution.”*



Image provided by Kevin Pieper/The Baxter Bulletin

We are truly thankful to the **129 EMS agencies** who took the time to answer the 2017 survey.



About NAEMT

Formed in 1975 and more than 65,000 members strong, the National Association of Emergency Medical Technicians (NAEMT) is the only national association representing the professional interests of all emergency and mobile healthcare practitioners, including emergency medical technicians, advanced emergency medical technicians, emergency medical responders, paramedics, advanced practice paramedics, critical care paramedics, flight paramedics, community paramedics, and mobile integrated healthcare practitioners. NAEMT members work in all sectors of EMS, including government agencies, fire departments, hospital-based ambulance services, private companies, industrial and special operations settings, and in the military.