

# Mobile Integrated Healthcare Program

## Measurement Strategy Overview

### Aim

*A clearly articulated goal statement that describes how much improvement by when and links all the specific outcome measures; what are we trying to accomplish?*

Develop a uniform set of measures which leads to the optimum sustainability and utilization of patient centered, mobile resources in the out-of-hospital environment and achieves the Triple Aim® — improve the quality and experience of care; improve the health of populations; and reduce per capita cost.

### Measures Definition:

#### 1. 18 Core Measures {"CORE MEASURE" in the description}

- a. Measures that are considered by the measures development team through experience as **essential for program integrity, patient safety and outcome demonstration.**

#### 2. CMMI Big Four Measures (RED)

- a. Measures that have been identified by the CMS Center for Medicare and Medicaid Improvement (CMMI) as the four primary outcome measures for healthcare utilization.

#### 3. MIH Big Four Measures (ORANGE)

- a. Measures that are considered **mandatory** to be reported in order to classify the program as a bona-fide MIH or Community Paramedic program.

#### 4. Top 18 Measures (Highlighted)

- a. The 18 measures identified by the numerous operating MIH/CP programs as **essential, collectable and highest priority to their healthcare partners.**

### Notes:

1. All financial calculations are based on the ***national average Medicare payment*** for the intervention described. Providers are encouraged to also determine the ***regional average Medicare payment*** for the interventions described.
2. Value may also be determined by local stakeholders in different ways such as reduced opportunity cost, enhanced availability of resources. Program sponsors should develop local measures to demonstrate this value as well.

## Table of Contents

	<u>Page</u>
<b>Structure/Program Design Measures</b>	<b>6</b>
• <a href="#"><u>S1: Executive Sponsorship</u></a>	6
• <a href="#"><u>S2: Strategic Plan</u></a>	6
• <a href="#"><u>S3: Healthcare Delivery System Gap Analysis</u></a>	7
• <a href="#"><u>S4: Community Resource Capacity Assessment</u></a>	8
• <a href="#"><u>S5: Integration/Program Integrity</u></a>	8
• <a href="#"><u>S6: Organizational Readiness Assessment – Medical Oversight</u></a>	9
• <a href="#"><u>S7: Organizational Readiness Assessment - Health Information Technology (HIT)</u></a>	10
• <a href="#"><u>S8: HIT Integration with Local/Regional Healthcare System</u></a>	10
• <a href="#"><u>S9: Public &amp; Stakeholder Engagement</u></a>	11
• <a href="#"><u>S10: Specialized Training and Education</u></a>	<b>11</b>
• <a href="#"><u>S11: Compliance Plan</u></a>	<b>11</b>
<b>Outcome Measures for <i>Community Paramedic</i> Program Component</b>	<b>12</b>
• <i>Quality of Care &amp; Patient Safety Metrics</i>	
○ <a href="#"><u>Q1: Primary Care Utilization</u></a>	<b>12</b>
○ <a href="#"><u>Q2: Medication Inventory</u></a>	12
○ <a href="#"><u>Q3: Care Plan Developed</u></a>	12
○ <a href="#"><u>Q4: Provider Protocol Compliance</u></a>	13
○ <a href="#"><u>Q5: Unplanned Acute Care Utilization (e.g.: emergency ambulance response, urgent ED visit)</u></a>	<b>13</b>
○ <a href="#"><u>Q6: Adverse Outcomes</u></a>	<b>13</b>
○ <a href="#"><u>Q7: Community Resource Referral</u></a>	13
○ <a href="#"><u>Q8: Behavioral Health Services Referral</u></a>	13
○ <a href="#"><u>Q9: Alternative Case Management Referral</u></a>	14
• <i>Experience of Care Metrics</i>	
○ <a href="#"><u>E1: Patient Satisfaction</u></a>	<b>15</b>
○ <a href="#"><u>E2: Patient Quality of Life</u></a>	15
• <i>Utilization Metrics</i>	
○ <a href="#"><u>U1: Ambulance Transports</u></a>	<b>16</b>
○ <a href="#"><u>U2: Hospital ED Visits</u></a>	<b>16</b>
○ <a href="#"><u>U3: All - cause Hospital Admissions</u></a>	<b>16</b>
○ <a href="#"><u>U4: Unplanned 30-day Hospital Readmissions</u></a>	<b>16</b>
○ <a href="#"><u>U5: Length of Stay</u></a>	16

- *Cost of Care Metrics -- Expenditure Savings*
  - **C1: Ambulance Transport Savings (ATS)** 17
  - **C2: Hospital ED Visit Savings (HEDS)** 17
  - **C3: All-cause Hospital Admission Savings (ACHAS)** 17
  - **C4: Unplanned 30-day Hospital Readmission Savings (UHRS)** 18
  - **C5: Unplanned Skilled Nursing (SNF) and Assisted Living Facility (ALF) Savings (USNFS)** 18
  - **C6: Total Expenditure Savings** 18
  - **C7: Total Cost of Care** 19
  
- *Balancing Metrics*
  - **B1: Provider (EMS/MIH) Satisfaction** 20
  - **B2: Partner Satisfaction** 20
  - **B3: Primary Care Provider (PCP) Use** 20
  - **B4: Specialty Care Provider (SCP) Use** 20
  - **B5: Behavioral Care Provider (BCP) Use** 20
  - **B6: Social Service Provider (SSP) Use** 20
  - **B7: System Capacity -- Emergency Department Use** 20
  - **B8: System Capacity – PCP** 21
  - **B9: System Capacity – SCP** 21
  - **B10: System Capacity – BCP** 21
  - **B11: System Capacity – SSP** 21

**Definitions** 22

## Measure Categories

**Structure:** Describes the acquisition of physical materials and development of system infrastructures needed to execute the service (Rand). For example:

- Community Health Needs Assessment
- Community Resource Capacity Assessment
- Executive Sponsorship, Strategic Plan & Program Launch Milestones
- Organizational Readiness Assessment – Health Information Technology Systems
- Organizational Readiness Assessment – Medical Oversight
- Plan for Integration with Healthcare, Social Services and Public Safety Systems

**Outcomes:** Describes how the system impacts the values of patients, their health and wellbeing (IHI). For example:

### *Quality of Care Metrics*

- Patient Safety
- Care Plan Acceptance and Adherence
- Medical Home
- Medication Inventories

### *Utilization Metrics*

- All-cause Hospital Admissions
- Emergency Department Visits
- Unplanned 30-day Hospital Readmissions

### *Cost of Care Metrics*

- Expenditure Savings by Intervention

### *Experience of Care Metrics*

- Patient Quality of Life
- Patient Satisfaction

**Balancing:** Describes how changes designed to improve one part of the system are impacting other parts of the system, such as, impacts on other stakeholders such as payers, employees, or community partners (IHI). For example:

- Partner (healthcare, behavior health, public safety, community) satisfaction
- Practitioner (EMS/MIH) satisfaction
- Public and stakeholder engagement
- PCP and other healthcare utilization

**Process:** Describes the status of fundamental activities associated with the service; describes how the components in the system are performing; describes progress towards improvement goals (Rand/IHI). For example:

- Clinical & Operational Metrics
- Referral & Enrollment Metrics
- Volume of Contacts, Visits, Transports, Readmissions

**Definitions:** Throughout the document, hyperlinks for certain defined terms are included.

## Structure/Program Design Measures

*Describes the development of system infrastructures and the acquisition of physical materials necessary to successfully execute the program*

Name	Description of Goal	Components	Scoring	Evidence-base, Source of Data
<b>Executive Sponsorship</b>	<p><b>S1:</b> Program has <a href="#">Executive Level</a> commitment and the program manager reports directly to the Executive leadership of the organization.  <b>{CORE MEASURE}</b></p>	<p>The community paramedicine program plan clearly identifies organizational executive level commitment for the human, financial, capital and equipment necessary to develop, implement, and manage the community paramedicine program both clinically and administratively.</p>	<p>0. There is no evidence of organizational executive level commitment</p> <p>1. There is some evidence of limited commitment for the program.</p> <p>2. There is evidence of full commitment for the program.</p>	<p>Documents submitted by agency demonstrating this commitment such as approved budgets, organizational chart and job descriptions</p>
<b>Strategic Plan</b>	<p><b>S2:</b> The program has an <a href="#">Executive Level</a> approved strategic plan.  <b>{CORE MEASURE}</b></p>	<p>The strategic plan should be based on the knowledge of improvement science and rapid cycle testing, and include the key components of a <a href="#">Driver Diagram</a>, specific measurement strategies, implementation milestones, a communication plan that includes engagement with local and regional stakeholders and a <a href="#">Financial Sustainability Plan</a>.</p>	<p>0. No evidence of a strategic plan.</p> <p>1. A written strategic plan, but it lacks key components.</p> <p>2. A written strategic plan that includes all key components.</p>	<p>Institute for Healthcare Improvement</p>

Name	Description of Goal	Components	Scoring	Evidence-base, Source of Data
<b>Healthcare Delivery System Gap Analysis</b>	<b>S3:</b> Program is designed to serve unmet needs in the local community. <b>{CORE MEASURE}</b>	<p>There is a description of illnesses and/or injuries within the community paramedicine service area including the distribution by geographic area, high-risk populations (i.e.: high utilizer populations, populations with high prevalence of chronic diseases, etc.), using payer, provider, public health, public safety and other data sources.</p> <p>There is a description of the process and methods used to conduct the HDSGA; describe community input received.</p>	<ol style="list-style-type: none"> <li>0. There is no written description of illness and/or injuries within the community paramedicine service area.</li> <li>1. One or more target population-based data sources to describe illness and injury within the target population, but healthcare system utilization data sources are not used.</li> <li>2. One or more target population-based data sources and one or more healthcare system utilization data sources are used to describe illness and injury prevalence and healthcare system utilization within the service area.</li> </ol>	Adapted from HRSA Community Paramedic Evaluation Tool

Name	Description of Goal	Components	Scoring	Evidence-base, Source of Data
<b>Community Resource Capacity Assessment</b>	<b>S4:</b> Program is designed to address gaps in resource capacity.	The community paramedicine program has completed a comprehensive inventory that identifies the availability and distribution of current capabilities and resources from a variety of partners and organizations throughout the community.	<ul style="list-style-type: none"> <li>0. There is no community-wide resource assessment.</li> <li>1. A resource assessment has been completed that documents the resources available to help meet the clinical needs of patients that may be enrolled in the community paramedicine program.</li> <li>2. A community-wide resource assessment has been completed that documents the resources available in the local community to help meet the clinical, behavioral and social needs of patients that may be enrolled in the community paramedicine program.</li> </ul>	Adapted from HRSA Community Paramedic Evaluation Tool
<b>Integration/Program Integrity</b>	<b>S5:</b> Program integrates with external regional healthcare system stakeholders	There has been an initial assessment (and periodic reassessment) of overall program effectiveness completed by an external agency (i.e.: CMS Quality Improvement Network or external stakeholder group comprised of healthcare, payer, social service and patient representatives).	<ul style="list-style-type: none"> <li>0. No external examination of the community paramedicine program overall or individual components has occurred.</li> <li>1. An outside group of stakeholders has conducted a formal assessment and has made specific recommendations to the program.</li> <li>2. Independent external reassessment occurs regularly, at least every two years.</li> </ul>	Adapted from HRSA Community Paramedic Evaluation Tool

Name	Description of Goal	Components	Scoring	Evidence-base, Source of Data
<b>Organizational Readiness Assessment – Medical Oversight</b>	<b>S6:</b> Organization is committed to strong medical oversight, effective clinical quality improvement, comprehensive education and continuing education program.	The community paramedicine program medical director has the authority to adopt protocols, implement a performance improvement system, ensure appropriate practice of community paramedicine providers, and generally ensure medical appropriateness of the community paramedicine program based on regulatory agency scope of practice and accepted standards of medical care.	<ol style="list-style-type: none"> <li>0. There is no community paramedicine program medical director.</li> <li>1. There is a community paramedicine program medical director with a written job description; however, the individual has no specific authority or time allocated for those tasks.</li> <li>2. There is a community paramedicine program medical director with a written job description. The community program medical director has adopted protocols, implemented a performance improvement program, and is generally taking steps to improve the medical appropriateness of the community paramedicine program.</li> </ol>	Adapted from HRSA Community Paramedic Evaluation Tool  NAEMSP Position Paper on MIH/CP program development

Name	Description of Goal	Components	Scoring	Evidence-base, Source of Data
<b>Organizational Readiness Assessment - Health Information Technology (HIT)</b>	<b>S7:</b> Organization has advanced health information technology systems and infrastructure.	The community paramedicine program has a unique medical record for each enrolled patient; and collects and uses patient data as well as provider data to assess system performance and to improve quality of care.	<ol style="list-style-type: none"> <li>0. There is no patient centric medical record of CP interventions.</li> <li>1. Patient centric medical records are used manually but are not used to assess system performance or quality of care.</li> <li>2. Patient centric medical records are collected electronically and are used to assess both system performance and to improve quality of care across the program.</li> </ol>	Adapted from HRSA Community Paramedic Evaluation Tool
<b>HIT Integration with Local/Regional Healthcare System</b>	<b>S8:</b> Organization has advanced health information technology systems and infrastructure.	The community paramedicine HIT system is integrated with the local healthcare providers to facilitate access to patient records by healthcare system participants.	<ol style="list-style-type: none"> <li>0. There is no exchange of patient data with other healthcare providers.</li> <li>1. CP medical records and data are pushed to healthcare providers or a health information exchange or its equivalent.</li> <li>2. There is bi-directional exchange of the electronic medical record and data for each patient/client contact that can be accessed by primary care providers, case managers, social service agencies and/or payers.</li> </ol>	Adapted from HRSA Community Paramedic Evaluation Tool

Name	Description of Goal	Components	Scoring	Evidence-base, Source of Data
<b>Public &amp; Stakeholder Engagement</b>	<b>S9:</b> Care Coordination Advisory Committee	Community paramedicine program, in concert with relevant stakeholders meets <del>regularly</del> and advises the program on strategies for improving care coordination.	<ul style="list-style-type: none"> <li>0. There is no care coordination advisory committee.</li> <li>1. There is evidence of engagement with relevant stakeholders.</li> <li>2. There is an established care coordination advisory committee and all key stakeholders are represented.</li> </ul>	Adapted from HRSA Community Paramedic Evaluation Tool
<b>Specialized Training &amp; Education</b>	<b>S10:</b> Specialized original and continuing education for community paramedic practitioners	A specialized educational program has been used to provide foundational knowledge for community paramedic practitioners based on a nationally recognized or state approved curriculum.	<ul style="list-style-type: none"> <li>0. There is no specialized education offered.</li> <li>1. There is specialized education offered, but it lacks key elements of instruction.</li> <li>2. There is specialized education offered meeting or exceeding a nationally recognized or state approved curriculum.</li> </ul>	North Central EMS Institute Community Paramedic Curriculum or equivalent.
<b>Compliance with State and Federal Regulations</b>	<b>S11:</b> <a href="#">Compliance Plan</a> {CORE MEASURE}	The community paramedicine program has a plan in place which assures compliance with all applicable laws and regulations and which prevents waste, fraud, abuse.	<ul style="list-style-type: none"> <li>0. No evidence of a compliance plan.</li> <li>1. A written compliance plan, but it lacks key components.</li> <li>2. A written compliance plan that includes all key components.</li> </ul>	Centers for Medicare and Medicaid Services

## Outcome Measures for Community Paramedic Program Component

*Describes how the system impacts the values of patients, their health and well-being*

Domain	Name	Description of Goal	Value 1	Value 2	Formula	Evidence-base, Source of Data
Quality of Care & Patient Safety Metrics	<b>Q1:</b> Primary Care Utilization { <b>CORE MEASURE</b> }	Increase the number and percent of patients utilizing a <a href="#">Primary Care Provider</a> (if none upon enrollment)	Number of <a href="#">Enrolled Patients</a> with an established PCP relationship upon graduation	Number of enrolled patients without an established PCP relationship upon enrollment	Value 1  Value 1/Value 2	Agency records
	<b>Q2:</b> <a href="#">Medication Inventory</a>	Increase the number and percent of medication inventories conducted with issues identified and communicated to PCP	Number of medication inventories with issues identified and communicated to PCP	Number of medication inventories completed	Value 1  Value 1/Value 2	Agency records
	<b>Q3.1:</b> <a href="#">Care Plan Developed</a> { <b>CORE MEASURE</b> }	Increase the number and percent of patients who have an identified and documented plan of care with outcome goals established by a physician and facilitated by the CP	Number of patients with a plan of care communicated by the patient's PCP	All enrolled patients	Value 1  Value 1/Value 2	Agency records
	<b>Q3.2:</b> <a href="#">Care Plan Developed</a> { <b>CORE MEASURE</b> }	Increase the number and percent of patients who have an identified and documented plan of care with outcome goals established by the patient's PCP and facilitated by the CP	Number of patients with a plan of care communicated by the patient's PCP	All enrolled patients	Value 1  Value 1/Value 2	Agency records

Domain	Name	Description of Goal	Value 1	Value 2	Formula	Evidence-base, Source of Data
	<b>Q4:</b> Provider Protocol Compliance <b>{CORE MEASURE}</b>	Eliminate plan of care deviations without specific medical direction supporting the deviation	Number of plan of care deviations without medical direction support	All patient encounters/interventions	Value 1 Value 1/Value 2	Agency records
	<b>Q5:</b> Unplanned Acute Care Utilization (e.g.: emergency ambulance response, urgent ED visit)	Minimize rate of patients who require unplanned acute care related to the CP care plan within 24 hours after a CP intervention	Number of patients who require unplanned acute care related to the CP care plan within 24 hours after a CP intervention	All CP visits in which a referral to Acute Care was NOT REQUIRED	Value 1/Value 2	Agency records
	<b>Q6:</b> <a href="#">Adverse Outcomes</a> <b>{CORE MEASURE}</b>	Minimize adverse effects (harmful or undesired effects) resulting from a medication or other treatment related to CP intervention within 24 hours of the CP intervention	Number of deaths from a cause related to CP intervention	All patient encounters/interventions	Value 1/ Value 2	Agency records
Number of <a href="#">Critical Care Admissions</a> related to CP intervention			All patient encounters/interventions			
	<b>Q7:</b> Community Resource Referral	Increase portion of patients referred to community resources for reconciliation of immediate social, transportation and environmental hazards and risks	Number of referrals to community resources (3 referrals for 1 patient = 3 referrals)	Number of enrolled patients with an identified need	Value 1/ Value 2	Agency records

Domain	Name	Description of Goal	Value 1	Value 2	Formula	Evidence-base, Source of Data
	<b>Q8:</b> Behavioral Health Services Referral	Increase portion of patients referred to a behavioral health professional for behavioral health intervention	Number of patients with an established therapeutic relationship with behavioral health resources	Number of enrolled patients with an identified need	Value 1/ Value 2	Agency records
	<b>Q9:</b> <a href="#">Case Management</a> Referral	Increase portion of patients referred to case management services	Number of patients with an established therapeutic relationship to case management resources	Number of enrolled patients with an identified need	Value 1/ Value 2	Agency records

Domain	Name	Description of Goal	Value 1	Value 2	Formula	Evidence-base, Source of Data
Experience of Care Metrics	E1: Patient Satisfaction { <i>CORE MEASURE</i> }	Optimize patient satisfaction scores by intervention.	To be determined based on tools developed	To be determined based on tools developed		Recommend an externally administered and nationally adopted tool, such as, HCAPHS; Home Healthcare CAPHS (HHCAPHS)
	E2: Patient Quality of Life	Improve patient self-reported quality of life scores.	To be determined based on tools developed	To be determined based on tools developed		Recommended tools (EuroQol EQ-5D-5L, CDC HRQoL, University of Nevada-Reno)

Domain	Name	Description of Goal	Value 1	Value 2	Formula	Notes
Utilization Metrics	<b>U1:</b> Ambulance Transports { <b>CORE MEASURE</b> }	Reduce rate of <u>unplanned</u> ambulance transports to an ED by <i>enrolled patients</i>	Number of <i>unplanned</i> ambulance transports up to 12 months post-graduation	Number of <i>unplanned</i> ambulance transports up to 12 months pre- <u>Enrollment</u>	(Value 1-Value 2)/Value 2	Monthly run chart reporting and/or pre-post intervention comparison
	<b>U2: Hospital ED Visits</b> { <b>CORE MEASURE</b> }	Reduce rate of ED visits by <i>enrolled patients</i> by intervention	ED visits up to 12 months post-graduation	ED visits up to 12 months pre-enrollment	(Value 1-Value 2)/Value 2	Monthly run chart reporting and/or pre-post intervention comparison
			<b>OR</b> Number of ED Visits avoided in CP intervention patient		Value 1	
	<b>U2.1:</b> Emergency Department Capacity	Increase number of hours of ED bed utilization avoided by CP patients during measurement period	Number of ED visits post enrollment * average Door to Disposition time for all ED patients	Number of ED visits pre enrollment * average Door to Disposition time or all ED patients	Value 1-Value 2	Monthly run chart reporting and/or pre-post intervention comparison
	<b>U3: All - cause Hospital Admissions</b> { <b>CORE MEASURE</b> }	Reduce rate of all-cause hospital admissions by <i>enrolled patients</i> by intervention	Number of hospital admissions up to 12 months post-graduation	Number of hospital admissions up to 12 months pre-enrollment	(Value 1-Value 2)/Value 2	Monthly run chart reporting and/or pre-post intervention comparison
	<b>U4: Unplanned 30-day Hospital Readmissions</b> { <b>CORE MEASURE</b> }	Reduce rate of all-cause, unplanned, 30-day hospital readmissions by <i>enrolled patients</i> by intervention	Number of actual 30-day readmissions	Number of anticipated 30-day readmissions	(Value 1-Value 2)/Value 2	Monthly run chart reporting and/or pre-post intervention comparison
	<b>U5:</b> Length of Stay	Reduce <u>Average Length of Stay</u> by enrolled patients by DRG	ALOS by DRG for enrolled patients at end of implementation year X	ALOS by DRG for patients NOT enrolled at the end of implementation year X	(Value 1-Value 2)/Value 2	Monthly run chart reporting and/or pre-post intervention comparison

Domain	Name	Description of Goal	Value 1	Value 2	Formula	Evidence-base, Source of Data
Cost of Care Metrics -- Expenditure Savings	<b>C1: Ambulance Transport Savings (ATS)</b> {CORE MEASURE}	Reduce <a href="#">Expenditures</a> for <a href="#">unplanned</a> ambulance transports to an ED <i>pre and post enrollment or per event</i>	Ambulance transport utilization change in measure period X average payment per transport for enrolled patients MINUS <a href="#">Expenditure per CP Patient Contact</a>	Number of patients enrolled in the CP program	Value 1 / Value 2	Monthly run chart reporting and/or pre-post intervention comparison  CMS Public Use Files (PUF) for ambulance supplier expenditures or locally derived number
	<b>C2: Hospital ED Visit Savings (HEDS)</b> {CORE MEASURE}	Reduce expenditures for ED visits <i>pre and post enrollment or per event</i>	ED utilization change in measure period X average payment per ED visit for enrolled patients MINUS Expenditure per CP patient contact	Number of patients enrolled in the CP program	Value 1/ Value 2	Monthly run chart reporting and/or pre-post intervention comparison  Medical Expenditure Panel Survey (MEPS), or individually derived payer data
	<b>C3: All-cause Hospital Admission Savings (ACHAS)</b> {CORE MEASURE}	Reduce expenditures for <a href="#">All-Cause Hospital Admissions</a> <i>pre and post enrollment or per event</i>	Hospital admission change in measure period X average payment per admission for enrolled patients MINUS Expenditure per CP patient contact	Number of patients enrolled in the CP program	Value 1/ Value 2	Monthly run chart reporting and/or pre-post intervention comparison  Medical Expenditure Panel Survey (MEPS), or individually derived payer data

Domain	Name	Description of Goal	Value 1	Value 2	Formula	Evidence-base, Source of Data
	<b>C4: <a href="#">Unplanned</a></b> 30-day Hospital Readmission Savings (UHRS) <b>{CORE MEASURE}</b>	Reduce expenditures for all-cause, unplanned, 30-day hospital readmissions <i>pre and post enrollment or per event</i>	Hospital readmission change in measure period X average payment per readmission for enrolled patients	Number of patients enrolled in the CP program	Value 1/ Value 2	Monthly run chart reporting and/or pre-post intervention comparison  Medical Expenditure Panel Survey (MEPS), or individually derived payer data
	<b>C5: Unplanned Skilled Nursing (SNF) and Assisted Living Facility (ALF) Savings (USNFS)</b>	Reduce expenditures for all-cause, unplanned, skilled nursing and/or assisted living facility admissions pre and post enrollment or per event	SNF and/or ALF admissions change in measure period X average payment per admission for enrolled patients	Number of patients enrolled in the CP program	Value 1/ Value 2	Monthly run chart reporting and/or pre-post intervention comparison  Medical Expenditure Panel Survey (MEPS), or individually derived payer data
	<b>C6: <a href="#">Total Expenditure Savings</a></b> <b>{CORE MEASURE}</b>	Total expenditure savings for all CP interventions	Calculated savings for each enrollee (ATS+HEDS + (ACHAS or UHRS)+USNFS)) MINUS the Expenditure of the CP interventions for intervention per enrollee, including alternative sources of care Expenditures		Sum of Value 1	Monthly run chart reporting and/or pre-post intervention comparison

Domain	Name	Description of Goal	Value 1	Value 2	Formula	Evidence-base, Source of Data
	<b>C7: Total Cost of Care</b>	Reduce total healthcare expenditures for enrolled patients	Total cost of care for enrolled patients for 12 months post enrollment MINUS total cost of care for enrolled patients pre-enrollment			<a href="#">Payer Derived</a>

Domain	Name	Description of Goal	Value 1	Value 2	Formula	Evidence-base, Source of Data
<b>Balancing Metrics</b>	<b>B1:</b> Practitioner (EMS/MIH) Satisfaction	Optimize practitioner satisfaction scores	To be determined based on tools developed			Recommend externally administered
	<b>B2:</b> Partner Satisfaction	Optimize partner (healthcare, behavior health, public safety, community) satisfaction scores	To be determined based on tools developed			Recommend externally administered
	<b>B3:</b> Primary Care Provider (PCP) Use	Optimize Number of PCP visits resulting from program referrals during enrollment	Number of PCP visits during enrollment		Value 1	Network provider or patient reported
	<b>B4:</b> Specialty Care Provider (SCP) Use	Optimize number of SCP visits resulting from program referrals during enrollment	Number of SCP visits during enrollment		Value 1	Network provider or patient reported
	<b>B5:</b> Behavioral Care Provider (BCP) Use	Optimize number of BCP visits resulting from program referrals during enrollment	Number of BCP visits during enrollment		Value 1	Network provider or patient reported
	<b>B6:</b> Social Service Provider (SSP) Use	Optimize number of SSP visits resulting from program referrals during enrollment	Number of SSP visits during enrollment		Value 1	Network provider or patient reported
	<b>B7:</b> Emergency Department Capacity	Decrease number of hours of ED bed utilization by CP patients during measurement period	Number of ED visits post enrollment * average Door to Disposition time for all ED patients	Number of ED visits pre enrollment * average Door to Disposition time or all ED patients	Value 1-Value 2	Monthly run chart reporting and/or pre-post intervention comparison

Domain	Name	Description of Goal	Value 1	Value 2	Formula	Evidence-base, Source of Data
	<b>B8:</b> System Capacity - PCP	Number and percent of patients <b>unable</b> to receive PCP services that they would otherwise be eligible to receive as a result of lack of PCP system capacity	Number of patients referred to PCP services that were unable to receive PCP services due to lack of PCP capacity	Number of patients referred to PCP services	Value 1 Value 1/Value 2	Network provider or patient reported
	<b>B9:</b> System Capacity - SCP	Number and percent of patients <b>unable</b> to receive SCP services that they would otherwise be eligible to receive as a result of lack of SPC system capacity	Number of patients referred to SCP services that were unable to receive SPC services due to lack of SPC capacity	Number of patients referred to SCP services	Value 1 Value 1/Value 2	Network provider or patient reported
	<b>B10:</b> System Capacity - BCP	Number and percent of patients <b>unable</b> to receive BCP services that they would otherwise be eligible to receive as a result of lack of BCP system capacity	Number of patients referred to BCP services that were unable to receive BCP services due to lack of BCP capacity	Number of patients referred to BCP services	Value 1 Value 1/Value 2	Network provider or patient reported
	<b>B11:</b> System Capacity - SSP	Number and percent of patients <b>unable</b> to receive SSP services that they would otherwise be eligible to receive as a result of lack of SSP system capacity	Number of patients referred to SSP services that were unable to receive SSP services due to lack of SSP capacity	Number of patients referred to SSP services	Value 1 Value 1/Value 2	Network provider or patient reported

## Definitions

### **Specific Metric Definitions:**

**Expenditure:** The amount **PAID** for the referenced service. Expenditures should generally be based on the national and regional amounts paid by Medicare for the covered services provided.

Examples:

<b>Service</b>	<b>Cost to Provide the Service by the Provider</b>	<b>Amount Charged (billed) by the Provider</b>	<b>Average Amount Paid by Medicare</b>
Ambulance Transport	\$350	\$1,500	<b>\$420</b>
ED Visit	\$500	\$2,000	<b>\$969</b>
PCP Office Visit	\$85	\$199	<b>\$218</b>

National CMS Expenditure by Service Type (note: it is preferable to use local or regional data if available, if not, these sources can be surrogate data if needed):

<b>Service</b>	<b>Average Expenditure</b>	<b>Source</b>
Emergency Ambulance Transport	\$419	Medicare Tables from CY 2012 as published
ED Visit	\$969	<a href="http://www.cdc.gov/nchs/data/hus/hus12.pdf">http://www.cdc.gov/nchs/data/hus/hus12.pdf</a>
PCP Office Visit	\$218	<a href="http://meps.ahrq.gov/data_files/publications/st381/stat381.pdf">http://meps.ahrq.gov/data_files/publications/st381/stat381.pdf</a>
Hospital Admission	\$10,500	<a href="http://www.hcup-us.ahrq.gov/reports/projections/2013-01.pdf">http://www.hcup-us.ahrq.gov/reports/projections/2013-01.pdf</a>

### **Triple Aim**

- Improve the quality and experience of care
- Improve the health of populations
- Reduce per capita cost

**Driver Diagram:** A Driver Diagram is a strong one-page conceptual model which describes the projects' theory of change and action. It is a central organizing element of the operations/implementation plan and includes the aim of the project and its goals, measures, primary drivers and secondary drivers. The aim statement describes what is to be accomplished, by how much, by when and where?

- Aim – A clearly articulated goal statement that describes how much improvement by when and links all the specific measures. What are we trying to accomplish? CMMI/IHI.
- Primary Drivers – System components that contribute directly to achieving the aim; each primary driver is linked to clearly defined outcome measure(s). CMMI.
- Secondary Drivers – Actions necessary to achieve the primary driver; each secondary driver is linked to clearly defined process measure(s). CMMI.

### **General Definitions**

- Adverse Outcome: Death, temporary and/or permanent disability requiring intervention.
- All Cause Hospital Admission: Admission to an acute care hospital for any admission DRG.
- Average Length of Stay: The average duration, measured in days, of an in-patient admission to an acute care, long term care, or skilled nursing facility
- Care Plan: A written plan that addresses the medical and psychosocial needs of an enrolled patient that has been agreed to by the patient and the patient's primary care provider.
- Case Management Services: Care coordination activities provided by another social service agency, health insurance payer, or other organization.
- Compliance Plan: A Compliance Plan clearly articulates policies, procedures and processes to assure compliance with all applicable laws and regulations associated with the community paramedicine program, including; prevention, detection and correction; conflict of interest policies; and mechanisms for identifying and addressing noncompliance.
- Core Measure: Required measurement for reporting on MIH-CP services.
- Critical Care Unit Admissions or Deaths: Admission to critical care unit within 48 hours of CP intervention; unexpected (non-hospice) patient death within 48 hours of CP visit.
- Desirable Metric: Optional measurement.
- Door to Disposition Time: "Door" time is defined according to the EMTALA and the AHA STEMI Guidelines: "The time at which the ambulance arrives at the hospital." Disposition time means the time at which the patient is admitted to the hospital as an inpatient or observation patient; or a patient is designated for observation within a Clinical Decision area of the ED, or is discharged from the ED.
- Enrolled Patient: A patient who is enrolled with the EMS/MIH program through either; 1) a 9-1-1 or 10-digit call; 2) a formal referral and enrollment process, or 3) contact by a provider within the EMS system with additional training on handling special patient populations.
- Evaluation: determination of merit using standard criteria.
- Executive Level: The most senior leadership of the organization. For governmental agencies, this should be the Chief of the Department, City/County Manager, City/County Commission, or other similar leadership. For private agencies, this would be the owner, CEO, President, Executive Director, or other similar leadership.
- Expenditure per CP Patient Contact: The average payment received by the agency calculated at a per patient contact rate. For example, if the agency is receiving payments on a per patient contact basis of \$75, then the average expenditure per patient contact is \$75. If the agency is getting an enrollment fee of \$1,200 and the average number of patient contacts per enrollment is 9, then the expenditure per patient contact is  $\$1,200 / 9 = \$133.34$ .
- Financial Sustainability Plan: a document that describes the expected revenue and/or the economic model used to sustain the program.
- Guideline: a statement, policy or procedure to determine course of action.

- Hotspotter/ High Utilizer: Any patient utilizing EMS or ED services 12 times in a 12 month period, or as defined by local program goals.
- Measure: dimension, quantity or capacity compared to a standard.
- Medication Inventory: The process of creating the most accurate list possible of all medications a patient is taking — including drug name, dosage, frequency, and route — and comparing that list against the physician’s admission, transfer, and/or discharge orders, with the goal of providing correct medications to the patient at all transition points within the hospital.
- Metric: a standard of measurement.
- Payer Derived: Measure that must be generated by a payer from their database of expenditures for a member patient.
- Pre and Post Enrollment: The beginning date and ending date of an enrolled patient.
- Primary Care Provider: The licensed care provider who is primarily responsible for the medical care of the patient. Generally, this provider develops the patient’s care plan, including the assessments and interventions to be completed by a community paramedic. It could be a physician, or an established Patient Centered Medical Home such as a community clinic or Federally Qualified Health Center.
- Repatriation: Returning a person to their original intended destination, such as an emergency department, following an intervention
- Social & Environmental Hazards and Risks: include trip/fall hazards, transportation, electricity, food, etc.
- Standard: criteria as basis for making a judgment.
- Total Expenditure Savings: The calculated savings based on the number of avoided events (i.e.: ambulance transports, ED visits, admissions) for all enrolled patients in the CP intervention.
- Unplanned: Any service that is not part of a patient’s plan of care.