Assessing the Outcomes and Value of EMS-Based Mobile Integrated Healthcare Programs

Introduction

Mobile Integrated Healthcare is the provision of patient-centered healthcare using mobile resources in the out-of-hospital environment. EMS-Based MIH is provided by a wide array of healthcare entities and practitioners that are administratively or clinically integrated with emergency medical services (EMS) agencies. An essential component of EMS-Based MIH programs is ability to demonstrate the simultaneous achievement of enhanced healthcare outcomes at reduced costs for the population served by the agency providing MIH services.

Objective

The primary objective of this Outcomes Measures Project (OMP) is to develop uniform measurement and reporting of specified and defined measures to demonstrate replication of successful interventions/programs and to further build the evidence base for economic sustainability and program replication. The project has three primary objectives that were articulated by a senior Centers for Medicare and Medicaid Services (CMS) official in March 2014:

- Develop a standard process for tracking and reporting outcomes from diverse programs to uniformly assess the clinical and economic value of EMS-Based MIH programs as a basis for reimbursement for the services provided
- Assure program integrity by defining the key foundational elements of programs structured for quality and success
- Identify best practices that can be used to replicate success in programs across a diverse geographic and demographic communities

Background

A core group of clinical, administrative and policy experts operating EMS-Based MIH programs began development of the measures project with invited participants for over twenty EMS and healthcare associations such as the American College of Emergency Physicians (ACEP), the Institute for Healthcare Improvement (IHI), the National Association of EMS Physicians (NAEMSP), the Agency for Healthcare Research and Quality (AHRQ), the National Committee on Quality Assurance (NCQA), the American Ambulance Association (AAA) and the National Association of EMTs (NAEMT). Over thirty operating EMS-based MIH programs were also joined the project, including agencies such as Regional Emergency Medical Services Agency, MedStar Mobile Healthcare, Allina Health, Mayo Medical Transport, UPMC Connect Community Paramedic and Mesa Fire and Medical Department.

The measures were drafted and circulated among all stakeholders for feedback and recommendation for change. There were over 65 specific recommendations submitted and revisions made to the measures based on the feedback. In addition, face-to-face briefings were held with CMS, AHRQ and NCQA to review the proposed measures.

Intended Use

This document is intended to be used by EMS agencies and EMS medical directors who plan to monitor and report the outcomes of their MIH-CP interventions. The priority was to create metrics that could be utilized by any agency, regardless of the availability of academic resources to help with data collection and analysis. As such, the proposed metrics rely heavily on descriptive statistics and measures that may introduce inherent biases (i.e. *the lack of a non-intervention cohort to control for possible regression to the mean in the utilization metrics*). Those agencies who are capable of more robust scientific methods are encouraged to use better intervention designs and statistical analyses, but to also report the metrics as we propose to allow for a meta-analysis of similar programs in the future.

Further, while there are 45 measures in the uniform data set, it is likely that many programs will not be able to report all measures. However, there was consensus among the developers, operating programs and key external stakeholder that some of the measures are essential or mandatory for externally reporting outcomes from EMS-Based MIH programs.

Operating EMS-Based MIH programs should brief their local internal and external stakeholders and then begin the steps necessary to begin measuring and reporting at least the four mandatory and 18 essential core measures using the values and calculations contained within this document. A companion electronic workbook has been developed to assist agencies with the measures reporting to their local partners, as well as for submission to a national databases for the global reporting of outcomes across multiple programs.

This document contains *Program Structure* and *Outcome* measures for the *Community Paramedicine* component of an EMS-Based MIH program. Additional *Program Structure* and *Outcome* measures are currently being developed for the *Ambulance Transport Alternatives* and *911 Nurse Triage* components of EMS-Based MIH programs.

Acknowledgements:

This document was developed by the core development group consisting of:

Brenda Staffan
Director, Community Health Programs
Regional Emergency Medical Services Authority, Reno, NV

Gary Wingrove
Government Affairs Specialist
Mayo Clinic Medical Transport
Rochester, MN

Dan Swayze, DrPH, MBA, MEMS
Vice President, COO
Center for Emergency Medicine of Western Pennsylvania, Inc.
Pittsburgh, PA

Brian LaCroix
President / EMS Chief
Allina Health Emergency Medical Services
St. Paul, MN

Matt Zavadsky, MS-HSA, EMT
Director of Public Affairs
MedStar Mobile Healthcare
Fort Worth, TX

Brent Myers, MD, MPH
Chief Medical Officer
Evolution Health
Dallas, TX

Gary A. Smith, MD, MMM, FAAFP
Medical Director
Mesa Fire and Medical Department
Mesa, AZ

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