



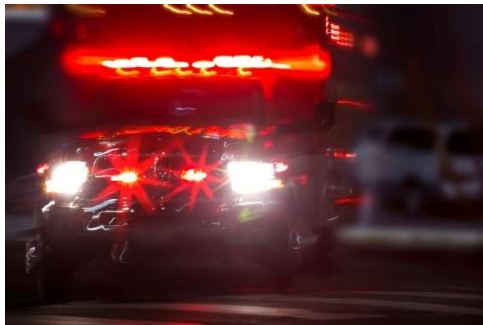
Mobile Integrated Health Care



TMF[®]
Health Quality Institute

Christopher Hanson, PA-C, CMHP
Innovation Strategist

Overview



Emergency Medical Services (EMS) Evolution



Mobile Integrated Health Care (MIH)



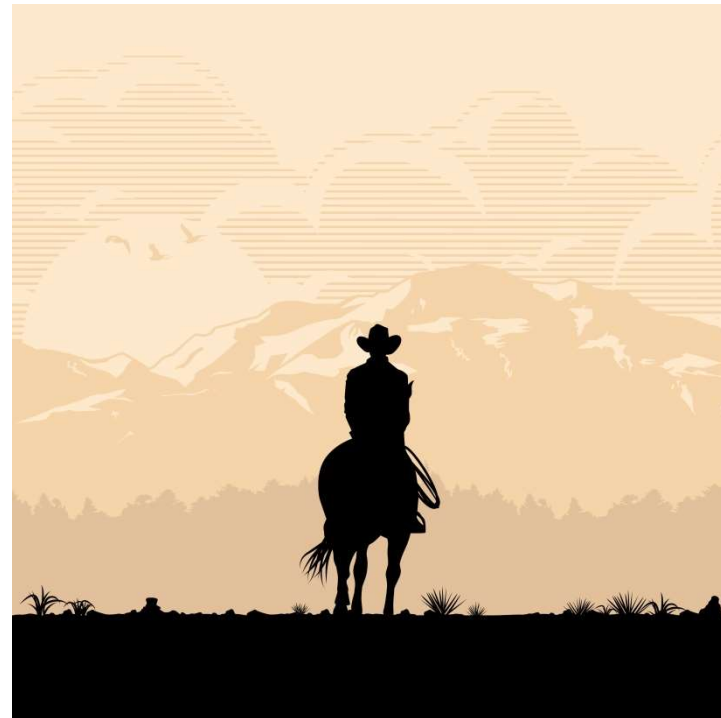
Implementation



Next Steps

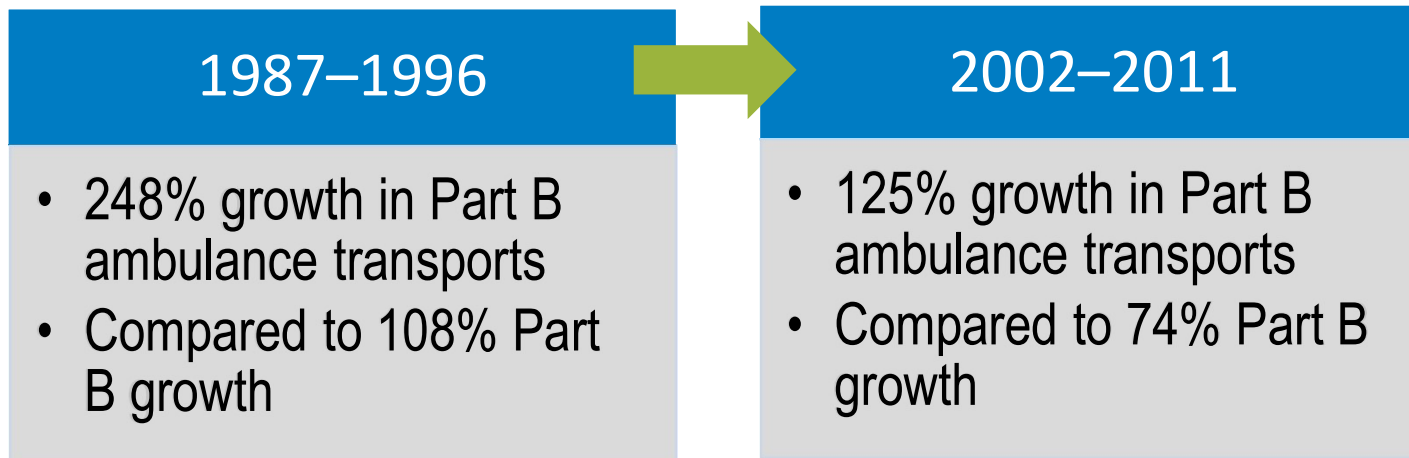
Traditional EMS

- Stand-alone
- One-size-fits-all
- Single procedure



Traditional EMS

U.S. Department of Health and Human Services, Office of Inspector General
Reports 1998 and 2013



EMS Transition



System processes → Patient outcomes



Mobile Integrated Health Care (MIH)



MIH Attributes

- Tailored to the needs of the community
 - Bridging care delivery gaps
- EMS integration



MIH Components

- EMS
- Advanced triage
- Case management
- Alternate destination
- Community paramedicine



MIH Care Models

- Public health
- Primary care
- Value-based care

TMF's Initial MIH Work

MIH-CP

Community Paramedics Reduce Hospital, Ambulance Use

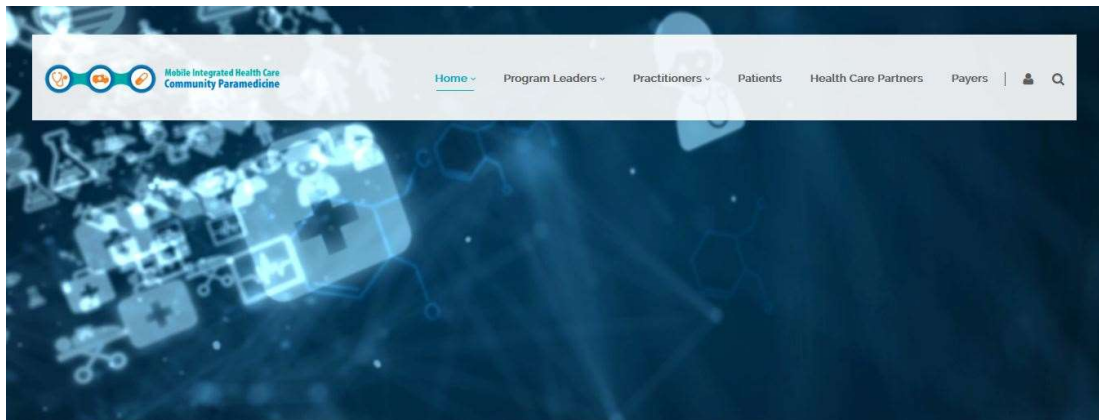
06/29/2018

Issue: July 2018

Kristine 'Kris' S. Calderon, PhD, CHES; Donna Zimmerman, RN, BSN; Joshua Clouse, BSBM, CP-C, Lic-P;
Matt Zavadsky, MS-HSA, EMT; Michelle Stehling, RD, LD

Assessment of infrastructure and challenges in U.S. mobile integrated healthcare (MIH) programs

Christopher Hanson, PA-C; Kris Calderon, PhD; Jill Nault-Connors, PhD; Matt Zavadsky, MHA; Kevin Munjal, MD; Russell Kohl, MD; Jay Crosson, PhD



Welcome to TMF Health Quality Institute's Mobile Integrated Health Care – Community Paramedicine Learning and Action Network

Implementation



Workflow Process Mapping



Stakeholder Engagement



Measurement

Workflow Process Mapping

Internal



Organizational
Readiness
Assessment



National Association of EMTs
MIH Structural Metrics

External



Community Needs



Health Care Delivery Gap Analysis

Stakeholder Engagement



$$\text{Success} = \sum_{\text{Insight}}^{\text{Action}} \left[\frac{\text{Value Created}}{\text{Resources Consumed}} \right] \text{Perception}$$

Stakeholders

Partners

- Not just hospitals
- Inter-professional cooperation reduces conflict

Payers

- Creation of novel reimbursement programs
- Requires identification of value to all parties

Patients

- Maintains patient-centered focus
- Ensures patient values are included

Measurement

MIH Outcomes Measures

34 measures in five domains:

- Quality and safety
- Experience of care
- Utilization
- Cost
- Balancing measures

Developed by a multi-stakeholder group, including the National Committee for Quality Assurance, and convened by the National Association of Emergency Medical Technicians.

HIT Optimization

Coordination and integration

- Automating data flows
- Sharing raw and analyzed results

Measurement plan must include plan for regular re-assessment and modification based on results



Challenges



Financial Sustainability

- Novel approaches
- Mindset change
- Data development



Program Referrals

- Triage
- “Stem the tide”



Interoperability

- Electronic health records (EHR) and electronic patient care reporting (ePCR) issues
- Software
- Measurement plan

Results

Learning and Action Network (LAN)

- 621 users
- 123 accounts
- 1,082 sessions
- 21 program profiles, 11% of MIH programs

St. Charles County, Missouri Ambulance District

2019 Missouri SQUIRE

Program	Period	Paid amount ambulance claims	Paid amount readmission claims	# SNF claims
SCCAD	11/1/2015-8/31/2016	\$2,936,582.45	\$ 46,296,935.68	4,884
SCCAD	11/1/2017-8/31/2018	\$2,761,963.63	\$ 34,391,666.93	3,844
% change		-5.90%	-25.7%	-21.3%
CJ Cares	1/1/2016-8/31/2016	\$359,541.55	\$ 9,223,210.37	731
CJ Cares	1/1/2018-8/31/2018	\$344,740.46	\$ 5,472,354.13	502
% change		-4.10%	-40.7%	-31.3%
Cox Health	1/1/2016-8/31/2016	n.d.	\$ 34,908,883.36	4,202
Cox Health	1/1/2018-8/31/2018	n.d.	\$ 26,800,148.08	3,987
% change		n.d.	-23.2%	-5.1%

ID	Measure	Description	Value	Goal	Result
q1	Primary Care Utilization	Number of enrolled patients with an established PCP relationship upon graduation	24	Increase the number and percent of patients utilizing a Primary Care Provider (if none upon enrollment).	100.0%
		Number of enrolled patients without an established PCP relationship upon enrollment	0		
E2	Patient Quality of Life	Overall Score on Enrollment	31	Improve patient self-reported quality of life scores.	40.3%
		Overall Score on Graduation	43.5		
u1	Ambulance Transports	Number of unplanned ambulance transports up to 12 months post-enrollment	21	Reduce rate of unplanned ambulance transports to an ED by enrolled patients.	-58.8%
		Number of unplanned ambulance transports up to 12 months pre-enrollment	51		

Results

Plano, Texas, Fire Department

ID	Measure	Description	Value	Goal	Result
E2	Patient Quality of Life	Overall Score on Enrollment	46	Improve patient self-reported quality of life scores.	73.9%
		Overall Score on Graduation	80		
U1	Ambulance Transports	Number of unplanned ambulance transports up to 12 months post-enrollment	54	Reduce rate of unplanned ambulance transports to an ED by enrolled patients.	-40.0%
		Number of unplanned ambulance transports up to 12 months pre-enrollment	90		
U2	Hospital ED Visits (90 days)	ED visits up to 12 months post-graduation	54	Reduce rate of ED visits by enrolled patients by intervention.	-40.0%
		ED visits up to 12 months pre-enrollment	90		
U4	Unplanned 30-day Hospital Readmissions	Number of actual 30-day readmissions	21	Reduce rate of all-cause, unplanned, 30-day hospital readmissions by enrolled patients by intervention.	-81.3%
		Number of anticipated 30-day readmissions	112		
C6	Total Expenditure Savings			Total expenditure savings for all CP interventions {Higher Value Desirable}	\$820,632.00

Program	Period	Paid amount ambulance	Paid amount readmission	# SNF claims
Heart of TX	1/1/2016-8/31/2016	n.d.	\$ 137,444,836	11,623
Heart of TX	1/1/2018-8/31/2018	n.d.	\$ 122,570,637	11,406
% change		n.d.	-10.8%	-1.9%

Results

Metropolitan EMS, Little Rock, Arkansas

Program	Period	Paid amount ambulance	Paid amount readmission	# SNF claims
Little Rock (T1)	3/1/2015 - 2/28/2016	\$ 2,087,824.00	\$ 40,208,679.94	3,155
Little Rock (T2)	3/1/2016 - 2/28/2017	\$ 2,727,952.11	\$ 48,947,738.59	4,509
Little Rock (T3)	3/1/2017 - 2/28/2018	\$ 2,804,307.10	\$ 43,820,177.16	4,328
% change		31%	22%	43%
% change		3%	-10%	-4%

Mercy Hospital, Ada, Oklahoma

ID	Measure	Description	Value	Goal	Result
u1	Ambulance Transports	Number of unplanned ambulance transports up to 12 months post-enrollment	10	Reduce rate of unplanned ambulance transports to an ED by enrolled patients.	-80.4%
		Number of unplanned ambulance transports up to 12 months pre-enrollment	51		
u2	Hospital ED Visits (90 days)	ED visits up to 12 months post-graduation	21	Reduce rate of ED visits by enrolled patients by intervention.	-88.9%
		ED visits up to 12 months pre-enrollment	190		
u3	All-cause Hospital Admissions	Number of hospital admissions up to 12 months post-graduation	11	Reduce rate of all-cause hospital admissions by enrolled patients by intervention	-91.9%
		Number of hospital admissions up to 12 months pre-enrollment	136		
u4	Unplanned 30-day Hospital Readmissions	Number of actual 30-day readmissions	6	Reduce rate of all-cause, unplanned, 30-day hospital readmissions by enrolled patients by intervention.	-60.0%
		Number of anticipated 30-day readmissions	15		

Results

Engagement



Partnerships

- National Association of Emergency Medical Technicians
 - LAN development
 - EMS 3.0
- National Association of EMS Physicians
 - Educational offerings
 - Data platform development



Publications

- EMS World
- MIH structure study

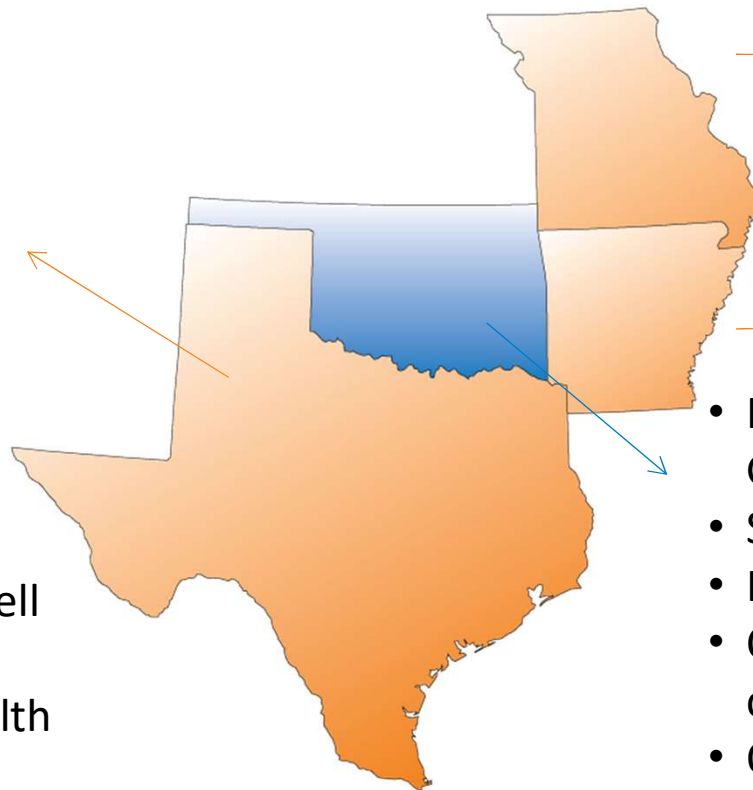


Presentations

- North American Primary Care Research Group, International Conference on Practice Facilitation 2019
- Multiple state and local presentations

Spreading TMF's MIH Work

- MedStar, Fort Worth
- Plano Fire-Rescue
- Catholic Health Initiatives St. Joseph Health, Bryan
- Texoma Medical Center, Denison
- Texas Hospital Association
- The University of Texas at Austin, Dell Medical School and School of Public Health
- Williamson County EMS



- Monthly workgroups
- State hospital associations

- Implementation in Ada, Miami, Grove and Oklahoma City
- Statewide gap analysis
- Health workforce development
- Community paramedicine curriculum and protocols
- Oklahoma Hospital Association
- MyHealthAccess engagement

National Partners: National Association of Emergency Medical Technicians (NAEMT), National Association of EMS Physicians (NAEMSP)

Spreading TMF's MIH Work

**Partnership
for Patients, U.S.
Department of Health
& Human Services**

**Comprehensive
Primary Care Plus
(CPC+)**

**Quality Payment
Program (QPP)**

**Bundled Payments
for Care Improvement
(BPCI) Advanced**

**Civil Money Penalty
Reinvestment
Program**

Next Steps



Education

- EMS industry practice and policy
- EMS and MIH scientific literature
- Stakeholder education



Engagement

- Include EMS in multi-stakeholder collaborations
- Promote quality and performance improvement opportunities



Integration

- Incorporate EMS into health care fabric
- Develop unique workflows to take advantage of the benefits of an MIH model

Resources

- TMF MIH Learning and Action Network:
<https://mihcp.tmf.org>
- National Association of Emergency Medical Technicians: <https://www.naemt.org>
 - [Measurement Strategy Overview](#)
- National Association of EMS Physicians:
<https://naemsp.org>