

The Role of EMS in Our System of Health Care



Yesterday

Tomorrow

Mobile Integrated Health Care / Community Paramedic

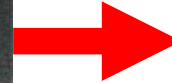
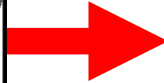
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Board Certified EMS Physician

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- Vice President – St. Vincent Emergency Physicians, Inc.
- Board Certified EMS Physician
- EMS Medical Director
 - Boone County Sheriff's Department
 - Care Ambulance in Clay County
 - Carmel Fire Department
 - Decatur Township Fire Department
 - Pike Township Fire Department
 - Whitestown Fire Department
 - Perry Township Fire Department
 - Zionsville Fire Department
 - Midwest Ambulance Service
 - Seals Ambulance Dunn
 - St. Vincent StatFlight
 - St. Vincent StatGround
 - St. Vincent EMS/Education



The History of EMS



“You call 911, you get an ambulance.”
“Ambulances take patients to the ER.”

What do we want?

- Do we want EMS to be reactive or proactive?
 - Reactive means we sit in our stations or on street corners and wait for someone to call us.
 - Proactive means we get out and do things to improve the health of our community in between running emergency calls.



What is MIH?

- The provision of healthcare using patient-centered, mobile resources in the out-of-hospital environment in a coordinated manner with physicians, hospitals, and other providers.
- It encompasses a myriad of potential expanded roles of EMT's, Paramedics, and EMS systems to provide higher quality patient-centered care and helping to prevent emergencies before they begin.

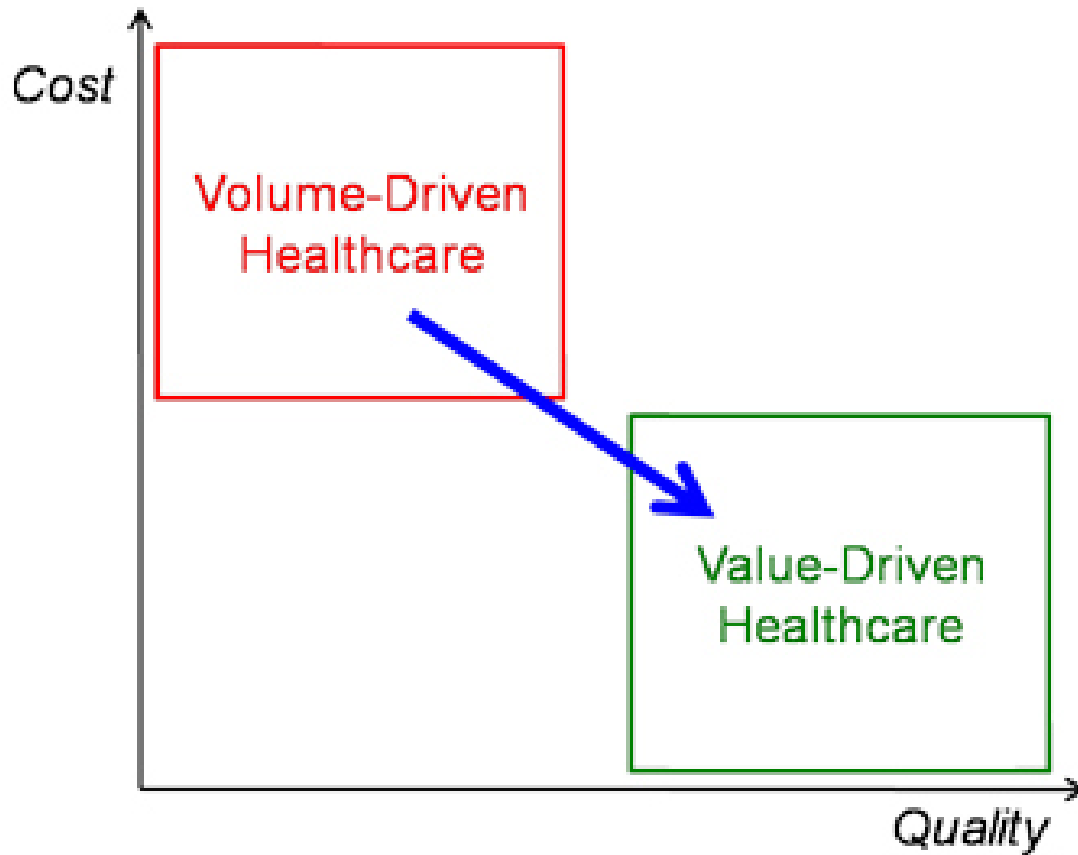
MIH Mission

To improve the healthcare provided to the people of Indiana by empowering Indiana EMS providers to play a larger, more integrated role within our healthcare system.

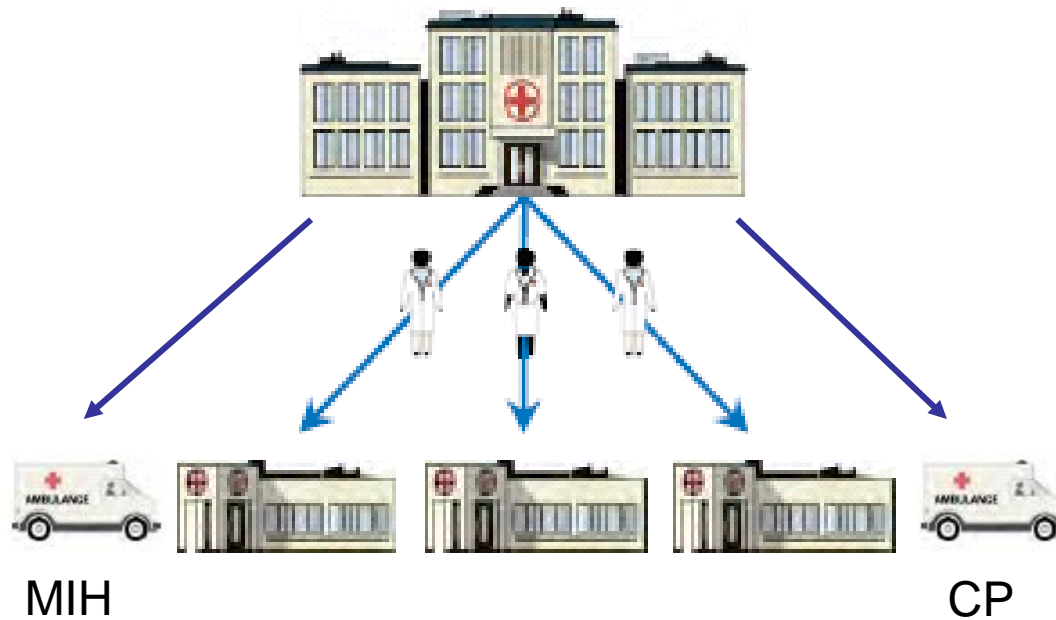
We do this by fostering collaboration among advocates and practitioners of community paramedicine and mobile integrated healthcare in the State Indiana and by advancing new models of out-of-hospital care, including elements to

- 1) make EMS more adaptive to changes in the healthcare system,
- 2) align EMS with the continuum of healthcare providers and resource,
- 3) integrate EMS into the public health infrastructure.

Healthcare is Changing!



Care in the Community



Community Paramedicine

Licensed Paramedic

- Licensed through Department of Homeland Security
- Multiple Training Options – Academia, Hospital, Private, Government

Non-Emergency Follow-up

- Not dispatched through 911
- Not an ambulance
- Scheduled Follow-up Home Visit

Program Based, Population Focused

- Aging in Place/Geriatric Care
- Pre/Post Surgery Follow-up
- Child Wellness Visits
- Substance Abuse & Addiction Support
- Chronic Disease Management – CHF, COPD, Diabetes
- Social Services Navigation
- Post ER Discharge Follow-up

Care Objectives

- **Results in Reduction of Readmissions**
- **Results in Increased personal health knowledge**
- **Results in Increased usage of Primary Healthcare**
- **Results in Increased patient accountability leading to behavior change**

Community Paramedicine

LOCATION BASED

Community
Paramedics are
where the
Patients are

Home

Senior Living
Facilities
Palliative Care
In-Patient

Work Place

SERVICES PROVIDED EVERY TIME

Care Plan Follow-
up

Medication
Inventory

Home
Assessment
Safety

Assessment
Social Needs

Social
Determinants
Referral

SERVICES PROVIDED AS NEEDED

12 lead EKG Test

Blood Glucose
Test

Capnography
Ultrasound
screening

IV, IN, IM

Medication
Administration
ISTAT

Pre-Transport
Checklist

Case Management System & Full Reporting

Paramedic Resources – Statewide

Occupation	Employment	Location Quotient
HealthCare Social Worker	4,470	1.32
Physicians	8,990	1.25
EMT & Paramedics	5,780	1.13
LPN & LVN	16,090	1.08
Registered Nurses: Nurse Anesthetists, Nurse Midwives & Nurse Practitioners	63,870	1.05
Nurse Assistants	30,910	1.01
Mental Health & Substance Abuse Social Worker	2,080	0.86
Social & Human Service Assistants	6,480	0.84
Clinical, Counseling & School Psychologists	1,300	0.56
Psychiatrists	280	0.53
Total:	140,250	

Location Quotient

Geographic spread of resources compared to similar population density. Defines location; does not determine need.

Source: Bureau of Labor Statistics, Analysis

Carmel Fire Department

Started a pilot program mid-2014 to develop a community paramedic program within their community.

- Conceptually driven by EMS Chief Tom Small and Fire Chief Dave Haboush
- Endorsed by Carmel Mayor Jim Brainard
- Recognized nationally by US New and World Report as well as the CBS evening news



St. Vincent Health Support

- \$25,000 grant from St. Vincent Carmel.
- \$25,000 grant from St. Vincent Foundation.
- Value in MIH recognized by hospital and financial reimbursement model adopted.
- Carmel Hospita/ED Administrative Support
- Population Health support.



Community Partner

- Telamon
 - Sunny Lu Williams and Stephen Etter
 - Business plan development
 - Technology deployment
 - Information services integration
 - Scalability of the MIH program
 - Reproducibility of the MIH program

telamon 

Carmel MIHCP

- Phase 1 – Started late 2014
 - Focus on community needs assessment
 - “Frequent flyers”
 - Preventing unnecessary 911 calls
 - Addressed community and social needs
 - Over 100 patients enrolled
 - Provided significant benefit to residents of Carmel and Clay Township



Carmel MIHCP

- Phase 2 – January 2016
 - Observation Avoidance
 - Focused on preventing observation admissions for emergency department patients who weren't sick enough to be full admissions, but needed additional care.
 - January – June 2016
 - Enrolled approximately 50 patients
 - 91.7% success rate of preventing admissions

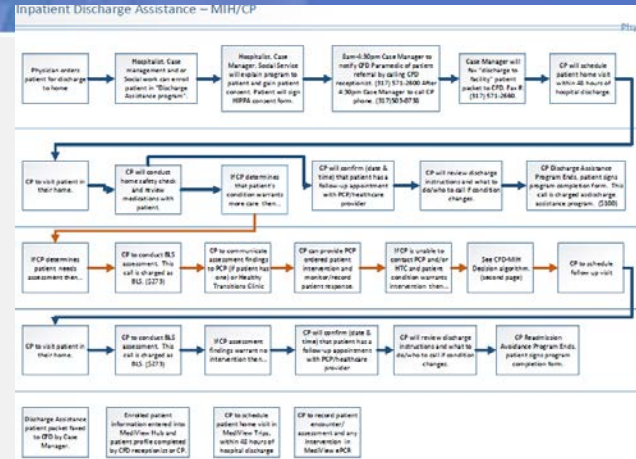
Carmel MIHCP

- Phase 3 – June 2016 – Current
 - Enrollment opened to inpatient discharges
 - Second hospital site opened at SVHCI
 - To date more than 100 patients enrolled.
 - More than 30 patients enrolled in October 2016 alone.
 - Enrollment was highest when MIHCP was stationed in the ER.

CFD-St. Vincent Partnership

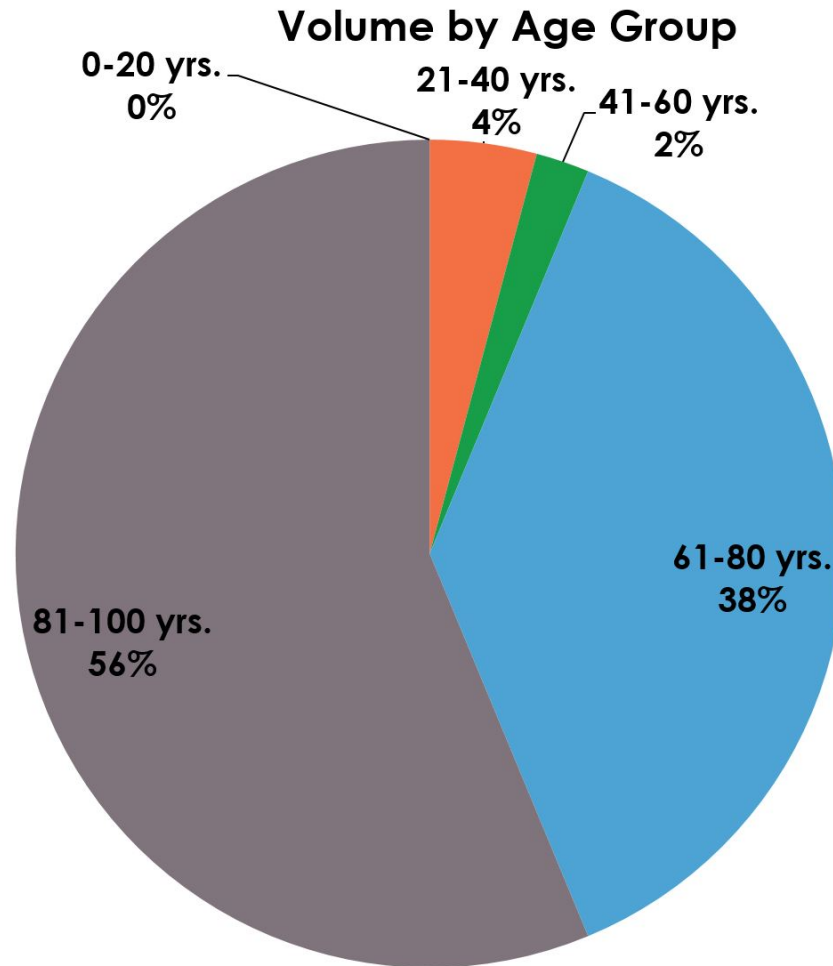
ER Observation Avoidance & In-Patient Discharge Assistance Pathways

- ❑ Home Visit within 24 or 48 hours
- ❑ Head to Toe Assessment, Medication Inventory, Discharge Instructions Review
- ❑ Follow-up Home Visit as needed
- ❑ Referral as needed
- ❑ Report in Case Management



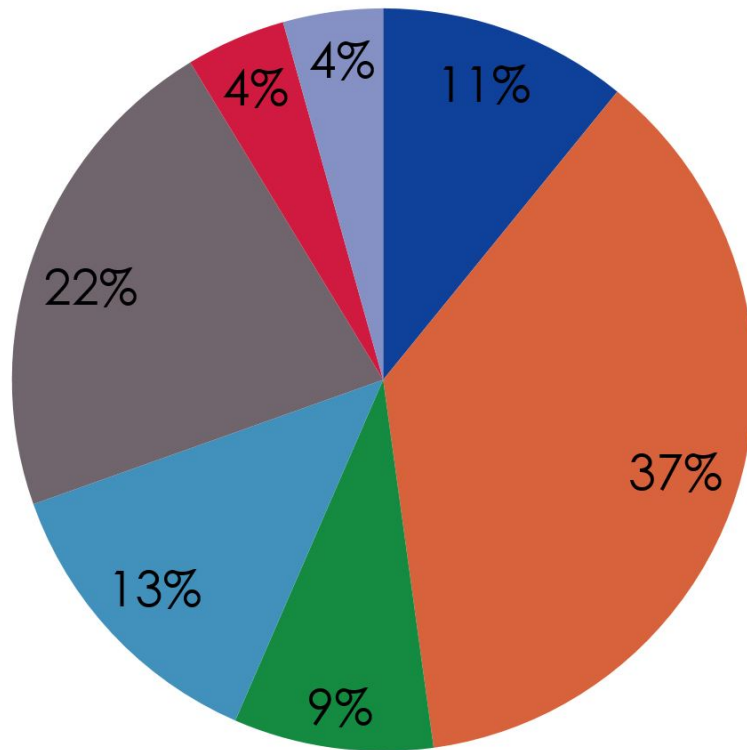
- **Outcomes**
 - Jan 2016 – Feb 2017
 - **80% Reduction in Readmissions comparing Prior Year to Post Year**
 - **55% Reduction in Readmissions comparing Prior 90 Days to Post 90 Days**

Volume by Age Group



Volume by Diagnosis

Volume by Diagnosis



■ SOB/Asthma/COPD

■ Fall Risk

■ Blood Chemistry

■ Cardiovascular

■ Mobility/Other

■ Mental Health

Other Programs

Mobile Integrated Healthcare Examples of MIHP		EMS	Call Center	Hospital	Primary Care	Mental Health/Detox	Cardiology	Pharmacy	Telemonitoring	Assisted Living	Hospice
Location	Impacts										
American Medical Response Arlington, TX	Reducing CHF readmissions	◆		◆	◆						
	Decrease utilization of EMS by high utilizers	◆		◆	◆						
University of Chicago Medicine Chicago, IL	Reducing CHF Admissions	◆		◆	◆		◆	◆	◆	◆	
MedStar Mobile Healthcare Fort Worth, TX	Reducing Hospice Revocation	◆			◆						◆
	Decrease utilization of EMS by high utilizers	◆	◆	◆	◆						
	Reducing CHF readmissions	◆	◆	◆	◆		◆				
Wake County EMS Raleigh, NC	Decrease utilization by patients who fall	◆	◆	◆	◆						
	Decrease utilization by patients with substance abuse and mental illness	◆	◆	◆		◆					
Barnes-Jewish Hospital/Abbott EMS Saint Louis, MO	Reducing CHF, AMI, COPD, and pneumonia readmissions	◆		◆	◆		◆				

Types of Patients

- Example #1
 - 40 y/o male with Kidney Stone
 - Vomiting, Dehydration, Elevated Creatinine
 - Enrolled from the ER
 - Medic follow up in 24 hours
 - Additional anti-emetics administered
 - IV Fluids given
 - Rechecked creatinine with bedside analyzer
 - Sent report to follow up doc and back to the ER.

Types of Patients

- Example #2
 - 35 y/o male discharged after inpatient stay for vomiting.
 - Had been seen in 4 ERs in the previous 7 days.
 - Patient had HIP 2.0 but not utilizing resources.
 - Was assigned to local community clinic but they had refused to see him because they were migrating to a new computer system.
 - Enrolled into the MIH program.
 - Paramedic in home treatment, labs tested
 - ER visits stopped, followed up in HTC
 - Now established in community clinic.

Types of Patients

- Example #3
 - 70 y/o female with UTI
 - Lived alone, mildly impaired mobility
 - No transportation
 - Enrolled into program
 - Medics took her home
 - Cleared her sidewalk of snow
 - Went to pharmacy and obtained Rx
 - 24 hour in home follow up
 - Took patient to PCP appointment 48 hours later.

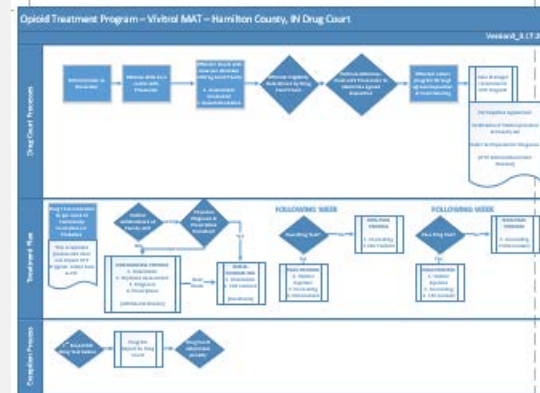
Limitations

- How do we pay for this program?
 - EMS reimbursement doesn't exist for MIH.
 - Limited resources for startup costs.
 - Money saving rather than revenue generating.
 - Significant resources from community are needed.
 - Jurisdiction of municipal agencies
 - Training/scope of EMS providers

Future Opportunity

Statewide Opioid Blocker & Education Resource

- ❑ Paramedics trained as Certified Recovery Specialists, Counseling
- ❑ Paramedics providing monthly injections of Vivitrol to diagnosed Patients with active prescription, Medication Assisted Treatment
- ❑ Drug Court & Probation Pathways, Eligibility & Referral
- ❑ Strong Partnerships & Clear, Accountable Roles
- ❑ Report in Case Management



Next Steps

- Include Additional Stakeholders
- Secure Additional Funding Appropriation from 2016 and 2017 Passed Bills
- Hamilton County Court Pilot
- 1115 Waiver



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