Mobile Integrated Healthcare 360 Arizona:

How Fire-Based and Private Sector Community Paramedicine is Shifting the EMS Paradigm

MIH in the Fire Service

Harry Beck, Fire Chief (Ret.), Mesa Fire & Medical Dept.

Brent Burgett, Deputy Chief, Mesa Fire & Medical Dept.

Community Care Initiative

CMS Grant

To test models in the pre-hospital healthcare system while improving efficiencies and demonstrating cost savings while improving patient health outcomes

City of Mesa, Arizona

- 137 square miles
- 457,587 residents (2013)
- 85,000 winter visitors (2010)

- 75,000+ > 62 years old
- Diverse Population

Mesa Fire and Medical Department

- 21 ALS Engines
- 5 ALS Ladders
- Community Paramedics

- 2 Community Care Units
- 20 Fire Stations
- 55,938 Total Calls
- 80 % Fire Based EMS

Mesa Fire and Medical Department Analysis 2013

Mesa 911 Calls   **55,938**

Medical Emergency Calls   **45,854**

Low Acuity Calls   **10,061**

Community Paramedic (TRV)Units

- Pre Grant
- One MFMD Paramedic & EMT
- Low Acuity Patients
- Managed Deployment Model
- Dispatch Triage
- Treat and Refer

Community Care
Advanced Practice Units (3)

- Captain Paramedic & Advanced Practice Provider
- Advanced Practiced Providers Funded by Mountain Vista Medical Center
- Treat and Refer to Primary Care Provider
- Provide Alternative Destination
- Patient Follow-up
- 24/7
- Registered Nurse Triage
- Medication Reconciliation

Community Care
Behavioral Health Units (2)

- ▶ Captain Paramedic and Behavioral Health Specialist
- ▶ Dispatch to Definitive Care within 2 hours
- ▶ Alternate Destination vs. Emergency Department
- ▶ Staffed during peak hours

Proven Model

Air Date: January 2013, KSAZ-TV

CMS Partners

Partners and Collaborators

- Professional Healthcare Providers (Advanced Practice Providers, Crisis Counselors)
- Billing Services
- Data and Patient Outcome Reporting
- Operational and Jurisdictional Expansion CMS Grant
- Centralized Medical Direction
- Enhanced Research/Reporting Capabilities

Cost Savings

*Value added services may include: medical evaluation, lab work, prescription, care coordination, health education, immunization for patient and family, (prevention) fall risk inspection, fire risk inspection, and community health assessment.

			Medicaid	Medicare	Private/Self Pay
Mean Reimbursement			$1755	$1762	$2000
Mean Intervention Cost *With value added services			$600	$600	$600
Healthcare Savings			$1155	$1162	$1400

Emergency Care Charges
Low Acuity Medical Patients

	Past Model	New Model	Savings
Transport to ER	$1,000	$0	$1,000
Registration	$525	$0	$525
Assessment	$325	$150	$175
Decision Making	$950	$0	$950
MFMD Cost	$375	$375	$0

Total Potential Savings per Patient $2,650

Behavioral Health Results

Emergency Care Charges
Behavioral Health Patients

	Past Model	New Model	Savings
Transport to ER	$1,000	$0	$1,000
Initial Evaluation	$3,500	$150	$3,350
3-Day ER Hold	$6,000	$0	$6,000
Inter-Facility Transport	$1,000	$0	$1,000
MFMD Cost	$375	$375	$0

Total Potential Savings per Patient **$11,350**

Unit Insurance Coverage 2013

Community Care Response

Medicare 28%
None 20%
Private 15%
Medicaid/AHCCCS 37%

Behavioral Health

MEDICAID, 49, 36%
PRIVATE, 25, 19%
MEDICARE, 59, 44%
NONE, 1, 1%

	Community Care Response	Behavioral Health
Medicare	28%	44%
Medicaid	37%	36%
Private	15%	19%
None	20%	1%

Nurse Triage

- **911 Call Consult**
- **Triage fort Chief Complaint**
- **Recommend Appropriate Level of Care**
- **Evaluate Low Acuity Patients**
- **Initiate Patient Record**
- **Coordinate With Alternative Providers**
- **Coordinate Appropriate Transportation**
- **Refer to Primary Care Physician**
- **Provide 72hr Follow Up Contact**

Centralized Medical Control

- 24/7 Dedicated MD
- Paramedic Consult
- Nurse Practitioner/PA Consult
- Nurse Triage Consult
- Emergency Department Coordination
- Quality Control

Community Outreach Programs

- Loyalty Customer Program
- Prevention Action Line (PAL)
- Immunization Program
- Home Safety Inspection and Fall Prevention Program
- Suicide/Substance Abuse Prevention

Loyalty Customer Program

- **Proactive Service**
- **Reduction of EMS Calls**
- **Partnership with regional ACO**

Prevention Action Line (PAL)

- Provide Community Access via Non-Emergency Phone Line
- Highly Visible Connection to the Community
- Utilizes the Strengths of Both Organizations to Provide Behavioral Services for Those Seeking Assistance

Immunization Services

- **School Based Immunization Clinics**
  - Over 11,000 Mesa Public School students vaccinated annually

- **Community Based Immunization Clinics**
  - Administered an additional 3000 immunizations to adults and children at community based flu clinics, high schools, malls, and health fairs

Home Safety Inspection/
Fall Prevention Program

- **Fire Prevention**
- **Fall Prevention**

- **Medication Safety**
- **Social Services**

Transitional Care

- ▸ 72 Hour Post-Discharge Contact
- ▸ Partnership with Specialist
- ▸ Proactive Service Geared Toward Prevention
- ▸ Reduces Readmissions
- ▸ Transition to Home Health

Disclaimer

Population Health & MIH

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

Population Health and Mobile Integrated Healthcare

J. Brent Myers, MD MPH FACEP

CMO Evolution Health

Associate CMO American Medical Response

The Plan

- **Current State**
  - Not all EMS patients are transported today
    - Cardiac arrest
    - Hypoglycemia
    - Certain Narcotic Overuse Situations
  - Behavioral economics have always been in play
- **Drivers of Change**
  - Volume to Value
- **Examples of Mobile Integrated Healthcare**

Behavioral Economics

Evolution HEALTH

Behavioral Economics

Better Health and Healthcare

Current State

Mobile Integrated Healthcare Practice

Not Take Patients to Hospital is Not Revolutionary

"The Most Powerful Predictor by far of survival to hospital discharge is return of spontaneous circulation in the field"

Kellerman A. Annals Emerg Med 2010;56:358-61

Because of the difficulty in providing effective chest compressions while moving the patient during CPR, the resuscitation should generally be conducted where the patient is found (Class IIa, LOE C). This may not be possible if the environment is dangerous.

Sample Deceased Protocol

How Will Families Handle Non-Transport?

- For all families of cardiac arrest victims, 97% were satisfied with the care

- 100% of the non-transported patients' families were satisfied

- 25% of the transported patients' families stated they wished the patient had been allowed to die in the home

How Will Families Handle Non-Transport?

- 50% of transported patients' families were not satisfied with interaction with the emergency physician

- 100% were satisfied with interaction with the emergency nurses

- 97% were satisfied with interaction with paramedics

How Will Families Handle Non-Transport?

O Families reported:

- Anxiety during the rush to the hospital

- Frustration when the resuscitation was terminated quickly after arrival

- Loneliness in the hospital waiting room

And It Is Not Just Cardiac Arrest:
Hypoglycemia and Narcotic Overuse

The Evidence – Non-Transport

- Evidence exists for specific conditions:
  - Hypoglycemia

  - Narcotic overdose

EDUCATION AND PRACTICE

PREHOSPITAL HYPOGLYCEMIA:

THE SAFETY OF NOT TRANSPORTING TREATED PATIENTS

Ed Cain, MD, Stacy Ackroyd-Stolarz, MSc, Peggy Alexiadis, BA, BSc, RRT,
Daphne Murray, BN

Hypoglycemia

- Prospective, observational trial in Halifax for all diabetic hypoglycemia

- Patients were enrolled over the phone

- No statistical differences in patients transport vs. not regarding recurrent episodes, admission, or unfavorable outcome

- Only one admission from non-transports (5 days later) and one expected death

TABLE 1. Repeat Episodes for All Hypoglycemic Patient Calls

	All	Transported	Not Transported	p
No. (%)	220	75 (34%)	145 (66%)	
Repeat	57 (25.9%)	17 (22.7%)	40 (27.6%)	0.43
Recurrences	6 (2.7%)	3 (4%)	3 (2%)	0.33
Mean interval for repeat episodes	48.8 days	57.1 days	40.7 days	0.60

Hypoglycemia Summary

- Across all studies, ~3% recurrence rate of hypoglycemia in 48 to 72 hours

- <1% have significant complications

- Lack of randomization prevents inference of causality

Narcotic Overdose

NO DEATHS ASSOCIATED WITH PATIENT REFUSAL OF TRANSPORT AFTER NALOXONE-REVERSED OPIOID OVERDOSE

David A. Wampler, PhD, D. Kimberley Molina, MD, John McManus, MD, Philip Laws, Craig A. Manifold, DO

Study Design

- Retrospective analysis for patients over 20 month period that were treated with Narcan in the field and had patient initiated refusal

- Protocol:
  - 2 mg IM with ongoing BVM
  - IV established and 2 mg IV
  - Attempt then made for 2 mg IM "to go"

- Outcome – presentation to the medical examiner within 48 hours, 30 days, or at all

Results

- 592 encounters during the 20 months

- 40 were in cardiac arrest upon EMS arrival

- Of the remaining 552, none presented to the MEO within 48 hours

TABLE 2. Patients Presenting to the Medical Examiner's Office after Naloxone Treatment and Patient-Initiated Refusal within the Study Period

EMS Disposition	Time (days) between Service and Death	Cause of Death
Refusal	372	Heroin
Refusal	54	Heroin
Refusal	4	Cocaine and heroin
Refusal	327	Cirrhosis
Aid only	250	HTN, CAD
Refusal	234	GSW
Refusal	247	Complications of a hip fracture
Refusal	7	GSW
LEO	34	Heroin

CAD = coronary artery disease; EMS = emergency medical services; GSW = gunshot wound; HTN = hypertension; LEO = law enforcement officer.

PEC; 2011

Some Findings Do Not Require a Study

Why do men attend weddings?

- Wife Made Them
- They are the groom
- Best man for groom
- Hook up with random chick
- Open Bar at Reception

GraphJam.com

POSITION STATEMENT

EMS PROVIDER DETERMINATIONS OF NECESSITY FOR TRANSPORT

NATIONAL ASSOCIATION OF EMS PHYSICIANS

- There may be benefit to avert unnecessary emergency department transfers of patients

- Evidence regarding safety of the practice is limited

- Additional education of providers and strict physician oversight are required

PEC; 2011

Study Design

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  - Attempt then made for 2 mg IM "to go"

- Outcome – presentation to the medical examiner within 48 hours, 30 days, or at all

Now Faith is the assurance
Of things hoped for
The belief in
Things unseen.
-- Hebrews 11:1

Evolution
HEALTH

Underlying Changes in Healthcare Environment

A Brief History

- Medicare

- EMTALA

- HIPAA

Evolution
H E A L T H

Medicare

Emergency Medicine and Active Labor Transfer Act (EMTALA)

What is EMTALA ?

1. **Is a federal law intended to prevent two illegal actions:**
   - Unacceptable transferring of uninsured and indigent patients to other hospitals
   - Unacceptable discrimination in the treatment of indigent or uninsured patients

2. **For hospitals that operate an Emergency Room and accept Medicare/Medicaid**
   - A person entering the ER and requesting an examination or treatment for a medical condition, the hospital must provide an *appropriate medical screening examination* to determine if an *emergency medical condition* exists.

   - Upon determination the emergency medical condition exist, the hospital must *stabilize* the patient within its ER capabilities, or *transfer* the individual to another hospital than can.

   - Hospitals with specialized capabilities (such as burn units or trauma centers) are obligated to accept transfers unless the acceptance would exceed the hospital's capability and capacity for providing care.

EMTALA. 42 U.S.C. Section 1395dd.

Health Insurance Portability and Accountability Act (HIPAA)

Evolution
H E A L T H

Setting Value-Based Payment Goals — HHS Efforts to Improve U.S. Health Care

Sylvia M. Burwell

Framework

- Volume-based FFS for discrete episode
  - Value based modifier

- Volume-based FFS for facilities for time
  - Value based modifier

- Volume-based FFS all costs for time
  - Value based modifier

- Value based for population
  - Volume based modifier

Implementation

⬭ Clinical challenges

⬭ Financial challenges

⬭ Institutional challenges

⬭ Why EMS is ideally suited to respond to these challenges

Evolution
H E A L T H

A.B. 305

ASSEMBLY BILL NO. 305–ASSEMBLYMAN OSCARSON

MARCH 13, 2015

————————

Referred to Committee on Health and Human Services

SUMMARY—Authorizes and provides for the regulation of community paramedicine services. (BDR 40-167)

FISCAL NOTE: Effect on Local Government: May have Fiscal Impact.
Effect on the State: Yes.

Sec. 2. *"Community paramedicine services" means services provided by an emergency medical technician, advanced emergency medical technician or paramedic to patients who do not require transportation to or services at a hospital and provided using mobile equipment and in a manner that is integrated with the health care and social services resources available in the community. Such services may include, without limitation, transportation to a facility other than a hospital, which may include a mental health facility, and the provision of health care services provided to patients on a scheduled basis.*

Compare Hospitals

Back to Results

General information	Survey of patients' experiences	Timely & effective care	Complications	Readmissions & deaths	Use of medical imaging	Payment & value of care

	REX HOSPITAL ✕	DUKE HEALTH RALEIGH HOSPITAL ✕	WAKEMED, RALEIGH CAMPUS ✕
	4420 LAKE BOONE TRAIL RALEIGH, NC 27607 (919) 784-3100	3400 WAKE FOREST RD RALEIGH, NC 27609 (919) 954-3000	3000 NEW BERN AVE RALEIGH, NC 27610 (919) 350-8000
	Distance ⓘ: 3.8 miles	**Distance** ⓘ: 4.1 miles	**Distance** ⓘ: 4.8 miles
	Add to My Favorites Map and directions	Add to My Favorites Map and directions	Add to My Favorites Map and directions

Evolution HEALTH

Average time to pain medication for fracture

Lower Percentages Are Better

Hover over the caret to view interval estimate range

National rate of unplanned readmission for chronic obstructive pulmonary disease (COPD) patients = 20.2%

	REX HOSPITAL 4420 LAKE BOONE TRAIL RALEIGH, NC 27607 (919) 784-3100 **Distance ⓘ**: 3.8 miles Add to My Favorites Map and directions	**DUKE HEALTH RALEIGH HOSPITAL** 3400 WAKE FOREST RD RALEIGH, NC 27609 (919) 954-3000 **Distance ⓘ**: 4.1 miles Add to My Favorites Map and directions	**WAKEMED, RALEIGH CAMPUS** 3000 NEW BERN AVE RALEIGH, NC 27610 (919) 350-8000 **Distance ⓘ**: 4.8 miles Add to My Favorites Map and directions
Death rate for heart attack patients	No different than the National Rate	No different than the National Rate	No different than the National Rate
Payment for heart attack patients	Less than the National Average Payment	No Different than the National Average Payment	Less than the National Average Payment

The National Death Rate for heart attack patients this reporting period was **14.2%**.

The National Average Payment for heart attack patients this reporting period was **$21,791**.

Evolution
H E A L T H

Bundled Payments for Care Improvement (BPCI) Initiative: General Information. Share

The Bundled Payments for Care Improvement (BPCI) initiative is comprised of four broadly defined models of care, which link payments for the multiple services beneficiaries receive during an episode of care. Under the initiative, organizations enter into payment arrangements that include financial and performance accountability for episodes of care. These models may lead to higher quality and more coordinated care at a lower cost to Medicare.

Select anywhere on the map below to view the interactive version

Source: Centers for Medicare & Medicaid Services

Thus Far . . .

- Emergencies still happen

- We need to think about different ways to engage our patients
  - Behavioral economics
  - Partnership with others in healthcare

- Now let's look at MIHP/CP

Three Common Measures

- Emergency Department Utilization

- Inpatient Utilization

- Patient Satisfaction

Atul Gawande Hot Spots

" [Dr} Brenner wasn't all that interested in costs; he was more interested in helping people who had received bad health care. The people cycling in and out of the hospital were usually the people receiving the worst care."

Realigning Reimbursement Policy and Financial Incentives to Support Patient-Centered Out-of-Hospital Care

Kevin Munjal, MD, MPH

Brendan Carr, MD, MS

INNOVATIVE MODELS OF PAYMENT AND CARE DELIVERY are increasingly being used to expand access, improve quality, and reduce medical costs. Although traditional fee-for-service medicine favors doing more than is necessary, newer payment models aim to realign incentives to decrease utilization and increase efficiency. However, little consideration has been given to how fee-for-service reimbursement in out-of-hospital care limits the ability of emergency medical services (EMS) to provide more patient-centered care and reduce downstream health care costs.

Retrospective studies estimate that between 7% and 34% of Medicare patients transported by ambulance to an emergency department could have been safely treated in an alternate environment.[1,2] However, Medicare and other payers provide no reimbursement for out-of-hospital care including response, triage, and patient assessment and treatment unless the patient is transported to an emergency department. The Medicare ambulance billing guide states, "The Medicare ambulance benefit is a transportation benefit and without a transport there is no benefit."[3] With most private insurers mimicking Medicare,[2] this payment policy significantly affects the behavior of EMS agencies contributing to an inefficient use of out-of-hospital care resources.

Financing Out-of-Hospital Care

National EMS expenditures from Medicare are approximately $5.2 billion per year.[4] Although this is less than 1% of total Medicare expenditures, there are considerable downstream health care costs associated with patients transported to emergency departments.[2] An average EMS agency receives 42% of its operating budget from Medicare fees, 19% from commercial insurers, 12% from Medicaid, and 4% from private pay; it requires approximately 23% in additional subsidization, most often provided by local taxes.[2] Thus, more than three-fourths of EMS revenue is generated from fee-for-service reimbursement, the service being transportation, not necessarily medical care.

However, approximately 26% of EMS responses do not result in a transport,[3] including situations in which patients refuse because their condition was effectively treated by EMS prior to transport (such as resolution of hypoglycemia or treatment of asthma). In 2010, median Medicare reimbursement was $464, slightly above the median cost per transport of $429 after adjusting for nontransported patients.[4] This slim margin must cross-subsidize Medicaid and uninsured patients whose care provides little or no reimbursement and would be quickly eroded by any change in transport rates. This creates a perverse incentive for agencies to transport patients to the hospital emergency department, even if transport is not what a patient needs or wants, and even if other alternatives might be better, less expensive, or more patient centered.

Patient-Centered Out-of-Hospital Care

Out-of-hospital care agencies that are reliant on transportation-based fee-for-service reimbursement are limited in the role they can play within the continuum of health care. Consider a patient with uncomplicated asthma who is without β-agonists or a patient with end-stage renal disease who becomes short of breath secondary to fluid overload on the day of dialysis. In either case, a patient-centered approach might be something other than transport to an emergency department. The patient with asthma might benefit from nebulized albuterol treatments and coordination of care with a primary care physician. The patient with renal disease might benefit from stabilization and transportation to the dialysis center. Neither of these alternative approaches would be reimbursed under existing rules. Instead, for EMS to collect $464 in reimbursement, the EMS agency triggers an extra emergency department visit at an average societal expense of $969.[6] The goal of reimbursement reform should be to realign incentives so that EMS agencies are not financially penalized for offering the patient the most medically appropriate option and offering society the highest value intervention.

Options for the EMS system might include a standard ambulance response, a multipatient transport vehicle, a

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COST & PAYMENT

By Abby Alpert, Kristy G. Morganti, Gregg S. Margolis, Jeffrey Wasserman, and Arthur L. Kellermann

Giving EMS Flexibility In Transporting Low-Acuity Patients Could Generate Substantial Medicare Savings

Abby Alpert is an assistant professor of economics and public policy at the Paul Merage School of Business, University of California, Irvine.

Kristy G. Morganti is a health policy researcher at the RAND Corporation in Pittsburgh, Pennsylvania.

Gregg S. Margolis is director of the Division of Healthcare Systems and Health Policy, Department of Health and Human Services, in Washington, D.C.

Jeffrey Wasserman (jeffrey@ rand.org) is director of RAND Health and vice president of the RAND Corporation in Santa Monica, California.

ABSTRACT Some Medicare beneficiaries who place 911 calls to request an ambulance might safely be cared for in settings other than the emergency department (ED) at lower cost. Using 2005–09 Medicare claims data and a validated algorithm, we estimated that 12.9–16.2 percent of Medicare-covered 911 emergency medical services (EMS) transports involved conditions that were probably nonemergent or primary care treatable. Among beneficiaries not admitted to the hospital, about 34.5 percent had a low-acuity diagnosis that might have been managed outside the ED. Annual Medicare EMS and ED payments for these patients were approximately $1 billion per year. If Medicare had the flexibility to reimburse EMS for managing selected 911 calls in ways other than transport to an ED, we estimate that the federal government could save $283–$560 million or more per year, while improving the continuity of patient care. If private insurance companies followed suit, overall societal savings could be twice as large.

Mobile Integrated Healthcare Practice: A Healthcare Delivery Strategy to Improve Access, Outcomes, and Value

Eric Beck, DO, NREMT-P; Alan Craig, MScPl, ACP; Jeffrey Beeson, DO, RN, EMT-P;
Scott Bourn, PhD, RN, EMT-P; Jeffrey Goodloe, MD, NREMT-P; Hawnwan Philip Moy, MD;
Brent Myers, MD, MPH; Edward Racht, MD; David Tan, MD; Lynn White, MS

The U.S. health care system is often described as one that fails to achieve optimal health outcomes while generating exorbitant costs for patients, payors and society. [1] The Institute of Medicine (IOM) estimates that $750 billion—30% of the U.S. annual health care budget—is wasted on unnecessary services, inefficient delivery, excessive administrative costs and prevention failures. [2] Barriers to patient access, fragmentation of acute and chronic care, ineffective management of chronic illness, and complex, outdated reimbursement processes leave patients, clinicians and payors frustrated at historic levels. In *Crossing the Quality Chasm*, released in 2001, the Institute of Medicine (IOM) Committee on the Quality of Health Care in America described an urgent need to redesign the healthcare delivery system. The IOM emphasized the need to expand information technology and to create payment policies based on innovation, outcomes and performance improvement, rather than on the delivery of care itself. [3] Renewed focus on bringing healthcare to the patient, specifically by delivering care outside of traditional settings, has underscored the need for realignment of financial incentives and reimbursement policy. [4]

A special problem: 24/7 coordinated out-of-hospital care

The discontinuities of health service are notably evident in the care of patients at home; this is particularly true for the chronically ill, frail elderly and mobility impaired. Multiple single-purpose providers offer niche care and often only during restricted hours of operation, neither of which match the actual needs of this patient population.

As a result, patients are routinely referred to hospital emergency departments (EDs) by their healthcare providers, outside of normal business hours, despite the common knowledge that the ED is an imprecise match to their needs. Further, care gaps such as a lack of post-acute transitional care make preventable re-admissions a virtual inevitability that is both expensive and disappointing to patients, caregivers and the health care system.

Vision Statement on Mobile Integrated Healthcare (MIH) & Community Paramedicine (CP)

In its simplest definition, Mobile Integrated Healthcare (MIH) is the provision of healthcare using patient-centered, mobile resources in the out-of-hospital environment. It may include, but is not limited to, services such as providing telephone advice to 9-1-1 callers instead of resource dispatch; providing community paramedicine care, chronic disease management, preventive care or post-discharge follow-up visits; or transport or referral to a broad spectrum of appropriate care, not limited to hospital emergency departments.

Key components of MIH programs include:

- Fully integrated – a vital component of the existing healthcare system, with efficient bidirectional sharing of patient health information.
- Collaborative – predicated on meeting a defined need in a local community articulated by local stakeholders and supported by formal community health needs assessments.
- Supplemental – enhancing existing healthcare systems or resources, and filling the resource gaps within the local community.
- Data driven – data collected and analyzed to develop evidence-based performance measures, research and benchmarking opportunities.
- Patient-centered – incorporating a holistic approach focused on the improvement of patient outcomes.
- Recognized as the multidisciplinary practice of medicine – overseen by engaged physicians and other practitioners involved in the MIH program, as well as the patient's primary care network/patient-centered medical home, using telemedicine technology when appropriate and feasible.
- Team based – integrating multiple providers, both clinical and non-clinical, in meeting the holistic needs of patients who are either enrolled in or referred to MIH programs.
- Educationally appropriate – including more specialized education of community paramedicine and other MIH providers, with the approval of regulators or local stakeholders.
- Consistent with the Institute for Healthcare Improvement's IHI Triple Aim philosophy of improving the patient experience of care; improving the health of populations; and reducing the per capita cost of healthcare.
- Financially sustainable – including proactive discussion and financial planning with federal payers, health systems, Accountable Care Organizations, managed care organizations, Physician Hospital Organizations, legislatures, and other stakeholders to establish MIH programs and component services as an element of the overall (IHI) Triple Aim approach.
- Legally compliant – through strong, legislated enablement of MIH component services and programs at the federal, state and local levels.

General Principles

- Who is eligible?
  - 9-1-1 entry point
  - Proactive visit after 9-1-1
  - Population otherwise defined

- Sample Programs:
  - 9-1-1 based – mental health and substance abuse
  - Proactive cooperation – Falls in Assisted Living
  - Population examples

Well Person Check

History:
- Patient presents requesting "blood pressure check"
- EMS responders to "assist invalid"
- Other situation in which patient does not have a medical complaint or obvious injury

Signs and Symptoms:
- Assess for medical complaint
- For patients with hypertension, particularly check for chest pain, shortness of breath, and/or neurologic changes
- For assist invalid calls, particularly check for syncope, trauma from fall, or inability to ambulate

Differential:
- Hypertensive urgency
- Hypertensive emergency
- Syncope
- Cardiac ischemia
- Cardiac dysrhythmia
- Fracture
- Head trauma

Legend	
	EMT
I	EMT- I
P	EMT- P
M	MC Order

Special Response Protocols

Universal Patient Care Protocol
↓

Patient has medical complaint or obvious trauma —Yes→ **Go to appropriate protocol and recommend transport**

No ↓

Obtain pulse, blood pressure, And pulse ox
↓

Pulse >110, SBP >200, DBP >120, or Pulse ox <94%? —Yes→ **Recommend transport for evaluation. Have patient sight refusal if transport declined.**

No ↓

Confirm patient has no medical complaint. Provide patient with vital sign results and have them contact their doctor to report results. → **Advise patient to call 9-1-1 if they develop any symptoms. Complete PCR and document elements of this protocol.**

Pearls:
- This protocol pertains to ALL responders
- Patients who are denying more severe symptoms may initially present for a "routine check". Please confirm with the patient at least twice that they have no medical complaints.
- All persons who request service or meet the definition of a patient shall have an PCR completed.
- For patient in this category, the PCR may be brief but must include vital signs and documentation of the lack of a medical complaint. Additionally, patient's with a potential mechanism for trauma should have a trauma exam completed.

Protocol
This protocol is unique to the Wake County EMS System

2011

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Alternative Destination for Mental Health and Substance Abuse

- Clinical Evaluation

- Community Needs Assessment

- Outcomes

Screening Form

Reason for call:	Was force used? Yes (☐) No (☐) *If yes, explain in narrative section of this form.*	
_☐_ 911 call	**Patient Injuries:**	**Paramedic/LEO Injuries:**
_☐_ Involuntary Pick up	(☐) None	(☐) None
_☐_ Wellness check - follow up	(☐) Prior to EMS arrival	(☐) Slight
_☐_ Other	(☐) During EMS/LEO encounter	(☐) Severe

Vital Signs: Time:_____   B/P:_____   Pulse:_____   Respirations:_____

BAC:_____   Temp:_____   Glucose:_____

Patient's Status:[*Check all that apply*] (☐) Current mental health patient. (☐) New mental health patient. (☐) Patient is homeless. (☐) Unknown or other	**Medication Utilization Screening** (☐) No medication use exceeding prescribed dose or OTC label (☐) Poison control center case created based on candidates med use
	Poison Control Center Information: Time of contact:_____(24 hr) **PCC Case/Reference Number** **Emergency Department Evaluation Recommended?** (☐) Yes (☐) No Poison control instructions: _____ _____ _____

Medical Screening of Appropriateness for Admission:

01 - (☐) No acute medical issues/traumatic injuries are present. (Wounds requiring closure or bleeding are not allowed)

02 - (☐) No unexplained mental status change(s) persist or intermittently recurred during encounter.

03 - (☐) BAC is less than 0.35 and candidate can tolerate oral fluids.

04 - (☐) Pulse is less than 120.

05 - (☐) Candidate compliant with medicines for chronic medical issues, or knows meds and doses and will take.

06 - (☐) Candidate has not taken medications outside normal dose _or_ poison control did not recommend ED eval.

07 - (☐) No poison control consult was required _or_ poison control recommendation and case info recorded above

08 - (☐) Candidate has no history of diabetes _or_ BGL <300 with no evidence of ketoacidosis.

09 - (☐) Candidate performs daily living activities independently

10 - (☐) ALL Boxes (1-9) are checked _or_ name of receiving facility staff member contacted who agrees to accept is
recorded to right _____

Direct Transport for SA/MH

- Patient has primary mental health crisis and/or substance abuse

- Patient does not require sedation or demonstrate agitation

- APP will then contact alternative site and evaluate the patient for potential placement

Exclusion Criteria

- Acute medical issue or trauma with bleeding, need for wound repair
- BAC >0.35 or patient too intoxicated to take po
- Pulse >120
- Unexplained alteration in mental status
- Unable/unwilling to take medications for pre-existing conditions

Exclusion Criteria

- Has taken medication outside of prescription/recommended dose and cannot be cleared by poison center

- Can perform ADLs independently

- Blood glucose < 300 with no evidence of DKA

Prehospital Diversion of Patients with Acute Mental Health Crises

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University of North Carolina School of Medicine[1], UNC Healthcare WakeBrook Campus[2], Wake County EMS[3]

INTRODUCTION

Emergency departments (EDs) are overburdened with patients with acute mental health crises. Emergency Medical Services (EMS) is a promising mechanism to reduce unnecessary ED use and improve patient care by rapidly and safely diverting appropriate patients in crisis to alternative treatment settings.

Wake County, NC provides a unique opportunity between Emergency Medical Services (EMS) and local health care facilities. Wake County EMS has an Advanced Practice Paramedic (APP) Program which allows for prehospital diversion of patients with acute mental health crises to an alternative destination based on protocol criteria (Figure 1). An APP must confirm a primary acute mental health crisis and exclude other emergent medical conditions per protocol in order to transport a patient to an alternative destination. If a patient does not meet diversion criteria, EMS may transport the patient to an ED for evaluation. Standard EMS personnel, arriving as the transport unit, may transport a patient to an ED without an APP evaluation if the patient requires immediate medical attention.

Appropriate patients are transported to UNC Health Care's WakeBrook (WB) Campus, a community mental health center located in Raleigh, NC, or other alternative destinations (e.g., detox facility). WB offers Crisis and Assessment Services (CAS), which serves as an acute crisis unit and entry point to the psychiatric facility. WB also provides an acute inpatient psychiatric unit (IPU), residential treatment (FBC), and an addiction treatment center.

Figure 1. APP Diversion Process

Supplemental Emergency 9-1-1 Response by Advanced Practice Paramedic (APP).

APP evaluates patient identified as having potential mental health crisis.

WakeBrook Diversion Criteria:
- No acute medical issue or traumatic injury, AND
- Confirmed behavioral health crisis, AND
- Patient agrees to alternative destination

YES → Divert to WakeBrook
NO → Transport to ED

OBJECTIVE

To describe characteristics, treatment, and outcomes of 9-1-1 patients experiencing a mental health crisis treated in a pilot intervention and transported by EMS either to an acute crisis unit at a nearby community mental health center or an ED per protocol.

METHODS

- Retrospective cohort study of patients for whom an APP was called from August 2013-July 2014
- Inclusion criteria: >10 years of age, evaluated in EMS pilot intervention
- Manual linkage of EMS data to destination records (WB or ED) using direct identifiers
- Descriptive statistics were used for patient demographics, disposition, and length of stay (LOS). Mann-Whitney U tests were used to assess differences in LOS.

Figure 2. Inclusion and Linkage Process

1,560 screened by APPs

3 patients <10 years of age removed

1,557 patients met age inclusion criteria

165 patients transported to other alternative destinations (non-WB) removed

232 patients who refused transport to alternative destinations removed

1,160 WB or ED patients

223 WB patients — 937 ED patients

3 unsuccessfully linked WB patients removed — 314 unsuccessfully linked ED patients removed

99% (n=220) of WB patients successfully linked — 66% (n=623) of ED patients successfully linked

RESULTS

Overall patient characteristics at WB (n=220) vs. ED (n=623) were similar:
- Male: **55%** vs. **46%**
- White: **58%** vs. **66%**
- Uninsured: **38%** vs. **36%**
- Median Age: **38 years** vs. **37 years**

For those patients admitted for psychiatric reasons, median LOS prior to disposition was significantly longer in the ED **(41.1 hours, IQR 17.8-63.1)** compared to CAS at WB **(20.1 hours, IQR 8.7-46.4) (p=0.02)**.

Over a 30-day follow-up period, **27%** of CAS patients had a return visit to an ED or WB for any reason; **25%** of ED patients had a return visit to an ED or WB for any reason.

CAS Patient Dispositions	
IPU	11%
FBC	17%
Transfer Psych	40%
Discharge	18%
Refuse Services	5%
Transfer to ED within 4 hours	5%

Medical Admit	22%
Board Pending Psych Transfer	21%
Transfer Psych	22%
Discharge	33%
Left AMA	3%

CONCLUSION

A mobile integrated health program allowed a significant number of patients to be treated at a dedicated community mental health center, where treatment LOS times were significantly shorter compared to a large, regional ED. Additional work is needed to characterize subsequent outcomes. Successful broader implementation could improve quality of care and significantly and safely reduce the volume of patients seen in the ED with acute mental health crises.

CONTACT INFORMATION

Email questions or comments to: jcreed@med.unc.edu

Highlights

- 220 of 1160 patients who were evaluated were transported to Wake Brook, for a total of 19%

- Only 10 were transferred to emergency department within 4 hours of arrival, none of whom had adverse outcomes

- Total time prior to disposition on average 41 hours for those transported to the ED vs. 20 hours for those transported to Wake Brook

Falls In Assisted Living Facilities

- 1 to 5 transports per day for our EMS system

- Majority are patients who are "found down" with no obvious injury or complaint

- Risk management strategy for the facility is to summon EMS for transport to the emergency department

Falls in Assisted Living Facilities

○ Retrospective study complete:

- 644 falls in assisted living were reviewed
- 197 of these patients had a time-sensitive medical emergency
- Protocol would have identified 190 of the 197
- Sensitivity then is 97% (93-98%, 95% CI)
  - Bachman M et al. PEC 2013;17(1):111 [abstract]

Falls in Assisted Living Facilities

- 1500 such transports were made last year

- ~$2.5 million dollars in healthcare expense

- Evaluation of the first 150 of these patients, 81% did not require admission and were discharged from the emergency department

Doctors Making House Calls — Falls in Assisted Living protocol flowchart

Falls in Assisted Living Facilities

- Prospective evaluation had been underway for two years
- Public/private partnership with Doctors Making Housecalls (DMH)
- 1200 + patients enrolled with over 1/2 not requiring transportation
- Common medical record with DMH
- On-going evaluation of safety and costs

LEADING PROVIDER OF HEALTHCARE SERVICES ACROSS THE PATIENT CONTINUUM

Envision HEALTHCARE

AMR

*A leading provider and manager
of community-based
medical transportation*

EmCare

A leading provider of integrated physician services to healthcare facilities

Evolution HEALTH

An emerging provider of comprehensive physician-led post-hospital management solutions

Pre-Hospital	Hospital	Post-Hospital

Pre-Hospital	Hospital	Post-Hospital
▪ Emergency and Non-Emergency Medical Transportation	▪ Emergency Department	▪ Population Assessment
▪ Interfacility and Critical Care	▪ Anesthesiology	▪ Transitional Care
▪ Managed Transportation Services	▪ Hospitalist / Inpatient Care	▪ Comprehensive Care Coordination
▪ Fixed-Wing Air Ambulance Services	▪ Radiology / Tele-radiology	▪ Telehealth & Telemedicine
▪ Disaster Response / FEMA	▪ Surgery	▪ Longitudinal High Risk Management

Evolution HEALTH

Clinical Footprint and Current Focal Areas

Over 50 Year History of Pioneering the Delivery of Care

Experience-Focused, Person-Centered and Population-Oriented Care Delivery

- EMS – 911, IFT, CCT
- Medical Transportation
- Home Health
- Home Hospice
- Mobile Medical Practice
- Medical Command Center
  - Telehealth
  - Telemedicine
  - Telephonic Triage
- Clinical Leadership
  - Post-Acute
  - Palliative Care
  - Emergency Medicine/EMS
  - Primary Care, Hospital Medicine

Clinically Integrated System of Care for Mobile Pre-Acute, Acute and Post-Acute Care

Evolution HEALTH

Six Value Levers to Improve the Experience of Care While Optimizing Clinical and Financial Outcomes

Comprehensive Clinical Assessments

- Target
- Outreach
- Engage
- Assess
- Activate
- Educate
- Navigate
- Enable
- Empower

Six Value Levers to Improve the Experience of Care While Optimizing Clinical and Financial Outcomes

Transitional Care

Bridges care between settings, offering 24/7 support with rapid response capability to reduce preventable admissions, readmissions and emergency department utilization.

- Hospital to Home/Home Health/Hospice
- Hospital to Post-Acute Facility
- Post-Acute Facility to Home
- Emergency Department to Home
- 24/7 Unplanned Care Support

Six Value Levers to Improve the Experience of Care While Optimizing Clinical and Financial Outcomes

High Risk Management

Proactively manage high risk, high cost or high value patients.

- Frail Elderly
- Medically Complex
- Mobility Impaired
- Chronically Ill
- High-cost
- High-touch
- 24/7 Unplanned Care Support

Six Value Levers to Improve the Experience of Care While Optimizing Clinical and Financial Outcomes

Advanced Illness Management

Robust support for patient with advanced illnesses and functional decline as goals of care shift from curative to palliative.

- Advanced care planning
- Red flag and symptom management plans
- Medication Management
- Self Management
- Hospice transition
- 24/7 Unplanned Care

Six Value Levers to Improve the Experience of Care While Optimizing Clinical and Financial Outcomes

Unplanned Care

Coordinates pre-acute and acute care needs using mobile clinicians and telehealth capabilities with rapid response care team delivered in-home or virtually.

- Acute Care
- Urgent Care
- Episodic Care

Six Value Levers to Improve the Experience of Care While Optimizing Clinical and Financial Outcomes

Medical Command Center

Provides access to care in need-matched, time appropriate manner using existing network, community and gap filling resources

- 911-EMS
- Transport
- In-Home Care
- Virtual Visits
- Schedule Appointments
- Network Navigation

The Care Model

24/7 Access & Coordination

- 24/7 deployment for planned and unplanned care
- Clinical Triage, Medical Consultation, Care Coordination
- B2C and On Demand Services
- Based on principles of choice architecture
- "Call Center" versus "Command Center"

Evolution
H E A L T H

How Unplanned Care Works

- Medical Triage
- Care Coordination
- Navigation
- Need Matched
- Time Appropriate

- Sends encounter information
- Provides mapping/driving directions
- Resource status
- Point-of-care data collection

- Physician
- Advanced Practice Provider
- Nurse
- Paramedic
- Community Health Worker

Evolution
H E A L T H

Clinically Synchronized & Cost-Effective Care

- Need matched, time appropriate resourcing
  - right care, right place, right provider, right time, right cost

- Culturally matched community health workers

- Robust multi-layered clinical expertise

- Cost-effective patient navigation

- Real-time decision support

- Care titrated for patient safety

- Logistics

Population Intelligence

MIH Transitional Care Outcomes

	Relative % reduction in Valley Health System 30-day readmissions after EvHealth implementation
Hip/Knee	36% decrease
AMI	56% decrease
CHF	30% decrease
PNA	**58% decrease***
COPD	16% decrease
Core Dx Total	**45% decrease***

Legend:
- ■ Valley Health System Pre-Intervention
- ■ Evolution Health TOC Program
- □ National Medicare Measure (risk-adjusted)

45%
REDUCTION
*

n=2,104

*** = statistically significant**

Evolution HEALTH

Journal of Patient Experience

Transitions of Care Model Inclusive of Unplanned Care Improves the Patient Experience

J Brent Myers, MD, MPH[1], Jon Cox, MHS, PA-C[2], Stephanie Teague, EMT-P[3], and Eric Beck, DO, MPH[1]

Journal of Health Economics and Outcomes Research

OPEN ACCESS

Mobile Integrated Healthcare: Preliminary Experience and Impact Analysis with a Medicare Advantage Population

Daniel J. Castillo[1], J. Brent Myers[1], Jonathan Mocko[1], Eric H. Beck[2*]

Table 2a. Unadjusted PMPM Costs, Utilization and Trends

	Pre	Post		Pre	Post	
	Intervention (n= 1,074)			Control (n = 1,241)		P-value
PMPM (3 mo. mean)						
Total	$934.60	$961.31		$862.72	$925.01	0.00931
Inpatient	$509.61	$520.71		$397.45	$426.78	0.00000
Emergency Room	$84.84	$74.59		$72.42	$79.57	0.00000
Utilization (3 mo. mean)						
Inpatient (per 1000)	76.53	69.30		63.39	75.60	0.00000
Emergency Room (per 1000)	138.01	134.54		129.20	154.16	0.00000
PMPM Trend (6 mo. pre, 3 mo. post)			Difference			Difference
Total	14%	-19%	-33%	10%	5%	-5%
Inpatient	19%	-21%	-40%	13%	8%	-5%
Emergency Room	17%	-6%	-23%	5%	8%	3%
Utilization Trend (6 mo. pre, 3 mo. post)			Difference			Difference
Inpatient	28%	-18%	-46%	6%	6%	0%
Emergency Room	19%	-5%	-24%	4%	7%	3%

PMP and Utilization Trends

PMPM Trend (6 mo. pre, 3 mo. post)			Difference			Difference
Total	14%	-19%	-33%	10%	5%	-5%
Inpatient	19%	-21%	-40%	13%	8%	-5%
Emergency Room	17%	-6%	-23%	5%	8%	3%

Utilization Trend (6 mo. pre, 3 mo. post)			Difference			Difference
Inpatient	28%	-18%	-46%	6%	6%	0%
Emergency Room	19%	-5%	-24%	4%	7%	3%

Outcomes

Considerations

- Strategic Relationships
- Innovation Collaboration
- Partnership Models
- Joint Ventures

Evolution
H E A L T H

WHEN YOU COME
TO A FORK IN THE
ROAD, TAKE IT.

– Yogi Bera

Breakout Sessions

A: Program Development
Ocotillo Room
- *Bob Costello, Fire Chief, Buckeye Fire, Medical & Rescue Dept.*
- *Stu Esh, Captain, Buckeye Fire, Medical & Rescue Dept.*

B: Expanding Services
Brittlebush Room
- *Laura Baker, Assistant Chief, Tucson Fire Dept.*
- *Josh Hurguy, Battalion Chief, Golder Ranch Fire Dist.*

C: Strategic Partnership: Integrating Pharmacy Throughout Rural Arizona
Chia Room
- *Keith Boesen, Director, Arizona Poison & Drug Information Center*
- *Kelly Boesen, Clinical Pharmacist/Certified Diabetes Educator, Arizona Poison & Drug Information Center*
- *Matt Eckhoff, Director, Community Integrated Paramedicine, Rio Rico Medical & Fire Dist.*

Why Should We All Care About Data? The Arizona MIH Data Crosswalk and National Perspective

- Jonathon S. Feit, MBA, MA, Co-Founder & CEO, Beyond Lucid Technologies, Inc.

- Taylor A. George, MHS, NR-P, Research Associate, Zuckerman College of Public Health, Univ. of AZ

- Moderated by: Bob Ramsey, Founder & CEO, Starwest Associates

A Non-Geek's Guide to Prehospital Data Exchange.

(Yes, you too can connect to Epic!)

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Inspiration for this Presentation (#1 of 2)

"I hate it when vendors take advantage of my inability to ask the right questions."

— Capt. Mike McElvaney,
Santa Monica Fire Dept.
during the 2nd California OSHPD
Community Paramedicine hearing

Let's talk about the right questions to ask.

A Successful, Sustainable CP/MIH Program:

❶ Improves patient care by caring for patients over time.

❷ Reduces costs by keeping patients out of the ED

❸ Centralizes the role of EMS in a connected healthcare ecosystem

Survey: How Many of You Hate / Distrust Technology (especially ePCR)?

Survey: How Many of You See the Value in Technology?

Survey: How Many of You Have Figured Out How to Get Sustainably Paid for CP/MIH?

What is the Value of your CP/MIH Program?

It's not what you know, it's what you can prove.

~ Training Day

What is the Value of your CP/MIH Program?

CAN YOU PROVE IT?

The "5 Rs" of Community Paramedicine and Mobile Integrated Health

BLT — First Response Matters. www.BeyondLucid.com

By Jonathon S. Feit, MBA, MA
Co-Founder & Chief Executive
Beyond Lucid Technologies, Inc.
Jonathon.Feit@beyondlucid.com

After my talk at the 2014 International Roundtable on Community Paramedicine, business spiked, which is why my *EMS Innovation Newsletter* was quiet for a few weeks. But a day of sessions on Community Paramedicine and Mobile Integration Health will take place at this year's EMS World Expo, and topics including out-of-home care, alternate site transport, non-transport, readmission prevention, and telemedicine will surely arise. They will do so again in the weeks following, at the American Ambulance Association conference and the International Association of EMS Chiefs Leadership Summit. (Let me know if you'll be attending and wish to discuss your specific context.)

As an MBA, and Co-Founder and C.E.O. of the first EMS-facing technology firm that designed patient documentation software specifically with Community Paramedicine and Mobile Integrated Health (CP/MIH) in mind, Fire and EMS agencies nationwide have sought my team's help to walk down the new care model's legal line (a dotted line at best in most places) while bolstering sustainability through sound economic judgment. After all, the archetypical CP/MIH models highlighted frequently across the country—including REMSA, MedStar, UPMC, Mesa (Arizona), Eagle County (Colorado), and San Diego—offer an inspiring set of models that seem to show signs of regional success. However, they are also specialized and very challenging to replicate.

In the long-term, most places <u>cannot</u> get paid for CP/MIH (and they won't be able to for a while)— so below are my "*5 Rs of Community Paramedicine and Mobile Integrated Health*," suggestions to guide the efforts of agencies large and small that wish to engage this new care delivery model:

1. **REASON** – Agency leaders should ask themselves *why* they want to go down this road. Is it to improve clinical care, lower costs, or free up resources? Or—if we're being honest— is it because CP/MIH seems like "the thing to do"? It's a hot topic, and "the cool kids are doing it." Are you afraid of being left out? Implementation isn't easy: a fire chief in Texas once told me he had to "use all his political capital" to push through a non-transport regulation pertaining to frequent transport patients. CP/MIH is at least as complex as frequent transports because its cost-benefit analysis is less obvious, as is the means by which to identify the patients— and providers—who will take part in the program, how patients will be tracked, and who holds command authority. (Add in union issues, and you have a recipe for extensive negotiations.)

2. **RIGHTS** – Speaking of extensive negotiations: Do you even have the legal permission to engage in CP/MIH? Consider what's happening in California right now: the state has preliminarily authorized eleven "Community Paramedicine Pilot Projects," an educational program to be run through UCLA, with statistical oversight by the University of California San Francisco. Given its practical, innovative curriculum and a statewide training model, the program should be a shoe-in—but California tightly restricts ambulance operations, and nursing unions have complained about EMS agencies invading what has traditionally been "their turf." Does your state allow you to take patients somewhere other than a hospital?

3. **REVENUES** – Revenue considerations are an interesting question-mark in the age of Accountable Care and the readmission prohibition. Hospitals weigh whether bringing patients in frequent visits is worth a penalty and possible non-reimbursement. (It's a more complicated calculation than it sounds.) Ask yourself: is CP/MIH a line of business worth the economic loss that your agency will incur by engaging in non-transport activities? Have you considered "the other side of the ledger"? Matt Zavadsky's presentation ... among expert discussions on the cost savings promised by CP/MIH ... system savings, Matt rarely references the costs incurred ... supplies, and field provider time—that cannot ... scheme. If you're going to spend money but ... justify the expense: Marketing to build co... bedside manner for chronic patients. Perh... is responsible for bringing to life the "EMS ... will have to *justify* foregone revenues.

4. **REGION** – How supportive is you... What if (as one agency brought to us) ... from local care providers? Will they cry... care, despite a loss of revenues from in... start becoming difficult to copy: Medstar's ... REMSA received a federal CMS Innovatio... received funding, too. UPMC and Allegheny ... competitive relationship that exists in few other ... Community a regional data sharing incentive prog... disposal to incentivize and underwrite the costs of a C...

5. **RECORDS** – and sophisticated CP/MIH process ... how clinically ...

5. **RECORDS** – I'm admittedly biased by my Day Job on this point, but a shortage of robust and sophisticated documentation software is a chronically neglected component of the CP/MIH process. It's also a critical reason that almost every CP/MIH program—no matter how clinically well-designed—has stayed small. Unlike traditional incident-specific ePCRs, CP/MIH requires records that are longitudinal in nature, tracking patients over time. Quality Metrics pertaining to Accountable Care and post-discharge follow up to avoid readmissions demand modern tools for data management, aggregation and real-time, high quality statistics. It has been interesting to watch the famous CP/MIH programs try bending pre-existing technology to meet their needs, yet none has succeeded: traditional neither ePCRs nor hospital-side electronic health records collect enough EMS-oriented data about themselves. The question is how quickly agencies will acknowledge CP/MIH's unique data needs—and the need for appropriately smart technology to measure success.

Incident Charting vs. Person Charting:
The Key to CP/MIH Success

- Why is HL7 relevant to CP/MIH?

- Why is NEMSIS v3 a prerequisite?

Different Colors of Government Money

Further reading:

"Different Colors of Money":
Federal funding silos have
hamstrung the EMS-to-
hospital data continuum.
How to correct the disjoint."
Becker's Hospital Review
23 June 2016

HealthIT.gov
NEMSIS.org

Prehospital Records	Hospital Records
DOT	HHS
NHTSA	ONCHIT
NEMSIS	HL7 (Meaningful Use)
V3.4	Stage 3
Acute	**Chronic**

What is HL7, anyway?

Why a NEMSIS v3 ePCR is enough for CP/MIH (as a starting point)…and why it isn't.

NEMSIS v3

CDA

HL7

CDA is the set of common data elements that connect EHRs to one another. It is not proprietary. NEMSIS and HL7 cannot directly "talk" (interoperate) with one another.

NEMSIS v2 ePCRs will experience unmappable "data holes" when attempting to generate a meaningful CDA. NEMSIS v3 is required.

Types of Standard Interoperable HL7-Based Clinical Documents

CCD

C-CDA

CDA

CDA R2

Discharge Summary

Clinical Notes

CDA version that BLT's MEDIVIEW™ system currently uses.

Sources:
ANSI, HL7, HealthIT.gov

How do CP/MIH Programs Connecft EMS Charting with Electronic Health Records?

NEMSIS v3

Supp. Data Elements

CDA

Electronic Health Record Systems

(*Yes, even Epic!*)

Standard ePCRs Do Not Chart Over Time

Past encounters

Mental health

Family history

Social factors

NEMSIS v3 ePCR

PLUS

Supplemental Data Elements

Patient Profiles
(Longitudinal care records)

139

Clinical, Operational, and Financial Benefits of Longitudinal Patient Care Charting

Historical context → informed decisions	Health trends by *patient*…not just by agency
Over-time data: - Mental health - Family history - Past visits	Reduce: - Charting time - Risk of errors - Duplicate work

Inspiration for this Presentation (#2 of 2)

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Arizona MIH/CIP Data Crosswalk Project

Taylor A. George MHS, EMT-P
Teaching/Research Associate
The University of Arizona

Disclaimer and COI

Introduction

⬆Q   AND   ⬌$

- OR -

⬇$ AND   ⬌Q

Introduction

Introduction

Introduction

Introduction

What do you need in order to survive in this environment?

If any one single piece is missing or functioning inefficiently, likelihood of survival and/or sustainability is drastically reduced.

What do you need in order to survive in this environment?

If any one single piece is missing or functioning inefficiently, likelihood of survival and/or sustainability is drastically reduced.

Arizona MIH/CIP Data Crosswalk

- "Equipment Check" of Arizona CIP Programs' Data Collection
  - Inspection of parts and functionality
  - Identification of currently collected data elements
  - Assessment of common themes
  - Assessment of core metrics
  - Comparison to various accepted national standards
    - Both traditional healthcare and MIH
  - Identification of gaps

- Recommendations for action
  - In order to achieve functional sustainability and self-sufficiency

Methods

- Electronic survey distributed to Arizona Fire/EMS agencies
  - Private list maintained by Vitalyst and RRMFD

- Agencies asked to provide information regarding:
  - CIP Program Type
  - Data Collection Methods
  - Data Metrics Collected
  - Outcomes Measured

- Agencies then asked to provide all CIP forms/templates for review
  - Used to identify, collate, and verify line-item metrics

Results - General

- 16 agencies indicated current/ongoing CIP programs and provided high-level information in response to the survey questions
  - See Table 1 of full written report

- 7 of those 16 agencies provided additional detailed information including all CIP forms/templates
  - See Table 2 of full written report

Results - Agency Collection Methods

- Commercial EMS ePCR (64%)
  - 5 different vendors

- Commercial Clinical EHR (14%)
  - 2 different vendors

- Paper PCR (21%)
  - Indicated later transfer into proprietary agency databases

Results - Categories of Data Collected

- 100% collect Patient Demographic Information
- 79% collect Enrollment Period Healthcare Utilization Information
- 79% collect Medication Adherence Information
- 79% collect Patient Satisfaction Information
- 71% collect Patient Referral Information
- 36% collect Pre-Enrollment Healthcare Utilization Information
- 26% collect Post-Enrollment Healthcare Utilization Information

Results - Categories of Data Collected

- 100% collect Patient Demographic Information
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- 79% collect Medication Adherence Information
- 79% collect Patient Satisfaction Information
- 71% collect Patient Referral Information
- 36% collect Pre-Enrollment Healthcare Utilization Information
- 26% collect Post-Enrollment Healthcare Utilization Information

Results - Categories of Outcomes Measured

- 81% collect EMS System Utilization Rates

- 69% collect Patient Outcomes Information

- 69% collect Customer Satisfaction Information

- 56% collect Hospital Readmission Rates

- 56% collect Cost of Care Information

Results - Categories of Outcomes Measured

- 81% collect EMS System Utilization Rates

- 69% collect Patient Outcomes Information

- 69% collect Customer Satisfaction Information

- 56% collect Hospital Readmission Rates

- 56% collect Cost of Care Information

Results - Alignment with National MIH Measures

- Based on the limited detailed data received from Arizona CIP programs, it is difficult to evaluate our state's adherence to these consensus measures.

- As such, a truly valid and exhaustive detailed review and comparison with the National MIH/CP Performance Measures Project is unable to be completed at this time.

- A general high-level analysis can be found within the Arizona MIH/CIP Data Crosswalk full written report.

Recommendations - Data Collected and Outcomes Measured

- Move towards 100% collection of a statewide standardized dataset
  - Health Outcomes Metrics
  - Quality of Care Metrics
  - Operational Metrics
  - Financial Metrics

- Achieve alignment with National MIH Measures
  - Model minimum core data metrics off of those provided by this consortium
  - Ensure that adverse outcomes are identified/tracked
    - Include root-cause analysis with corrective action as needed

Recommendations - Data Collected and Outcomes Measured

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- Achieve alignment with National MIH Measures
  - Model minimum core data metrics off of those provided by this consortium
  - Ensure that adverse outcomes are identified/tracked
    - Include root-cause analysis with corrective action as needed

Health Outcomes and Quality of Care

- Add additional metrics for Health Outcomes and Quality of Care
  - Assesses impact on Population Health, part of IHI Triple Aim

- Include composite appraisal scoring
  - SF-12, HRQOL-14, Personal Wellness Profile, Intermountain Risk Score, etc.

- Use validated disease-specific tools
  - DQOL-B, Minnesota Living with Heart Failure Questionnaire, etc.

-The IHI Triple Aim. Institute for Healthcare Improvement. Published 2012. Accessed 29 Jan 2017. http://www.ihi.org/engage/initiatives/tripleaim/pages/default.aspx
-IHI Triple Aim Measures. Institute for Healthcare Improvement website. Published 2016. Accessed 29 Jan 2017. http://www.ihi.org/engage/initiatives/tripleaim/pages/measuresresults.aspx
-US Department of Health and Human Services. Hospital Value-Based Purchasing Fact Sheet. ICN 907664. Published Sep 2015. Accessed 04 Aug 2016. https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/Hospital_VBPurchasing_Fact_Sheet_ICN907664.pdf

Health Outcomes and Quality of Care

- Add additional metrics for Health Outcomes and Quality of Care
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- Use validated disease-specific tools
  - DQOL-B, Minnesota Living with Heart Failure Questionnaire, etc.

❖In brick and mortar healthcare, Health Outcomes and Quality currently constitutes 40% of reimbursement under Value-Based Purchasing

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End Goal

End Goal

FOOD FOR THOUGHT

**Providing high-quality care at a lower cost is not bound by political identity.
One way or another, it's here to stay.**

Full Report

- A full version of the Arizona MIH/CIP Data Crosswalk can be found via Rio Rico Medical & Fire District's website
  - http://www.rioricofire.org/chipp

Bear Down!

Taylor A. George MHS, EMT-P
Teaching/Research Associate
The University of Arizona

Lunch will be served in the Saguaro Dining Room.

Please bring your lunch back to the ballroom for our lunch keynote presentation.

Top MIH Activities We Should All Be Watching

Matt Zavadsky, MS-HSA, EMT, Chief Strategic Integration Officer, MedStar Mobile Healthcare

Top MIH Activities We Should All Be Watching

The Healthcare Environment…

It's About….. The $

- **$10,346 per capita health expenditures!!**
  - Due in large part to **quantity-based** payments

Healthcare 3.0…

- **Alternative Payment Models**
    - Accountable Care Organizations
    - Shared risk/Shared savings models
- **Payment based on _OUTCOMES_**
    - Readmissions & VBP Penalties
- **Bundled payments based on episode of care**
- **Push to Managed Medicare/Medicaid**
- **MSPB calculations = 2015**
    - Medicare Spending Per Beneficiary
        - Hospital accountable for some outpatient post acute costs
- **Merger and Acquisition activity**

Cardiac bundled-payment program will likely penalize high-spending hospitals

By Maria Castellucci
August 12, 2016

Hospitals with higher than average spending in cardiology services could face penalties as a result of CMS' proposed bundled-payment program for bypass surgery and heart attacks, according to a new analysis.

The CMS will randomly select 98 metropolitan regions with hospitals that treat three types of cardiac care: coronary bypass surgery; heart attack patients managed with drugs and other treatments; and patients who receive percutaneous coronary intervention. The program will begin rolling out July 1, 2017.

Hospitals that meet the targets and quality benchmarks will get to keep the savings. Those that exceed the targets will have to pay Medicare back at year-end.

Hospitals with higher cardiac-care spending are more likely to struggle to meet CMS targets. These hospitals probably treat sicker patients who lack continuum of care services that prevent costly readmissions, according to the report.

For heart attack patients, Pearson said systems may need to focus on establishing continuum of care services to prevent readmissions like providing home care services and a managed-care plan.

Pennsylvania to test new payment model for rural hospitals: 8 things to know

Written by Kelly Gooch | **January 13, 2017**

CMS and Pennsylvania are joining forces on a new model designed to improve health and healthcare is rural areas of the state.

The goal of the model is not only to improve health and healthcare in rural areas of Pennsylvania, but also to reduce the growth of hospital expenditures across payers — including Medicare — and improve the financial viability of the state's rural hospitals, according to CMS.

CMS said Pennsylvania rural hospitals participating in the model will receive all-payer global budgets — funded by all participating payers — to cover inpatient and outpatient services they provide. In exchange, these hospitals will use the money "to deliberately redesign the care they deliver to improve quality and meet the health needs of their local communities," the agency added.

Pennsylvania, during each performance year, will prospectively set the all-payer global budget for each participating hospital, CMS said. The all-payer global budget will primarily be based on hospitals' historical net revenue for inpatient and outpatient hospital-based services from all participating payers, according to CMS.

http://www.beckershospitalreview.com/finance/pennsylvania-rural-health-model-targets-hospital-finances-quality-8-things-to-know.html

The Growth…

2009 = 4 Programs

2014 = 160 Programs

2017 = 201 Program

City	State
Tuscaloosa	AL
Little Rock	AR
Mountain Home	AR
Apache Junction	AZ
Buckeye	AZ
Chandler	AZ
Cottonwood	AZ
Green Valley	AZ
Lake Havasu	AZ
Mesa	AZ
Nogales	AZ
Phoenix	AZ
Phoenix	AZ
Rio Rico	AZ
Scottsdale	AZ
Scottsdale	AZ
Sedona	AZ
Sierra Vista	AZ
Sun City West	AZ
Tempe	AZ
Tucson	AZ
Tucson	AZ

Alameda	CA
Burbank	CA
Carlsbad	CA
Fountain Valley	CA
Glendale	CA
Hayward	CA
Huntington Beach	CA
Los Angeles	CA
Modesto	CA
Moorpark	CA
Newport Beach	CA
Orange	CA
Pasadena	CA
Rocklin	CA
San Bernardino	CA
San Diego	CA
San Diego	CA
San Francisco	CA
San Leandro	CA
Santa Monica	CA
Vallejo	CA
	CA
Centennial	CO
Colorado Springs	CO
Edwards	CO
Fort Collins	CO
Littleton	CO
Pagosa Springs	CO
Woodland Park	CO

Danbury	CT
New Haven	CT
Washington	DC
Bradenton	FL
Coral Springs	FL
Lecanto	FL
Ocala	FL
Sarasota	FL
Satellite Beach	FL
Sunrise	FL
Tampa	FL
Trinity	FL
Atlanta	GA
Blairsville	GA
Buford	GA
Conyers	GA
Gainesville	GA
Macon	GA
Marietta	GA
Riverdale	GA
Hilo	HA
Boise	ID
Moscow	ID
Sandpoint	ID

Elgin	IL
Quincy	IL
Rockford	IL
Rockford	IL
Carmel	IN
Crawfordsville	IN
Fishers	IN
Highland	IN
Indianapolis	IN
Olathe	KS
Louisville	KY
Baton Rouge	LA
Lafayette	LA
New Orleans	LA
Boston	MA
Malden	MA
Largo	MD
Boothbay Harbor	ME
Calais	ME
Castine	ME
Dover-Foxcroft	ME
Farmington	ME
Greenville	ME
Lewiston	ME
Presque Isle	ME
Scarborough	ME
Searsport	ME
Tenants Harbor	ME
Waterville	ME
Winthrop	ME

Ann Arbor	MI
Ann Arbor	MI
Bloomfield	MI
Clinton Township	MI
Clinton Township	MI
Detroit	MI
Grand Rapids	MI
Hart	MI
Muskegon	MI
Pinconning	MI
Portland	MI
Southfield	MI
St. Johns	MI
Crosslake	MN
Fergus Falls	MN
Fergus Falls	MN
Grand Rapids	MN
Minneapolis	MN
Oakdale	MN
Robbindale	MN
St. Paul	MN
St. Paul	MN
Wadena	MN
St Louis	MO
St. Louis	MO
Fayetteville	NC
HIllsborough	NC
Jacksonville	NC
Lumberton	NC
Marion	NC
Raleigh	NC
Smithfield	NC
Wilmington	NC
Winston Salem	NC
Winston Salem	NC

Fargo	ND
Rugby	ND
Omaha	NE
Elizabeth	NJ
Jersey City	NJ
Neptune	NJ
Ridgewood	NJ
Woodbury	NJ
Albuquerque	NM
Rio Rancho	NM
Sante Fe	NM
Battle Mountain	NV
Las Vegas	NV
Reno	NV
Winnemucca	NV
Cambridge	NY
Chestnut Ridge	NY
New York	NY
New York	NY
Syosset	NY
Dayton	OH
Monroe	OH
Pinkerinton	OH

Hillsboro	OR
Redmond	OR
Tigard	OR
Cranberry	PA
Erie	PA
Harrisburg	PA
Harrisburg	PA
North Huntingdon	PA
Pittsburgh	PA
Abbeville	SC
Memphis	TN
Austin	TX
Austin	TX
Conroe	TX
Dallas	TX
Dallas	TX
El Paso	TX
Fort Worth	TX
Georgetown	TX
Houston	TX
McKinney	TX
Plano	TX
Rowlett	TX
San Antonio	TX
Schertz	TX
Webster	TX

Arlington	VA
Chesterfield	VA
Kent	WA
Olympia	WA
Prosser	WA
Seattle	WA
Tacoma	WA
Madison	WI
West Allis	WI
Riverton	WY

The Evidence…

UCSF

University of California
San Francisco

Research Report

Mobile Integrated Health Care - Community Paramedicine: A Resource for Community-Dwelling People at Risk for Needing Long-Term Care

Alicia LaFrance, MPH, MSW

Janet Coffman, MPP, PhD

November 15, 2016

Original Article

An Innovative Approach to Health Care Delivery for Patients with Chronic Conditions

Janice L. Clarke, RN,[1] Scott Bourn, PhD, RN, EMT-P,[2] Alexis Skoufalos, EdD,[1]
Eric H. Beck, DO, MPH, NREMT-P,[2] and Daniel J. Castillo, MD, MBA[2]

Abstract

Although the health care reform movement has brought about positive changes, lingering inefficiencies and communication gaps continue to hamper system-wide progress toward achieving the overarching goal—higher quality health care and improved population health outcomes at a lower cost. The multiple interrelated barriers to improvement are most evident in care for the population of patients with multiple chronic conditions. During transitions of care, the lack of integration among various silos and inadequate communication among providers cause delays in delivering appropriate health care services to these vulnerable patients and their caregivers, diminishing positive health outcomes and driving costs ever higher. Long-entrenched acute care-focused treatment and reimbursement paradigms hamper more effective deployment of existing resources to improve the ongoing care of these patients. New models for care coordination during transitions, longitudinal high-risk care management, and unplanned acute episodic care have been conceived and piloted with promising results. Utilizing existing resources, Mobile Integrated Healthcare is an emerging model focused on closing these care gaps by means of a round-the-clock, technologically sophisticated, physician-led interprofessional team to manage care transitions and chronic care services on-site in patients' homes or workplaces.

Introduction

SINCE ITS IMPLEMENTATION in 2010, the Patient Protection and Affordable Care Act (ACA) has succeeded in providing more people with access to care and improving value on a number of fronts (eg, banning preexisting conditions as a reason to deny health insurance coverage, instituting exchanges that enable consumers to comparison shop for health insurance plans, allowing adult children up to age 26 coverage under their parents' health insurance). However, the complexity of the large, fragmented, and uncoordinated US health care system continues to prove challenging, despite ongoing efforts to address escalating health care costs and suboptimal quality outcomes.

The problem

Persistent inefficiencies, resistance to change, and multiple interrelated issues across the system prevent critical information and resources from reaching providers and patients in a timely manner. Strategic vision, coupled with the ability to mobilize and deliver appropriate resources to patients in the community, is needed so that health care professionals can provide accessible, safe, well-coordinated, cost-effective, high-quality care.

Access to healthcare services. Continued barriers to access range from lack of availability to high prices to lack of insurance coverage. In the nation's 4 largest states, 12%–30% of residents lacked health insurance coverage or experienced problems getting needed care in 2014.[1] In many rural areas, an inadequate supply of health care professionals restricts access to needed services, challenging the health care system to utilize and deploy clinical and material resources in different ways.[2] A major weakness in typical outpatient and inpatient care delivery systems is that primary care professionals, paramedics, emergency physicians, and hospitalists function in unintegrated silos that impede

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Conclusion

A patient-centered, unplanned care treatment strategy may significantly improve the patient's health-care experience while reducing unnecessary utilization of higher cost, inpatient health-care resources. This particular case series includes only Medicare patients discharged from a single health-care system; we are in the process, however, of deploying this strategy for Medicare patients more broadly as part of a population health strategy as well as for a Medicaid expansion population. As these programs mature, we look forward to sharing our experiences with these groups as well.

Further study is required to determine the magnitude of improved satisfaction, cost-effectiveness, and other outcomes compared to other, more traditional delivery models. Preliminary experience with an unplanned care delivery model, as a component of a transitions of care initiative, shows great promise in improving the quality, experience, value, and outcomes for patients.

Mobile Integrated Healthcare: Preliminary Experience and Impact Analysis with a Medicare Advantage Population

Daniel J. Castillo[1], J. Brent Myers[1], Jonathan Mocko[1], Eric H. Beck[2*]

Abstract

Background: Mobile Integrated Healthcare (MIH) is a novel, patient-centered approach to population management. This concept creates a needs-matched, time appropriate assignment of one or more members of a multi-professional clinical team to care for patients on a scheduled or unscheduled basis. The selection of the site of care for scheduled interventions is driven by patient choice and, most often occurs in the patient's home; unscheduled interventions are guided by a 5-point triage system and, based on acuity, may be treated in the home, primary care office, urgent care or, rarely, in an emergency department.

Methods: An MIH team was assigned to deliver a care coordination program for a Medicare Advantage PPO (MAPPO) population (55% female, 71.2 years mean age), with risk assignment and interventions designed to affect potentially avoidable utilization of Emergency Medical Services (EMS), emergency department, and medical inpatient admissions. Patients participating in the MIH program were compared with contemporaneous, risk-matched non-participants as well as to actuarially expected cost and utilization based on historical claim experience.

Results: All measured trends demonstrated favorable results for patients participating in the MIH program when compared against a matched cohort: 19% decrease in emergency department per member per month (PMPM) cost, 21% decrease in emergency department utilization, 37% decrease in inpatient PMPM cost, 40% decrease inpatient utilization, all measures reached statistical significance. Member experience satisfaction scores and patient activation measures also showed favorable preliminary trends.

Conclusion: This initial impact analysis of a MIH care coordination program for this MAPPO population demonstrates promising trends regarding utilization, cost, member experience and patient activation. These preliminary findings indicate both that implementation of such a program is feasible and strongly suggest meritorious impacts upon the health, experience and cost of care for the population.

Keywords: population health, care management, community paramedic, interprofessional, value-based care, mobile integrated healthcare

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Providing Acute Care at Home: Community Paramedics Enhance an Advanced Illness Management Program—Preliminary Data

Karen A. Abrashkin, MD,* Jonathan Washko, MBA,† Jenny Zhang, BA,* Asantewaa Poku, MPH,* Hyun Kim, ScD,‡ and Kristofer L. Smith, MD, MPP*

Models addressing urgent clinical needs for older adults with multiple advanced chronic conditions are lacking. This observational study describes a Community Paramedicine (CP) model for treatment of acute medical conditions within an Advanced Illness Management (AIM) program, and compares its effect on emergency department (ED) use and subsequent hospitalization with that of traditional emergency medical services (EMS). Community paramedics were trained to evaluate and, with telemedicine-enhanced physician guidance, treat acute illnesses in individuals' homes. They were also able to transport to the ED if needed. The CP model was implemented between January 1, 2014, and April 30, 2015 in a suburban–urban AIM program. Participants included 1,602 individuals enrolled in the AIM program with high rates of dementia, decubitus ulcers, diabetes mellitus, congestive heart failure, and chronic obstructive pulmonary disease. Participants had a median age of 83 and an average of five activity of daily living dependencies (range 0–6). During the study period, there were 664 CP responses and 1,091 traditional EMS transports to the ED among 773 individuals. Only 22% of CP responses required transport; 78% were evaluated and treated in the home. Individuals that community paramedics transported to the ED had higher rates of hospitalization (82.2%) than those using traditional EMS (68.9%) ($P < .001$). Post-CP surveys showed that all respondents felt the program was of high quality. Results support the potential benefits of CP and invite further evaluation of this innovative care model.

Key words: Community Paramedicine; community paramedics; Mobile Integrated Healthcare; Advanced Illness Management; acute care

New models are needed to improve the quality and costs of care for older adults with multiple advanced chronic conditions. Two out of three older Americans have multiple chronic conditions, and treatment for this population accounts for 66% of the country's healthcare budget.[1] Homebound older adults are a particularly costly and vulnerable subpopulation. Constituting 5.6% of the community-dwelling Medicare population (~2 million people), they tend to be older, female, nonwhite, and less affluent than those who are not homebound, and only 11.9% receive primary care services at home.[2] Homebound individuals are often unable to access outpatient care and forgo needed treatment for extended periods of time. Faced with an exacerbation of a chronic illness or a new acute problem, their only option is to dial 911 and seek treatment in the emergency department (ED).[3]

Evidence supports an overreliance on hospital services for older adults and homebound individuals. More than one-third of Medicare beneficiaries who are evaluated and treated in the ED (without hospital admission) may be safely treated in a lower-acuity setting,[4] and homebound individuals are significantly more likely than those who are not homebound to have been hospitalized in the last year (52.1% vs 16.2%).[2] Intervening in the prehospital space could result in significant cost savings—an estimated $560 million per year for Medicare beneficiaries alone[4]—while also improving individual experience and avoiding iatrogenic harms that older adults often incur.[5–7]

Preventing hospitalization of older adults will require a multifaceted approach. Efforts to date include engaging and educating specialists and identifying important research

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0002-8614/16/$15.00

Original Article

Conclusion

Assuring access to high-quality, safe, integrated, and well-coordinated care is tantamount to improving population health outcomes, reducing wasteful spending, and reversing the spiraling cost curve. Unfortunately, a multitude of inter-related problems continue to impede progress toward these goals, and these considerable issues are most evident in caring for the growing population of patients with multiple, complex chronic conditions. MIH is an emerging model that leverages EMS systems to effectively address the key issues of care transitions, longitudinal care, and unplanned episodes of care by using existing resources more efficiently and enabling data and information sharing among health systems and other providers. Readily adaptable to meet the health needs of populations in any locality, the model is designed to deliver chronic and urgent care whenever and wherever needed.

The Distribution of Recommended Care Levels by Age, Gender, and Trauma vs Medical Classification within the Emergency Communication Nurse System

Mark Conrad Fivaz, MD[1]; Jennie McQueen, RN[1]; Tracey Barron, MCPara[3]; Jeff Clawson, MD[2]; Greg Scott, MBA[2]; Isabel Gardett, PhD[2]; Brett Patterson[2]; Mat Zavadsky, MS[4]; Neal Richmond, MD[5]; Chris Olola, PhD[2]

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ABSTRACT

Introduction: An examination of the Emergency Communications Nurse-determined Recommended Care Levels (RCLs), for calls transferred for secondary nurse-triage has not been performed. The outcome of such an investigation

Conclusion: Patients accessing 911 systems with low-acuity conditions and undergoing a secondary nurse-triage are predominantly female, over 50 years of age, and have more medical-related chief complaints than trauma-related. Almost a third of all the patients triaged through the ECNs received alternative RCLs other than receiving an *Emergency response (911)* or being sent to the *Emergency care as soon as possible* RCL. Both centers documented a low percentage of *Emergency response (911)* RCL.

INTRODUCTION

The Emergency Communication Nurse System (ECNS™) is a computerized telephone patient assessment process, completed by a certified Emergency Communication Nurse (ECN) that can be used for secondary triage of low-acuity 911 calls. In over 2,900 medical dispatch centers distributed throughout 43 countries around the world, emergency medical calls are triaged by trained and certified emergency medical dispatchers (EMDs). Using the automated Medical Priority Dispatch System (MPDS®) software, ProQA™, the EMD assigns specific determinant codes which represent the patient chief complaint, response urgency/level (OMEGA [lowest], ALPHA, BRAVO, CHARLIE, DELTA, and ECHO [highest]), and acuity, as determined by the EMD's primary assessment (Figure 1). Some of these cases coded as low acuity by the EMD, are candidates for non-ambulance care.[1-3] The ECN, when situated in the 911 center, can make a final determination as to the type of care the patient receives.

Once the EMD assigns the case an approved "nurse-eligible" low-acuity determinant code (within the OMEGA and ALPHA Priority-level calls), the caller is transferred immediately to the ECN, who provides the secondary patient assessment (Figure 2). This assessment begins with the ECN selecting one of the 211 problem-

Evaluation Report

Evaluation of California's Community Paramedicine Pilot Project

by Janet M. Coffman, PhD, MPP, Cynthia Wides, MA, Matthew Niedzwiecki, PhD, and Igor Geyn

January 23, 2017

Contents

Executive Summary

Community paramedicine (CP), also known as mobile integrated health, is an innovative model of care that is being implemented throughout the United States. This model of care utilizes the unique abilities of paramedics and emergency medical services (EMS) systems to meet local health care needs through partnerships between EMS agencies and other health care providers. Community paramedicine also aligns with the triple aim of improving patient experience, improving community health status, and decreasing the cost of care. Community paramedics receive additional training beyond that required for paramedic licensure and provide care outside of their traditional role, which in California is restricted to responding to 911 calls, transporting patients to an acute care hospital emergency department (ED), and performing inter-facility transfers.

In 1972, California established the Health Workforce Pilot Project (HWPP) program (California Health and Safety Code Sections 128125-128195), a farsighted program administered by the California Office of Statewide Health Planning and Development (OSHPD) that waives scope of practice laws to test and evaluate new and innovative models of care. On November 14, 2014, OSHPD approved HWPP #173, a project sponsored by the California Emergency Medical Services Authority (EMSA), which encompasses 13 projects that are testing six community paramedicine concepts. (Appendix A shows a map of the sites.)

- **Post-Discharge Short-term Follow Up:** Provide short-term, home-based follow-up care to people recently discharged from a hospital due to a chronic condition (e.g., heart failure) to decrease hospital readmissions within 30 days.

- **Frequent EMS Users:** Provide case management services to frequent 911 callers and frequent visitors to EDs to reduce their use of the EMS system by connecting them with primary care, behavioral health, housing, and social services.

- **Directly Observed Therapy for Tuberculosis:** Collaborate with local public health department to provide directly observed therapy to people with tuberculosis (i.e., dispense medications and

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After Monday, January 23 @ 09:00 PT:

http://healthforce.ucsf.edu/communityparamedicine

Alternate Destination – Urgent Care Projects

- Among the limited number of patients who were enrolled, paramedics were able to identify patients for whom transport to an urgent care center was an appropriate option.

- No patients experienced an adverse outcome, although two patients were transferred to an ED following admission to an urgent care center and nine patients were rerouted to an ED because the urgent care center declined to accept the patient.

- To operate safely and efficiently, these projects need to closely match field screening protocols with the capabilities of urgent care centers and the illnesses and injuries they are willing to treat.

- The projects yielded modest savings because insurers pay less for treatment provided in urgent care centers than in EDs for the same illnesses and injuries.

http://healthforce.ucsf.edu/communityparamedicine

Alternate Destination – Behavioral Health Care Project

- Paramedics performed medical screening of patients to determine whether they could be safely transported directly to a mental health crisis center.

- Ninety-five percent of patients were evaluated at the behavioral health crisis center without the delay of a preliminary emergency department visit. Only 5% of patients required subsequent transfer to the ED, and there were no adverse outcomes. After refining the field medical evaluation protocols, the rate of transfer to an ED fell to zero.

- The project yielded savings for payers, primarily Medi-Cal, because screening behavioral health patients in the field for medical needs and transporting them directly to the mental health crisis center obviated the need for an ED visit with subsequent transfer from an ED to a behavioral health facility. For uninsured persons, the amount of uncompensated care provided by ambulance providers and hospitals also decreased.

- Enhanced community safety because it reduced the amount of time that law enforcement devotes to behavioral health calls.

http://healthforce.ucsf.edu/communityparamedicine

Assessing call demand and utilization of a secondary triage emergency
communication nurse system for low acuity calls transferred from an

ABSTRACT

Introduction: Telephone nurse triage at the 9-1-1 dispatch point is relatively new in the United States despite its ability to significantly reduce expensive and scarce Emergency Medical Services (EMS) resource use and emergency department visits. A previous study investigated the distribution of 9-1-1-triaged call incident types within the Emergency Communications Nurse System (ECNS) and found that 9-1-1 triage systems yielded a variety of low acuity complaints that were handled by the Emergency Communications Nurse (ECN). This study explored the current and potential utilization for triaging low acuity calls transferred from 9-1-1.

Objective: To determine the utilization potential of a secondary nurse triage system in handling low acuity calls transferred from a 9-1-1 emergency dispatch system.

ers determine whether a patient needs medical care—and if so, how soon, and what kind.[1] Many hospitals, medical practices, and insurance companies offer such services, in part to increase customer satisfaction and provide information during out-of-office hours, but also to reduce overuse, or inappropriate use, of expensive emergency and urgent care services.[2] This is particularly important as Emergency Department (ED) overcrowding and overuse continue to escalate.[3,4] Therefore, an intervention that can alleviate this deteriorating situation would be a great asset in the delivery of effective and efficient emergency care at the ED.[4,5]

Although telephone advice lines are common, as are nurse triage services connected with emergency departments, telephone nurse triage at the 9-1-1

The Measures…

MIH Outcome Measures Team Members
As of: 10/10/2016

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THIRTY YEARS OF CARING & INNOVATION 1986 30 2016

MEDSTAR MOBILE HEALTHCARE

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As of: <mark>10/10/2016</mark>

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Carlsbad Fire	Linda Allington	Linda.Allington@carlsbadca.gov
Cataldo Ambulance	Karen Host	khost@cataldoambulance.com
Chandler Fire & Medical Department	Val Gale	Val.Gale@chandleraz.gov
Christian Hospital EMS	Shannon Watson	sjt8343@bjc.org
Clackamas Fire District #1	Amy Jo Cook	communitymedicipad@ClackamasFire.com
Concierge Transport Services	Steve Epright	sepright@jlfcts.com
Dallas Fire Department	Norman Seals	norman.seals@dallascityhall.com
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Eagle County, CO	Chris Montera	cmontera@ecparamedics.com
EasCare Ambulance	Matt Goudreau	mgoudreau@eascare.com
Evergreen (CO) Fire/Rescue	Bob Walter	bwalter@evergreenfirerescue.com
Fire District #1 - Everett, WA	Shaughn Maxwell	sMaxwell@firedistrict1.org
First Call Ambulance - Tennessee	Kevin Rainbolt	krainbolt@firstcall-ambulance.com
F-M Ambulance	Syverson Sherm	Sherm.Syverson@FMAmbulance.com
Henry Ford Health System - Wyandotte Hospital	Brandon Young	BYOUNG5@hfhs.org
Humbolt General Hospital	Pat Songer	psonger@hghospital.ws
Idaho EMS Bureau	Mindi Anderson	andersonm@dhw.idaho.gov
JFK Medical Center	Richard Schlosser	Rschlosser@jfkhealth.org
Lifeguard Ambulance Service	David Bump	David.Bump@lifeguardambulance.com
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McKinney, Texas Fire Department	Liz Fagan, M.D.	docliz77@me.com
MEDAVEE EMS, MA	Tim Coolen	Tim.Coolen@MEDAVIEEMS.COM
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Medic Ambulance	J. Pierson	jpierson@medicambulance.net
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MedStar Mobile Healthcare	Matt Zavadsky	MZavadsky@medstar911.org
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Mesa Fire & Medical Department	Harry Beck	Harry.Beck@mesaaz.gov
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Mt. Sinai Hospital	Kevin Munjal	kevin.munjal@gmail.com
Nature Coast EMS	Mike Hall	mikeh@naturecoastems.org
New Hampshire State EMS Office	Nick Mercuri	Nick.Mercuri@dos.nh.gov
New Hanover Regional Medical Center	Rick O'Donnell	rick.o'donnell@nhrmc.org
New York State EMS Bureau	Michael Taylor	michael.tayler@health.ny.gov
North Memorial	Gary Wingrove	Wingrove.Gary@mayo.edu
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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*.

Table of Contents

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	Q1: Primary Care Utilization {*CORE MEASURE*}	Increase the number and percent of patients *utilizing* a Primary Care Provider (if none upon enrollment)	Number of Enrolled Patients 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
	Q2: Medication Inventory	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
	Q3.1: Care Plan Developed {*CORE MEASURE*}	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
	Q3.2: Care Plan Developed {*CORE MEASURE*}	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

MIH Outcome Measures Worksheet - Community Paramedicine Intervention

Agency:	Anycity MIH Program	
Location:	Anycity , USA	
Number of enrolled patients:	1,600	

Agency entered information field	
Hard coded field	

ID	Measure	Input Description	Value	Output Goal	Result		
Q3	Case Management Referral	Number of enrolled patients with an identified need	7,500	{Higher Values Desirable}	88.87%	●	
E1	Patient Satisfaction	Overall Score (out of max = 5)	4.8	Optimize patient satisfaction scores by intervention. {Higher Values Desirable}	4.8	●	
E2	Patient Quality of Life	Overall Score on Enrollment	2.4	Improve patient self-reported quality of life scores. {Higher Values Desirable}	75.0%	●	
		Overall Score on Graduation	4.2				
U1	Ambulance Transports	Number of unplanned ambulance transports up to 12 months post-enrollment	1,750	Reduce rate of unplanned ambulance transports to an ED by enrolled patients. {Higher Reduction Desirable}	-52.7%	●	
		Number of unplanned ambulance transports up to 12 months pre-enrollment	3,700				
U2	Hospital ED Visits (90 days)	ED visits up to 12 months post-graduation	1,975	Reduce rate of ED visits by enrolled patients by intervention. {Higher Reduction Desirable}	-58.4%	●	
		ED visits up to 12 months pre-enrollment	4,750				
U3	All-cause Hospital Admissions	Number of hospital admissions up to 12 months post-graduation	460	Reduce rate of all-cause hospital admissions by enrolled patients by intervention {Higher Reduction Desirable}	-70.5%	●	
		Number of hospital admissions up to 12 months pre-enrollment	1,560				

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The Legislation…

ARKANSAS

2015 House Bill 1133
Act 685, 2015 Laws
Signed by Governor Asa Hutchinson on March 24, 2015.
Becomes effective July 2, 2015.
Creates a program for licensure of community paramedics. Does not appear to specifically address reimbursement.
BRMC pilot program going statewide

IDAHO

2015 House Bill 153
2015 Session Law Chapter 157
Signed by Governor Butch Otter on March 26, 2015.
Becomes effective July 1, 2015.
Creates a foundation for emergency medical services (EMS) agencies to fill existing gaps in healthcare access, extend the reach of healthcare providers, and facilitate the integration of care with existing community based resources. Establishes definitions for Community Health EMS, Community Paramedic and Community Health Worker to allow for EMS agencies to create a framework to build a Community Health EMS system, using properly trained personnel operating under physician oversight that can be locally tailored to fit the specific needs of Idaho's diverse communities. Does not appear to specifically address reimbursement.

MAINE

2012 House Paper 1359 (LD 1837)
2012 Public Law Chapter 562
Signed by Governor Paul LePage on March 29, 2012.
Becomes effective August 17, 2012.
Allows the Maine Emergency Medical Services Board to authorize up to 12 pilot projects throughout the state. Working under the supervision of a primary care provider, community paramedics will work with chronically ill patients who are at risk for hospital readmission. During downtime, the paramedic will follow up on healthcare provider referrals and check vital signs, evaluate patients, make sure they are taking their medications as prescribed and conduct treatments. The law also directs the board to submit a written report to the legislature that summarizes the work and progress for each authorized pilot.

MASSACHUSETTS

2015 House Bill 3650
Main Operating Budget FY2016 (see Outside Section 93 beginning on bottom of page 277)
Signed by Governor Charlie Baker on July 17, 2015.
Becomes effective December 31, 2015.
Requires Department of Public Health to evaluate and approve mobile integrated healthcare (MIH) programs and community EMS programs developed and operated by the primary ambulance service with the approval of the local jurisdiction and the affiliate hospital medical director to provide community outreach and assistance to residents of the local jurisdiction in order to advance injury and illness prevention within the community. Establishes statewide MIH advisory council.

MINNESOTA

2011 Senate File 0119
2011 Session Law Chapter 12
Signed by Governor Mark Dayton on April 6, 2011.
Becomes effective July 2, 2011.
Defines Emergency Medical Technician-Community Paramedics (EMT-CP) and establishes a process for certifying them. Establishes training and clinical requirements for certification, including completion of a community paramedic training program from an approved college or university, and authorized community paramedics to provide services as directed by the patient's primary care physician. Enables community paramedics to provide specific health services, as well as prevention, emergency care, evaluation, disease management and referrals.

MINNESOTA

2012 Senate File 1543
2012 Session Law Chapter 169
Signed by Governor Mark Dayton on April 9, 2012.
Becomes effective July 1, 2012, or upon federal approval (whichever is later).
Authorizes medical assistance reimbursement rates, as determined by the Human Services Commission, to cover community paramedic services to certain high-risk individuals, including frequent ED users or other patients that have been identified as at-risk for hospital readmission. Also requires Commission to evaluate the impact on health care cost and quality. Although the law applies only to public coverage, policymakers and state officials believe that private insurers will follow suit.

NEVADA

2015 Assembly Bill 205
2015 Chapter 154
Signed by Governor Brian Sandoval on May 25, 2015.
Effective May 25, 2015, for the purpose of adopting any regulations and performing any other preparatory administrative tasks necessary to carry out the provisions, and January 1, 2016, for all other purposes.
Allows licensed ambulance, air ambulance or firefighting agencies and certified personnel to qualify for an endorsement on their permits to provide community paramedicine services. Requires paramedicine departments to submit quarterly reports to the state outlining the services they provided and the estimated health and economic benefits of those services. Nevada's health department will summarize the reports and submit them to the legislature and the Legislative Committee on Health Care. Enables legislators to review how Nevada community paramedicine programs are addressing health care gaps in rural and urban locations throughout the state. Collected data may result in result in a compelling argument for a future state reimbursement component for community paramedicine.

OHIO

2015 House Bill 64
Main Operating Budget FY2016-FY2017 (see top of page 1751 – Sec. 4765.361)
Signed by Governor John Kasich June 30, 2015.
Becomes effective September 30, 2015.
Allows EMTs and paramedics with fire departments to work on patients in non-emergency situations either at stations or at residences. Does not appear to specifically address reimbursement.
Effort by Lafayette brings community paramedicine to state

WASHINGTON

2015 Senate Bill 5591
Chapter 93, 2015 Laws
Signed by Governor Jay Inslee on April 24, 2015.
Becomes effective July 24, 2015.
Allows emergency medical services to develop community assistance referral and education services programs. Does not appear to specifically address reimbursement.
Washington State Signs Community Paramedicine Bill into Law

The Education…

"**Mobile Integrated Healthcare is an innovative and patient-centered approach to meeting the needs of patients and their families**. The model does require you to "flip" your thinking about almost everything – from roles for health care providers, to what an EMT or paramedic might do to care for a patient in their home, to how we will get paid for care in the future.

The authors teach us how to flip our thinking about using home visits to assess safety and health. They encourage us to segment patients and design new ways to relate to and support these patients. **And they urge us to use all of the assets in a community to get to better care**. This is our shared professional challenge, and it will take new models, new relationships, and new skills."

Maureen Bisognano
President and CEO
Institute for Healthcare Improvement

NFPA 451: Guide for Fire Based Community Healthcare Providers

Alerts: Receive e-mail updates on this document

| About | Current & Prior Editions | Next Edition | Technical Committee | Technical Questions |

Products & Training

NFPA 451 is in the early developmental stages prior to beginning full public review and initial revision cycle. The NFPA Standards Council's approval is necessary before entering revision cycle. See Next Edition tab for further information on draft development.

What is NFPA 451?
Official document scope

What does NFPA 451 address?

Articles and Reports
- Fire Based Mobile Integrated Healthcare and Community Paramedicine (MIH & CP) – Data and Resources

Catalog   X

NATIONAL FIRE PROTECTION ASSOCIATION
The leading information and knowledge resource on fire, electrical and related hazards

The Electronic Medical Record & Billing Systems…

The Economic Models…

The Service Delivery Models…

- **Patient Navigation Model…**
  - High Utilizer Group (HUG) patients
  - 9-1-1 Nurse Triage program
  - CHF readmission prevention
  - Hospice revocation avoidance
  - Observation admission avoidance
  - Home Health partnership

The Service Delivery Models...

- **New//Pending Models**
  - BPCI for CCJR Partnership
  - Post-Acute Care Partnership
  - Palliative Care
  - High-Risk Diabetic Monitoring
  - BPCI for Cardiac Patients
  - ....?

The 3.0 Transformation...

Patient-centered

Urgent and Emergent Care Remain *Core* to EMS

24/7 emergency medic dispatch (911)

Rapid response, medical assessment and treatment

Urgent cardiac, stroke, trauma, mass casualty/ disaster care

Emergency and critical care transport

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But EMS Must Offer Expanded *Roles*

Nurse advice

Post-discharge follow up, preventive care

Chronic disease management and support

Alternative transportation or referral to community health or social services resources

Shared Vision = *Industry Alignment!*

- **National Association of EMTs**
- **National Association of State EMS Officials**
- **National Association of EMS Physicians**
- **National EMS Management Association**
- **National Association of EMS Educators**
- **American Ambulance Association**
- **International Academies of Emergency Dispatch**
- **American Red Cross**
- **International Trauma Life Support**
- **The Paramedic Foundation**
- **Academy of International Mobile Healthcare Integration**
- **Center for Leadership, Innovation and Research in EMS**

Goals of the EMS 3.0 Initiative

The Leadership Group has adopted the following goals for the initiative:

1. Establish EMS 3.0 Attributes defining the current status of system development for each and macro-level recommendations for needed changes to achieve EMS 3.0 status of each.

2. Establish a review process for each Attribute, led by an appropriate Association leader for that Attribute focus to accomplish Goal 1. Each Association leader will have at least one Association partner to assist in the work, and a Leadership Group "whip" to monitor and facilitate progress.

3. Develop a toolkit to assist EMS agencies in achieving EMS 3.0 capability and performance.

Attribute or Sub-Attribute	Lead or Co-Leads	Partners
Clinical Care Delivery		
Medical Oversight	**NAEMSP**	**NASEMSO (Medical Director Council - MDC) /Paramedic Foundation**
Protocols/Guidelines	**NASEMSO (MDC)**	**NAEMSP**
Clinical Quality	**NAEMSP**	**NEMSMA/AIMHI**
Patient Safety	**Center for Leadership, Innovation and Research in EMS (CLIR) Emergency Medical Error Reduction Group (EMERG)**	**NAEMSP**
Patient/Population Information Collection and Use	**TPF/NASEMSO**	**NAEMSP/Association of State and Territorial Health Officers (ASTHO)**
Economic Models and Finance	**AAA**	**NEMSMA/AIMHI/NAEMT**

The Publications…

ICMA

Leaders at the Core of Better Communities

ICMA

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ICMA Publications / PM Magazine / June 2015

EMS in the Era of Health Care Reform

Collaborating to Reduce Costs and Improve Care

EFFICIENTGOV

For forward-thinking municipal leaders.

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EMS In 2015: Demonstrating Value in a Changing Healthcare System

December 24, 2015 - by EfficientGov Staff

ASPR Blog

MAY 20

Community Paramedicine and the Changing Face of Pre-Hospital Care

Author: Experts from the CMS Innovation Center
Published Date: 9/20/2016 10:59:00 AM
Category: Public Health Preparedness; Response & Recovery; Innovations; Hospital Preparedness;

EMS WILL PLAY AN INTEGRAL ROLE AS THE COMMUNITY PARAMEDICINE CONCEPT EVOLVES

>> BY DAVID K. TAN, MD, FAAEM

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Change From the Inside Out – Health Care Leaders Taking the Helm

Donald M. Berwick, MD, MPP1; Derek Feeley, DBA1; Saranya Loehrer, MD, MPH1

1Institute for Healthcare Improvement, Cambridge, Massachusetts

Even as politicians and pundits continue to debate the merits of the Affordable Care Act (ACA), it is time to look beyond it to the next phase of US health care reform.

innovations in delivery mature at a far faster pace than laws and regulations evolve, even in far less contentious political times than today's. *For example, productive new health care roles, such as community paramedics*, community health workers, and resilience counselors, *emerge at a rate that legal requirements and reimbursement policies simply do not match*.

10: Congress, in consultation with the U.S. Department of Health and Human Services, *should identify, evaluate, and implement mechanisms that ensure the inclusion of pre-hospital care (e.g., <u>emergency medical services) as a seamless component of health care delivery rather than merely a transport mechanism</u>.*

Possible mechanisms that might be considered in this process include, but are not limited to:

- *Amendment of the Social Security Act such that emergency medical services is identified as a **provider** type, enabling the establishment of conditions of participation and health and safety standards.*

- *Modification of CMS's ambulance fee schedule to better link the quality of pre-hospital care to reimbursement and health care delivery reform efforts.*

- *Establishing responsibility, authority, and resources **within HHS** to ensure that pre-hospital care is an integral component of health care delivery, not merely a provider of patient transport.* The existing Emergency Care Coordination Center could be leveraged as a locus of responsibility and authority (see Recommendation 4) but would need to be appropriately resourced and better positioned within an operational division of HHS to ensure alignment of trauma and emergency care with health delivery improvement and reform efforts

Triple threat: Achieve multiple goals with community paramedics

by Chrissy Wild
October 2, 2015

Many health systems embarking on population health initiatives know they need to bolster their partnerships with community resources, but don't know where to focus their efforts. Community paramedicine is a great place to start.

Community paramedics receive advanced training, allowing them to provide a range of in-home services, such as health coaching and home safety assessments for your rising- and high-risk patients. They can also help you reduce your ED volumes by providing in-home treatments to frequent 911 callers whose needs are not emergent, and reduce your readmission rates by performing post-discharge check-ups on at-risk patients.

How do I measure success?

Many programs compare their targeted patient population's number of 911 calls, ED visits, admissions and readmissions, and total cost of care prior to program enrollment to those metrics post-enrollment. These basic metrics serve as a barometer for the program's success and are useful in demonstrating the ROI of the program to organization leaders and private payers for reimbursement purposes.

https://www.advisory.com/research/care-transformation-center/care-transformation-center-blog/2015/10/community-paramedicine-webcon-recap

By Abby Alpert, Kristy G. Morganti, Gregg S. Margolis, Jeffrey Wasserman, and Arthur L. Kellermann

Giving EMS Flexibility In Transporting Low-Acuity Patients Could Generate Substantial Medicare Savings

Abby Alpert is an assistant professor of economics and public policy at the Paul Merage School of Business, University of California, Irvine.

Kristy G. Morganti is a health policy researcher at the RAND Corporation in Pittsburgh, Pennsylvania.

Gregg S. Margolis is director of the Division of Healthcare Systems and Health Policy, Department of Health and Human Services, in Washington, D.C.

Jeffrey Wasserman (jeffrey@rand.org) is director of RAND Health and vice president of the RAND Corporation in Santa Monica, California.

ABSTRACT Some Medicare beneficiaries who place 911 calls to request an ambulance might safely be cared for in settings other than the emergency department (ED) at lower cost. Using 2005–09 Medicare claims data and a validated algorithm, we estimated that 12.9–16.2 percent of Medicare-covered 911 emergency medical services (EMS) transports involved conditions that were probably nonemergent or primary care treatable. Among beneficiaries not admitted to the hospital, about 34.5 percent had a low-acuity diagnosis that might have been managed outside the ED. Annual Medicare EMS and ED payments for these patients were approximately $1 billion per year. If Medicare had the flexibility to reimburse EMS for managing selected 911 calls in ways other than transport to an ED, we estimate that the federal government could save $283–$560 million or more per year, while improving the continuity of patient care. If private insurance companies followed suit, overall societal savings could be twice as large.

Home / Research / Care Transformation Center / Care Transformation Center Blog / Triple threat: Achieve multiple goals with community paramedics

Care Transformation Center Blog

Triple threat: Achieve multiple goals with community paramedics

9:30 AM on October 2, 2015 by Christina Wild

Many health systems embarking on population health initiatives know they need to bolster their partnerships with community resources, but don't know where to focus their efforts. Community paramedicine is a great place to start.

Community paramedics receive advanced training, allowing them to provide a range of in-home services, such as health coaching and home safety assessments for your rising- and high-risk patients. They can also help you reduce your ED volumes by providing in-home treatments to frequent 911 callers whose needs are not emergent, and reduce your readmission rates by performing post-discharge check-ups on at-risk patients.

Here are answers to questions we get frequently asked about developing a community paramedicine program.

States Using Emergency Medical Techs to Expand Health Care Services

By Debra Miller

September 12, 2016

States are increasingly turning to community paramedicine to help fill the gap in the health care workforce. States have been experimenting with community paramedicine programs for the last five years or more. Expanding the role of licensed or certified emergency medical technicians—or EMTs—and paramedics to provide non-emergency preventive health care services directly to patients in their communities can be cost-effective and make up for health care work force shortages.

"Community paramedics offer extensive background experience and will provide for better access to health care," Oscarson said. "Nevada now has an opportunity to fill unmet or unrealized community primary care and health needs. Using EMS providers in an expanded role will increase patient access to primary and preventive care, save health care dollars and improve patient outcomes."

In late August, Nevada received approval of a state plan amendment from the Centers for Medicare and Medicaid to provide Medicaid reimbursement for medically necessary community paramedicine.

Janet Haebler, senior associate director of state government affairs for the American Nurses Association, said community paramedicine "strives to fill in gaps in services that previously had been provided by public health and home care nurses but were lost with funding cuts."

http://knowledgecenter.csg.org/kc/content/states-using-emergency-medical-techs-expand-health-care-services

A New Kind of Paramedic for Less Urgent 911 Calls

Community paramedicine, which can drastically reduce unnecessary ER visits, could be the future of emergency care.
by Mattie Quinn
September 2016

If there is one issue confronting our health-care system on which just about everyone agrees, it's this: *Unnecessary emergency room visits are a significant driver of costs. But getting the people who most abuse emergency services under control has been an uphill battle.*

Some of the big insurance players involved with government health-care programs are starting to get in on the action as well. Blue Cross and Blue Shield of New Mexico has begun pilot programs for its Medicaid patients in a few of the state's more urban areas. The company says a group of patients identified in one of the programs has cut its ER use by 60 percent. One former super-utilizer hasn't been to the ER in the 11 months he's been enrolled in the program, says Kerry Clear, the company's manager of community social services.

GOVERNING
THE STATES AND LOCALITIES

The Politics….

The Media…

Paramedics Step Up to Cut Hospital Readmissions

Emergency medical workers find a new lucrative line of business: helping hospitals potentially save millions of dollars.

By Alan Neuhauser
October 9, 2014

Community paramedicine, in one sense, brings back the black-bag home-doctor visits of yore: rather than wait for a call to 911, paramedics swing by former patients' homes. They'll check vital signs, make sure patients are taking their medications, look for potential hazards like mold in the home or tricky stairs. In some programs, the paramedics may administer vaccines, draw blood for tests, and drive patients to the pharmacy or local clinic rather than the emergency room.

Last week, Medicare declared it would penalize 2,610 hospitals, docking them a portion of every Medicare payment that goes toward a patient's stay – fines expected to total about $438 million, Kaiser Health said.

Those penalties, as intended, has created huge interest in preventative care. As Chris Montera of Colorado's Eagle County Paramedic Services describes, paramedics have "come in to help them [the hospitals] fill those gaps."

Paramedics work to keep patients out of the E.R.

Anna Gorman, Kaiser Health News
May 10, 2015

Around the country, the role of paramedics is changing. *In various states, they're receiving extra training to provide more primary and preventive care and to take certain patients to urgent care or mental health clinics rather than more-costly emergency rooms.* Ramsdell and others in his program, for instance, spent 150 hours in the classroom and with clinicians learning how to provide ongoing care for patients.

Using a $9.8 million federal grant, Gubbels' agency launched three different projects. In addition to providing paramedic home visits and offering 911 callers options besides the ER, the agency started a nurse-run health line to give people with health questions another number to call in non-emergency situations.

An early evaluation by the University of Nevada, Reno, which was based on insurance claims and hospital data, shows that the projects saved $5.5 million in 2013 and 2014. They helped avoid 3,483 emergency department visits, 674 ambulance transports and 59 hospital re-admissions, according to the preliminary data. The federal government plans to do its own evaluation.

Paramedics Aren't Just for Emergencies

Home visits for lab tests, IV medications and hospital follow-up

By Laura Landro

Aug. 17, 2015

Paramedics, who race to emergencies and transport victims to the nearest ER, are taking on a new role: keeping patients out of the hospital.

In this new role, paramedics augment existing programs like visiting nurse services and home care. **They also treat patients who don't meet home-nursing criteria or don't want someone in their home all the time but still have complex needs, says David Schoenwetter, an emergency physician and head of the mobile health paramedic pilot program at Geisinger Wyoming Valley Medical Center** in Wilkes-Barre, Pa., part of Danville, Pa.-based Geisinger Health System.

The programs aim to reduce the high costs of emergency room visits and inpatient hospital stays. Hospitals are facing financial penalties from Medicare and other payers when patients are readmitted to the hospital within 30 days of being discharged.

days among 704 patients who had a home visit from a paramedic, Geisinger calculates. In tFrom March 2014 to June 2015, the Geisinger mobile health team prevented 42 hospitalizations, 33 emergency department visits and 168 inpatient he case of heart-failure patients, hospital admissions and emergency-room visits were reduced by 50%, and the rate of hospital readmissions within 30 days fell by 15%. Patient satisfaction scores for the program were 100%.

http://www.wsj.com/articles/paramedics-aren-t-just-for-emergencies-1439832074

Community Paramedicine Can Improve Your Hospital's Standing, Ease ED Burden

This emerging care model uses local emergency medicine technicians and paramedics to provide services outside of their traditional emergency response and transport roles.

November 30, 2015

Michael Milligan

ED overuse and misuse are major problems that not only lead to higher health care costs (and readmission penalties under health care reform), but also longer wait times and lower patient satisfaction.

Some hospitals have tried educating consumers about the importance of primary care and the appropriate use of urgent and emergency care. But as long as the ED remains a safety net for people — a place they can go for convenient care, emergency or not — ED misuse will continue.

However, there is an emerging care model that hospitals and health systems can implement to help alleviate overcrowded EDs: community paramedicine.

Community paramedicine, also known as mobile integrated health care-community paramedicine, or MIH-CP, uses local emergency medicine technicians and paramedics to provide services outside of their traditional emergency response and transport roles. It shifts emergency medical services from being solely reactive to incorporating proactive measures that ensure the most efficient use of the EDs — all to reduce inappropriate use of local emergency care resources and improve the overall health of communities.

http://www.hhnmag.com/articles/6739-community-paramedicine-can-improve-your-hospitals-standing-ease-ed-burden

According to a national survey presented by the National Association of Emergency Medical Technicians, 81 percent of MIH-CP programs surveyed that have been in operation for more than two years have reported success in lowering costs related to frequent 9-1-1 users.

Additional Benefits

An MIH-CP program also presents two important business development opportunities, especially for rural and critical access hospitals.

First, creating an MIH-CP program positions a facility as more than just an ED: It's a community health resource. Overall health and wellness is a significant component in today's health care environment, and it is a highly marketable message.

Second, an MIH-CP program establishes a strong connection between a hospital and the local EMS. This connection will help to ensure that rural facilities and critical access hospitals don't get passed up when emergencies occur.

Through the partnership an MIH-CP program will create, emergency medical services will fully understand a rural facility's capabilities and will, therefore, feel comfortable bringing patients there for care. While the ultimate goal of MIH-CP is to decrease ED overuse, appropriate emergency care is still an important entry point for rural hospitals to connect with patients.

Best Practices: Paramedics deployed as care navigators

By Steven Ross Johnson | *December 19, 2015*

Former paramedic Matt Zavadsky long believed that there was a broader role for his profession beyond simply responding to emergencies.

In line with a 1996 National Highway Traffic Safety Administration report, he envisioned a system in which paramedics functioned as navigators, steering patients to the most appropriate care setting to reduce use of hospital emergency departments.

But he encountered resistance. "Everywhere I went, people said, 'Why would we want to prevent 911 calls, ER visits and (hospital) admissions? That's how we get paid,' " recalled Zavadsky, now public affairs director for the Fort Worth, Texas-based Area Metropolitan Ambulance Authority, a public agency also known as MedStar Mobile Healthcare.

That attitude about ED treatment and hospital admissions was changing by 2009, as health systems focused on avoiding inappropriate, high-cost care. That year, Zavadsky and his agency decided to see whether the idea, known as community paramedicine, could be a viable business model. His agency is the exclusive emergency medical services provider for the Fort Worth area, serving more than 900,000 residents.

The Revolution in EMS Care

Thanks to new technology, new life-saving techniques and new missions, ambulance crews are far from the 'horizontal taxicabs' they once were

By Laura Lancro

Sept. 25, 2016

There's a revolution taking place in emergency medical services, and for many, it could be life changing.

From the increasingly sophisticated equipment they carry and the new lifesaving techniques they use, to the changing roles they play in some communities—providing preventive care and monitoring patients at home—ambulance crews today are hardly recognizable from their origins as "horizontal taxicabs."

Coming soon: preventive-care teams

In what could amount to a sea change for many EMS workers, health-care policy makers are looking at having so-called community paramedicine teams provide preventive care—and even make regularly scheduled house calls.

In a concept some are calling "EMS 3.0," ambulance crews with advanced medical training in more communities already are treating patients in their homes, including frail or elderly patients, helping to manage chronic conditions like diabetes, and are checking on recently discharged hospital patients to ensure they are following their care instructions.

http://www.wsj.com/articles/the-revolution-in-ems-care-1474855802

Tapping the Potential of Community Paramedicine

Community Paramedicine can help in hospitals' population health and value-based care efforts, says population health thought leader Ken Kizer.

September 28, 2016

Lola Butcher

Community paramedicine is an important component of population health management and the new emerging value-based health care economy because it fills gaps in the typical health care delivery infrastructure that are especially relevant to value-based payment.

… paramedics are an already existing and very large workforce that is well-integrated into local communities and very well-trusted and highly regarded by the public. Another advantage that CP has is the rapid evolution to a value-based economy in which it can fill a clear and demonstrated need. CP provides a bridge between primary care and emergency care and can fill gaps in the underlying health care delivery infrastructure that exist in so many communities across the country.

Physicians and health system leaders need to see CP as a very promising model of community-based care that can help to support their population health management goals and their clinical integration goals and help them to thrive in a value-based health care economy.

Going to the Emergency Room Without Leaving the Living Room

Paula Span

NOV. 4, 2016

For a while, paramedics were rushing Maria Vitale to the emergency room at Long Island Jewish Medical Center every few weeks.

Her children (and Medicaid) had managed to keep her at home with full-time aides, but every 911 call led to hours of waiting in the emergency department, often followed by admission to the hospital.

Since March 2015, however, paramedics have visited Mrs. Vitale's home 10 times, and whisked her to the hospital just once.

When Mrs. Vitale falls or seems lethargic or short of breath, her aides no longer call 911. They dial the House Calls service at Northwell Health, the system that includes Long Island Jewish Medical Center and that dispatches what it calls community paramedics.

They often arrive in an S.U.V. instead of an ambulance. And with 40 hours of training in addition to the usual paramedic curriculum, they can treat most of Mrs. Vitale's problems on the spot instead of bustling her away.

Community Paramedics Work To Link Patients With Mental Health Care

By Shefali Luthra
November 14, 2016

For Kelly Kjelstrom, plugging the gaps in mental health care can mean something as simple as a late-night taco and a friendly chat.

After a physical assessment, paramedics like Kjelstrom talk to the patient — to figure out what, precisely, the issue is, asking also about issues like a patient's mental health history, drug use and insurance status. They use that information, along with details about resources available, to figure out the next steps for the patient — maybe it is a hospital or a psych facility, or maybe it is outpatient care.

The Modesto pilot program launched a year ago. Similar projects are also underway in North Carolina, Minnesota, Texas, Colorado and Georgia. Other states, such as Washington and Nevada, have shown interest.

"We're moving in the right direction with programs like these," said Karen Shore, a principal at the California-based consulting firm Transform Health. "It isn't solving all of our health system problems. But that's not a fair expectation."

Meet A Paramedic Who Makes House Calls To Keep Patients Out Of The ER

By Lauren Silverman

January 18, 2017

Traditionally, ambulance crews arrive with sirens blaring — ready to rush someone to the hospital. In Fort Worth, some paramedics are doing the opposite and scheduling visits to treat patients in their homes. KERA's Lauren Silverman tagged along with a MedStar paramedic to find out why mobile integrated healthcare is gaining traction.

Last year, Guevara went to the emergency department more than 20 times, occasionally needing a ventilator to breathe.

"My asthma has been going on since I was 14 years old," she says. "My anxiety triggers it when I go places so I tend to shelter myself and stay home all the time."

Farris says from the perspective of the doctor in the emergency room, patients like Guevara are labeled as "non-compliant". They're seen as patients who won't follow orders. If you spend time trying to understand the situation, that's not usually the case, he says.

"The mental health needs that [Guevara] has, tied in with her asthma, tied in with her allergic asthma, tied in with her clotting factor, all of this stuff together, even her dehydration, all of it together is combining factors to make her worse.

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But he encountered resistance. "Everywhere I went, people said, 'Why would we want to prevent 911 calls, ER visits and (hospital) admissions? That's how we get paid,' " recalled Zavadsky, now public affairs director for the Fort Worth, Texas-based Area Metropolitan Ambulance Authority, a public agency also known as MedStar Mobile Healthcare.

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Paramedicine Programs Making House Calls

But Scope of Practice Under Scrutiny

by CHARLOTTE HUFF

Special Contributor to
Annals News & Perspective

Loretta Crittenden had been checking her weight daily to watch for any fluid buildup that might signal worsening congestive heart failure. Late one week last fall, the number on the scale began to climb upward, totaling 6 pounds in just 2 days.

By then it was Friday afternoon, and when her family physician's office was contacted, Crittenden was advised to seek help at a nearby emergency department (ED). So the family contacted 911, and 2 vehicles arrived, an ambulance and another with the same system, staffed by a community paramedic.

After Crittenden's vital signs were checked, including some blood work, the 89-year-old Fort Worth woman was given the choice to remain at home and determine whether an intravenous dose of furosemide—administered by the community paramedic—would ease the fluid buildup. The family jumped at that option, recounted Joy Gilliam, Crittenden's daughter, when another paramedic returned to check on Crittenden that evening. "She felt good enough not to go to the ER," Gilliam said, "but she still needed help."

Offering paramedic backup for patients like Crittenden is one of a cross section of services that MedStar, the ambulance service for Fort Worth, TX, provides through its community paramedicine program. Through contracts with various health entities, they assist frequent users of the emergency system, patients who have been recently discharged from the hospital, as well as patients in hospice care. Enthusiasts for the model, which is proliferating around the country, say that it can tap the underused skills of paramedics to reach patients who might otherwise not receive medical care or unduly strain the emergency system with low-acuity medical problems.

Historically, ambulances have served as "a taxi service," only reimbursed if they transport a patient, said Matt Zavadsky, MS-HSA, EMT, MedStar's chief strategic integration officer and that community medicine program's founder. "So many of the people that we respond to don't necessarily need to be in an emergency room," he said, noting that at least one third of MedStar's calls aren't deemed urgent enough to activate the siren.

MedStar, which piloted its program in 2009, is one of the earliest pioneers for the concept, sometimes also called mobile integrated health

care. By 2014, there were at least 103 such programs nationally, according to a survey by the National Association of Emergency Medical Technicians.[1] Other early programs include those launched in rural areas of Colorado and Minnesota. In 2015, California started a pilot that is testing the concept in a dozen sites around the state, funded through a $1 million grant from the California Health Care Foundation.[2]

But some observers, including physicians, advise a dose of caution. So far, data on these programs' safety and cost-effectiveness are limited, according to one analysis published early last year in *Annals of Emergency Medicine*.[3] In California, that state's chapter of the American College of Emergency Physicians (ACEP) has criticized some aspects of the multisite pilot project there, saying that it gives paramedics too much autonomy to transport a patient elsewhere, such as to an urgent care center.

"I think our main concern is the safety of having a paramedic determine in the field that a patient who called 911 doesn't need to be seen in the ER," said Aimee Moulin, MD, president-elect of the California ACEP. "Determining whether an emergency condition exists, we feel like, is the purview of the emergency medicine physician rather than a paramedic."

PRIMARY CARE VERSUS NAVIGATION

Broadly speaking, the programs adopt one of 2 focuses, depending on where they are based. Rural areas, such as Eagle County in a

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To cover the various low-level and more urgent crises that might arise, community paramedicine teams operate around the clock. Any 911 call that's linked to a patient in the community paramedicine program, as Crittenden was, reaps a 2-pronged response, one from an ambulance and the second from a community paramedic.

When Ebbett arrived at Crittenden's home Friday evening, she had already shed 4 pounds over numerous bathroom trips and was sitting at the table, eating dinner with gusto. "You all did a great service for me," she said.

The Future…?

The Future…

Key Metrics: Top 10 Lists

Highest to Lowest | Fiscal Year

Market Pension Debt/Household | 2015

Submit

Rank		Market Pension Debt/Household
1	Alaska	$110,538
2	California	$92,748
3	Illinois	$84,353
4	Connecticut	$81,273
5	Hawaii	$67,638
6	Massachusetts	$65,075
7	New Jersey	$63,297
8	New Mexico	$60,821
9	Oregon	$57,844
10	Nevada	$56,695

Questions?

Ask an Expert:
Text (657) 4MIH360
Submit a Question Card
or Visit the Table in the Lobby

Public/Private Partnership for MIH: The Lake Havasu Project

Aphreikah DuHaney-West, Chief Nursing Officer, Havasu Regional Medical Center

and

Jasen Stello, Battalion Chief/EMS Coordinator, Lake Havasu City Fire Dept.

Lake Havasu City

1. Island Resort Community
2. 6 Fire Stations ALS Staffing (22-25 per day)
3. 8500-9000 responses per year
4. 1 Hospital Havasu Regional Medical Center
   171 Beds 8000 admits annually
5. 2 Urgent Cares
6. Limited to no Mental Health Services

Adapted Response Staffing

24/7 365

- Station 1
  - 1 ALS Engine 3 personnel (2medics)
  - 1 AR1 2 personnel (1medic)
    - AR1 runs level A calls first out area 1 second out remainder of City
    - AR1 complete all HRMC rounds and scheduled CP Service Calls
    - Can self assign to any emergency call at crew discretion

How We Started Our Partnership

Get involved with your local hospital(s)

a) Seek involvement with their advisory boards, readmission coalition, board of trustees, etc.

b) Provide EMS capability education and community healthcare gaps to the CEO, CNO, and CFO.

c) Identify Mutual 911 / Hospital goals community minded

d) Established connection with community stakeholders

e) Educate City Administration / Politicians

How We Started Our Partnership

Where Was The Need In LHC

   a) CHF

   b) COPD

   c) Pneumonia

   d) Sepsis

   e) High Risk Patients (multiple comorbidities)

   f) High Rate Users

****** Mental Health******

Main Objective

Follow The Triple Aim

1. Improve the patient experience of care (including quality and satisfaction)

2. Improve the health of populations

3. Reduce the per capita cost of health care

Additional Objectives
Expectant Outcomes

1. Reduction in 911 responses for repeat readmission users
2. Opportunity for Community Paramedics to intervene prior to 911 call.
3. Better connection / understanding between primary care providers and EMS
4. Connect patients with available community resources
5. Shift from reactive system to preventative system
6. Use ARV for response support to other low level 911 calls

Data Who Needs What

1. Identify who needs data related to the program.
   a) What does the Fire Department need?
   b) What does the Hospital need?
   c) What do the CEO's, City Managers, Council Members, Fire Boards, etc. expect to see?
2. How will information be collected?
3. How is this information shared
   a) Patient consent
   b) Software
   c) Manually (rounds)
   d) Secure fax
   e) Case management
   f) Transitions of Care Manager

How the process Works

Patients are Admitted To The Hospital

CHF, COPD, Pneumonia, Sepsis, High Rate Users are Identified Upon Admittance and Their Information is Prepared for LHCFD Community Paramedic Program

Hospital Treats and Cares for All Patients for a Successful Recovery

Patients are Prepared for Discharge From Hospital

Enrolled Patients are Discharged with ARV / CIP Follow Up

Non Selected Patients are Discharged with Alternative Follow Up

Once a Patient is Discharged

Patient Contacts

290 Patients Declined

615 Patients Enrolled in the ARV Program

905 Patients Qualified To Be Enrolled In The CIP/ ARV Program – 615 Enrolled

Quarterly Enrollment

615 Patients Entered the CIP/ARV Program

(From Program Start Date – July, 2014 to December 31, 2016)

Hospital Outcomes

Discharge Appointments

- Completed rapid cycle test on one unit for 30 days
- Currently 100% (80% improvement) of patients appointments are being made with 85% (70% improvement) making to the original appointment.

Patient Education

- •Focusing on CHF education
- •Reviewing quality and quantity of written discharge instructions

Post Acute

- •• Develop post acute d/c plan for all patient with high risk for readmission
- ••Post –acute huddle with CM, MD, SNU to discuss patients who failed after multiple levels of care

Hospital Outcomes

Acute Myocardial Infarction

Hospital Outcomes

Chronic Obstructive Pulmonary Disease

Hospital Outcomes

Pneumonia

Program results / outcomes

27 Patients (high rate / risk users)
Readmitted Within 30 Days of First Visit by the ARV
3/1/2016 – 12/31/2016

16 Patients Readmitted Within 30 Days of First Visit by the ARV
7/1/2014 – 2/29/2016

Patients Visited

■ Patients With Positive Outcome

572 Patients Had A Positive Outcome

Outcomes

182 Patients with medication discrepancies

615 Patients visited

433 Patients with proper medications

29% Patients With Medication Discrepancies Down From 60% on Program Inception

Outcomes

Home Health Validation / Referral

- ■ Total patients visited
- ■ Patients already on Home Health
- ■ Patients refered to Home health via PCP

67 Patients Referred Via PCP

8.03%

18.23%

102 Patients already
on Home Health

446 Patients
Did not qualify for
Home Health
based on hospital

615 Patients Visited
as of 12/31/16

73.74%

Results of Program

LAKE HAVASU CITY FIRE

HAVASU REGIONAL MEDICAL CENTER

Outcomes

Outcomes

Understanding the Program and Health Care Plans

218 Completed and Returned their Customer Satisfaction Survey's

Outcomes

Satisfaction of the Program

218 Completed and Returned their Customer Satisfaction Survey's

Outcomes

Where Are We Now

- Community wide readmission coalition
  - Patient Education
  - Patient appointment scheduling
  - Post acute care services

- Data Merging

- Funding

- Treat and Refer program organization

- What other patient types may benefit from service

Questions

Contact Information:

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Light Refreshments Available in Saguaro Dining Room

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The Buzz on MIH: Keys to Sustainability

- Val Gale Jr., Assistant Chief, Chandler Fire, Health & Medical Dept.

- Monica R. Vandivort, M.D., Assistant Professor & Home Care Medicine Director, Univ. of AZ College of Medicine/Banner Tucson & Sierra Vista

- Matt Zavadsky, MS-HSA, EMT, Chief Strategic Integration Officer, MedStar Mobile Healthcare

- Moderated by: Catherine Liemohn, GHPC/HRSA Technical Assistance Consultant and Melanie Mitros, PhD, Director, Strategic Community Partnerships

Panelists

- **Val Gale Jr.**, Assistant Chief, Chandler Fire, Health & Medical Dept.

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Questions: Text
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Or Submit a Question Card

Goals

- **Identify, lift up and celebrate** efforts to help Arizonans be healthier and live well

- **Facilitate connections** between groups and sectors

- **Shift the "health" paradigm** – health is more than health care.

- **Influence** policies and systems for change

ELEMENTS OF A HEALTHY COMMUNITY

HEALTH EQUITY RESILIENCY

- TRANSPORTATION OPTIONS
- ACCESS TO CARE
- AFFORDABLE QUALITY HOUSING
- COMMUNITY SAFETY
- ECONOMIC OPPORTUNITY
- EDUCATIONAL OPPORTUNITY
- ENVIRONMENTAL QUALITY
- FOOD ACCESS
- COMMUNITY DESIGN
- PARKS AND RECREATION
- SOCIAL/CULTURAL COHESION
- SOCIAL JUSTICE

YEAR OF HEALTHY COMMUNITIES
2017 ARIZONA

Vitalyst
HEALTH FOUNDATION

A CATALYST FOR COMMUNITY HEALTH

Learn more at:
www.LiveWellAZ.org

All presentation materials can be found online:

www.vitalysthealth.org/mih-360-az-symposium

Please complete your evaluations and leave them on the table.