Community Paramedicine Briefing

March 5, 2013
Capitol Visitor's Center – SVC 209
Washington, DC

Planning for Today

- EMS Today
- National Association of EMTs
- North Central EMS Institute

EMS On The Hill Day
Be There For EMS

Paramedics

- 826,000 Licensed by States
  - 64% Basic
  - 6% Intermediate
  - 24% Advanced
- 37,000,000 Responses
- 81,000 Vehicles
- 28,000,000 Transports

2011 National EMS Assessment

Paramedic Services

- 16,000 Transporting Agencies*
  - 5 per US County**
  - 3 per Hospital***

*2011 National EMS Assessment – minus non-transport agencies, plus California (2006)
** Computed
*** Computed

Ems

eMs

Expanded Role

- Primary care
- Emergency care
- Public health
- Disease management
- Prevention
- Wellness
- Mental health
- Dental care

Figure 3: Primary Care Services to be offered by the Respective Community Paramedic Programs

STATE:	[redacted]													
PROGRAM:	[redacted]													
SERVICES														
Patient History/Physical Assessment	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Weight Checks-Adult and Pediatric	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Well Child Checks			X	X				X	X	X			X	
Vital Signs	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Blood Pressure Screening	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cholesterol Screening			X	X									X	
Routine Follow-up 12-Lead EKG	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Blood Glucose Checks	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Pulse Ox Monitoring	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Set Up CPAP	X	X	X	X		X	X	X	X	X		X	X	X
Ultrasound			X					X						
Lab Specimen Collection	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Lab Specimen Testing (Inc. I-STAT)		X			X			X		X	X	X		X
Neurological Assessment	X	X	X		X	X	X	X	X	X	X	X	X	X
Post Stroke Assessment	X	X	X		X	X	X	X	X	X	X		X	X
Ophthalmoscope		X	X			X				X	X		X	X
Chronic Disease Management (heart disease, asthma, COPD, diabetes)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Managing Surgical Drains							X					X	X	X
Managing Tracheostomies										X			X	X
Managing Catheters										X	X		X	X
Managing PICC lines										X			X	X
Peripheral Intravenous Lines	X	X	X	X	X	X	X	X	X	X	X		X	X
IV Catheter Changes	X	X	X	X	X	X	X	X	X	X	X		X	X
Antibiotic Infusions			X	X						X	X		X	X
Suture Removal			X		X					X	X	X	X	X
Treatment of Minor Injuries	X		X			X	X	X			X	X	X	X
Post Partum Home Visits		X			X	X	X	X					X	
Infusion Therapies			X								X			
Wound Care		X	X	X	X	X	X	X	X	X	X	X	X	X
Wound Vacuum			X			X				X		X		X
Medication Monitoring/Reconciliation	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Immunizations		X	X	X	X	X	X	X	X	X	X	X	X	X
Fluoride Varnish for Children		X	X											
In-Home Lifestyle/Safety Evaluation	X	X	X	X	X	X	X	X	X	X	X	X	X	X

SERVICES	
Patient History/Physical Assessment	Managing Surgical Drains
Weight Checks-Adult and Pediatric	Managing Tracheostomies
Well Child Checks	Managing Catheters
Vital Signs	Managing PICC lines
Blood Pressure Screening	Peripheral Intravenous Lines
Cholesterol Screening	IV Catheter Changes
Routine Follow-up 12-Lead EKG	Antibiotic Infusions
Blood Glucose Checks	Suture Removal
Pulse Ox Monitoring	Treatment of Minor Injuries
Set Up CPAP	Post Partum Home Visits
Ultrasound	Infusion Therapies
Lab Specimen Collection	Wound Care
Lab Specimen Testing (Inc. I-STAT)	Wound Vacuum
Neurological Assessment	Medication Monitoring/Reconciliation
Post Stroke Assessment	Immunizations
Ophthalmoscope	Fluoride Varnish for Children
Chronic Disease Management (heart disease, asthma, COPD, diabetes)	In-Home Lifestyle/Safety Evaluation

The Models

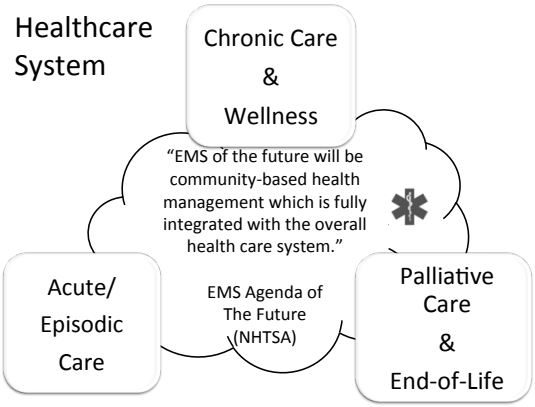
- Primary Healthcare
- Substitution
- Community Coordination

Blacker, N., Pearson, L., & Walker, T. (2009). Redesigning paramedic models of care to meet rural and remote community needs. *The 10th National Rural Health Conference*, Cairns, Australia, May 17-20, 2009. (Accessed via http://10thnrhc.ruralhealth.org.au/papers/docs/Blacker_Natalie_D4.pdf on November 30, 2011).

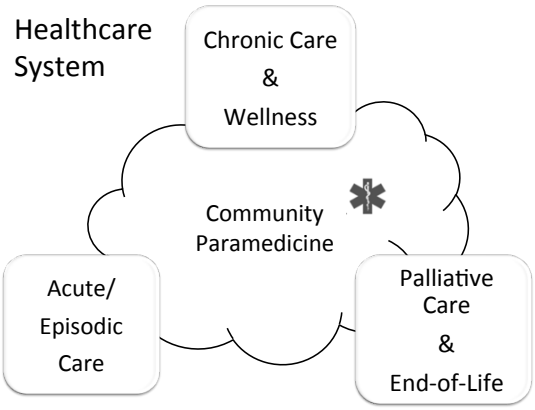
Douglas F. Kupas, MD, EMT-P

The Role of the Physician Medical Director

- Associate Chief Academic Officer
  Geisinger Health System
- Co-Chair, Community Paramedic Committee
  National Association of EMS Physicians
- Medical Director Council
  National Association of State EMS Officials



Healthcare System



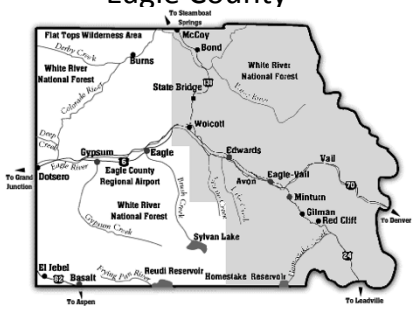
Eagle County Paramedic Services: Admission/ Readmission Avoidance and Primary Care Model

Chris Montera, AAS, NRP
Chief of Clinical Services/Assistant CEO

Kevin Creek, NRP
Community Paramedic

Eagle County Paramedic Services
Edwards, CO

Eagle County



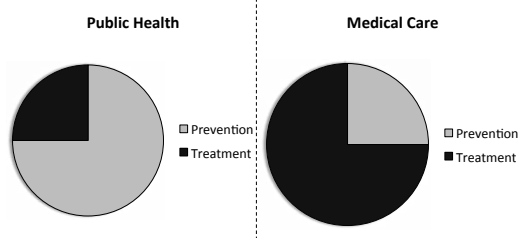
Uninsured Rates

- 15.8% US
- 17% Colorado
- 29% Eagle County

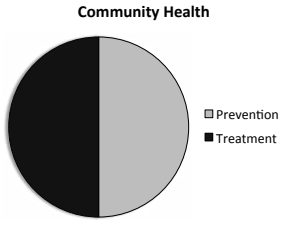
68 Primary Care Providers
5 Providers take Medicare, Medicaid, Uninsured

Health Care Delivery

Population Health Care



Community Paramedic



Procedures

- Blood Pressure checks
- Well Baby Checks Weights
- Bili Checks Heel Stick
- Immunizations
- Length Head and Circumference
- Diabetes – Pt Education
- Post Discharge
- Medication Reconciliation
- Mental Health Connections
- CPAP
- BiPap Sleep Apnea
- Oxygen Sat checks
- Otoscope
- Blue Tooth Stethoscope
- Digital Equipment / Camera
- Home Medication Compliance and Dispensing Tools
- Antibiotic Infusions
- Suture and Staple removal
- Home Dialysis
- Vaccines
- Intravenous Catheter Changes
- Asthma Management MDI Uses
- Peak Flows
- Steroid uses
- Prevention
- Public Health Activities
- Pt Documentation SOAP Notes
- History & Physical
- Mobile ISTAT Lab Work
- Home Safety Elderly and Child Wound Care
- Post Op Other Wounds
- Catheters - Foley, Straight Cath
- Cardiac Rehab
- Stroke Rehab
- Fluoride Varnishing
- Disease Investigations

Measurable Results/Outcomes

1: Reduce rehospitalizations by 50%

2: Ensure all patients in a medical home

3: Calculate cost savings of Community Paramedic Program versus cost of on-going care/hospital care

Measurable Results/Outcomes

4: Injury prevention versus potential costs associated with no prevention

5: Number of vaccinations given and Public Health visits

Initial Findings

- September 2010 – June 2012
- 36 patients
- 97 visits
  - Data Savings based on these numbers
- July 2012 – Current
- 46 Patients
- 200 Post Discharge Calls (last month)

Initial Findings

- 68 % had co-morbidities, meaning more than one major health issue
- 53 % were over age 65 and had underlying health conditions.
- 18 % had a psychiatric issue, in addition to other medical needs.
- 9 % had a congenital disorder (birth defect), which made them vulnerable to other health issues.
- 9 % were recently discharged from the hospital and had an unrelated, underlying medical condition or risk factor

Initial Findings

- Prevented
  - 47 Physician visits
  - 15 Ambulance transports
  - 13 ER visits
  - 3 Admissions/readmissions
  - 244 Skilled Nursing days

Initial Cost Savings

- $1,279 average savings per visit
- $3,446 average savings per patient

- Health Economist – Eide Bailly

Initial Cost Savings

- $124,071 SAVED!

Case Study

- 68 year old female
- Insulin Dependent Diabetic
- Early Onset Alzheimer's
- Does not qualify for all Home Care Visits

Contact Information

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www.wecadems.com/cp.html

www.communityparamedic.org

Matt Zavadsky, MS-HSA, EMT

MedStar: Alternative Destinations and ACO Support model

About MedStar…

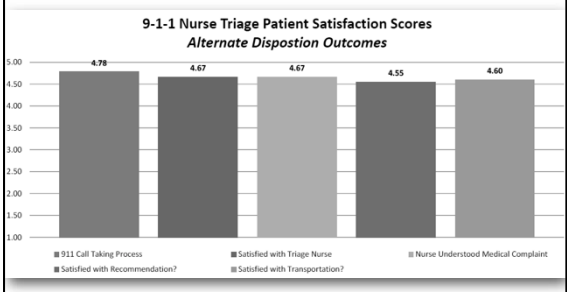
- Governmental agency (PUM) serving Ft. Worth and 14 Cities
  - 880,000 residents, 421 Sq. miles
  - Exclusive provider for all emergency and non emergency EMS
- 112,000 responses annually
- 350 employees
- Medical Control from 14 member Emergency Physician's Advisory Board (EPAB)
  - Physician Medical Directors from all emergency departments in service area + Tarrant County Medical Society
- $33 million budget / No tax subsidy
- Fully deployed system status management

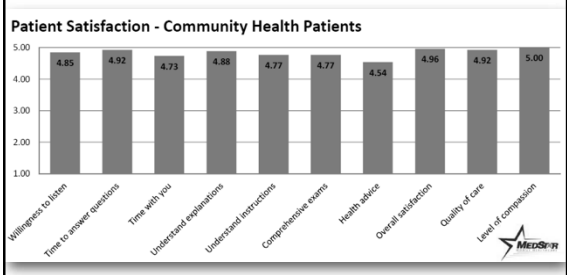
Patient Navigation Programs

- **9-1-1 Nurse Triage**
  - 241 patients navigated over 6 months
  - Expenditure Savings = $276,000
    - $1,195 per patient
- **EMS Frequent EMS users**
  - 43 patients enrolled with 2+ years of data
  - Expenditure Savings = $1.1 million
    - $26,000 per patient
- **Congestive Heart Failure**
  - 24 patients over 6 months
  - Expenditure Savings = $503,000
    - $38,000 per patient

Patient Navigation Programs

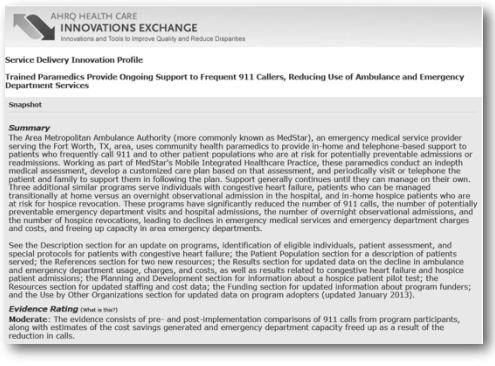
- **Observation Admission Avoidance**
  - 24 patients over 4 months
  - Expenditure Savings = $32,000
    - $2,160 per patient
- **Hospice Revocation Avoidance**
  - 24 patients over 4 months
  - Expenditure Savings = $180,000
    - $21,300 per patient





Patient Safety

- Nurse Triage
  - All patients called back in 24 hours and 1 week
- Community Health Programs
  - Standard/consistent assessment process
    - Feedback to PCP
  - Daily reviews by coordinator
  - Bi-weekly case reviews
  - Monthly Care Coordination Council


AHRQ HEALTH CARE
INNOVATIONS EXCHANGE
Innovations and Tools to Improve Quality and Reduce Disparities

Service Delivery Innovation Profile

Trained Paramedics Provide Ongoing Support to Frequent 911 Callers, Reducing Use of Ambulance and Emergency Department Services

Snapshot

Summary

The Area Metropolitan Ambulance Authority (more commonly known as MedStar), an emergency medical service provider serving the Fort Worth, TX, area, uses community health paramedics to provide in-home and telephone-based support to patients who frequently call 911 and to other patient populations who are at risk for potentially preventable admissions or readmissions. Working as part of MedStar's Mobile Integrated Healthcare Practice, these paramedics conduct an indepth medical assessment, develop a customized care plan based on that assessment, and periodically visit or telephone the patient and family to support them in following the plan. Support generally continues until they can manage on their own. Three additional similar programs serve individuals with congestive heart failure, patients who can be managed transitionally at home versus an overnight observational admission in the hospital, and in-home hospice patients who are at risk for hospice revocation. These programs have significantly reduced the number of 911 calls, the number of potentially preventable emergency department visits and hospital admissions, the number of overnight observational admissions, and the number of hospice revocations, leading to declines in emergency medical services and emergency department charges and costs, and freeing up capacity in area emergency departments.

See the Description section for an update on programs, identification of eligible individuals, patient assessment, and special protocols for patients with congestive heart failure; the Patient Population section for a description of patients served; the References section for two new resources; the Results section for updated data on the decline in ambulance and emergency department usage, charges, and costs, as well as results related to congestive heart failure and hospice patient admissions; the Planning and Development section for information about a hospice patient pilot test; the Resources section for updated staffing and cost data; the Funding section for updated information about program funders; and the Use by Other Organizations section for updated data on program adopters (updated January 2013).

Evidence Rating (What is this?)

Moderate: The evidence consists of pre- and post-implementation comparisons of 911 calls from program participants, along with estimates of the cost savings generated and emergency department capacity freed up as a result of the reduction in calls.

Mike Wilcox,MD

North Memorial Healthcare: Integrated ACO model

- Medical Director, EMS and Community Paramedic Educational Programs
  Hennepin Technical College (MnSCU), Minneapolis,MN
- Assistant Medical Director, Emergency Medical Services
  North Memorial Health Care, Robbinsdale,MN
- Medical Director
  Mdewakanton Fire Emergency Services, Prior Lake,MN
- Medical Director
  Scott County Community Services, Shakopee,MN

Dan Swayze, DrPH

eMedHealth: Primary Care and Health Plan Directed model

- Vice-President, Chief Operations Officer
  eMedHealth, Pittsburgh, PA

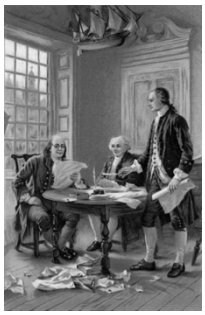
Emed Health:

The Pittsburgh Community Paramedic Experience

Dan Swayze, DrPH, MBA, MEMS
Vice President | Chief Operating Officer
Center for Emergency Medicine of Western Pennsylvania, Inc.

Our experience

- Immunizations
- Biometric screenings
- Asthma
- Care transitions



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Asthma Program

- Description
  - In home visits for uninsured patients with asthma admission
  - 4-5 visits
- Setting
  - Low income community

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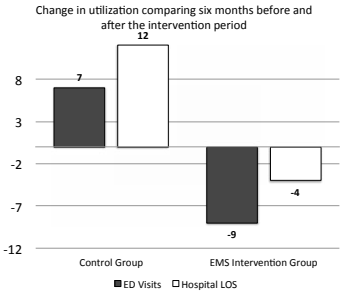
Preliminary Results

- Compared to a computer generated randomized control group, the group receiving the EMS home visit (n=42)
  - **Had fewer ED visits**
  - **Had shorter lengths of stays in hospital**
  - **Saved average of $1216** in hospital charges



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Safe Landing Program

- Description
  - In home post discharge follow-up
  - 1-2 visits
- Experience
  - ~3 years

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Safe Landing Components

- Medication reconciliation
- Personal medical record
- Symptom response plan
- PCP follow up appt

44

Preliminary Results

- Compared to their historical use, the group receiving the EMS Safe Landing Visit (n=134)
  - Had **16 fewer readmissions**
  - Had **81 fewer days in hospital**
  - **Saved $1.2 million** in hospital charges

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New results

- 13 CHF patients
- National average for readmission within 30 days is **24.8%**
- Safe Landing patients
  - **0 readmissions** at 30 days
  - **0 readmissions** at 60 days
  - **1 readmission** at 90 days
- $120,000+ average charge

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Brent Myers, MD MPH

Wake County: Alternative Destination and Prevention model

Director
Wake County Department of Emergency Medical Services
331 S. McDowell Street
Raleigh, NC 27601
www.wakegov.com/ems

Community Health

- Substance abuse/mental health (SA/MH)
  - Direct transport to facility for mental health or substance abuse care
- Falls prevention/care
- Hypertension/CHF checks
- Diabetic checks
- *Pre-plans (nursing homes, home health)*

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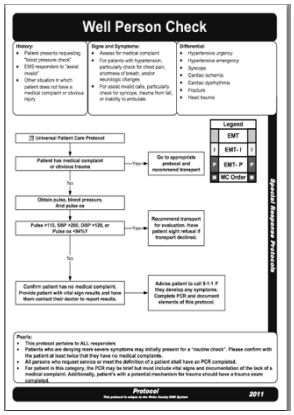

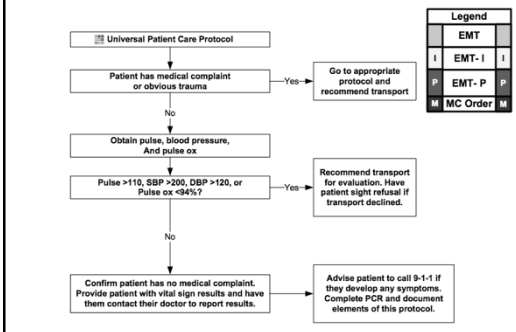

Screening Form

Reason for call:
__ __ 911 call
__ __ Involuntary Pick up
__ __ Wellness check - follow up
__ __ Other

Was force used? Yes (☐) No (☐) ***If yes, explain in narrative section of this form.***

Patient Injuries:
(☐) None
(☐) Prior to EMS arrival
(☐) During EMS/LEO encounter

Paramedic/LEO Injuries:
(☐) None
(☐) Slight
(☐) 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

Alternative Destination

- 204 patients in a 12 month period were placed
- Mental health patients consume 14 ED bed hours on average (2,448 hours)
- Chest pain patients consume 3 ED bed hours on average
- Thus, we opened beds for 816 chest pain patients in the 12 month period
- This also saved ~$350,000 in total healthcare costs for this population

Alternative Destination

- Ambulance is returned to service <10 minutes 78% of the time
- This returned 120 unit hours to the EMS system
- Of patients screened, 32% ultimately "alternatively destinated"

Alternative Destination

- Most recent observational data indicate an average length of stay of 35 hours in the crisis and assessment unit
- The actual savings for the alternative destination is not only the emergency department bed hours saved but also the in-patient bed hours for mental health "holds"

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Alternative Destination

- Ambulance is returned to service <10 minutes 78% of the time
- This returned 120 unit hours to the EMS system
- Of patients screened, 32% ultimately "alternatively destinated"
- Safely increasing the proportion of alternative destinations is now a focus

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

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Falls in Assisted Living Facilities

- IRB approval is in place to study all such transports for the past year:
  - Evaluate safety of a decision tree that would allow APPs to evaluate patients on-site and avoid unnecessary transports
  - Determine proportion of patients with any findings on evaluation that required intervention
  - Determine costs associated with the evaluation

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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

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Falls in Assisted Living Facilities

- Prospective evaluation will begin soon (in the next 2 weeks)
- Public/private partnership with Doctors Making Housecalls (DMH)
- No ambulance will be dispatched; rather, APP only to simple falls
- Common medical record with DMH
- On-going evaluation of safety and costs

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Low Acuity Callers

- Data Driven triage score
  - 1 very ill/injured
  - 2 and 3 need prompt evaluation
  - 4 and 5 – can safely go to the waiting room
- We are working to implement this scoring mechanism
- ~20% of our transports are level 4 and 5 (~$3.5 million in transport charges per year)

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Summary

- Hot spots that are amenable to intervention in the EMS population exist
- The Advanced Practice Paramedic program is one method to improve care while reducing cost to the healthcare system
- Standardized measures to evaluate performance are the next challenge

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ALLEGHENY COUNTY, PA COMMUNITY PARAMEDICINE: "CONNECT" PILOT PROGRAM

Robert J. McCaughan
Vice President
Prehospital Care Services
Highmark Inc.

Congressional Hill Briefing
Tuesday, March 5, 2013

WHAT IS THE PARAMEDICINE CONNECT PILOT?

•The CONNECT pilot program aims to:

•Reduce 30 day hospital readmission rates for CHF and other chronic diseases;

•Increase the number of patients actively enrolled in social service programs based on their psychosocial needs; and

•Improve health-related quality of life scores for participants completing the program compared to their baseline scores at intake.
•
•This Pilot will involve the Allegheny County EMCS Council (ACEMS) and 17 of the 46 licensed EMS agencies in the county serving a population of 684,485. The selection criteria used was based on the City of Pittsburgh and the 36 municipalities that comprise the county's urban core. Funding for the two-year pilot program is being provided jointly by Highmark and UPMC.

COMMUNITY PARAMEDICINE: HISTORY OF THE "CONNECT" PILOT PROJECT

Pittsburgh EMS (PEMS) and The Center for Emergency Medicine (CEM)

⇩

City Controller Audit Allegheny County EMS Council (ACEMSC)

⇩

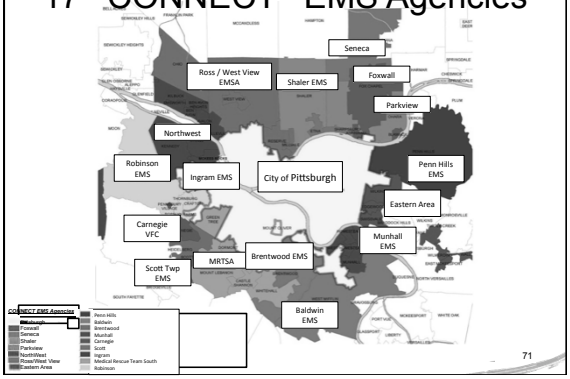
The Congress of Neighboring Communities (CONNECT)

⇩

PEMS, CEM, ACESMC, CONNECT, HIGHMARK and UPMC

Congress of Neighboring

17 "CONNECT" EMS Agencies



Community Paramedic™ Program Handbook

Western Eagle County Health Services District

Fall 2011
Version 1.2

North Central EMS Institute

COMMUNITY™ PARAMEDIC

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