Emerging Trends in the Post-Acute Setting

Partners HealthCare at Home
Dana Sheer, BS, MSN, ACNP
Background

• 85% of American’s have some health insurance.*
  – 46% government funded

• “Mind the Gap” – more than 15% of insured are uninsured for at least 1 year or more.

• Poorer healthcare adherence, complications and adherence.

• Associated with higher costs of care.

1/2008 – Annals of Internal Medicine
Background

• 45% of U.S. population has a chronic medical condition:
  – 50% w/multiple chronic conditions

• Medicare population:
  – 83% - 1 or more chronic conditions
  – 23% - 5 or more chronic conditions

• 2015 – est. 150 million American’s w/1 chronic medical condition
Background

• Cost of Healthcare in the United States:
  – 2005: $2.0 Trillion, $6697/person, 16% GDP
  – 2015: est. $4.0 Trillion, 20% GDP
  – 10% of patients across all ages incur 60-70% of costs

• Cost Variations:
  – National variations in practice volume and intensity.
  – Miami 2.5 times higher Medicare costs than Minneapolis.
  – Outcomes: no difference.

1/2008 – Annals of Internal Medicine
Figure 2. The nation’s health dollar, calendar year 2005: where it went.

- **Other Spending** 25%
- **Hospital Care** 30%
- **Physician and Clinical Services** 21%
- **Nursing Home Care** 6%
- **Prescription Drugs** 10%
- **Program Administration and Net Cost** 7%

“Physician and Clinical Services” includes offices of physicians, outpatient care centers, and medical and diagnostic laboratories. “Other Spending” includes dentist services, other professional services, home health, durable medical products, over-the-counter medicines and sundries, public health, other personal health care, research, and structures and equipment. Source: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.
Background

• Technology and Innovation:
  – Associated w/higher spending and utilization
  – Associated w/large share of health care expenditures

• Clinical and Cost Effectiveness:
  – Evaluated by both private and public organizations.
  – Who owns what?
    • 45 agencies/22 countries share technology assessment in the Int’l Network of Agencies for Health Technology Assessment.

1/2008 – Annals of Internal Medicine
U.S. Healthcare System Performance

• Commonwealth Fund Criteria:
  – Long, healthy, and productive lives - mortality
  – Quality – EBM
  – Access
  – Efficiency
  – Equity
  – Capacity to innovate/improve
Background

Yet…

• Life Expectancy:
  – 1900 – 49 years
  – 2014 – 79 years
  – 90+ - fastest growing segment of U.S. population
    • 2050: total 90+ population expected to quadruple!
Background

• Long term care services needed:
  – Institutional,
  – Aging in Place,

• Care coordination/transitions needed,

• Multi-disciplinary care needed,

• However, these services are often unfunded or poorly reimbursed!

1/2008 – Annals of Internal Medicine
The Triple Aim Goals

**Quality**
- Improve Patient Outcomes

**Cost**
- Reduce costs/penalties associated with readmissions

**Patient Experience**
- Improved Continuity of Care
- Improved Pt/family expectations
- Improved Patient Satisfaction scores
Focus on Reducing Acute Readmissions

Penalties to be tied to high readmission rates:

- **Medicaid**: Reduced payments of high readmission rates using 3M PPR Grouper Software
- **CMS**: Starting FY13 acute inpatient hospitals with higher-than-expected readmission rates for AMI, HF and PNE will receive payment reductions for discharges on or after October 1, 2012
- **Commercial**: Pay-for-Performance Contracts

New Performance Metrics

- More than just access: now its readmission rate and access
- Requires greater capabilities and enhanced clinical management
- Shared process improvement
- Integration into readmission reduction programs
PCC Efforts to Reduce Readmissions

HIGH LEVEL OVERVIEW

1. REDUCE NUMBER OF ED REFERRALS
   A. By improving STACH→PCC transfer

3. PROVIDE ED WITH ALTERNATIVES TO ADMISSION
   A. By improving dispositions

2. PROVIDE BETTER INFORMATION TO ED
   A. By improving PCC→ED transfer

PCP

1C. By improving PCC to PCP transfers

PHH

1D. By improving PCC to PHH transfers

1B. By improving PCC facility processes

ED

STACH

3. PROVIDE ED WITH ALTERNATIVES TO ADMISSION
   A. By improving dispositions

X

X

X

X

X

X

ED

PCC

STACH

X

X

X

PCC

PHH

PCP
Aligning Resources around Patient Populations

• Care Transitions
  – Advance Practice Clinicians
  – PolyPharmacy
  – Health Information Exchange
  – Caregiver involvement
  – Care connections
  – Disease Living vs. Living with Disease
    • Patient Self-Management
The New World of Healthcare Reform

• Medical Home
• Hospital at Home
• Community Centered Medical Home
• Accountable Care Organizations
• Self management of Chronic Disease
• Medication Reconciliation
• Care Transition Coaches
Population Health & Partners HealthCare at Home: Care Across the Continuum

- **Telemonitoring**
  Build on existing capabilities of PHH to implement a heart failure telemonitoring referral and communication protocol to serve more high-risk patients

- **Chronic Care Management**
  Utilize PHH clinicians to train PHM case managers

- **Mobile Observation Unit**
  Provide timely, appropriate clinical services to support a patient’s safe return home from the ED

- **Integration with Medical Homes**
  Pilot having PHH clinicians documenting in LMR for MGH and BWH Primary Care practices to enhance continuity and coordination
What makes launching a program complex?

Program Planning Tool

Operational Readiness Checklist

Implementation Checklist

- Project Team
- Business Case
- Reimbursement and Compensation
- Documentation and Meaningful Use
- Quality Tracking and Reporting
- Contracting, Credentialing, and Licensure
- Technology Software and Hardware
- Training
- Technology Support
- HIPAA, Patient Consents, and Notifications
- Patient Registration
- Branding and Marketing

Courtesy MGH Telehealth

Member of Partners HealthCare, founded by Brigham and Women’s Hospital and Massachusetts General Hospital
Technology in Home Care

• “Disease management, patient self-management, and telehealth are essential interventions to reduce readmissions and improve quality of life for chronic care patients. …Effective quality improvement programs will merge facets from all three interventions.”

(Home Health Quality Improvement [HHQI] National campaign 2011 – a CMS initiative)
Telehealth & Remote Patient Monitoring

• 100 million people have at least one chronic condition.
• It is estimated that nearly 5 million Americans have heart failure with approx. 700,000 new cases annually.
• HF is the most common reason for hospitalization among Medicare patients.
• Patient outcomes are consistently poor, 1 in 10 patients die within 30 days of discharge.
• 27% of Medicare HF patients have hospital readmission within 30 days of discharge at a cost of > $17.4 billion/year.
Telehealth & Remote Patient Monitoring

How does technology in the home/community-based care model allow for prevention, early detection, behavior change, social support, better outcomes?

<table>
<thead>
<tr>
<th>Condition</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Failure/CVD</td>
<td>√ Decreased Hospitalizations</td>
</tr>
<tr>
<td>Diabetes</td>
<td>√ Decreased ED Utilization</td>
</tr>
<tr>
<td>COPD</td>
<td>√ Increased patient involvement &amp; provider collaboration/continuity</td>
</tr>
<tr>
<td>Stroke</td>
<td>√ Improved patient outcomes &amp; QOL</td>
</tr>
<tr>
<td></td>
<td>√ Decreased cost of care</td>
</tr>
<tr>
<td></td>
<td>√ Increased patient and provider satisfaction</td>
</tr>
</tbody>
</table>
Telehealth & Remote Patient Monitoring

• How does telehealth/telemedicine reduce hospital, clinic or ER visits and ultimately healthcare costs?
  – Focused goals of programs:
    • Symptom management
      – Motivational Interviewing
      – Active Listening
    • Patient interactions
      – 82% report more control of disease management
      – 69% report no ED utilization
      – 78% report avoided rehospitalization
    • Clinical team coordination
    • Removal of time/distance barriers for the delivery of healthcare services/activities

Institute for Healthcare Improvement – “Just monitoring symptoms and vitals signs isn’t enough. Patients must be engaged in the process with education and coaching for programs to be effective.”
# New England Telemedicine Legislation

<table>
<thead>
<tr>
<th>State</th>
<th>Legislated Mandate for Private Coverage</th>
<th>Legislated Medicaid Coverage (Interactive Video)</th>
<th>Other Proposed Bills Affecting Medicaid Coverage</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut</td>
<td>Proposed</td>
<td></td>
<td></td>
<td>SB 40 &amp; SB 858</td>
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<tr>
<td>Maine</td>
<td>Enacted</td>
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<tr>
<td>Massachusetts</td>
<td>Proposed</td>
<td>Proposed</td>
<td>Proposed</td>
<td>H1951, S530, S467, H948</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>Enacted</td>
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<tr>
<td>Vermont</td>
<td>Enacted</td>
<td>Enacted</td>
<td>Proposed</td>
<td>H272 &amp; S88</td>
</tr>
</tbody>
</table>

*American Telemedicine Association, 2/20/13
### MA Healthcare/TeleHealth Finance Reform

1. **MA Healthcare Reform Section 47BB** (effective 11/2012)
   - Requires coverage for telemedicine consistent with coverage for health care services provided through an in-person consultation. The statute defines telemedicine as the use of interactive audio, video or other electronic media for the purpose of diagnosis, consultation or treatment. “Telemedicine” shall not include the use of audio-only telephone, facsimile machine or e-mail.

2. **H. 1951 An Act Health Insurance: Mandated Coverage for Telemedicine Service**
   - Requires telemedicine coverage for all health plans including Medicaid; authorizes the use of remote monitoring; and includes a provision to require the health home benefit for the chronically ill. The bill defines telemedicine as the “use of synchronous video conferencing, remote patient monitoring, and asynchronous health images or other health transmissions supported by mobile devices (mHealth) or other telecommunications technology by a health care provider to deliver health care services at a site other than the site where the provider is located relating to the health care diagnosis or treatment of a patient.”

3. **S. 530: An Act Relative to the Full Application of Telemedicine Coverage**
   - Requires telemedicine coverage for private insurers, Medicaid, and State Employee Plans. The bill defines telemedicine as the “use of interactive audio, video or other electronic media for the purpose of diagnosis, consultation or treatment.”

4. **H. 2114 An Act Relative to Full Application of Telemedicine Coverage**
   - Requires telemedicine coverage for private insurers, Medicaid, and State Employee Plans; The bill defines telemedicine as the “use of interactive audio, video or other electronic media for the purpose of diagnosis, consultation or treatment.”

5. **S. 467 An Act Relative to Telemedicine**
   - Requires telemedicine coverage for private insurers and state employee plans only; the bill defines telemedicine as the “use of audio, video or other electronic media for the purpose of diagnosis, consultation, or treatment as it pertains to the delivery of healthcare services.”

6. **H. 948 An Act to Expand Coverage and Access to Behavioral Health Services**
   - Requires telemedicine coverage for telepsychiatry services.

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*Courtesy MGH Telehealth*

*Member of Partners HealthCare, founded by Brigham and Women’s Hospital and Massachusetts General Hospital*
# Home Care Telemonitoring’s Value

<table>
<thead>
<tr>
<th>Financial</th>
<th>Now</th>
<th>Readmission Era</th>
<th>ACO Era</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial</td>
<td>Reduction in LOS For Hospitals</td>
<td>Decrease LOS <em>plus</em> avoid costs of readmissions</td>
<td>Shared Bottom Line</td>
</tr>
<tr>
<td>Quality</td>
<td>Quality is ‘silied’ by entity</td>
<td>Readmissions reduction begins to <em>define</em> higher quality</td>
<td>Quality = value based care <em>across the continuum</em></td>
</tr>
<tr>
<td>Access</td>
<td>Access has been challenging with the current level of demand</td>
<td>Access to the <em>right provider</em> = overall better quality and reduced readmissions</td>
<td>Access will be key as the population ages and demand increases</td>
</tr>
<tr>
<td>Efficiency</td>
<td></td>
<td></td>
<td>Quality + Effective + Low Cost = Efficiency</td>
</tr>
<tr>
<td>Patient Satisfaction</td>
<td></td>
<td></td>
<td>The patient preference for <em>site of care</em> will be a factor</td>
</tr>
<tr>
<td>Shared measures</td>
<td></td>
<td>Readmission rates</td>
<td>Cost, quality, access, efficiency, patient satisfaction</td>
</tr>
</tbody>
</table>
The Future of Home TeleHealth

• Improved/affordable technology
  – mHealth
  – Wearable sensors
  – Smart algorithms
  – Avatars for teaching

• Improved interoperability
  – Vendor agnostic
  – Best in class options
Home Care Technology
Partners HealthCare at Home
Issues facing our patient population

• Falls
  – One in three adults age 65 and older falls each year
  – By 2020, the annual direct and indirect cost of fall injuries is expected to reach $54.9 billion
  – On average, the hospitalization cost for a fall injury is $17,500

• Medication Errors
  – 700,000 emergency department visits and 120,000 hospitalizations are due to adverse drug events annually
  – $3.5 billion is spent on extra medical costs of adverse drug events annually

• Heart Failure
  – In 2010, heart disease will cost the United States $316.4 billion. This total includes the cost of health care services, medications, and lost productivity.

* Centers for Disease Control and Prevention
The current technology at PHH

- Glucometers
- Oximeters
- Coaguchek Machines
- Remote patient telemonitoring
- Personal Emergency Response devices
- Medication Dispenser
HealthCare Products & Technology - Statistics

• Personal Emergency Response Unit
  – 3,950 subscribers / 120 subscribers with Auto Alert

• Remote Telemonitoring
  – 2,900+ patients cared for since 2006
  – 67% decrease in CHF hospital re-admissions with CCCP patients

• Medication dispensers
Positive Outcomes

• Patients
  – 98% of patients stated they would recommend the Personal Emergency Response Unit

  – 98% of patients stated they would recommend the Telemonitoring program

  – “I didn’t always think much of my emergency response button until I needed it. I am so grateful that I had it. The follow-up call I received when I returned from the hospital really showed how much you care.” ~ Personal Emergency Response Unit patient
The future of technology at PHH

- Mobile care for field staff
- Evolve Telemonitoring
  - Ability to choose patient specific services
- Tele-rehab
- Tele-wound care
- End of life care
- Predictive home safety
2004  PHH and CCH study of homebound Medicare patients and demonstrated benefits of telemonitoring

2005  Telemonitoring becomes standard of care for homebound patients with heart failure at Partners HealthCare at Home

2007  Pilot program at MGH to assess benefits of remote monitoring in non-homebound patients

2009  Connected Cardiac Care Program offered across Partners Network as an opt-out program

2012  iCMP expands: with increased collaboration with CCH and PHH to provide telemonitoring resource to HF patients

2012 – 2013  PHS Care Redesign Efforts – heart failure telemonitoring as the standard of care at discharge.

  BWH – Heart Failure Inpatient Units and Outpatient Clinics
  MGH – Ellison 11 and 16
  NSMC – Heart Failure Clinic
  NWH – Heart Failure Clinic
<table>
<thead>
<tr>
<th>Year</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| 2004 | Reduced skilled nursing visits and trend towards decreased hospitalization  
      | Reduced cost of providing care |
| 2009 | Initial analysis showed a 33% reduction in readmission rates  
      | Subsequent analysis showed a > 50% reduction in readmission rates |
| 2013 | **Commonwealth Fund:**  
      | 51% reduction in heart failure hospital readmissions  
      | 44% reduction in non-heart failure hospital readmissions  
      | Statistically significant reductions in all cause morbidity and mortality for patients who are readmitted  
      | Improved patient understanding of heart failure and self-management skills  
      | High levels of clinician and patient acceptability and satisfaction |
HF Tele-monitoring: Selection Criteria

- **Screen using eligibility criteria:**
  - Have a moderate or high risk for hospitalization (iCMP risk score of 1 or 2)
  - Class II, III or IV of HF
  - Not at goal weight at time of hospital discharge
  - Have a Partner’s affiliated Primary Care Physician
  - Multiple ED visits and/or readmissions
  - Able to take English and Spanish* speaking patients (*utilizing interpreter line)
  - Ability to use traditional phone line or cell modem
  - Are mentally competent and willing or who have a primary caregiver willing to assume responsibility for Telemonitoring
  - Have a clean, safe environment for the equipment
  - Have Massachusetts residency
Supported Self Monitoring Program

• Heart Failure – primary diagnosis
• Prior Remote Monitoring
• High Risk for Rehospitalization
• Weekly Telephonic Intervention
  • Weight
  • Nutrition
  • Symptoms
• Communication with Primary Team
• Chronic Disease Management Staff Training
Assessment of Patient Self Management Behavior

The European Heart Failure Self-care Behaviour Scale

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>I completely agree</th>
<th>I don’t agree at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I weigh myself every day</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>If I get short of breath, I take it easy</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>If my shortness of breath increases, I contact my doctor or nurse</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>If my feet/legs become more swollen than usual, I contact my doctor or nurse</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>If I gain 2 kg in 1 week, I contact my doctor or nurse</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>I limit the amount of fluids I drink (not more than 1.5–2 l/day)</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>I take a rest during the day</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>If I experience increased fatigue, I contact my doctor or nurse</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>I eat a low salt diet</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>I take my medication as prescribed</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>11</td>
<td>I get a flu shot every year</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td>I exercise regularly</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

**Instruction to patients:** This scale contains statements about heart failure self-care. Respond to each statement by circling the number you think best applies to you. Note that the different answer alternatives constitute a scale ranging between the extremes of ‘I completely agree’ (1) to ‘I don’t agree at all’ (5). Even if you feel uncertain about a particular statement, circle the number you feel is most true for you.

**Instruction to researcher:** A total score is calculated by summing all items. If more than three items are missing a total score cannot be obtained. In case of <3 missing items the 3 is used to replace the missing score per item. Copyright Jaarsma, Strömberg, Mårtensson, Dracup, 1999.
Self Management Behavior

- Identifies specific deficiencies in self care
- Aggregated data could be used to determine overall level of self care skill
- E.G.
  - Aggregated score 12-24-Poor to fair skills
  - Aggregated score 25-36- Fair to Good skills
  - Aggregated score 37-60-Good to excellent skills
Results are mixed about the efficacy of this type of intensive telemonitoring for this patient population; patients are enrolled in program for longer than is effective

- Internal CCCP data (from a cohort study) suggests a positive effect on readmissions of heart failure patients at 30 days but the advantage disappears at 60 days
- The results of the CCH cohort study are consistent with a Cochrane study published in 2010 (value to short term readmissions in cohort studies)
- Two large randomized studies did not come to the same conclusions (see next slides)

- The majority of patients received telemonitoring services for >120 days
- Average cost was $1451 per patient over the course of their time in the program

<table>
<thead>
<tr>
<th>Days in Program</th>
<th># Patients</th>
<th>% of program</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-60</td>
<td>43</td>
<td>14.19</td>
</tr>
<tr>
<td>61-120</td>
<td>72</td>
<td>23.76</td>
</tr>
<tr>
<td>&gt;120</td>
<td>188</td>
<td>62.05</td>
</tr>
<tr>
<td>TOTAL</td>
<td>303</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Randomized studies using IVR telemonitoring did not see increased value due to short term readmissions

- 1653 HF patients randomized to IVRS or routine care
- Used IVR rather than physiologic monitoring (may not be apples to apples comparison)

Members of Partners HealthCare, founded by Brigham and Women’s Hospital and Massachusetts General Hospital

Partners HealthCare CHF Telemonitoring
Exploring the Hybrid Approach: Types of Telemonitoring

Hybrid Approach Combining Options

Offer stratified telemonitoring based on relative risk of readmission and where there is a demonstrated need on the basis of a self care behavior assessment

- All patients and their families should be educated to provide self monitoring and self care
- Telemonitoring should be tailored to the needs and skills of patients and families
- Telemonitoring should not be viewed as an ongoing and continued service
- Telemonitoring should be discontinued 14 days prior to discontinuation of home services
- Physiologic stability
- Self care behaviors
- European Heart Failure Self Care Behavior Scale
- Validated 12 item survey (Likert 1-5)
- Higher scores indicate better self care behaviors
  - Analyzing data form large European study to determine correlation between score and readmission risk

Interactive Voice Recognition System (IVR)
Least expensive intervention
Computerized algorithm closed loop to clinicians
No head to head comparisons with other forms
Low “touch”

Telephone contact
Requires skilled contact on a routine basis
High “touch”
More expensive due to labor costs

Telephone contact with physiologic monitoring
Requires skilled contact for outliers
Medium touch
Most expensive option due to labor cost and costs of equipment
Partners Mobile Observation Unit

Project Overview

• Collaborative initiative between Partners Healthcare at Home (PHH) and Partners Pioneer ACO to provide patients with home-based alternatives to inpatient/observation care.

Project Aim

• Improve patient experience of care and avoid harms of hospitalization through enhanced home-based therapies
• Prevent unnecessary hospital observation stays or admissions through targeting the ED and providing extra disposition option to clinicians
• Reduce readmissions among patients entering the hospital through the ED
• Create flexible resource as a “universal backstop”
• Identify areas for future investment/intervention
Quarterly Observation Stays per 1,000 Medicare Beneficiaries
National and State

This material was prepared by Masspro, the Medicare Quality Improvement Organization for Massachusetts, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily represent CMS policy. 10-ma-caretrans-14-50-readmissions-stateofstate-Mar14
Partners Mobile Observation Unit

The Partners Mobile Observation Unit (PMOU), offers same day, home-based clinical care to patients admitted to an emergency department for reasons that are found to be treatable at home with enhanced home care. The program offers a high-quality alternative to hospitalization for qualified patients who will benefit from additional medical treatment and support in the safety and comfort of their home.

Upon discharge from an emergency room, a Partners HealthCare at Home (PHH) nurse practitioner will be deployed to meet the patient at home to conduct an intensive, structured visit as a continuation of the patient's care plan.

Additionally, the home is evaluated for safety and barriers to the patient’s ability to recover at home. The PMOU provides patient self-management counseling and a high level of coordination with primary care providers.

If needed, telephonic support may be offered until outpatient care can be arranged. A referral to the patient’s preferred home care provider, as well as other community resources may also be provided.

The patient does not need to meet home care admission criteria and there is no charge for the service.

Enrollment Criteria:
- Patient has a Partners PCP (exceptions can be made on a case by case basis).
- Patient lives in the Metro Boston area; all referrals will be considered on a case-by-case basis.
- Medical status is stable and does not indicate hospital level of care:
  - Clinically stable infection (i.e., UTI, PNA, cellulitis) that warrants monitoring.
  - Chronic disease exacerbation (e.g., CHF/COPD), not back to baseline, but stable-to-improving, and requires monitoring.
  - Clinically stable, but ongoing concern about ability to thrive at home (e.g., home safety, adherence concerns, uncertain outpatient follow-up).
- No acute psychiatric diagnosis.
- IV diuretics/antibiotics assessed on a case by case.

www.partnersathome.org

Find us on: 

Benefits of the Mobile Observation Unit
- Improved patient experience and outcomes
- Reduced hospitalizations
- Lower healthcare costs
- Improve clinical flow in emergency departments and inpatient observation units.
PMOU Process

Provide high quality home-based evaluation, treatment and continuity with community-based providers.

Patient Selection
• Rounding by PHH liaisons and PMOU clinicians (virtual and in-person)
• Referral from Case Management/Nursing/Physician

PMOU Contact
• Dedicated 1-800 number and email address
• Partners Page

NP Deployment
• 4-12 hours post discharge
• Monday-Friday 9am to 7pm pilot with goal to expand

Closed Loop Communication
• Primary Care Team
• ED/OBS/Case Management
• Others as Identified
Target Patient Population

- A Partners PCP

- A mix of clinical complexity and/or frailty/home-safety concerns:
  - Clinically stable infection (UTI, PNA [Curb-65 of 2-3], cellulitis) that warrants monitoring;
    - Options for continued IV interventions for limited populations (in progress)
  - Non-operative pt w/ fall, but requiring titration of pain meds and/or home safety evaluation;
  - CHF/COPD flare, not back to baseline, but stable-to-improving and requires monitoring;
    - Options available for continued IV interventions for limited populations (in progress)
  - Clinically stable, but on-going concern about ability to thrive at home (e.g. home safety, adherence concerns, adequate outpatient follow-up);
  - Future Considerations:
    - Inpatient on the mend but requires closer monitoring at home (above and beyond traditional VNA and other community care) prior to visit with PCP.
    - Patient at home or in PCPs office at risk of ED use and subsequent inpatient admission.

- No primary psychiatric diagnosis
## Home Visit Specifics – NP Role in the Home

### Patient Engagement
- Ensures the patient and family understands:
  - Chief Complaint
  - Treatment plan in the ED
  - Rationale for tests/procedures and meaning of results
  - Future Care Plan/Next Steps
  - Current medication and changes
- Discusses and answers questions regarding recent diagnosis (and others as pertinent)

### Clinical Assessment
- Evaluates and assesses:
  - Physical condition/findings
  - Home Safety Evaluation
  - Handles the management of ADL’s/IADL’s
  - Treatment Plan
  - Condition Changes

### Coordination of Care
- Facilitates obtaining medications and addresses medication use concerns
- Conducts medication reconciliation
- Arranges VNA resources if needed
- Discusses follow up plan and what will be communicated to the primary team
- Sets up follow up appointments with the appropriate primary clinical team
- Follows up with any pending labs/results
- Communicates with HCP’s or identified family with follow-up plans/concerns
- Provides contact information for any questions/concerns not addressed during visit
Patient Presentation
94 Year Old Female

Patient was admitted to ED OBS unit as a result of tripping over construction on the sidewalk:
- Found to have R scaphoid fx, L rotator cuff injury on clinical exam and R orbital fracture
- No additional support at home besides a housekeeper

VNA Referral
- Patient referred to home VNA to continue plan of care. Occupational and physical therapy, nursing and social work services were arranged.

PMOU Referral
- The PMOU was asked to see the patient at home to assess safety, continued fall risk and to ensure independence
- The patient and her family report overall satisfaction with the services provided by the PMOU

Transfer to Assisted Living
- Patient will be transitioning to an assisted living facility with the next month because her family is concerned for her safety home alone
PMOU Patients and Family Members Say…

• “I wasn’t sure I wanted the visit but I’m really glad I had a chance to talk with you; you really helped me understand…”

• “Thank you for checking on me; I was really worried coming home. My glass broke and I can’t see in the dark”.

• “This was really helpful, if I need you again, can I call you?”

• “I didn’t understand why my dad was on these medications. Thank you so much; this was important”
Pilot – Initial Data

• Pilot – June – September, 2013
• 61 patient referrals
• Mean age – 76
• 35% of patients would have otherwise been admitted (based on referrer assessment)
• No increased ED utilization/admission
• 93% had outpatient f/u w/in 2 weeks (vs. 43%)
Early Lessons Learned

- Relationships take time:
  - Need collaborative relationships with key hospital and emergency department leadership, which requires understanding the culture ("you’re not there to change them")
  - Find your champions

- Develop and integrate protocols:
  - Understand emergency department protocols for specific conditions in order to successfully integrate into the ED clinical workflow
  - Needs to be a "one click" solution for referring clinicians

- Dot your I’s and Cross your T’s:
  - Invest in setting up the legal MD/NP scope of practice agreements
  - Examine IT needs early (and be okay with work-arounds):

- Stay focused…
  - Mission creep can erode your ROI

- But listen to your customers:
  - Evolve program while still achieving aims and sustainability
Next Steps

• Launch program at second AMC
• Develop additional clinical protocols:
  – If PCP-based referral to be possible – need new risk screen
• Increase “quality” referral volume
• Continuous learning around successes and failures:
  – Targeting of patients and efficacy of program in the home
• Identify possible program efficiencies
Other Clinical Programs

• IV Therapeutics
  – Oncology
  – Cardiac
  – Immune Related Diseases
  – Infections

• Wound Care
  – Complex Management
  – VAC therapies
  – Expansion of wound care therapeutics
Questions???
&
Thank You!!!