Remote Monitoring & Chronic Care Management: A Community Health Center Model of Care

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Health Disparities
- Cardiovascular Disease
- Diabetes Mellitus
- Hypertension

Barriers to Care
- Transportation
- Economic status
- Low health literacy

Population
- 15.4% uninsured
- Median income - $23,500
- 70% African American
North Carolina's telehealth program provides daily home monitoring of chronic conditions.
Remote Patient Monitoring Framework

Proven to improve health and enhance care by interconnecting stakeholders to increase accountability and change patient behaviors.

Timeline – RCCHC Telehealth

• July 2006 – NC Health and Wellness Trust Grant
• October 2006 – HRSA OAT Grant
• 2007-2012 – Multi-discipline/area specific pilot grants
• October 2009-2013 – HRSA OAT COTN Grant
• 2011 – Vidant Health Development of RPM
Timeline – RCCHC Telehealth

- 2009-2016 – InScope Health – Public – Private Partnership
  - Co-Op
  - School Based
  - McLean Trucking
  - Corporate Wellness
- 2014 Direct Relief/NACHC BD Building Healthy Communities Award
- Now – RCCHC patients only
HWTF Phase I Study Protocol

- 2006-2009
- IRB Approved
- External evaluation – ECU/WFU

Hypothesis:
- CVD, DM, HTN patients who participate in daily in-home remote monitoring and chronic care management will experience:
  - Enhanced compliance
  - Increased self care
  - Reduced hospitalizations and bed days
  - Reduced ER visits
  - Reduced health care expenditures
Hospitalizations, Hospital Days and Emergency Room Visits by Telehealth Status, All Participants (N=64)
The Results
RPM cost containment validated by Wake Forest School of Medicine

<table>
<thead>
<tr>
<th>64 Participants</th>
<th>Pre RPM</th>
<th>During RPM</th>
<th>Post RPM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6 Months Prior to RPM</td>
<td>6 Months During RPM</td>
<td>Proven Long-term Results Over 3 Years</td>
</tr>
<tr>
<td>Hospital Bed Days</td>
<td>199</td>
<td>99</td>
<td>83% Reduction</td>
</tr>
<tr>
<td>ED Visits</td>
<td>27</td>
<td>5</td>
<td>79% Reduction</td>
</tr>
<tr>
<td>Hospital and ED Charges</td>
<td>$1.34M</td>
<td>$382K</td>
<td>87% Decrease</td>
</tr>
</tbody>
</table>

- Total Hospital and ED Charges for 24 months after RPM was $483,024. The cost of caring for these patients had significantly decreased.

The RCCHC study demonstrates that Remote Patient Monitoring influences patient behavior which leads to persistent health benefits and cost containment.
Central Oregon Telehealth Network

Funded thru HRSA
Office for the
Advancement of
Telehealth

Awarded:
August 14, 2013
3 year funding
Program Results

- Over the 3 years the grant supported 426 unduplicated patients
- A total of 455 patients considering duplicates on program at different points of time
- Key lessons learned were gathered on standing conference calls in all areas of the program: administrative, clinical, process, and technology.
- BLOG: http://cotnexperience.blogspot.com
RPM Tool Kit

Broad Components
- Administration
- ROI & sustainability plan
- EHR integration
- Staffing
- Training
- Communication
- Outcomes
- Devices

Link - https://www.telehealthresourcecenter.org/training
The Methodology

Planning: Business Suitability

Requirements Definition

Discovery

Product Selection

Patient Provider Engagement

Sustainment

Clinician & Patient Support

Data Analytics

Implementation: Remote Patient Monitoring

Ongoing Health Trends

Reporting:
Valuable Outcomes

**PROVIDER**
- Real time access to patient health data
- Better view into patient’s lifestyle
- Supports meaningful use
- Lower healthcare cost
- Improves treatment plans and outcomes
- Supports Patient Center Medical Home and NCQA accreditation

**PATIENT**
- Fewer ED/Offices visits
- Fewer hospital re-admissions
- Improves overall health and quality of life
- Improves provider relationship
- Reduces out-of-pocket expenses
- Increases accountability and healthcare IQ
- Ease of use
Telehealth Today at RCCHC
Current State

- 90 patient capacity
- Expand capacity/utilization
- Expansion to outlying sites
- Used in conjunction with CCM billing
- Multi-channel referrals

- Equipment vendor RFP
- Understand/Streamline billing processes
- Improve referral template
- Improve communication/coordination with hospital-based program
- Maintain provider engagement
Reimbursement

- 99091 unbundling in 2018 by CMS

- Requirements
  - F2F
  - Consent
  - Time

- Co-pay

- 3rd party varies
Patient Identification

- Disease state
  - Patient registries
  - New diagnoses

- Risk score
  - ED utilization
  - Charlson Comorbidity Index
  - Impactability

- ED/IP discharges

- Referrals
How We Got Here and Where to Go

• Keep moving forward
• Fail forward
...(If you know your) WHY you can bear any HOW.
-Viktor E. Frankl
Establishing Innovative Partnerships