Telemedicine and Remote Monitoring: A Tool for Reduction in Readmissions

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Telemedicine/TeleHealth: Simple Definition

Exchange of medical information via electronic communications from one site to another to improve the clinical health of patient’s.

- Two-way video conferencing
- Email
- smart phones utilizing consumer-focused wireless applications
- wireless tools with remote monitoring of Biometric data
- transmission of still images
- patient portals
- continuing medical education
- nursing call centers

http://www.americantelemed.org/about-telemedicine/what-is-telemedicine#.V0ZtalhijjU
Modalities Differ by Recipient and Timing of Service

Provider-to-Patient

1

Common applications:
- Virtual primary care
- Virtual urgent care
- Virtual pre- and post-op

Provider-to-Provider

2

Common applications:
- Telestroke
- TeleICU
- Telepsychiatry

3

Common applications:
- Teleradiology
- Telepharmacy
- Teledermatology

4

Common applications:
- Secure e-messaging
- Remote patient monitoring
- Wearables (e.g., Fitbit)

Synchronous (real time)

Asynchronous (time lag)

2016 The Advisory Board Company/Advisory.com
Strategic Benefits of Telemedicine/Telehealth

**Direct-to-Consumer Virtual Visits**
- Enhanced Rural Access
- Improved Patient Convenience
- Capture New Patients
- Retention of Existing Patients
- Expanded Physician Capacity

**Real-Time Virtual Specialist Consults**
- Improved Access in communities with persistent provider shortage
- Improved patient experience from convenient appointments
- Reductions in avoidable patient transfers

**Store/Forward Information Exchange**
- Extended hours of specialist support
- Expanded provider capacity
- Improved patient experience via reduced wait in access to care

**Remote Patient Monitoring Devices**
- Reduced ED utilization and readmissions
- Improved patient management of chronic comorbid conditions
- Reduction in patient mortality
- Enhances Medication Management
The Time Is Ripe for Virtual Care


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**Year-Over-Year Medicare Reimbursement for Telehealth Services**

<table>
<thead>
<tr>
<th>Year</th>
<th>PCP Visits</th>
<th>Specialty Consults</th>
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<tbody>
<tr>
<td>2006</td>
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<td>2014</td>
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<tr>
<td>2015</td>
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**Estimated U.S. Growth in Virtual Consults**

- **5-YR Growth**
  - 62%
  - 48%
  - 157%

**Year-Over-Year Medicare Reimbursement for Telehealth Services**

- **604% Growth**

**Estimated U.S. Growth in Virtual Consults**

- **(In millions)**
  - 2015: $2.5, 15.0, 6.6
  - 2020: $26.9, 21.5

**Sources:**
1. CMS data.
2. 2015 HIS Analytics report.
Insurers Paying for Telehealth Services

**Outlook for Commercial Reimbursement**
- There are no consistent standards that govern private commercial payers
- **As of January 2016, 32 states and DC mandate insurance companies to provide coverage for telehealth services**, but with varying requirements and reimbursement rates.
- Some payers are partnering with non-health system innovators to offer covered virtual services for select groups of beneficiaries.

**Anthem**
- Covering real-time video, telephonic, and secure chat visits for non-urgent care consultations
- Scaled across 46 states; doctor visits and prescriptions available in CA
- Partners with American Well’s LiveHealth Online platform

**BlueCross BlueShield Association**
- Individual state Blues plans partner with variety of vendors, like American Well
- National Labor Office alliance with Teladoc
- Adds Teladoc services to benefits plans for labor trust funds, labor unions, and independent BCBS companies served by NLO

**UnitedHealthcare**
- Covers virtual visits for enrollees in self-funded employer health plans with access in 47 states and DC
- Expanding to employer-sponsored and individual plan participants in 2016
- Partners with Doctor on Demand and American Well

**Kaiser Permanente**
- Offers telehealth services to patients on multiple platforms, including patient portal and mobile app
- Invested $10M in Vidyo telehealth platform in December 2015

Why Re-admissions are Top Priority

**Readmission Reduction Program (HRRP):** Section 3025 of the Affordable Care Act October 1, 2012, requires CMS to reduce payments to hospitals with excess readmissions in a 30 day period specific to *Myocardial Infarction, Heart Failure, and Pneumonia* with an annual escalating penalty of 1% to 3% from 2012 to 2015 of all Medicare admissions, not just those resulting in readmissions.

**FY 2015:** expanded > **COPD, Total Hip Arthroplasty, and Total Knee Arthroplasty**

**FY 2016:** Expanded pneumonia to included **aspiration pneumonia** and **sepsis patients coded with pneumonia present on admission**

**FY 2017:** addition of **coronary artery bypass graft (CABG) surgery** to RRP

**Louisiana:** 59% of hospitals receive penalties, average penalty 0.71%, number of penalized hospitals = 72
Primary Causes of Re-admissions

- Poor Quality of Care in the initial Hospital Admission
- In-adequate Discharge Planning/Teaching
- In-adequate post discharge follow up
- Poor coordination of inpatient and outpatient healthcare teams
- Exacerbation of Chronic conditions
Readmission Statistics

- **18%** of Medicare patients discharged from the hospital are readmitted within 30 days
- Approximately **$17 billion** in annual Medicare dollars are attributed to readmissions
- FY 2015: **3/4** of hospitals received readmission penalties
  - only 39 hospitals (1%) are receiving the full 3% penalty for excess readmissions
  - average hospital penalty = 0.63%.
- Medicare beneficiaries with **>5 chronic conditions** have a readmission rate of **25%**, compared to 9% for those with one or no chronic conditions.

Best Practices: Reducing Readmissions

**Pre and post-discharge Risk-screening**
- Continuous evaluation of readmission risk extending into the post discharge period
- Medicare population > average readmission day is 14

**Self Management**
- Assess capacity of high-risk patients to self-manage care
- Identify Family support

**Care Coordination**
- Assure Timely f/u Visit (48-72hrs)
- Medication Reconciliation and Compliance
- Home nurse visits with Nutritional screening
- Disease Management coaching
- Telehealth monitoring as needed
- Increase telephonic communication with patients/family

[aha.org/research/reports/tw/15mar-tw-readmissions.pdf](http://aha.org/research/reports/tw/15mar-tw-readmissions.pdf)
Telemonitoring of fluid status in heart failure: CHAMPION (Implanted Wireless Monitor in Pulmonary Artery)

**Trial Results:**

*Treatment group* > 270  
*Control Group* > 289

**CHF Hospitalizations:**

84 in the treatment group (n=270)  
120 in the control group (n=280)

*37% reduction* in heart-failure-related hospitalization compared with the control group

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*Our results are consistent with, and extend, previous findings by definitively showing a significant and large reduction in hospitalisation for patients with NYHA class III heart failure who were managed with a wireless implantable haemodynamic monitoring system. The addition of information about pulmonary artery pressure to clinical signs and symptoms allows for improved heart failure management.* *(The Lancet)*

Can Telemonitoring Reduce Hospitalization and Cost of Care?  
A Health Plan’s Experience in Managing Patients with Heart Failure Utilizing Remote Patient Monitoring (RPM)

Geisinger Health Plan (GHP) Study of RPM:
Results of Claims based data>

- **All-cause hospital admission rates:** ➡️ 23%

- **Readmission Rates:**
  - 30DAY: ➡️ 44%
  - 90DAY: ➡️ 38%

- **Total Cost of Care:** ➡️ 11%

“Evidence that points to the significant value of remote patient monitoring in enhancing population health management efforts continues to mount.”
Nesim Bildirici, CEO of AMC Health

POPULATION HEALTH MANAGEMENT; Volume 0, Number 0, 2014; Mary Ann Liebert, Inc., DOI: 10.1089/pop.2013.
Telemedicine: Connecting Physicians with Patients in Rural locations Around the clock

Rural Accessibility:
- Connects Specialist with underserved population
- Improves ability to care for Acutely ill patients
- Reduces Traditional Barriers to Care in rural settings
- Expands Physician practice by reaching new patients
- Increases Diagnostic Testing Capabilities

“We hooked up the ED physician with one of our pediatric infectious disease experts at University of California-Davis (UC-Davis) Children’s Hospital, who was able to view the child, speak to the parents about possible exposure, and then recommend an appropriate antibiotic.” James Paul Marcin, MD, Director of Pediatric telemedicine at the UC-Davis Center for Health and Technology

Telestroke  Telepsychiatry  TeleICU  Telesonography

TELEGERIATRICS: Reducing Cost and Hospitalizations

Hospitalization of Nursing Home Residents:
- Septicemia
- Pneumonia
- CHF
- Limited Access to Providers
- Treatment for acute illness
- Inability to treat patient at facility
- Afterhours or weekends

Most common Hospital Dx

Telemedicine Advantage
- Virtual Visit at bedside
- Perform Physical Exam
- Treat acute problem by prescribing Medications
- Communicate with PCP/Family members

Nursing homes transferred one quarter of their Medicare residents to hospitals for inpatient admissions, and Medicare spent $14.3 billion on these hospitalizations. (Department of Health and Human services)
Conclusion

**Telemedicine/Telehealth Services**
- Increases Patient Engagement
- Improves lifestyles
- Expands care access
- Produces better outcomes
- Improves Diagnostic Capabilities
- Utilizes Technology and Innovation
- Keeps Patients connected to HCP
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