TELEHEALTH 2014: EVOLVING CHRONIC DISEASE MANAGEMENT

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VISN 10 Rural Health Consultant
What is Telehealth / Telemedicine?

- **Telehealth** – primarily patient health education with remote monitoring and coordination of care
  - In general, no direct interaction between provider and patient
  - E.g. home glucose monitoring with medication titration

- **Telemedicine** – direct provision of medical care
  - Two-way video, image review
  - E.g. acute care visit, Tele-Dermatology

**Often terms are used interchangeably**
1. Home Telehealth
2. Clinical Video Telehealth
3. Store-and-Forward Telehealth
Regulation of Telemedicine

OTS (Office of Telehealth Services) – Oversees the programs, ensures that certain requirements are met; Similar to JCAHO; Biannual site visits.

Competencies – Care Coordinators must maintain yearly competencies related to Telehealth.

Conditions of Participation – Clinical, business and technical components of the program are intact.
Home Telehealth
Home Telehealth

- Facility to Patient’s Home
- Telemessaging / Telemonitoring
- Patients are monitored at home using home Telehealth technologies
- Goal: Reduce ER visits, hospital admissions, bed days of care
- Patients learn self-management skills that allow them to take control of their diagnosis and monitor their condition from home.
Telemessaging

- Diagnoses
  - Diabetes
  - CAD
  - CHF
  - COPD
  - Hypertension
  - Spine Cord Injury
  - Depression
  - Schizophrenia
  - PTSD
  - Bipolar
  - Dementia
  - Low ADL
  - MOVE!
  - Smoking Cessation
  - Substance Abuse
- Daily monitoring
- Easy to use and transport
- Interactive Voice Response
Comparing Technologies:

### Wired Devices

- Landline or high speed internet (wired, wireless, cellular) required
- Cabled peripherals provide accurate data
- Real time data transmission not available with all vendors
- Dialogs often more inclusive
- Cost: approx $300

### Interactive Voice Response

- No Landline or Internet Required
- Cell phone
- Same Day Data Transmission
- Inbound/outbound calls
- Lack of cabled peripherals
- Phone plan required
- No reading required
- Cost: no fee service
Daily Alerts

- Color coded alerts are generated based on how patient answers questions about symptoms and inputs biometric data.
- General, Behavior, Symptoms, Knowledge:

  - Red = High alert
  - Yellow = Medium alert
  - Green = No alert
Nurse’s Role in Reviewing Daily Alerts: Identify priority alerts

![Table showing patient responses with time and severity levels]
<table>
<thead>
<tr>
<th>Risk</th>
<th>Question</th>
<th>Response</th>
<th>Category</th>
<th>Aspect</th>
<th>Report Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>low</td>
<td>Welcome back, DONALD! Your questions are ready for you! You may start at any time.</td>
<td>Okay</td>
<td>General</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>low</td>
<td>Have you checked your blood sugar in the last 24 hours?</td>
<td>Yes</td>
<td>Behavior</td>
<td>Glucose Metabolism</td>
<td></td>
</tr>
<tr>
<td>low</td>
<td>Did you check your blood sugar this morning?</td>
<td>Yes</td>
<td>Behavior</td>
<td>Glucose Metabolism</td>
<td></td>
</tr>
<tr>
<td>low</td>
<td>Did you check your morning blood sugar reading BEFORE the morning meal?</td>
<td>Yes</td>
<td>Behavior</td>
<td>Glucose Metabolism</td>
<td></td>
</tr>
<tr>
<td>high</td>
<td>What was your morning blood sugar reading?</td>
<td>319</td>
<td>Symptoms</td>
<td>Glucose Metabolism</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This is too high. Please call your Care Coordinator now, or if it is after business hours, call the VA TeleNurse at 1-888-838-6446.</td>
<td>continue</td>
<td>Behavior</td>
<td>Glucose Metabolism</td>
<td></td>
</tr>
<tr>
<td>medium</td>
<td>Did you check your morning blood sugar reading roughly 2 hours AFTER eating the morning meal?</td>
<td>No</td>
<td>Behavior</td>
<td>Glucose Metabolism</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The best time to check your sugar is before a meal, 2 hours after a meal, or at bedtime.</td>
<td>continue</td>
<td>Behavior</td>
<td>Glucose Metabolism</td>
<td></td>
</tr>
<tr>
<td>medium</td>
<td>Did you check your midday blood sugar reading today?</td>
<td>No</td>
<td>Behavior</td>
<td>Glucose Metabolism</td>
<td></td>
</tr>
<tr>
<td>medium</td>
<td>Did you check your evening blood sugar today?</td>
<td>No</td>
<td>Behavior</td>
<td>Glucose Metabolism</td>
<td></td>
</tr>
</tbody>
</table>
Telemonitoring

- Use of two way audio/video technology
- Provides remote care delivery
  - Assessment
  - Education
  - Data Collection
  - Multiple Peripherals
  - Digital Photography
- Mimics in-person visit
- Earlier identification of exacerbation by using stethoscope, multiple peripherals, and live assessment
- Regularly used for patients with HF and/or COPD diagnosis
- Cost: $3,800 w/ peripherals
Why Home Telehealth?

- Allows the clinic to target high risk, high resource Non-Institutional Care (NIC) patients
- Proactive management of health issues
- Encourage patient education
- Improve patient self-management behaviors
- Involve the caregivers as appropriate
- Increase patient satisfaction
- Increase provider satisfaction
- PACT / Medical Home Benefits
Cleveland VAMC Highlights
Cleveland HT Census Growth
Technology in Use

- Health Buddy: 364
- IVR: 409
- Commander Flex: 729
- miLife: 33

Total: 1,535

VA’s 2nd Largest Program!!!
## ED Visit Reduction

<table>
<thead>
<tr>
<th></th>
<th>Cleveland</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 mo.</td>
<td>-22%</td>
<td>-12%</td>
</tr>
<tr>
<td>12 mo.</td>
<td>-7%</td>
<td>-20%</td>
</tr>
</tbody>
</table>
Hospital Admissions Reduction

<table>
<thead>
<tr>
<th></th>
<th>Cleveland</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 mo.</td>
<td>-34%</td>
<td>-28%</td>
</tr>
<tr>
<td>12 mo.</td>
<td>-36%</td>
<td>-34%</td>
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</table>
Bed Days of Care Reduction

<table>
<thead>
<tr>
<th></th>
<th>Cleveland</th>
<th>National</th>
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</thead>
<tbody>
<tr>
<td>6 mo.</td>
<td>-47%</td>
<td>-54%</td>
</tr>
<tr>
<td>12 mo.</td>
<td>-67%</td>
<td>-59%</td>
</tr>
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</table>
Clinical Video Telehealth
Clinical Video Telehealth

- Facility to Facility
- Facility to Home
- Uses advanced Telehealth technologies to make diagnoses, manage/provide care, and perform check-ups
- Real-time videoconferencing technologies with supportive peripheral devices and consultation between clinics and hospitals, or hospitals and other hospitals
Clinic Based Video Telehealth

- **Facility to Facility / Facility to Outpatient Clinic**
  - Within VA: Clinical Enterprise Videoconferencing Network (CEVN)

- **Facility to Non-VA Location**
  - Outside VA: “Video Expressway” allows for secure connection to non-VA facilities (e.g. University of Akron, Ohio correctional facilities)
Cleveland Video Program Offerings

- Tele-Mental Health
- Tele-Cardiology
- Tele-Pain Medicine
- Tele-Diabetes
- Tele-Spinal Cord Injury
- Tele-Surgery
- Tele-Blind Rehab / VIST Services
- Tele-Genomic Medicine
- Tele-Physical Therapy
- Tele-Nephrology
- Tele-Clinical Pharmacy
- Tele-Amputation
- Tele-Pulmonary
- Tele-MOVE! Exercise
- Tele-Traumatic Brain Injury
- Tele-Audiology
- Tele-Speech Pathology
- Tele-Geriatrics
- Tele-Gastroenterology
- Tele-Chaplain Services
- Tele-Neurology
- Tele-Nutrition
Telemedicine Mobile Carts

- Numerous peripheral options available
  - Stethoscope, POX, BP, Ultrasound, EKG, Audiology, Skin Exam Camera, ENT Tools, Imaging Software, Vital Sign Monitors
- Immediate Primary or Specialty Care Access
- Right Care, Right Place, Right Time
- Practice preventative medicine and more conveniently monitor chronic conditions
- Allows medical centers to create provider networks
- Reduced cost to both patients and providers
IP Video to the Home

- Veterans use their own devices
- Approximately 2,700 patients nationally
- Modalities
  - Home Telehealth Telemonitoring
  - Jabber
- Technology and processes have been created to ensure secure, encrypted connections
- Issues
  - Co-Payments?
  - Security Process?
Cleveland CVT Encounter Growth

![Cleveland CVT Encounter Growth Graph](image-url)
Store & Forward
Telehealth
Facility to Facility

- Uses advanced Telehealth technologies to make diagnoses, manage/provide care, and determine the necessity of follow-ups

- Imagers acquire and store clinical information (e.g. data, image, sound, video) that is then forwarded to (or retrieved by) another site for clinical evaluation.

Programs:
- Tele-Retinal Imaging
- Tele-Dermatology
- Tele-Wound Care
- Tele-ECG
Cleveland SFT Image Growth
Benefits of CVT & SFT

- Travel Reduction
  - Cost Savings
  - Time Savings
  - Compliance

- Increased Patient Satisfaction

- Improved No-Show Rate

- Increased Access & Awareness

- Integrates PACT Teams into Specialty Care Process
VA & Non-VA Reimbursement
VA Reimbursement

- **Home Telehealth**
  - Each patient with at least 3 months of HT monitoring, local VA is reimbursed approx $10,000 - $16,000 annually through the VERA Model

- **Clinical Video Telehealth**
  - Providers get workload credit as though they saw patients as a face-to-face visit
  - Can be used to vest patients into the VERA Model

- **Store & Forward Telehealth**
  - No Reimbursement
  - Increases access, providers get workload credit as though they saw patients as a face-to-face visit
Affordable Care Act

- Projected shortage of at least 39,000 family practitioners by 2020 even before announcement of ACA
  - 30 million more expected healthcare users

- Change from fee for service to outcome based model

- Penalties will be assessed for frequent hospitalizations

- Prevention will be the new focus (HT)
  - Physician must be engaged for true prevention
Thank You!

Questions?
Contact Information

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