A VETERAN’S HOME
TELEHEALTH EXPERIENCE

CHRONIC CARE MANAGEMENT IN THE
COMFORT OF HOME

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DISCLOSURES

There is no actual or potential conflict of interest related to this presentation.
OBJECTIVES

At the conclusion of this program, learners will be able to:

1. Define Home Telehealth (HT): its structure, processes and performance metric

2. Describe the Veteran-centric care delivery model through collaborative practice between the PACT team and the HT Care Coordinators

3. Show how the use of Home Telehealth best practices translates to improved access to care, improved outcomes and cost containment
NURSING THEORETICAL MODEL

NOLA PENDER’S HEALTH PROMOTION MODEL

“Health is the actualization of inherent and acquired human potential through goal-directed behavior, competent self-care, and satisfying relationships with others”

The model supports nurses in understanding the major determinant of health behaviors as a basis for behavioral counseling to promote healthy lifestyles

(Pender, Murdaugh, & Parsons, 2011, p. 234)
HEALTHCARE TECHNOLOGY EVOLUTION

HISTORY

☑ 1920 – shore-based medical specialists were radio-linked to address medical emergencies at sea (Winters, 1921, p. 465)

☑ 1950s - post-war, the U.S spearheaded the use of computers in medicine (Masic, 2007, p. 179)

☑ 1990s – with flourishing technology, telemedicine came to the forefront (Shi & Singh, 2015, p. 108)

☑ 2001 – inception of eHealth initiative (national leader in research, education and advocacy for the use of technology in health care organizations) (Shi & Singh, 2015, p. 108)

☑ 2003 – the Veterans Health Administration launched its telehealth program (U.S. Veterans Health Administration)
HEALTHCARE TECHNOLOGY DIFFUSION

DEFINITIONS

- **E-Health** – all forms of electronic health care delivered over the internet (Maheu et al., 2001, p. 78)

- **Mobile Health/M-health** – the use of wireless communication devices to support public health and clinical practice (Kahn et al., 2010, p. 256)

- **Telehealth** – encompasses teledmedicine and clinical applications that involve an interdisciplinary health care team (Field & Grigsby, 2002, p. 423)

- **Telemedicine** – employs the use of telecommunications technology for patient care when distance separates the patient and provider (Zanaboni & Wooton, 2012, p. 8)
HOME TELEHEALTH (HT)

DEFINITION

The application of care and case management principles to deliver health care services through coordinated care.

Source: (http://www.telehealth.va.gov)
To reduce complications, hospitalizations, and clinic or emergency room visits for Veterans in post-acute care settings, high-risk Veterans with chronic disease or Veterans at risk for placement in long-term care.

Source: [http://www.telehealth.va.gov](http://www.telehealth.va.gov)
PROGRAM BENEFITS

INCREASE ACCESS TO CARE
Care coordinator availability during office hours to assist the care team in addressing veteran needs

COST CONTAINMENT
↓ ED and office visits curtail government expenditure

IMPROVE CLINICAL OUTCOMES
Timely interventions delay disease progression, improving clinical quality
SUPPORTING STUDIES

STUDIES SUPPORTING HT BENEFITS

Home-Based Telebehavioral Health for U.S. Military Personnel and Veterans With Depression: A Randomized Controlled Trial
This study adds to a growing literature base of studies supporting the feasibility and effectiveness of providing behavioral health treatments via telehealth technologies (Luxton, Pruitt, Wagner, Smolenski, Jenkins-Guarnieri & Gahm, 2016, p. 928)

Reduced Cost and Mortality using Home Telehealth to Promote Self-management of Complex Chronic Conditions: A Retrospective Matched Cohort Study of 4,999 Veteran Patients
Ongoing HT evaluations showed improved health-related quality of life, reductions in unscheduled primary care visits, 50% fewer hospitalizations, 11% fewer ED visits and shortened LOS, validating the efficacy of daily monitoring (Darkins, Kendall, Edmonson, Young & Stressel, 2015, p. 70)

Telemonitoring or Structured Telephone Support Programmes for Patients with Chronic Heart Failure: Systematic Review and Meta-analysis
The literature backs the use of HT remote telemonitoring to improve health outcomes in patients with heart failure (Clark, Inglis, McAlister, Cleland, & Stewart, 2007, p. 946)
SUPPORTING STUDIES

STUDIES SUPPORTING HT BENEFITS

- **Adherence to Blood Pressure Telemonitoring in a Cluster Randomized Trial**
  Technological innovations have added telehealth as a tool for managing hypertension (Kerby et al., 2016, p. 668)

- **Outcomes of the Kaiser Permanente Tele-home Health Research Project**
  Remote home monitoring using technology is effective, well-received by patients, capable of maintaining quality of care, and has the potential for cost savings (Johnston, et al., 2000, p. 42)

- **Building a telehealth network through collaboration: The story of the Nebraska Statewide Telehealth Network**
  The Nebraska Statewide Telehealth Network has demonstrated increased access to health care by rural residents (Meyers et al., 2012, p. 348)
VA STUDY: COST COMPARISON AMONG OUTPATIENT PROGRAMS

- Home Telehealth - $2,403
- Home Health Care - $22,200
- Institutionalized Care - $92,300

Source: [http://www.telehealth.va.gov](http://www.telehealth.va.gov)
Audit of Home Telehealth Program 2015
PROGRAM STRUCTURE

VACO Office of Connected Care

VISN

Local Facilities

Facility Telehealth Coordinator

HT Lead

HT Care Coordinators

Program Support Assistant
DISEASE MANAGEMENT PROTOCOLS (DMPs)

DEVELOPED FOR VA HOME TELEHEALTH PROGRAMS

- A series of questions, answers, responses, education and information that are derived from routine clinical practice meant to replicate aspects of face-to-face assessments

- Sent to veterans enrolled in HT; daily responses are required

- HT technology transmits veteran responses back to the care coordinator for review and intervention as appropriate
Coronary Artery Disease
Caregiver Support for the Veteran with Dementia
Congestive Heart Failure
Chronic Kidney Disease
Chronic Obstructive Pulmonary Disease
Depression
Diabetes
Hypertension
Palliative Care
Tobacco Cessation
Weight Management
ENROLLMENT CRITERIA

> 1 hospital admissions in the past calendar year for related disease

> 14 primary care or specialty care visits in the past 12 months

Two or more Urgent Care or ED visits in the past year

Takes 10 or more prescription medications

Needs help with uncontrolled symptoms

Source: http://www.defenseimagery.mil/imageRetrieve.action?g uid=5a59a5d5f57f5dca3406c1a25854f3335cfce2c4&t=2
ENROLLMENT CRITERIA

Chronic conditions, including but not limited to the approved DMPs

Vet’s environment is such that daily care and medical problems can be managed safely in the home

Vet and caregiver are able to give consent for the use of technology in the home

Vet is able and willing to transmit biometric data at least 70% of the time
MODES OF TRANSMISSION

MULTIPLE OPTIONS FOR TRANSFER OF BIOMETRIC DATA

- IN-HOME MESSAGING DEVICE
- INTERACTIVE VOICE RESPONSE
- SECURE WEB BROWSER
A VETERAN’S JOURNEY

- 82 year old
- Lives with wife in a single-family home
- Lives one hour away from the main facility
- Children live out of state
- Limited driving (poor night vision)
- Limited dexterity
- Memory problems

**DMP:** DM and HTN

**GOALS:**
- DM (↓HgbA1C from 9.1 to <8 in six months)
- HTN (↓ BP 160/90 in six months)
The veteran uses technology to transmit biometric data to a care coordinator.

The care coordinator analyzes transmitted data, provides patient education, and coordinates with PACT to address veteran care needs.
HOME TELEHEALTH INTEGRATION WITH PACT

PATIENT-ALIGNED CARE TEAM

Care team works collaboratively with the patient to plan the patient’s overall health care

Continuous, coordinated care throughout a patient’s lifetime

Emphasis on personal relationships, holistic care, care coordination, quality and safety, access, affordable care

Goal is to maximize health outcomes

Led by a primary care provider

Team-based model of care
BENEFITS OF HT/PACT INTEGRATION

1. Epitomizes the patient-centered care model

2. Facilitates stronger collaborative efforts among HT care coordinators and Primary Care towards achieving the patient’s SMART goals

3. Fosters better understanding of performance measures that directly impact care

4. Promotes utilization of available tools and resources to facilitate consolidated team-based care
Immediate clinical needs
Patients are the recipients of care and the focus of the care team
Multiple teams

Comprehensive needs of the whole person
Patients and family members are essential and active members of the care team
Cross continuum team with a focus on the patient’s experience over time
STRENGTHENING RELATIONSHIPS

A CARE COORDINATOR IS ASSIGNED TO A PACT

- Assertively initiates appropriate consultations
- Actively participates in meetings and trainings
- Judiciously resolves issues and concerns
- Keenly involves veterans
COLLABORATIVE STRATEGIES

Ascertained provider preference

Determine required signature on notes

Develop a process for bidirectional communication

Streamline practices within the team (handoff during absences)
COMMON CONCERNS

IDENTIFIED BY MEMBERS OF THE INTERDISCIPLINARY CARE TEAM

Challenges related to managing chronic disease

Comprehension/retention

Difficulty with specialty care follow up

Inadequate knowledge about medications

Insufficient medical device/equipment knowhow

Limited knowledge of available resources
VETERAN-CENTRIC CARE

uncontrolled signs and symptoms

provider sends a referral to HT

HT CC enrolls veteran

HT CC coordinates with PACT

improve clinical quality outcomes
A1C TREND OVER ONE YEAR

<table>
<thead>
<tr>
<th># OF MONTHS IN HT</th>
<th>Enrollment</th>
<th>Month 3</th>
<th>Month 6</th>
<th>Month 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1C</td>
<td>9.1</td>
<td>9.1</td>
<td>8.6</td>
<td>7.9</td>
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</tbody>
</table>

HEMOGLOBIN A1C
BP TREND OVER ONE YEAR

![Blood Pressure Trend Graph]

<table>
<thead>
<tr>
<th># OF MONTHS IN HT</th>
<th>SBP</th>
<th>DBP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollment</td>
<td>190</td>
<td>102</td>
</tr>
<tr>
<td>Month 3</td>
<td>178</td>
<td>98</td>
</tr>
<tr>
<td>Month 6</td>
<td>166</td>
<td>90</td>
</tr>
<tr>
<td>Month 12</td>
<td>158</td>
<td>88</td>
</tr>
</tbody>
</table>
REFERRAL SOURCES

- Care Assessment Need (CAN) report
- Healthcare Effectiveness Data and Information Set (HEDIS)
- Outlier reports
- Outpatient programs (NIC, HBPC, Respite, VIP)
- Primary Care Provider
- Strategic Analytics for Improvement and Learning (SAIL) report
# Clinical Quality Indicators

**Programs Monitor Core Clinical, Business and Satisfaction Quality**

<table>
<thead>
<tr>
<th>Clinical Quality Indicators</th>
<th>Targets/ VA Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTN: BP &lt;140/90 (age 18-59)</td>
<td>&gt; 70%</td>
</tr>
<tr>
<td>HTN: BP &lt;150/90 (age 60-85)</td>
<td>&gt; 84%</td>
</tr>
<tr>
<td>DM: HgbA1C &lt;9</td>
<td>&gt; 84%</td>
</tr>
<tr>
<td>CHF: On ACE-I or ARB</td>
<td>&gt; 83%</td>
</tr>
<tr>
<td>Bed Days of Care (BDOC)</td>
<td>≤ -40%</td>
</tr>
</tbody>
</table>
PATIENT SATISFACTION SURVEY

1. My CC explains things in a way that is easy to understand.
2. The information provided by my CC has helped me manage my health problems.
3. Over the past 3 months, my HT equipment works.
4. My HT equipment is easy to use.
5. I have made changes in the way I take care of myself as a result of the VA HT program.
6. When I have questions, I am able to contact my CC during business hours.
7. Using the VA HT program has made a positive difference in my health.
8. I would recommend the HT program to others.

- Always
- Usually
- Sometimes
- Never
BEHAVIOR MODIFICATIONS

REACTIVE
Problem-driven interventions
Lack of thorough assessments
Delayed reporting of concerns and issues
Complacency/ lack of initiative

POSSIBLE RESULTS
↑ Hospitalizations
↑ Morbidity/ Mortality
↑ Healthcare Costs

PROACTIVE
Comprehensive routine assessments
Early detection and reporting of concerns
Maintains healthcare knowledge current
Ongoing patient education

POSSIBLE RESULTS
Prevention of Patient Hospitalizations
↓ Morbidity/ Mortality
↓ Healthcare Costs
WORKING AT THE TOP OF OUR LICENSES

- Our roles as clinicians have evolved over time, and our functions broaden as we accommodate those roles.

- As leaders, we must champion ongoing development in clinical skills, intervention delivery and documentation, immersing staff in patient advocacy and the patient care team continuum.

- As teachers, we must educate ourselves with the most up-to-date guidelines and changes. We could only teach what we know!

- As professionals, we should strive to keep moving forward to improve patient outcomes, collect data to support our initiatives, and do performance improvement projects to maintain quality.
PUTTING THE PIECES TOGETHER

CARING FOR THE PACT VETERAN

Compliance with policies and procedures

Focus on prevention and precautions

Maintaining a continuous feedback circuit

Medication management/ adherence promotion

Ownership, accountability, integrity

Sharing best practices

Signs and symptoms management
KEYS TO QUALITY VETERAN CARE

- Commit to Interdisciplinary Rounds
- Establish a Follow Up Plan Before Discharge
- Reinforce Patient Education
- Uphold Prevention
- Utilize VA Programs & Resources
THE RIPPLE EFFECT

Veteran safety is top priority

Communicate, collaborate, cooperate

Embrace change

Fiscal responsibility is everyone’s job

Inspire others – when inspired, people are committed to making others better

The ripple effect promotes inspiration among ourselves and motivates others

“I alone cannot change the world, but I can cast a stone across the waters to create many ripples”

- Mother Teresa
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