December 7, 1941

Remember Pearl Harbor

Home Based Primary Care: An Interdisciplinary Team Model for Veterans Too Sick to Go to Clinic

Karen L. Shea, MD
Medical Director, VA ECHCS HBPC
Assistant Professor, Division of Geriatric Medicine
December 7, 2017
Financial Disclosures

All those in control of the content of this continuing education activity reported no relevant financial relationships with commercial interests.

Overview

- The Aging Veteran population
- Home Based Primary Care (HBPC) Model
- HBPC vs. Medicare Home Care
- HBPC vs. Hospice Care
- Medical Foster Home Model
- HBPC Outcomes
- HBPC Expansion Initiative
- Conclusion
Interestingly, approx. 7% of Veterans account for 50% of all VA healthcare cost.

- Who is this 7%?

- How do we take care of this aging population?
The VA Continuum of Care

Care Coordination/Home Telehealth

Home-Based Primary Care
Rehabilitation Therapy
Independence
Geriatric Evaluation

CRC / Medical Foster Homes
State Homes
Respite

Community Home Health
Homemaker/Home Health Aide
Primary Care
Mental Health & Specialty Clinics

Acute Care
Adult Day Health Care
Nursing Home
Hospice


The Beginning of Home Care...

- **1900’s** – Visiting Nurse Organizations were started.

- **1909** - the Metropolitan Life Insurance Company established insurance coverage for home nursing care for their policyholders.

- **1930s-1940s** - the chronically ill were overwhelming hospital capacity.

- **1960’s** - home care was included in Medicare, Medicaid and the Older Americans Act.

HBPC History

- **1970:** VA began using comprehensive home care with 6 demonstration sites within the Hospital Based Home Care Program.
  - Emphasis on non-institutional, extended rehab programs

- **1972:** Funding was secured for the 6 demonstration hospitals.

- **Presently:** HBPC now serves Veterans in 147 VA medical centers and more than 267 community-based outpatient clinics (CBOC).


---

Veterans Served and Growth Trends

*Geriatrics and Extended Care, VA Fact Sheet, 2016*
HBPC Program

• Interdisciplinary team that provides comprehensive, proactive, patient-driven longitudinal primary care in the homes of Veterans.

• Specifically designed to care for the highest needs and highest cost sector.

• Designed to serve Veterans through the months and years before death.

• Resource intensive program that is able to achieve significant quality and cost savings outcomes.

Who is eligible?

• Must be enrolled in the VA health care system.
• Must live within HBPC's service area designated by each VA medical facility to represent a safe and efficient service delivery area (30 miles from the Denver VA; 60 miles from the Pueblo CBOC).
• The Veteran and caregiver must voluntarily accept HBPC to provide primary care in the home (must give up current PCP).
• The Veteran's home must be adequately safe for the Veteran, caregiver and staff making home visits.
Who is eligible?

- Frail, chronically ill – “too sick to go to clinic.”

- Require the skills of an interdisciplinary team because of complex medical, social, rehabilitative, palliative and behavioral care needs.

- Ideal for veterans with recurrent ER visits and hospitalizations.

HBPC Veteran Demographics

- Mean age 77 years
- 96% male
- 74% white
- 48% married
- 11% catastrophically disabled
- LOS 293 days
- 3 visits/month average

- Local Data:
  - 25% live alone
  - 50% served during the Vietnam War
  - 16% have no caregiver
  - 30% have a caregiver with moderate limitations

HBPC Veterans

- Common diagnoses include CAD, DM, CHF, COPD, CVA, CKD, Cancer, Depression, Anxiety, PTSD, Dementia, Parkinson’s.
- On average, they have $\geq 8$ chronic medical conditions and take $\geq 12$ medications.
- Have multiple ($>5$) problems that need to be addressed each visit.
- Dependent in 2 or more ADLs.
- Many are homebound.

HBPC Special Veteran Populations

- Spinal Cord Injury (SCI) and Amyotrophic Lateral Sclerosis (ALS):
  - Provide comprehensive primary care in their home
  - Assess for and provide adaptive equipment and advanced technology
  - Meet the changing needs of the patient
  - Comanage trachs, vents, g-tubes in collaboration w/ VA subspecialists
  - Provide palliative care as the disease progresses
  - Work closely with community hospice agencies
  - Provide Veteran and caregiver support (REACH VA)
VA Eastern Colorado Health Care System
Denver HBPC Team

- Program Manager
- Medical Director
- 1 Physician
- 7 Nurse Practitioners
- 2 Dietitians
- 2 Rehab Therapists

*Veterans are seen within a 30 mile radius from the Denver VA*

Rural satellite HBPC - Pueblo, CO
America’s “Home of Heroes”

- Veterans are seen within a 60 mile radius from the Pueblo CBOC.

- Team:
  - 1 Nurse Practitioner
  - 1 RN
  - 1 Social Worker
  - Pharmacist, Dietitian, Rehab Therapist and Psychologist

- Shared with Denver
HBPC Interdisciplinary Team (IDT) Model

- IDT approach:
  - **Program Manager** oversees the day-to-day operations of the program.
  - **Medical Director** is responsible for the overall medical care delivered by the HBPC team.
  - **MD/NP** functions as the primary care provider and carries a defined caseload.
    - Visits are made on a regular basis approx. every 1-2 months.
  - **RN's** function as case managers and deliver nursing care in the home.
HBPC IDT Model

- **Social workers** perform assessments of interpersonal resources and psychosocial functioning of the Veteran and caregiver.

- The **dietitian** assesses nutritional status and recommends and educates about special diets and diet modifications.

- The **rehab therapist** evaluates functional status and performs a home safety evaluation. He/she also determines the need for specialized home medical equipment and educates the patient and caregiver on proper use.

- The **pharmacist** performs a thorough medication review and educates the veteran and caregiver about proper use of medications.

- The **psychologist** provides mental health assessment, treatment, management and professional consultation services

- A interdisciplinary plan of care is developed within 30 days of admission and every 3 months thereafter.
Goals of HBPC

- Maximize health and function in the home.

- Minimize need for hospitalization and institutionalization.

- **Maintain quality of life.**

Educating future healthcare providers

- Geriatric Fellows
- Internal Medicine residents
- Medical students
- Nurse Practitioner students
- Pharmacy residents and students
- RN students
- SW interns
- Audiology residents
Discharge from HBPC

This happens when the Veteran:

- Dies
- Moves out of service area
- Goes to a long-term care setting
- No longer needs primary care in the home and can access outpatient clinical care

May also occur if:

- The home is unsafe
- There is disruptive behavior
- Lack of participation in a significant portion of the plan of care

What can be done in the home?

- Comprehensive physical exam
- Complete medication reconciliation
- Toenail/foot care
- Foley catheter care/changes
- Phlebotomy/Immunizations
- Wound care
- Joint injections
- G-tube changes
- Minor skin procedures
- Bladder scans (PVR)
- Food inventory
- Home safety evaluation
- Advance care planning
HBPC vs. Medicare Home Care

**Table 1. Differences Between VA HBPC and Medicare Home Care**

<table>
<thead>
<tr>
<th>VA HBPC</th>
<th>Medicare Home Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Targets complex chronic disease</td>
<td>• Remediable conditions</td>
</tr>
<tr>
<td>• Comprehensive primary care</td>
<td>• Specific problem-focused</td>
</tr>
<tr>
<td>• Skilled care not required</td>
<td>• Requires skilled care</td>
</tr>
<tr>
<td>• Strict homebound not required</td>
<td>• Must be homebound</td>
</tr>
<tr>
<td>• Accepts declining status</td>
<td>• Requires improvement</td>
</tr>
<tr>
<td>• Interdisciplinary team</td>
<td>• One or multidisciplinary</td>
</tr>
<tr>
<td>• Longitudinal care</td>
<td>• Episodic, post-acute care</td>
</tr>
<tr>
<td>• Reduces hospital days</td>
<td>• No definitive impact</td>
</tr>
<tr>
<td>• Limited geography &amp; intensity</td>
<td>• Anywhere; anytime</td>
</tr>
</tbody>
</table>

*Note: From Edes, T. (June, 2006). Purchased Skilled Home Care & HBPC Update. Presentation conducted at the Gateway to the Community: Veterans at Home conference, St. Louis, MO. Printed with permission.*

HBPC vs. Hospice Care

- HBPC model is very similar to that of hospice:
  - Team approach
  - Holistic care
  - Emphasis on training and support of the caregiver
- Differences:
  - Not required to have a time-limited prognosis.
  - Provide primary care and all meds, not just those related to the terminal condition.
  - Chaplain support or prolonged bereavement support not provided.
Medical Foster Home (MFH) Model

- MFH is an alternative to nursing home care and offers Veterans 24/7 comprehensive long-term care in a safe, home environment.
- Funding is through private pay.
- Cost is based on veteran care needs and income.
- Veteran is enrolled in HBPC upon MFH admission.

Denver VA MFH Program

- Initially piloted in 2000 and 2004
- 2010 – 34 programs → 2015 – 116 programs
- Denver Program est. 2009
- Total Veterans served: 64
- Veterans passed since 2009: 27
- Active MFHs: 10
- Veterans currently living in MFH: 13
- Average monthly cost $3250 (based on care needs).
MFH Team Model

- MFH Coordinator
- VA HBPC Interdisciplinary team
- Recreational Therapist
- VA Inspection Team (nurse, SW, OT, RD, Fire & Safety inspector)
- MFH offers:
  - The veteran their own room in a family home.
  - No more than 3 residents per home ensuring a "home-like" atmosphere.
  - Help with ADLs and IADLs
  - Personalized one-on-one care 24/7.

MFH Caregivers (aka Angels)

- Caregiver is the homeowner (or renter).
- Financially stable, experienced in nursing home level of care and over the age of 21.
- Flexible and positive.
- Adult caregiver back-up required.
- Able to provide a compassionate, "family-like" environment.
- Able to complete two required training sessions annually.
- Willing to actively participate with the MFH/HBPC team.
Why HBPC?

- HBPC Outcomes:
  - Cost Reduction (VA and Medicare)
  - Reduced hospital admissions and inpatient days
  - Improved access to care
  - Improved patient satisfaction

HBPC and Cost Reduction

- According to a Congressional Budget Office report, between 1998-2004, Medicare costs rose 29% per person, whereas VA costs rose only 1.7% per person over the same time period.
  - WHY?
- The VA Healthcare System has programs in place specifically for chronic disabling disease.
- HBPC has contributed to cost containment and reduction for the VA.
  - How?
  - Cost savings or cost shifting?

HBPC and Cost Reduction

- Edes et al. study - veterans dually enrolled in the VA and Medicare
- Reviewed VA cost for purchased care and Medicare A and B claims from CMS
  - Time period 6 months before and during HBPC
- Total cost of care during HBPC was compared to projected cost for the same population
- 6,951 Veterans were included in this cost analysis


Cost Reduction, Hospital Admits and Hospital Days

<table>
<thead>
<tr>
<th>Variable</th>
<th>Before</th>
<th>During</th>
<th>P-Value</th>
<th>Change (95% Confidence Interval) %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare hospital days&lt;sup&gt;a&lt;/sup&gt;</td>
<td>4,511</td>
<td>4,161</td>
<td>&lt;.001</td>
<td>-7.8 (-8.4 to -7.1)</td>
</tr>
<tr>
<td>Medicare skilled nursing facility days&lt;sup&gt;b&lt;/sup&gt;</td>
<td>5,559</td>
<td>5,594</td>
<td>.8</td>
<td>0.6 (-0.4 to 1.7)</td>
</tr>
<tr>
<td>Total Medicare costs per patient, $ (6 months)</td>
<td>4,025</td>
<td>3,590</td>
<td>&lt;.001</td>
<td>-10.8 (-11.5 to -10.1)</td>
</tr>
<tr>
<td>VA hospital days&lt;sup&gt;c&lt;/sup&gt;</td>
<td>8,877</td>
<td>4,339</td>
<td>&lt;.001</td>
<td>-51.1 (-52.3 to -49.9)</td>
</tr>
<tr>
<td>Total VA costs per patient, $ (6 months)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>19,234</td>
<td>13,822</td>
<td>&lt;.001</td>
<td>-26.1 (-29.2 to -23.1)</td>
</tr>
<tr>
<td>VA + Medicare hospital admissions per 100 patient-months</td>
<td>15.7</td>
<td>11.7</td>
<td>&lt;.001</td>
<td>-25.5 (-26.5 to -24.5)</td>
</tr>
<tr>
<td>VA + Medicare hospital days&lt;sup&gt;c&lt;/sup&gt;</td>
<td>13,388</td>
<td>8,500</td>
<td>&lt;.001</td>
<td>-35.5 (-37.6 to -33.4)</td>
</tr>
</tbody>
</table>

**ECHCS HBPC Data and Hospital Avoidance**

<table>
<thead>
<tr>
<th></th>
<th>6mo before HBPC admit</th>
<th>ADMIT</th>
<th>6mo after HBPC admit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal control</strong></td>
<td>110 patients</td>
<td>13</td>
<td>Same population with</td>
</tr>
<tr>
<td></td>
<td>admitted in last</td>
<td></td>
<td>intervention</td>
</tr>
<tr>
<td></td>
<td>12 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>28 Inpatient admissions</strong></td>
<td></td>
<td></td>
<td>13 inpatient admissions</td>
</tr>
<tr>
<td><strong>176 Inpatient days</strong></td>
<td></td>
<td></td>
<td>84 inpatient days</td>
</tr>
</tbody>
</table>

*In FY 2017, there was a 48.8% reduction inpatient admissions and 47% reduction inpatient days.*

---

**MFH data:**

- 2016 Levy and Whitfield study:
  - Retrospective, used observational data
  - Designed to describe incident cohorts, not matched
  - Objective was to compare characteristics, healthcare use and costs of care for Veterans in MFH compared to Veterans in HBPC, community living centers (CLCs) and contract nursing homes (CNHs).
  - Used VA and Medicare data from FY 2010 and FY 2011

**Results:**

- Veterans were younger and unmarried, had higher levels of comorbidity and frailty when compared to those in HBPC.

- Similar comorbidities and frailty as those in CLCs and CNHs.

- Fewer hospitalizations when compared to HBPC.

- LOS shorter than those in HBPC (276 vs. 294 days).

- Total costs (VA and Medicare) were lower in MFH enrollees when compared to those in CLCs and CNHs.
  - $46,766 vs $93,933 and $60,832

**Access and Patient Satisfaction**

- Edes et al. also performed a qualitative study to evaluate the HBPC experience from the Veteran and family point of view.

- Interviewed 31 Veterans and caregivers at 3 VA’s representing geographic variation and established programs.

- Results:
  - No perceived restriction of services
  - Felt HBPC prevented hospitalizations
  - Improved access to care
  - Improved medication management
  - Felt safer and had peace of mind
  - Improved quality of life

Veteran Comments

“They are just the anchor. It gives me security, health-wise and psychologically. I know I have someone to come out. I know I can phone someone in an emergency. I know I have security.” – *Vietnam Veteran*

Caregiver Comments

“He would have been in the hospital or nursing home if we hadn’t got into this program.” – *Caregiver for WWII Veteran*

“I think he gets better care when they come out to your home. You’re more relaxed and can talk to them. At the hospital they are in a hurry. The nurse can spend time with you and they are not in a hurry.” – *Caregiver of WWII Veteran*
Local HBPC Success Story...

- Mr. O: 62 year old Vietnam war Veteran with decompensated liver disease from hepatitis C; history also complicated by TBI, uncontrolled DM and inability to manage meds at home.
- Before HBPC he was hospitalized at the Denver VA 4 times over 6-8 weeks.
- 33 total inpatient days for liver decompensation and encephalopathy. Total cost of care approximately $82,500
- Inpatient Medicine team consulted HBPC for help.

Mr. O Cont’d

- Admitted to HBPC program = zero hospital admissions during the first 2 years in the program.
- Veteran was stabilized on a medication regimen and successfully completed treatment for Hepatitis C.
- Mr. O expresses his gratitude every visit and states, “The team saved my life.”

- What did we do for him?
Impact on Medicare

- The success of HBPC contributed to the Independence at Home (IAH) Demonstration of HBPC in Medicare (Section 3024 Affordable Care Act)
- Initiated in June 2012
- In-home primary care for Medicare’s highest cost beneficiaries with multiple chronic conditions.
- Testing whether home-based care can reduce the need for hospitalization, improve patient and caregiver satisfaction and lead to better health and lower costs.
- In Years 1 and 2 of the IAH demonstration, IAH sites successfully cared for more than 10,000 patients with savings totaling more than $35 million.

www.iahnow.org

HBPC Expansion Initiative

- Data analysis conducted by the Geriatrics and Extended Care Data Analysis Center (GEC DAC) estimates there are > 45,000 Veterans using VA healthcare today that are in need of HBPC services.

- Efforts have been initiated to develop and implement HBPC expansion teams throughout the VA to accommodate an additional 4,750 Veterans per year over the next 2 years.
Goals of the HBPC Expansion Initiative

**Improve targeting:**
- implement a strategy to identify patients that are High Need/ High Risk (HNHR).
  - Veterans identified through a risk-stratification method and provided on a list to each VISN, updated quarterly.
  - The HNHR list primarily represents the VA population that would be eligible for the Medicare Demonstration of HBPC.
  - JEN Frailty Index, Nosos, CAN scores

**Improve access and efficiency:**
- assess Veterans currently enrolled in HBPC and those referred to HBPC and consider if their needs can be met through other services and/or increase the use of in-home technology.
Patient at a remote location is seen in real time over video by a provider at a different distant location.

When to use?
- Add on visits
- Evaluation of wounds or other skin conditions
- Quick consultation with IDT provider
- Rural Veterans, hard to get to
- Family meetings

**HAT (healthcare access tablet):**
- A VA issued device that is stable on a table-top stand.
- Uses available 4G cellular connection
- Comes with a small general exam camera and has the option of several peripheral devices.
Innovative Interdisciplinary care: Clinical Video Telehealth (CVT)

• COTS (Commercially available off-the-shelf technology):
  • A VA issued device
  • The vendor can use any commercial brand device that fits the contract description.
  • Cannot add peripheral devices
  • Uses available 4G cellular connection

• VA Video Connect:
  • A new VA solution that enables Veterans to virtually meet-up with their VA healthcare providers, in something called a “virtual medical room.”
  • Uses encrypted video to ensure the session is secure and private.
Goals of the HBPC Expansion Initiative

- Within ECHCS, there are 1,240 veterans that would be eligible for HBPC based on HNHR assessment.

- FY2017 is a learning year:
  - focus is on experience, very modest growth
  - VISN 19 – milestone 42 veterans

- FY2018 and FY2019 emphasis will be on growth:
  - VISN 19 – milestone 174 & 262 respectively

Concluding Points

- There is no place like home.
  - The majority of aging Veterans wish to remain in their home until the end of their life.
  - The VA has made a commitment to focus on non-institutional care.

- HBPC and MFH are innovative, effective models for non-institutional long-term care.
  - They have been shown to reduce cost, hospitalizations and improve access, patient satisfaction and quality of life.

- It’s all about Teams.
  - Comprehensive home care must be longitudinal and involve an interdisciplinary team approach.
Alpha Poem

Helping our military veterans exist for as long as possible in their home
Both with Autonomy and Self Efficacy even with the challenges of age and despite the medical problems they endure
Providing real and effective interventions that are meaningful and which respect the wisdom of their years
Caring for our wounded warriors as they reminisce about their past and progress toward the end of their brave and valued journey

By Beth Wilkins, PsyD

Acknowledgements
References


References


VISN 19

- Montana
- Cheyenne
- Grand Junction
- Muskogee
- Oklahoma City
- Salt Lake City
- Sheridan
- Denver
Veteran-Directed Home- and Community-Based Services

- This is a program that enables Veterans to manage a flexible service budget and hire family, friends and neighbors to provide care and purchase goods to help them live in the community.
- Key components include the following:
  - Veteran-directed model
  - Flexible budget for services
  - Ability to hire friends and family
  - Person- and family-centered counseling provided by the No Wrong Door
  - Fiscal management services to process workers' payroll and taxes