VA Telemental Health:
Expanding and Emerging Technologies

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VA Expanding and Emerging Technologies

- Historical Telemental Health Progression
- Telemental Health Infrastructure
- National Telemental Health Center (NTMHC)
- Expanding Technologies:
  - Videophones
  - PC-Based Mobile Videoconferencing
  - In-Home Messaging Devices
  - Integrated Voice Response
  - My Health-e Vet
  - Cell Phone Apps
Critical Concepts

• TMH as 10 Year OTS + OMHS/OMHO Collaboration
• TMH as critical service in VA Telehealth services
• Future Directions and New Applications
Historical Progression

• 1959-University of Nebraska Medical Center connecting to
  – Omaha VA, Lincoln VA, and Grand Island VA Hospital
• 1973 Massachusetts General Hospital to Bedford VA
• Resurgence in the 1980s with widespread entry into computer age with major initiative in the past 10 years
• FY 2011 Clinic –Based Telemental Health:
  – 55,000 TMH video patients
  – 140,000 TMH visits
  – 146 hospitals
  – 531 Community Based Clinics
• From 2003-2011, Telemental Health *annual* encounters have increased approx 10 fold from 14,000 to over 140,000.

• From 2003-2011, Telemental Health *annual* unique patients have increased > 6 fold from 8,000 to over 55,000.

• Total Telemental Health encounters from 2003-2011 = over 500,000
VA TMH Services
FY 2003-2011

[Bar chart showing the number of patients and visits from 2003 to 2011]
Current TMH Use in VHA

- Is used to treat virtually every DSM (Diagnostic and Statistical Manual) diagnosis, including affective disorders, anxiety disorders/PTSD, psychotic disorders, and substance use disorders.

- Is employed to deliver virtually every treatment modality including individual therapies, group therapies, medication management, family therapy, couples therapy, cognitive behavior therapies, psychological testing, etc.

- Takes place at multiple sites of care including VA medical centers, VA Community Based Outpatient Clinics, non-VA healthcare facilities, student health centers, homeless shelters, supervised housing sites, and residence.

- Is delivered by clinicians from multiple mental health professions and specialties including psychiatrists, psychologists, advanced practice clinical nurse specialists, physician assistants, social workers, RNs, addiction specialists, vocational rehabilitation specialists, and trainees.
Outcomes of 98,609 U.S. Department of Veterans Affairs patients enrolled in telemental health services, 2006-2010.


**OBJECTIVE:**
- The study assessed clinical outcomes of 98,609 mental health patients before and after enrollment in telemental health services of the U.S. Department of Veterans Affairs between 2006 and 2010.

**METHODS:**
- The study compared number of inpatient psychiatric admissions and days of psychiatric hospitalization among patients who participated in remote clinical videoconferencing during an average period of six months before and after their enrollment in the telemental health services.

**RESULTS:**
- Between 2006 and 2010, psychiatric admissions of telemental health patients decreased by an average of 24.2% (annual range 16.3%-38.7%), and the patients' days of hospitalization decreased by an average of 26.6% (annual range 16.5%-43.5%). The number of admissions and the days of hospitalization decreased for both men and women and in 83.3% of the age groups.

**CONCLUSIONS:**
- This four-year study, the first large-scale assessment of telemental health services, found that after initiation of such services, patients' hospitalization utilization decreased by an average of approximately 25%.
TeleMental Health (TMH): Change in Acute Psychiatric Hospital Admissions and Hospital Days after TMH

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NEW PATIENTS</th>
<th>DECREASE HOSPITAL ADMISSION</th>
<th>DECREASE INPT DAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>18,137</td>
<td>24.6%</td>
<td>24.4%</td>
</tr>
<tr>
<td>2008</td>
<td>20,738</td>
<td>16.3%</td>
<td>16.5%</td>
</tr>
<tr>
<td>2009</td>
<td>27,075</td>
<td>38.7%</td>
<td>43.5%</td>
</tr>
<tr>
<td>2010</td>
<td>32,659</td>
<td>17.5%</td>
<td>20.1%</td>
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</tbody>
</table>
TMH Implementation Principles

- Establishing the Telemental Health Leadership Team
- Needs assessment
- Clinical specifications
- Technical specifications
- Administrative specifications
- Guidance for conducting the clinical interview
- Emergency planning
- Training
- Quality monitoring and outcomes
Telemental Health Infrastructure

• VHA National Telemental Health Field Work Group (FWG) since 2003
• VISN Mental Health Leaders select VISN TMH FWG representatives
• VISN TMH FWG representatives collaborate with VISN Telehealth Leads
• VISN TMH FWG reps serve:
  – In national strategic planning role
  – As VISN TMH Leader, subject matter expert and resource
  – As a conduit from VACO to facility and clinicians
TeleHealth Infrastructure

VHA National Telehealth Expansion FY11-FY12

• 21 VISN Telehealth Leads
• 144 Facility Telehealth Coordinators
• 1,150 Telehealth Clinical Technicians
  – Clinic Set Up/Scheduling
  – Technology Support
  – Workload Credit
• 3 National Telehealth Training Centers
• National Telehealth Technology Contracts
• National Telehealth Technology Help Desk
Mental Health and Telemental Health Leadership Structure

**VACO**
OMHS, OMO
and OTS
Chief Consultants
National TMH Lead

**VISN LEVEL LEADERSHIP**
VISN Mental Health Leads and
VISN Telemental Health Field Work Group Representatives

**FACILITY LEVEL LEADERSHIP**
Facility Mental Health Service Line Chiefs and Facility Telemental Health Leads, Facility Telehealth Coordinators
TMH Implementation Resources

• VHA Clinic Based Telehealth CBT Operations Manual - Telemental Health Appendix
• Web Based Training Modules
  – TMH Overview
  – Emergency Management
• Live Simulated Training
• Extensive Specialized and Optional Training
• Ongoing Training: e.g. National Journal Club
  – TMH Overview
  – Emergency Management
Typical VA Telemental Health Program

• Majority of Telemental Health Activity is Hub and Spoke Model from Facility to its CBOCs
• Provides Access to General Mental Health Services for Patients in Remote CBOCs
• Provides Access to Medical Center Specialists for Patients in Remote CBOCs
• Ease of Implementation
  – Same Credentialing and Privileging
  – Same Medical Record
  – Same Workload and Reimbursement Mechanism
  – Same Quality Management Oversight
  – Same IT Department and IT Infrastructure
Continuum of Telemental Health

Continuity of Care from

- Clinician to Home
- Facility to Community Outpatient Clinic
- Facility to Facility
- VA to non-VA sites
- VISN to VISN
- National Connectivity
- International Applications
1. Historical Progression to a National Center
2. Continuum of Growth Beyond Facility and VISN Boundaries
3. Delivery of Expert Telemental Health Care Throughout the Nation
VA National Telemental Health Center

• To unify the use of telemental health technologies
  – To assure access to uniform mental health services nationwide
  – To increase access to specialty care in all geographic areas
  – To establish panels of national clinical experts
  – To provide highly specialized services
  – To develop resource bank opportunities
National Telemental Health Center

- Logistical facilitation
  - Credentialing and privileging
  - Scheduling
  - Coding
  - Quality management
  - Memos of Understanding
  - Access to Remote Medical Records
Established national Telemental Health clinical services as prioritized by OMHS/OMHO national mental health clinical initiatives:

- Tele-Behavioral Pain Management: Comprehensive Expert Evaluation and Cognitive Behavioral Module
- Tele-Bipolar Disorder Focused Expert Consultation and Follow-up Module Using Motivational Interviewing Techniques
- Tele-Compensations and Pension Examinations including International Locations
- Other Expert Evidence Based Therapies: Tele-CBT for Insomnia, Tele-CBT for Non-Epileptic Seizures
- In Process: Transgender Evaluations, Gender Specific Pain Disorders
National Telemental Health Center

• Service Sites in the following regions:
  – Current: V1, 4, 6, 8, and 9
  – In Process: 7, 12, 15, 16, 20, 21
  – International: Okinawa Japan
Expanding Applications and Emerging Technologies

• Videophones
• PC-Based Mobile Video Conferencing
• In-Home Messaging Devices
• Integrated Voice Response Applications
• My Health-e Vet
• Cellular Phone Apps
Videophones

• Adjunctive devices for treatment
• Can easily be plugged into conventional phone land lines
• Can be used as stationary device in places of residence or transported to multiple sites, e.g. homeless shelters
• Transmission though can vary based upon phone carriers and geographic location
• With recent increased accessibility to cell phones, land line phone is decreasing
Videophones for intensive case management of psychiatric outpatients.


- 12 month study, 24 patients receiving supplemental videophone mental health services

- Videophones used to access the hospital clinical team via the home telephone line, when an acute clinical need arose in addressing questions related to medication management and treatment planning

- 95% patient satisfaction, especially savings of time and travel, assistance with medication questions, and increase involvement with treatment.

- Savings of 135 hours of patient and staff travel time, $4000 salary costs. We believe that there are other potential uses of videophones for seriously mentally ill patients, including discharge planning, intensive post-discharge monitoring and transition to community life.
PC-Based Mobile Video Conferencing

- Using existing PC and Web camera (USB)
- Software
- HIPAA encryption
- Scheduling
- Firewall issues
- Widespread applicability
- Especially useful for non-mobile patients
- Low cost, multiple clinicians can use
- Veterans must have hardware (PC+Webcam) and Internet (Highspeed)
- Monitors needed in some applications
VA VIDEO VISIT

Set-Up Instructions

Dear (Veteran First Last Name),

As discussed with your VA Team, this e-mail message confirms your upcoming VA Video Visit with (Provider’s First Last Name) beginning promptly at 4:28 PM, Mountain time zone, on Tuesday, September 20, 2011, and provides step-by-step instructions.

Please complete the following 4 Steps:

Step 1* - Install Videoconferencing Software on your computer at least 24 hours prior to your scheduled appointment:

a. Click the following link to download the Movi software to your computer:
https://downloads.va.gov/files/webops/telehealth/VideoAnywhere-Movi-Setup-4-1.zip

b. Double-click on the downloaded file to start the software installation.

c. In the installation process, follow the prompts to 'Accept' the options presented.
d. When the installation is complete, click the 'Finish' button. Movi software is now installed on your PC.

* The Movi software will remain installed on your computer after your scheduled visit is finished. There's no need to perform the above steps again for subsequent calls, unless the software is later uninstalled, or you've been notified by VA staff that an upgrade to the software is required.

For your visit, your VA Team has already confirmed that your PC has:
•Windows XP, Windows Vista, or Windows 7;
•web cam;
•microphone;
•speakers or headphones/earphones
Step 2 - Get Movi Username/Password required for Video Visit:

a. Click the following link to browse to the VA Video Visit **Confirmation Screen**, at least 15 minutes prior to your scheduled appointment: https://videoanywhere.va.gov/confirmation/?meeting=4ffd2f2e-3eee-43e0-8d92-a5988fd13a4d. (If your browser doesn't automatically open to that screen, copy the URL above and paste it into your browser address bar.)

b. Type the telephone number you provided to the VA Team during scheduling into the 'Phone Number' field.

c. Click the 'Submit' button.

![Figure 1: Example initial confirmation screen](image_url)
Figure 2: Example confirmation screen, with Movi credentials
Step 3 - Place Video Visit call to VA through Movi:
Launch the Movi client from the Start menu (it is usually found in the All Programs/Cisco folder). Once it's running, sign in (Figure 3):

a. Type (or copy and paste) your 'User Name' from Step 2 into the 'Username' field (Figure 3).

b. Type (or copy and paste) your 'Password' from Step 2 into the 'Password' field (Figure 3).

c. Click the 'Sign in' button
Place a Movi call:
d. Type “joseph.doe” (the VA provider's Movi address of the clinician with whom you'll have your video call) in the field labeled 'Type name or phone number…'. Don't include the quotation marks when typing the name.
e. Press the 'Enter' key on your keyboard, or move the mouse over the name that appears below when typing, and press the green phone icon (Figure 4).
Step 4 Sign out:

a. When you have completed the call, click on the status indicator (usually a green ball) to the left of your name, and select "Sign out" from the menu that appears (Figure 5).

Figure 5: Sign out of Movi
In-Home Messaging Devices

• Daily scripts focus on three areas:
  – Symptom and behaviors indicating potential for decompensation that are forwarded as alerts to the clinician for priority triage
  – Quantifiable trendable symptomotology data, e.g. depression ratings or amount of substances used
  – Psychosocial patient education material, generally adapted from evidence-based treatments like motivational interviewing techniques or cognitive behavioral therapy principles.
In-Home Messaging Devices

- **Purpose:** In 2007, VA Connecticut Healthcare System was funded to begin a Home Telemental Health Program using electronic messaging.
- **Procedure:** 76 patients with diagnoses of schizophrenia, PTSD, depression, and substance use disorders received in-home electronic messaging devices with scripted disease management protocols which included alerts, trendable data and educational components. Each patient’s electronic information was sent to the nurse practitioner daily for triage and follow-up.
- **Conclusions:** In assessing the program, patients who were enrolled in the Home Telemental Health Program demonstrated substantial decreases in hospitalization rates (80, 86%), with marked decline in ER visit rates (60, 66%). Satisfaction data indicated a high level of satisfaction with the components of the Home Telemental Health Program. The feasibility, positive outcomes and satisfaction from this program lay the groundwork for future electronic messaging applications, such as internet and smart phone technologies.
Interactive Voice Response

• IVR technology can be activated from any type of phone including a cell phone
• The phone user can use his voice or touch the number pad on the phone to generate answers to questions about his/her health
• Over 2 million people in the USA use cell phones instead of standard phones
• Multiple language options
• Simple secure pass code with inbound and outbound call options
IVR Operations in VA

- The Veteran typically calls the Interactive Voice Response (IVR) System from his/her telephone.
- The system can also call the Veteran if needed or if the Veteran has failed to call in, including custom messaging and reminder options.
- The system may ask the Veteran for his/her pass-code (4-digit number) or some other identifier.
- The system asks the Veteran a series of questions about his/her health which have been designed by the VA for each diagnosis using branching logic and education.
- Responses are sent over the phone for the staff to review on the software desk top application.
• Technology exists but applications limited by information security issues
• VA uses My Health-e Vet platform
• Wellness reminders
• Appointment manager
• Secure messaging
• Access to personal medical records
• Mental health resources like patient education and self ratings
Secure Messaging - Myhealthevet

Mental Health

Learning about a mental health condition is a good first step to being able to recognize some of its symptoms. You may be wondering if you have symptoms of concern. One way of determining that is to take a brief confidential and anonymous screen. Only you will see the results of the brief screen. None of the results are stored in your My HealthEvet account or sent anywhere. You can choose to print a copy of the results for your own records or give to your physician or a mental health professional.

This section contains screens for symptoms of several mental health conditions. You can take a screen to see if you have symptoms that are commonly associated with a specific mental health condition or with stress. The fact that you have symptoms of a mental health condition does not necessarily mean that you have a mental health condition or that a mental health condition is causing you difficulty in functioning in a major area of your life, such as your family, personal relationships, work life or social settings.

If you are concerned about any illness, regardless of what the screen shows, you should seek further evaluation from your physician. If you are concerned that you may have a medical emergency or are having thoughts of harming yourself or someone else, call 911, the National Suicide Prevention Lifeline at 1-800-273-TALK (8255), or go immediately to the nearest hospital Emergency Room for an evaluation.

Screening Tools

- Alcohol Use Screening (AUDIT-C)
- Depression Screening (PHQ-9)
- Post Traumatic Stress Disorder Screening (PCL)
- Substance Abuse Screening (ASSIST)
PTSD Coach Overview

DEVELOPMENT TEAM: Julia Hoffman, Psy.D.¹,², Laura Wald, Ph.D.¹, Eric Kuhn, Ph.D.¹,³, Carolyn Greene, Ph.D.¹, Josef I. Ruzek, Ph.D.¹, Kenneth Weingardt, Ph.D.⁴

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PTSD Coach is a mobile phone app for people with PTSD and those interested in learning about PTSD.

This app provides:
- education about PTSD
- a self-assessment tool
- portable skills for acute symptoms
- direct connection to crisis support
- information about available treatment
Summary

• VA Telemental Health has revolutionized the mental healthcare system by expanding access to mental health services from facilities to clinics

• The VA National Telemental Health Center continues to expand the delivery of mental health services throughout the nation through the use of innovative technologies