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# Clinical Benefits of Telehealth Technology in Behavioral Health Care

February 19, 2015, 1-2:30pm (EST)

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Clinical Affairs Senior Advisor  
Defense and Veterans Brain Injury Center  
Silver Spring, Md.

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# Webinar Overview

In today's world of technology and connectivity, outpatient behavioral-healthcare services are delivered in much the same manner as they have for the last 65 years; a patient takes time off work or away from family, commutes to the provider's office, and meets with the provider individually or in a group, in a shared, private space. This traditional model of care may impose barriers that increase the difficulty and challenges for those seeking treatment, and may lead some to avoid behavioral healthcare completely. Couple this with the nearly 80 million Americans living in underserved areas (<http://www.hrsa.gov/shortage/>), and an individual's access to high-quality behavioral-health services becomes a key issue facing the behavioral health field. Telemental healthcare, the delivery of behavioral healthcare to a location where the provider is not physically present, is one way to enable access to care. Research consistently supports the use of technology such as video teleconferencing to deliver effective evidence-based care. This webinar focuses on the clinical benefits of remote healthcare, both to the patient and to the therapy process.

During this webinar, participants will learn to:

- Define telemental healthcare and explain its applicability to behavioral health settings.
- Determine clinical scenarios that may benefit from telemental healthcare.
- Compare and contrast the therapeutic process between in-person and telemental health services.
- Describe how telemental health increases patient access to behavioral health services.

# Larry D. Pruitt, Ph.D.

- Dr. Larry Pruitt is a clinical psychologist in the Research, Outcomes, and Investigations Division at the National Center for Telehealth & Technology (T2).
- He earned his M.A. and Ph.D. in Clinical Psychology at the University of Nevada, Reno, including a clinical internship at the Sierra Nevada VA Medical Center.
- Dr. Pruitt serves as the Program Lead for the DoD Suicide Event Reporting (DoDSER) system, as well as the Clinical Research Supervisor for T2's In-Home Telehealth Program.



Photo courtesy of: Natalie Pruitt

# Kathleen I. Woodside, Ph.D.

- Dr. Kathleen Woodside is a clinical psychologist practicing at the Portland VA Medical Center and a research psychologist with the National Center for Telehealth & Technology (T2).
- She earned her Ph.D. in counseling psychology from the University at Buffalo and completed a fellowship in polytrauma recovery at the Baltimore, Maryland VA.
- Dr. Woodside is recognized for her work integrating telemedicine methods and technology into clinical practice and helped establish an innovative telemental health program at the Portland VA.



Photo courtesy of: Kathleen Woodside, Ph.D.



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# Disclosure Statement

- The views expressed in this presentation are those of the presenters, Dr. Pruitt and Dr. Woodside, and do not reflect the official policy of the Department of the U.S. Army, U.S. Department of Defense, or the U.S. Department of Veterans Affairs.
- Dr. Pruitt and Dr. Woodside have no relevant financial relationships to disclose.
- Dr. Pruitt and Dr. Woodside do not intend to discuss the off-label/investigative (unapproved) use of commercial products or devices.

# Polling Question #1

How hesitant/willing are you to use telemental health to provide behavioral health services?

<input type="radio"/>	Very hesitant
<input type="radio"/>	Somewhat hesitant
<input type="radio"/>	Neutral
<input type="radio"/>	Somewhat willing
<input type="radio"/>	Very willing

# Guiding Question

“What treatment, by whom, is most effective for this individual, with that specific problem, and under which set of circumstances?”

(Paul, 1967, p. 111)



# Vignette #1

## **An active duty soldier deployed to a remote forward operating base in Afghanistan:**

- Having a great deal of difficulty adjusting to life on deployment...
- Is located a three-day drive from nearest medical facility
- The trip involves passing through dangerous territory requiring a full convoy for the travel

# Vignette #2

## **An elderly veteran who comes in to the VA once a week for PTSD treatment:**

- Right leg is amputated (100% service-connected)
- Spouse provides their only non-VA income
- Patient lives several hours away from the VA hospital in rural North Dakota
- ...Oh yeah, and it's winter

# Vignette #3

**A Staff Sergeant (SSG) in the U.S. Army whose duties produce a very hectic schedule:**

- Is a single mother, whose responsibilities don't allow her to take time off during the day
- Doesn't have routine child care in the evenings

# Vignette #4

## A physician's assistant, struggling with symptoms of panic disorder:

- Knows there are treatments that can help, but doesn't like "being the one in the 'patient's chair,'" which has stopped him from seeking treatment
- Has several patients receiving behavioral health services and doesn't want them to see him sitting in the clinic waiting room

# Vignette #5

## **An administrative assistant for the only mental health clinic in town:**

- Is struggling with a difficult substance use disorder
- Fears that her boss and colleagues will learn of her problem

# Food for Thought

Would you remain a customer at a bank that requires customers to use checks rather than offering debit cards and online banking?

-No!

Why then, does the behavioral health field still practice in the same way it did 60 years ago?!

# Polling Question #2

Have you ever provided treatment over the telephone?

<input type="radio"/>	Yes
<input type="radio"/>	No

# Polling Question #3

Have you provided treatment using video teleconference technology?

<input type="radio"/>	Yes
<input type="radio"/>	No



# What is Telehealth

- **Defining Telemental Health (TMH)**

The provision of behavioral health services:

- Via telecommunications technologies
- To a location in which the provider is not physically present  
(American Telemedicine Association, 2013)

- **Uses:**

- Treatment
- Assessment
- Psycho-education
- Training
- Supervision and consultation

# Examples of Telehealth

- **Asynchronous (“Store-and-Forward”)**
  - E-mail
  - Texting
  - Websites  
Example: <http://afterdeployment.dcoe.mil>
  - Smartphone apps  
Example: <http://t2health.dcoe.mil/apps/virtual-hope-box>
- **Synchronous (occurs in real-time)**
  - Telephone/videophone
  - Video teleconference (VTC)
    - Desktop web cam, VTC software package, and high-speed network access

# Care Settings

- **Satellite clinics**
  - Community-Based Outpatient Clinics (CBOCs)
  - Clinic-to-clinic for specialty services
- **The patient's home**
  - Using their own equipment
- **Secured facilities**
- **Rural vs. urban settings**

# Polling Question #4

Have you ever had a patient where simply attending treatment caused great stress or was hazardous?

<input type="radio"/>	Yes
<input type="radio"/>	No

# Polling Question #5

If Yes, what kind of stress did this put on the patient?

<input type="radio"/>	Time away from work
<input type="radio"/>	Finding childcare
<input type="radio"/>	Strained finances due to travel costs/time
<input type="radio"/>	Exacerbated physical limitation
<input type="radio"/>	Exacerbated behavioral health symptoms
<input type="radio"/>	Risk of physical injury

# Benefits of TMH

- **Reduced Costs (patient):**

- Time away from work
- Use of earned leave
- Lost wages
- Child/elder care, etc.

(Hilty et al., 2007; Simpson et al., 2005)

- **Reduced Costs (clinic):**

- Resources (equipment/infrastructure) shared between providers
- Reduced office space needs
- Reduced need for translation services
- Triage provided remotely without an automatic in-person visit
- Access to specialists/consultation services who can serve a broader population

# Benefits of TMH (continued)

- **Reduced travel:**

- From rural location to urban clinic
- Across busy urban areas
- Reduces costs in terms of fuel, lodging, wear-and-tear
- Saves on travel reimbursement (VA)
- Saves stress navigating an unfamiliar healthcare setting and city
- **New recommendation is to opt for TMH, if appropriate, when the patient has a >30 min, 1-way commute for services**

(Brown et al., 2015)

- **FY2013: Portland VAMC Rural MH**

- 6,636 patient visits
- 1,089,037 travel miles saved
- Nearly FOUR times around the earth

(Lu et al., 2014)

# Benefits of TMH (continued)

- **Increased safety (patient):**
  - Elderly patients at risk for fall
  - Risky driving
- **Increased safety (provider):**
  - Patients who are at risk for acting aggressively
    - Non-fatal, job-related violent crime perpetrated against mental health professionals by patients occur at a rate of 68.2 per 1000
      - Approximately 4 times greater than the rate for physicians
      - Approximately 3 times greater than the rate for nurses  
(Anderson & West, 2011; Friedman, 2006)
  - Virtual office allows more control over selection of space



# Benefits of TMH (continued)

- **Access to care:**

- 80 million Americans live in Health Professional Shortage Areas (HPSA)
  - As of June 2014, there were 4,000 identified mental health HPSAs
  - HPSA is identified when the psychiatrist to population ratio is at, or worse than, 1:30,000
  - HPSAs include individuals who face economic, cultural, or linguistic barriers to health care  
(U.S. Department of Health and Human Services, 2014)

# Benefits of TMH (continued)

- **Access to Care:**
  - Patients with no personal transportation
  - Rural patients with no or few local options, especially specialty care
  - Patients with psychiatric barriers to routinely accessing care
  - Conduit to care for patients in crisis  
(Gros et al., 2011)

# Benefits of TMH (continued)

## ■ Reducing the Impact of Stigma

- Stigma associated with mental health problems and lack of anonymity in receiving mental health care are barriers to treatment-seeking, especially in rural areas

(Robinson et al., 2012)

- Internalized stigma is associated with worsening psychiatric symptoms and decreased persistence in accessing MH services

(Drapalsk et al., 2014)

- Potential to feel more “anonymous” in session:
  - “I like you better this way.”

(Anonymous quote)

# Conceptualizing Telehealth

- **Important:**
  - Telehealth is an additional option for behavioral health care
    - Given that it meets the needs of the patient/case
    - As a means to improve access to care
  - Not a replacement for in-person care

# Resources for Evidence of TMH

## Meta-analyses and RCTs supporting the clinical efficacy of treatment delivered remotely

- *Videoconferencing psychotherapy: A systematic review* (Backhaus et al., 2012)
- *Psychotherapy mediated by remote communication technologies : A meta-analytic review.* (Bee et al., 2008)
- *Randomized clinical trial of telepsychiatry through videoconference versus face-to-face conventional psychiatric treatment.* (De Las Cuevas et al., 2006)
- *A randomized trial of telepsychiatry for post-traumatic stress disorder.* (Frueh et al., 2007)
- *What about telepsychiatry? A systematic review.* (García-Lizana & Muñoz-Mayorga, 2010)
- *Exposure therapy for PTSD delivered to veterans via telehealth: Predictors of treatment completion and outcome and comparison to treatment delivered in person.* (Hilty et al., 2013)
- *Effect of telephone-administered vs. face-to-face cognitive behavioral therapy on adherence to therapy and depression outcomes among primary care patients: A randomized trial.* (Mohr et al., 2012)
- *Telemedicine for anger management therapy in a rural population of combat veterans with posttraumatic stress disorder: A randomized non inferiority trial.* (Morland et al., 2010)
- *New directions for telemental health research.* (Rabinowitz et al., 2008)
- *An integrated approach to delivering exposure based treatment for symptoms of PTSD and depression in OIF/OEF veterans: Preliminary findings.* (Strachan et al., 2012)

# Evidence for TMH

- **Treatment Targets:**

- Bipolar Disorder
- Major Depression
- Post-traumatic Stress Disorder
- Obsessive-Compulsive Disorder
- Panic Disorder
- Schizophrenia
- Substance Abuse

(Bensink et al., 2006; Brand & McKay, 2012; Choi et al., 2013; DelliFraine & Dansky, 2008)

- **Treatments Investigated:**

- Medication management
- Cognitive Behavioral Therapies
  - Behavioral Activation
  - Exposure therapies (e.g. prolonged exposure; exposure and response prevention)

# Who Benefits from TMH?

- **Children and adolescents** (Nelson, Barnard, & Cain, 2006)
- **Adults** (Mitchell et al., 2008)
- **Older adults** (Carmody et al., 2013)
- **Veterans** (Gros et al., 2011)
- **Ethnically diverse populations** (Dwight-Johnson et al., 2011)
- **Active duty service members** (Luxton et al., 2015)

# Who is Not Suited for TMH

- **TMH is not right for everyone**
  - Clients with visual or auditory perception problems
  - Clients who are acutely violent or unstable with poor impulse control
  - Acutely suicidal patients or severely decompensated patients with immediate need for hospitalization
  - Patients with ideas of reference regarding televisions
  - Clients who cannot tolerate occasional interruptions in service
  - Clients who prefer to be seen face-to-face in person
  - In-home clients lacking minimum technological competencies may become frustrated



# Technological Considerations

- Effectiveness can be hampered by poor internet infrastructure
  - Very rural patients may have more difficulty establishing or maintaining a VTC connection
- High-level security settings may hamper connection ability to external users
  - DoD, VA, large health care networks
    - Block external IP address from 'calling in'

# The Patient's Experience

“At first I didn't think that I'd be able to connect, emotionally, over the computer. But as we got going, the screen just disappeared”

(Anonymous quote)

- Hesitation is common at first
  - Perceived lack of experience with computer equipment cited as a reason why patients avoid remote care
    - Exposure ≠ Avoidance

# The Provider's Experience

- Behavioral Health Providers:
  - Regular use of TMH is positively correlated to ratings of provider satisfaction  
(Modai et al., 2006)
    - Satisfaction increases as experience is gained
  - Those with direct experience using TMH in their practice report:
    - More positive ratings
    - Higher levels of satisfaction
      - Especially in terms of improving access to care  
(Simms et al., 2011)

# Access to Treatment Services

## TMH, as an option, creates an opportunity to...

- Access a population of individuals who find it too overwhelming or distressing to attend treatment in-person
- Discuss services available, obtain informed consent, and discuss treatment rationale
- Provide evidence-based treatments, if appropriate
  - Once rapport is established and the individual has “bought-in” to treatment, a face-to-face meeting becomes an important exposure target

# Therapy Process

## Having OPTIONS:

- Validates that the patient's time/energy/resources are valuable
- Communicates therapy isn't a one-way process
- TMH embodies the collaborative approach to psychotherapy
  - Increased treatment compliance among those not complying with in-person care  
(Hommel et al., 2013)

# Treatment Non-Specifics

## Contact:

- TMH allows for more frequent contact between patient and provider
  - Especially if contact is limited by practical issues
  - Treatments that require extensive between session homework (e.g., activity monitoring, exposure exercises)
  - Patients in crisis
  - Among those at risk for treatment drop-out:
    - Individuals who received a telephone call between sessions were more likely to attend their next session  
(Fox et al., 1996)

# Treatment Non-Specifics (continued)

## Rapport:

- Cooperative problem-solving of technical issues
  - Facilitates initial and sustained rapport
  - Facilitates collaborative problem-solving and builds self-confidence
- Capability to view a patient's environment and personal effects in their home:
  - Can be used to build connectedness in a manner akin to the joining processes that occur when a therapist physically conducts treatment with a family in their own home. (Reiter, 2000)
  - For example, a patient may have a dedicated room for a hobby, sports team, or another personal interest, and those interests or activities can be brought into the therapeutic context to build a stronger, personalized therapeutic relationship

# Treatment Non-Specifics (continued)

## Clinical Context:

- For In-Home TMH:
  - Ability to observe, with the consent of the patient, information in real time about the patient's living environment
    - A short-cut to:
      - Information about the patient's activity level
      - Opportunity to plan for important caretaking behavior
- For a patient with insomnia:
  - The practitioner could 'tour' the patient's sleeping environment
  - Is a bright alarm clock present? Are the windows covered?  
(Henry et al., 2013)
- For a patient seeking treatment for substance abuse or dependence:
  - The practitioner and patient could work together to dispose of drug paraphernalia and relapse triggers in the home environment  
(Benavides-Vaello et al., 2013)
- For a patient reporting hoarding behavior:
  - Allows for more objective assessment of living environment as well as the changes made over the course of treatment



# Anxiety

- **Maintained by avoidance**
  - Social Anxiety
  - Panic Disorder
  - Specific Phobia
  - Generalized Anxiety
- **TMH SHOULD NOT be used to facilitate avoidance**
  - Patients who are less able to tolerate anxiety may therefore be less able to seek or adhere to conventional in-office care
  - TMH may provide an opportunity to expose those individuals to behavioral health services they would normally avoid
  - Over the course of treatment the provider works toward face-to-face sessions as part of an exposure hierarchy

# PTSD

- **Median length of time to seek treatment following a trauma:**
  - 12.1 years (Wang et al., 2005)
- **Where might TMH help with this?**
  - Increased access to care
  - Reduced stigma for seeking treatment
  - Fewer triggers activated prematurely
  - Differential willingness to seek TMH treatment still an empirical question

# Depression

- **Hallmark symptoms:**
  - Withdrawal
  - Low energy
  - Loss of interest
    - Makes overcoming the treatment-seeking barrier that much more difficult
- **TMH lowers barriers to seeking care, undermining those symptoms**
  - Meets the patient where they are in order to start moving toward a common goal

# Polling Question #6

How many feel that telehealth would have a negative impact on the treatment relationship between a patient and provider?

<input type="radio"/>	Yes
<input type="radio"/>	No
<input type="radio"/>	Maybe

# Treatment Satisfaction

- **Systematic review of TMH research over the last 10 years:**
  - Comparable, and high, levels of treatment satisfaction between in-person and telemental health options
  - Comparable ratings of therapeutic/working alliance  
(Jenkins-Guarnieri et al., 2015)
- **Exception: Low-quality TMH connection:**
  - Interrupts continuity of TMH image/sound quality  
(Hyler, Gangure, & Batchelder, 2005)
  - Group therapy delivered via TMH

# Social Support

- **TMH has been used to build relationships with socially isolated caregivers**
  - Allowed caregivers to achieve meaningful social interactions without disrupting their caregiving responsibilities  
(Wright, Bennet, & Gramling, 1998)
- **For those at risk for treatment drop-out:**
  - Individuals who received a telephone call between sessions were more likely to attend their next session  
(Fox, Lawson, & Modlinski, 1996)

# Safety Planning

- No published studies suggesting that HBTMH is less safe than in-office care
- Patient safety during TMH, including HBTMH, can be effectively managed with appropriate training and safety planning (Gros et al., 2011; Luxton et al., 2010)
- Working collaboratively to establish a safety plan ahead of an actual need may in itself have a therapeutic benefit
- ‘How to’ guide, “*Managing Suicide Risk in Home-Based Telepractice*” (Luxton et al., 2014)

# Privacy and Stigma

- **Patients who forgo seeking treatment due to these concerns may be willing to participate in remote care when:**
  - It is provided in the privacy of their own home
  - Steps are taken to enhance privacy
- **Confidentiality:**
  - Provider has less control over their environment
    - Need to be sure to account for others in the patient's environment
    - Clinic assistants, family members, open windows, etc.  
(Olden et al., 2010)
- **TMH Guide for setting up a private therapy context:**

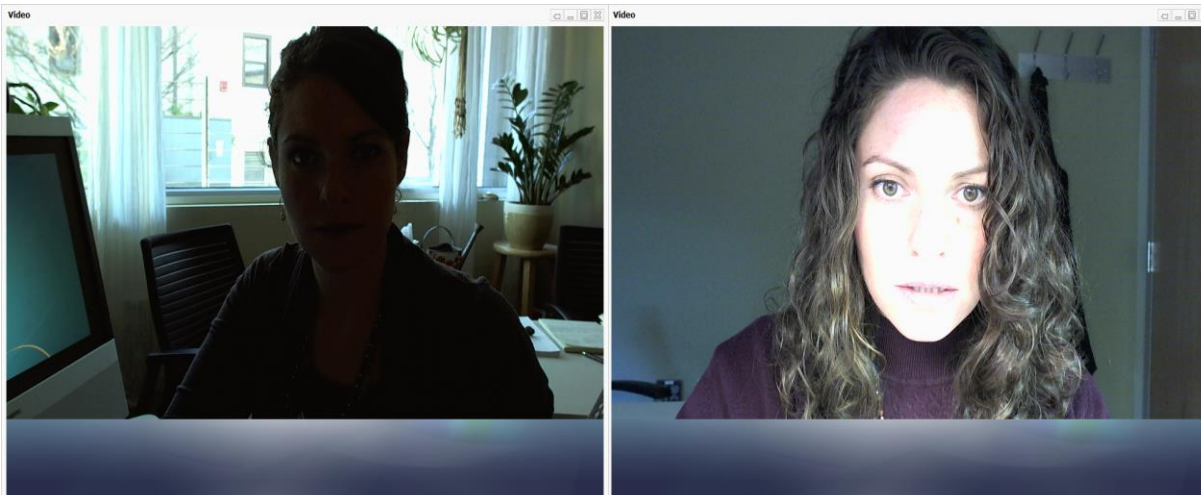
[https://www.t2health.dcoe.mil/sites/default/files/intro\\_telemental\\_health\\_may2011\\_1.pdf](https://www.t2health.dcoe.mil/sites/default/files/intro_telemental_health_may2011_1.pdf)



# Clinical Environment

## Clinician's office

- New meaning for the therapeutic frame: What does a snapshot of your office say about you?
- Adequate lighting? Free of backlighting and odd shadows on the clinician's face?
- Implications of potentially more relaxed environment
  - Patient can't see provider's shoes kicked off under the desk



Photos courtesy of: Kathleen Woodside, Ph.D.

# Ethical Considerations

## Vignette #1

### **Thirty-something mother of three whose husband has recently been physically abusive:**

- You are working with a 30-something mother of three who discloses to you that her husband has recently been physically abusive with her.
- You see her in home over webcam because she lives 100 miles from the nearest MH clinic and has full-time parenting duties. In the next session, her husband is present. She is reserved and quieter than usual, her chair situated somewhat behind her husband's in the frame. You inquire about the new addition and she states that they have decided together that he will be attending all future sessions.

# Ethical Considerations (continued)

## Vignette #2

### **An elderly veteran who comes in to the VA once a week for PTSD treatment:**

- You are checking your personal email and social media sites (over lunch, on your own device, of course) and you discover that a TMH client to whom you have been providing PTSD treatment has found your social media page.
- The client has sent you a personal message with a link to footage he shot while in Afghanistan. The tone of the message seems to convey distress and he writes vaguely that he doesn't know if he can "handle it anymore" and is wishing to "get away from it all." He states that he "know[s] you're online all day" and asks you to accept him as a social media contact so that he doesn't have to "go through this alone."

# Ethical Considerations (continued)

- **“The use of telecommunication technologies in the provision of psychological services presents unique potential threats to the security and transmission of client/patient data and information.”**

(American Psychological Association, 2013)

- Computer viruses, hackers, theft of technology devices, damage to hard drives or portable drives, failure of security systems, flawed software
  - Confidentiality of electronic communications
- **Informed consent about limits and potential risks of telehealth**

# Ethical Considerations (continued)

- **Potential boundary issues and “micro” changes to our practices as a result of “two-dimensional” world**
  - Glancing at email, IM, phone, etc. more tempting
  - Personal behaviors of tele-therapist: shoes off, casual attire, messy office
- **Self-monitoring may increase awareness of clinician’s impact**
- **May prevent some multiple relationships in small communities**
- **Macro-issues: If you build it, they will come. Will you have the needed competencies?**

# Limitations

- Lack of training
- Insufficient experience
  - Two primary reasons providers and patients avoid TMH  
(Shore et al., 2006; Starling & Foley, 2006)
  - HBTMH patients/providers can learn to use telehealth equipment and software effectively
    - Minimal training
    - Short amount of time  
(Bischoff et al., 2004; Gabrielian et al., 2013; Shore et al., 2006)
- Some clinically relevant data may be missed when using TMH technology
  - Olfactory data
    - Alcohol consumption, hygiene, etc.
  - View of the client's entire body
    - Gauge for psychomotor agitation, gait disturbance, etc.

# Limitations

- **Tele-clinicians have less control over the patient's treatment environment**
  - Soundproofing, clinic noise, waiting room environment, receptionist's familiarity with MH patients
  - Shared office space can mean higher likelihood of intrusions into patient space
  - Privacy may be more difficult in-home
    - Knocks at the door, package deliveries, visits from neighbors, family members in the next room through a thin wall, children in the room

# Practice Recommendations

- **Know the TMH laws/regulations at:**
  - Your site
  - The remote site
- **Think critically about the patient's treatment-seeking barriers and how those barriers affect compliance**
- **Get training and achieve competence**
  - Practice, practice, practice!



# TMH Guidelines

- **American Psychological Association**

American Psychological Association. Guidelines for the practice of telepsychology. 2013; Retrieved from <http://www.apa.org/practice/guidelines/telepsychology.aspx>

- **American Telemedicine Association**

American Telemedicine Association. Practice guidelines for video-based online mental health services. 2014; Retrieved from <http://www.americantelemed.org/resources/standards/ata-standards-guidelines>

- **National Center for Telehealth and Technology**

National Center for Telehealth & Technology. DoD Telemental Health Guidebook, Second Edition. 2013; Retrieved from <http://t2health.dcoe.mil/sites/default/files/TMH-Guidebook-Dec2013.pdf>

# Polling Question #7

How hesitant/willing are you to use telemental health to provide behavioral health services?

<input type="radio"/>	Very hesitant
<input type="radio"/>	Somewhat hesitant
<input type="radio"/>	Neutral
<input type="radio"/>	Somewhat willing
<input type="radio"/>	Very willing

# Summary

During this webinar, participants learned to:

- Define telemental health care and explain its applicability to behavioral health settings.
- Determine clinical scenarios that may benefit from telemental health care.
- Compare and contrast the therapeutic process between in-person and telemental health services.
- Describe how telemental health increases patient access to behavioral health services.

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