Webinar #6: IPAD: Tele-behavioral health applications (Advanced)
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Tele-Behavioral Health

Derived from **telemedicine** or **telehealth**

**Telemedicine** is the use of medical information exchanged from one site to another via electronic communications to improve a patient’s clinical health status.

Telemedicine includes a growing variety of applications and services using two-way video, email, smart phones, wireless tools and other forms of telecommunications technology (American Telemedicine Association)

**Telemedicine** is the use of telecommunication and information technologies in order to provide clinical health care at a distance. It helps eliminate distance barriers and can improve access to medical services that would often not be consistently available in distant rural communities (Wikipedia)
Families in rural areas are historically subject to a shortage of health care professionals such as medical doctors, specialists, and psychologists (Bransford, Nahabedian, & Waterson, 2010; Charles, 2000; Hojabri, Borousan, & Manafi, 2012; Lockamy & Smith, 2009).

With telemedicine technology, individuals in rural communities have better access to the same intervention services available to their urban counterparts (American Telemedicine Association, 2013; Hojabri et al., 2012; Huston & Huston, 2000; Obstfelder, Engeseth, & Wynn, 2007).


*Coverage applies to certain health services and/or rural areas only.

Source: American Telemedicine Association
Center for Connected Health Policy – National Telehealth Policy Research Center

Website: [http://cchpca.org/](http://cchpca.org/)

Mission: “The Center for Connected Health Policy (CCHP) is a nonprofit, nonpartisan organization working to maximize telehealth’s ability to improve health outcomes, care delivery, and cost effectiveness.”

**Report:** State Telehealth Policies and Reimbursement Schedules A Comprehensive Plan of the 50 States and District of Columbia

- [http://cchpca.org/sites/default/files/uploader/50%20STATE%20MEDICAID%20REPORT%20SEPT%202014.pdf](http://cchpca.org/sites/default/files/uploader/50%20STATE%20MEDICAID%20REPORT%20SEPT%202014.pdf)
Chi and Demiris (2014) Systematic review of studies employing telehealth interventions which focused on family caregivers’ outcomes. The Embase, CINHAL, Cochrane and PubMed databases were searched using combinations of keywords including “telehealth,” “telemedicine,” “telecare,” “telemonitoring,” “caregiver” and “family.”

65 articles reviewed included 52 experimental studies, 11 evaluation studies, one case study and one secondary analysis. Thirty-three articles focused on family caregivers of adult and older patients, while 32 articles focused on parental caregivers of pediatric patients.
Chi and Demiris (2014)

- The technologies included video, web-based, telephone-based and telemetry/remote monitoring.

- Six types of interventions delivered via technology:
  - Education, Consultation (including decision support), Psychosocial/cognitive behavioral therapy (including problem solving training), Social support, Data collection and monitoring, and Clinical care delivery.

- More than 95% of the studies reported significant improvements in the caregivers’ outcomes and that caregivers were satisfied and comfortable with telehealth.

- The review showed that telehealth can positively affect chronic disease care, home and hospice care.

Wacker and colleagues (2013) had behavior analysts conduct functional analyses via telehealth.

Findings suggested that behavior analysts can conduct FAs effectively and efficiently via telehealth.

Wacker and colleagues (2013)

- 20 Children with Autism Spectrum Disorders
- Child Age Ranged from 29-80 months
- Each child displayed problem behavior and lived an average of 222 miles from the nearest available behavior analyst
- Parents traveled to telehealth clinics within 15 miles of home for weekly telehealth consults

Wacker and colleagues (2013)

- FAs identified environmental variables that maintained problem behavior for 18 of the 20 cases.

- Interrater agreement averaged over 90%.

Tele-Behavioral Health – Further Peer Reviewed References for Conducting FBAs or Parent Training


Wayne W. Fisher, Kevin C. Luczynski, Stephanie A. Hood, Aaron D. Lesser, Mychal A. Machado, Cathleen C. Piazza, Preliminary findings of a randomized clinical trial of a virtual training program for applied behavior analysis technicians, Research in Autism Spectrum Disorders, 2014, 8, 9, 1044
Uses of iPads and Technology to Support Tele-Behavioral Health

Recording of Behavior
Video Recording
Remote Conduct of FBAs or PCP meetings
Parent Education, Training and Support
Oasis Training Program (Research Example)
Recommended Telehealth Applications for Video Calling

Download Provider Handbook
Example Uses of *iPad Video* for Recording of Behavior

- Video recording of baseline level of problem behavior during problem routine or problem transition
- Video recording of exemplary intervention techniques as practiced by the clinician or parent
- Video recording for *Teaching Expectations* in which a step-by-step set of expectations for a problem daily routine or transition is taught through modeling, or similar methods
- Video recording of Person-Centered Planning process
iOS Apps for Telehealth Communication by HIPPA Compliance

HIPPA-Compliant Apps

- **Vsee** - A free group VOIP calling software that is fully encrypted, HIPPA compliant and designed for low-bandwidth use in rural areas

- **Hippachat** – A free (for now) texting and VOIP calling software that is fully encrypted and HIPPA compliant

Non HIPPA-Compliant

- **Skype** – the standard Microsoft-owned VOIP software. Available for desktops, tablets and smartphones

- **Hangouts/Voice** – The standard Google-owned VOIP calling software

- **Facetime** – The standard Apple-owned VOIP calling software (Drawback – requires Apple OS on each end)
The Best Video Calling app for Telehealth on iPad: VSee

VSee


VSee gives you free 5-way group video calls, screen sharing, and instant messaging, with a clean interface.

Use VSee for secure, low-bandwidth calls on 3G, 4G, and WiFi networks.
The Best Video Calling app for Telehealth on iPad: VSee

Vsee

Features:
• 5-way* group video chat: see everyone at once
• Screen sharing: view the apps and desktops that other users share from their Macs and PCs. Pan and zoom shared screens.
• API for integrating with Telehealth and other applications
• Instant messaging and group chat
• No Ads!
• Works on 3G, 4G, and WiFi

*5-way group video chat supports up to 5 participants in the video call.
The Best Video Calling apps for Telehealth on iPad: VSee

Vsee

- Desktop app available on Mac and PC (see below for more info)
- Low bandwidth: conserves data usage
- Calls are encrypted end-to-end for absolutely no eavesdropping
- Switch between front and back cameras

Why not use skype, google, or other popular alternatives for telehealth? See the link below for an explanation:

http://vsee.com/blog/dont-skype-google-video-chat-for-telehealth/
The Best Video Calling apps for Telehealth on iPad: VSee Features

VSee - Simple, secure video conferencing and screen share telemedicine software.

One-click web video calling

▶ VSee simplifies patient-doctor interactions with its easy no-install, one-click video calling from the web.

One-click screen share

▶ Whether it's a medical chart or treatment instructions, doctors or patients can share the application or document by simply clicking on it. Circle or draw on the shared application with the VSee annotation tool to make explanations clear.

Share medical devices

▶ VSee provides medical device integration with stethoscopes, otoscopes, ultrasounds, X-rays, surgical fluoroscopes, etc. Doctors can both receive clear medical device readings and observe patients in HD video simultaneously.
The Best Video Calling apps for Telehealth on iPad: VSee Features

VSee - Simple, secure video conferencing and screen share telemedicine software.

Low bandwidth HD video and 3G mobility

- VSee makes HD video practical over consumer networks by only requiring a fraction of the bandwidth of Skype and Vidyo. A NIH paper published in the Journal of Telemedicine and eHealth showed that VSee works well even over 3G networks. VSee is ideal where bandwidth is low and has been successfully used from Rwanda to Indonesia to Syria.

Secure, encrypted, and HIPAA compliance

- VSee uses end-to-end 256-bit AES, FIPS 140-2 certified encryption to guarantee that no servers have access to the decryption keys. VSee is so secure that it beat out Cisco and Polycom for U.S. Congress approval to run behind its firewall. Learn more at vsee.com/hipaa.

Source: https://vsee.com/telemedicine
VSee video chat is HIPAA compliant in two ways:

1) It protects data privacy in that all audio/video communication is securely encrypted and transmitted from point-to-point such that even VSee does not have access to any identifiable health information that may be communicated.

2) VSee offers the HIPAA-required Business Associate Agreement where VSee agrees to be responsible for keeping all patient information secure and to immediately report any breach of personal health information.

Source: https://vsee.com/hipaa
Another HIPAA-compliant Telehealth App: HipaaChat

HipaaChat is text messaging, but HIPAA-compliant. Don’t want to type? Try the Walkie-Talkie feature! Need telemedicine? Use our video phone.

Got something to say to a colleague? Ordinary texting is fast and easy. It’s also a HIPAA-violation. Now, use HipaaChat to send quick texts, patient info, reports, images or anything else.

Need to identify a situation and take action? Be in two places at once, because HipaaChat works like a videophone for telemedicine. Speedy, safe, secure & IT-approved!

Press Release (Jan 15, 2015):
http://www.everbridge.com/everbridge-launches-hipaachat-mobile-messaging-app-healthcare-professionals/
Another HIPAA-compliant Telehealth App: HipaaChat Features

HIPAA-compliant security and privacy.

HipaaChat was built from the ground-up to enable you to be HIPAA-compliant. We map to every HIPAA-regulation, including all Administrative, Technical and Physical Safeguards.

It’s expertly encrypted and secure because we use the same advanced algorithms as the U.S. Department of Defense.

Patient Safety First! Protect your patients, protect their privacy, and protect your practice.
Another HIPAA-compliant Telehealth App: HipaaChat Features

Coordinate & save time:

- Texting -- gives you clarity of the order. Walkie-talkie does too, faster.
- Photos -- help identify a situation.
- Video calls -- bring immediate telemedicine consults. Video also captures any change in patient status.

Exchange words. Or photos (aka, a thousand words).

HipaaChat lets you send securely encrypted text and photo messages. HipaaChat anything from orders, vitals, lab reports, images, referrals, prescriptions and discharge instructions. No need to call or wait on hold for information. If you’re a texter, you’ll love HipaaChat on iPhone or iPad.
Another HIPAA-compliant Telehealth App: HipaaChat Features

HipaaChat turns any iPhone or iPad into a HIPAA-compliant videophone for telemedicine.

But unlike traditional telemedicine systems, HipaaChat is as simple as making a phone call. A world’s first! And it’s mobile, so doctors can perform video consults from anywhere to anyone. Consult with ERs, remote hospitals, nursing homes or referring physician offices! You can also use HipaaChat for post-op “rounds” so patients can go home sooner. No more rushing to the hospital or transferring patients to “see” a specialist. Taking call has never been easier! *Video calling requires iPhone 4S+, iPad 2+, or iPod Touch 5th Gen.

Don’t want to type? Try our walkie-talkie!

It’s just like when we were kids. You hold the button, you speak, they hear you. And then you’re done. HipaaChat’s walkie-talkie feature is even faster than texting because who wants to type all those complex medical words? And if someone needs to refer back to your voice message, they can play it over and over again.

Pricing: HipaaChat Lite is on sale (free!) for a limited time only. It will transition to a paid app in the future.

Use of IPADS and Technology to Support Tele-Behavioral Health

Teleconferencing via Vsee (Secure Encrypted), Hipaachat, Skype, or other apps for free video calling can support a variety of behavior-support related activities, including:

1. Observation of Client Problem Behavior(s) or Problem Routines or Transitions
2. Observation of Parent Performing interventions
3. Consultation with Parents, other Providers involved in the child’s care
4. Remote data collection, assessment, or sharing of documents
5. Identification of environmental variables maintaining problem behavior, Remote Functional Assessment/FBA (See previous references)
Recording of Behavior - Example 1:

- Behavior support clinician works with parent to record a video of a problem routine, problem transition, or problem behavior.

- The routine or transition is then analyzed using behavioral principles and contextual data to determine likely behavior triggers, function of problem behavior, inadvertent reinforcement of unwanted behavior.

- An intervention is designed based upon the above.
Use of IPADS and Technology to Support Tele-Behavioral Health

Recording of Behavior - Example 2:

- Behavior support clinician works with parent to record a video of an example of the intervention being performed.
- The example routine or transition intervention would then be documented by the video and available for use as a reminder.
- Based on the above, a parent helps to learn how to implement the PBS practitioner’s intervention recommendations with a high fidelity.
Recording of Behavioral Expectations - Example 3:

- Behavior support clinician works with parent to record short videos demonstrating household or contextual expectations for behavior.
- The example expectations would be positively taught and the videos used to reinforce child learning about positive expectations for conduct.
- Based on the above, a child’s performance of desired behavior will be more likely, and the PBS professional can help teach parents how to reinforce desired behaviors when present.
Further examples (See OASIS program for some of this in action):

Parent Training and Consultation, including subcomponents such as:

- Awareness Training
- Training in basic PBS and ABA applied intervention skills
- Training in basic PBS and ABA concepts and theory
- Assessment of Skills and Knowledge through Quizzing
Websites for Info on Telehealth

- Resources on Insurance Coverage Parity for Telehealth and State Legislation
Video examples (Coming soon!)

**OASIS** (Online and Applied System for Intervention Skills) training program, which was developed in collaboration with parents of children with autism. This is a great example of parent support & parent consultation.[Current research]

**SAMHSA Training Resource:** [http://www.integration.samhsa.gov/operations-administration/telebehavioral-health](http://www.integration.samhsa.gov/operations-administration/telebehavioral-health)

“Divided into six sessions, the training will provide you with the tools and resources necessary to identify and implement a telebehavioral health program. Each educational session includes a Q&A session with telebehavioral health experts, and associated resources for further exploration and information.”

**Center for Telehealth & e-Health Law**

- [www.ctel.org](http://www.ctel.org)

**National Center for Telehealth and Technology**

- [http://t2health.dcoe.mil/](http://t2health.dcoe.mil/)
Discussion

How is your center currently using the iPads and other technology for tele-behavioral health?

- What are your future plans?
- How does billing affect feasibility?
- How does lack of rural cell phone coverage affect connectivity?
Thank you for joining us today!

Our next webinar is scheduled for May 14th. The topic is Presentations and Workshops for Families

If you have any questions, please contact us.

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