Taking Neuropsychology Out of The Office: Extending Our Practice through Telehealth Technology

Munro Cullum, PhD, Gerard Gioia, PhD and Kenneth Podell, PhD
Conflict of Interest/Financial Disclosure

Dr. Cullum:
• Royalties from Pearson, Inc. for Texas Functional Living Scale
• Honoraria from: variety of medical institutions for talks provided on mild TBI/concussion

Dr. Gioia:
• Royalties from: Psychological Assessment Resources, Inc.
• Honoraria from: variety of medical institutions for talks provided on mild TBI/concussion

Dr. Podell
• Honoraria from: variety of medical institutions for talks provided on mild TBI/concussion
Overview

1. Introduction
2. Historical/Research Perspectives
3. Rules/Regulations
4. Resources
5. Ethical and practical considerations
6. Future of Neuropsych in the age of technology
7. Q & A
What’s In a Name?

Addresses issue of delivery/communication of procedures and not technique or actual performance.

Not specific to any type of health care specialty dentistry, nursing, stroke, urology, psychology, surgery

Definitions vary nationally and by state
- Definition (state law) can define service type, modality and reimbursement
Why Telehealth?

<table>
<thead>
<tr>
<th>Advantages/Benefits</th>
<th>Disadvantages/Face-to-Face</th>
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<tbody>
<tr>
<td>Accessibility –</td>
<td>• Cost of home technology</td>
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<tr>
<td>• Ease of reaching rural areas</td>
<td>• Technological difficulties</td>
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<td>• Specialty services</td>
<td>• Patient familiarity with technology</td>
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<td>• Transportation</td>
<td>• Control of the environment</td>
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<td>• Improved outcomes</td>
<td>• Easy of rapport and engagement</td>
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<td>• Often same as face-to-face</td>
<td>• Anxiety/discomfort with technology</td>
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<tr>
<td>• Patient satisfaction</td>
<td>• Noisy home environment</td>
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<td>• Cost-effective/Expand practice</td>
<td>• Control of environment</td>
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<tr>
<td>• Ease of scheduling</td>
<td>• Rapport/Non-verbal cues</td>
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<td>• Patients and docs</td>
<td>• Handling emergencies</td>
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<td>• Technology savvy</td>
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<tr>
<td>• Patient in home environment</td>
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Wade, SL et al, Rehab. Psychology, 2019;64(3); 298-306
Mechanisms of Telehealth

• Live interactive video (synchronous)
  – Web-based e-health consumer sites
  – Point-to-point (organization specific)

• Store and forward (asynchronous)
  – Images, vitals, videos, etc.

• Remote patient monitoring (RPM)
  – Remote collection of data that is stored and forwarded to provider
  – 3rd party monitoring systems
    • EEG, ECG, PCSS

• Telephone, faxes, emails
Is the Public Ready for Tele-Health

- At least 50% were interested in ≥1 of the services

- Yet only 21% had used tele-health
Is Healthcare Ready for Tele-Health?

Based on 2016 survey data:
- 15.4% physicians are in practices that use patient interactive telehealth.
- 11.2% are in practices that use doc-to-doc telehealth consults.
- In practices
  - ≤4 providers: 8% use telehealth
  - >50 providers: 25% use telehealth
Issues to Ponder

• Model
  – Synchronously, asynchronously or both
  – Consultation alone
  – Test administration via video or phone
  – Use of technician on the ground

• Is it a good fit for patient type?

• Using online or video presented NP tests or questionnaires
  – Reliability/validity issues

• How to handle an emergency situation

• Confirming physical location of patient

• HIPPA compatible technology that is truly secured
  – Same level of compliance as in-office/person
  – Additional state laws?

• Local ordinance – can you practice from your location (e.g., home)?

• Does your malpractice policy allow you to do telehealth?
Issues to Ponder

- Proper consent specific to telehealth
- Confidentiality by the practitioner
- Confidentiality by the patient
  - Recording the session
  - Posting a confidential communication to social media
- Backup plan – in case tele-visit fails
- Billing – determined by state law
  - What if technology fails 25 minutes into session
    - Still billable?
- Maintaining test material confidentiality
  - If no onsite assistant
  - Home testing?
- Practicing across state lines
  - PSYPACT
- Cultural/regional differences
Historical Perspectives and Research Findings

Munro Cullum, PhD

University of Texas Southwestern Medical Center
Telepsychology, Telepsychiatry, Telemental Health

Based on verbal interactions, with visual & auditory cues key

Natural for video teleconference environment … And neuropsychology
Telehealth Publications by Specialty
PubMed search 1-15-13

"Telemental" = 55  "Telehealth" = 16,480

- radiology (1473)
- pathology (841)
- dermatology (362)
- psychiatry (302)
- surgery (237)
- rehabilitation (227)
- stroke (106)
- neurology (27)
- psychology (23)
- neuropsychology (2)
Telehealth Publications by Specialty

PubMed search 2-7-18

“Telemental” = 143  “Telehealth” = 26,714

- radiology (1698)
- pathology (1007)
- dermatology (595)
- psychiatry (484)
- surgery (294)
- rehabilitation (591)
- stroke (262)
- neurology (66)
- psychology (64)
- neuropsychology (8)
Telehealth Publications by Specialty
PubMed search 2-7-18

“Telemental” = 205  “Telehealth” = 32,604
Telepsychology/Telepsychiatry Evidence

- Most studies report similar outcomes to traditional face-to-face therapies*
- Similar diagnostic impressions in many d/o’s
- Good acceptability by patients & families
- Adequate to good acceptability by therapists
- Appears to be reasonable alternative, particularly when distance/time is a factor
- Cost-efficiency demonstration is complex

*Limited data for pediatric studies
Typical Video teleconference (VC) setup

Implications for *teleneuropsychology*?
Teleneuropsychology Questions

- Many neuropsychological tests involve question-answer responses & require little equipment
- What tests can be administered via video teleconference technology?
- Some administration procedures for other tests could be modified for telemedicine application
Teleneuropsychology Questions

• *Impact on reliability / validity?*

• Need for validation in the tele-environment?
  • Modified instructions/administration effects

• Applicability of norms?

• What populations are suitable for this assessment medium?
Teleneuropsychology Literature

• Preliminary neuropsychological literature search in 2006 revealed <10 studies, with varying samples and tests, though encouraging results

Teleneuropsychology Literature

- Early studies generally examined singular or a few brief screening tools (e.g. MMSE)

- Designs varied
  - Sample sizes generally small
  - Limited tests examined
  - Alternate test forms inconsistently used
  - Counterbalancing often not done
  - Use/role of remote assistants
  - Normal vs impaired subjects
Feasibility of Telecognitive Assessment in Dementia

C. Munro Cullum
Myron F. Weiner
Helena R. Gehrmann
Linda S. Hynan
University of Texas Southwestern Medical Center at Dallas

Videoconferencing (VC) technology has been used successfully to provide psychiatric services to patients in rural and otherwise underserved settings. VC-based diagnostic interviewing has shown good agreement with conventional face-to-face diagnosis of dementia in several investigations, but extension of this technology to neuropsychological assessment has received little attention. To this end, the authors administered a brief battery of common neuropsychological tests via VC technology (telecognitive) and traditional face-to-face methods to 14 older persons with mild cognitive impairment (MCI) and 19 persons with mild to moderate Alzheimer’s disease (AD). Highly similar test scores were obtained when participants were tested in-person or via VC. Telecognitive assessment appears to be a valid means to conduct neuropsychological evaluation of older adults with cognitive impairment. Furthermore, continued development of VC technology has implications for expanding neuropsychological assessment options in underserved populations.

Keywords: neuropsychological testing; cognition; dementia; videoconferencing; telemedicine; telecognitive assessment
Teleneuropsychology: Larger Study Design

- Utilize common neuropsychological measures often used in assessment of dementia
- Tap multiple cognitive domains in brief fashion
- Tests amenable to telemedicine environment
- Alternate test forms available for test-retest
teleneuropsychology study

aims

investigate:
• feasibility
• utility
• acceptability
• reliability
• validity *in different populations:*

- urban caucasians
- rural american indians
- with and without dementia
Teleneuropsychology Testing Setup
Teleneuropsychology Considerations

• Enhancing subject comfort with testing environment and ability to understand & carry out instructions, manipulate test materials & assist examiner

• What materials are needed at remote site?
  • How will clients access materials?
  • What will be shown to them vs local manipulatives

• Assess need for remote-site assistance with exam
  • Help with what? Special needs/precautions?
  • Need observer / assistant in room?
  • Assistance available nearby?
Telecog Study Design: Subjects

• 100 *Urban Ss*:
  • 50 controls,
  • 25 MCI
  • 25 AD

• 75 *American Indians* (Choctaw Nation):
  • 50 control
  • 25 AD/MCI

NIH R01-AG27776-01A2
Teleneuropsychology Battery

- Mini Mental State Examination (MMSE)
- Hopkins Verbal Learning Test-Revised
- Digit Span (forward & backward)
- Letter Fluency
- Category Fluency
- Boston Naming Test (15 item version)
- Clock Drawing

-Alternate forms administered in counterbalanced fashion x condition
-Average test time designed to be < 45 minutes
Subjects

• N = 203 (119 control, 84 MCI / AD)
• Age: 46-90 yr, M = 68.4 (SD=9.6)
• Educ: 6-20 yr, M = 14.1 (SD=2.3)
• 63% Female

Cullum et al., JINS (2014)
### Results: Testing Time (minutes) x Condition Videoconference (VC) vs Face to Face (FF)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC Test Time</td>
<td>41.3</td>
<td>8.8</td>
<td>29</td>
<td>94</td>
</tr>
<tr>
<td>FF Test Time</td>
<td>36.3</td>
<td>7.1</td>
<td>24</td>
<td>74</td>
</tr>
</tbody>
</table>
Results: MMSE x Condition: Total Sample

ICC = .91, p < .0001
BNT, Letter & Category Fluency x Test Condition

Cullum et al., JINS (2014)
BNT, Letter & Category Fluency x Test Condition

Cullum et al., JINS (2014)
Digit Span & Clock Drawing x Test Condition

Cullum et al., JINS (2014)
Digit Span & Clock Drawing x Test Condition

Cullum et al., JINS (2014)
HVLT-R Learning x Test Condition

Cullum et al., JINS (2014)
HVLT-R × Test Condition

HVLT Total score ICC = .80

Cullum et al., JINS (2014)
Video Teleconference Administration of the Repeatable Battery for the Assessment of Neuropsychological Status.

Galusha-Glasscock JM¹, Horton DK¹, Weiner MF², Cullum CM³.

Abstract
Teleneuropsychology applications are growing, but a limited number of assessment tools have been studied in this context. The present investigation was designed to determine the feasibility and reliability of the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) administration by comparing video teleconference (VTC) with face-to-face (FF) test conditions. Eighteen adult subjects over age 55 with and without cognitive impairment were administered Forms A and B of the RBANS in VTC and FF settings in counterbalanced fashion. Similar RBANS scores were obtained in both test conditions, with generally high correlations between administration methods. Results support the feasibility and reliability of remote administration of the RBANS via VTC.
RBANS Results - FTF vs VTC

Immediate...
Visuospatial
Language
Attention
Delayed...
Total Scale

Face to Face
VTC

r=.84
r=.59
r=.75
r=.81
r=.90
r=.88

Remote Neuropsychological Assessment in Rural American Indians with and without Cognitive Impairment.

Wadsworth HE, Galusha-Glasscock JM, Womack KB, Quiceno M, Weiner MF, Hynan LS, Shore J, Cullum CM.

Abstract

OBJECTIVE: To determine the feasibility and reliability of a brief battery of standard neuropsychological tests administered via video teleconference (VTC) to a sample of rural American Indians compared with traditional face-to-face administration.

METHODS: The sample consisted of 84 participants from the Choctaw Nation in Oklahoma, including 53 females and 31 males [M age = 64.89 (SD = 9.73), M education = 12.58 (SD = 2.35)]. Of these, 29 had a diagnosis of mild cognitive impairment or dementia, and 55 were cognitively normal. Tests included the MMSE, Clock Drawing, Digit Span Forward and Backward, Oral Trails, Hopkins Verbal Learning Test-Revised, Letter and Category Fluency, and a short form Boston Naming Test. Alternative forms of tests were administered in counterbalanced fashion in both face-to-face and VTC conditions. Intraclass correlation coefficients (ICCs) were used to compare test scores between test conditions across the entire sample.

RESULTS: All ICCs were significant (p<.0001) and ranged from 0.65 (Clock Drawing) to 0.93 (Boston Naming Test), with a mean ICC of 0.82.

CONCLUSION: Results add to the expanding literature supporting the feasibility and reliability of remote videoconference-based neuropsychological test administration and extend findings to American Indians.
Validity of Teleneuropsychological Assessment in Older Patients with Cognitive Disorders

Hannah E. Wadsworth1,*, Kaltra Dhima1, Kyle B. Womack1,2, John Hart, Jr1,2, Myron F. Weiner1, Linda S. Hynan1,3, C. Munro Cullum1,2,4

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E-mail address: hannah.wadsworth@utsouthwestern.edu (H.E. Wadsworth)

Editorial Decision 11 December 2017; Accepted 16 December 2017
Teleneuropsychology Validity
FTF and VC results from subjects with vs without cognitive impairment

FTF vs VTC Adjusted Mean Differences

- Clock Total
- Digit Span Forward
- Digit Span Backward
- BNT-15
- HVLT-R Total
- HVLT-R Delayed Recall
- FAS
- Animals

Wadsworth et al., Arch Clin Neuropsy, 2017
Conclusions

• Telecognitive testing in older subjects is feasible with minimal support at far end (at least >MMSE=15)

• Testing in VC and FF conditions yielded similar results across tests examined and in urban Caucasian and rural American Indian groups

• Validity supported by ability of tests to distinguish impaired vs non-impaired groups equally well in each condition (MCI+AD vs NC)
# Evidence for NP Tests administered via VC

<table>
<thead>
<tr>
<th>GLOBAL COGNITIVE</th>
<th>LANGUAGE</th>
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<tbody>
<tr>
<td>MMSE, Ammons Quick Test, Camcog, NART, SPMSQ, WASI</td>
<td>Phonemic &amp; Category Fluency, Boston Naming Test, WAIS-3 Vocabulary, BDAE Picture Description, MAE Aural Comprehension</td>
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<tr>
<th>ATTENTION / INFO PROCESSING</th>
<th>VISUOSPATIAL</th>
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<tbody>
<tr>
<td>Digit Span, Symbol Digit Modalities, Trail Making Test, Brief Test of Attention, Seashore Rhythm Test, Adult memory &amp; Info Processing</td>
<td>Clock Drawing, WAIS-3 Matrix Reasoning, Beery VMI, Visual Object &amp; Space Perception</td>
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<tr>
<th>EPISODIC MEMORY</th>
<th>PSYCHOMOTOR</th>
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<tr>
<td>HVLT, CVLT-II Short form, RAVLT, Modified Rey-O Figure, WMSR Logical Memory, Benton Visual Retention Test, Adult Memory &amp; Information Processing</td>
<td>Grooved Pegboard</td>
</tr>
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</table>

*Cullum & Grosch, in Myers & Turvey (2012)*
Evidence for NP Tests administered via VC

12 Studies met criteria (N=497)

Of 79 scores
- FF>VTC in 61%
- VTC>FF in 33%
- FF=VTC in 6%

Conclusion: No effect of VC vs FF
Consumer Acceptability of Teleneuropsychology in Adults

- N = 40
  - 21 control, 19 AD/MCI
  - 62% female
- Age 50-82 (M=71)
- Educ 10-20 (M=15)
- Likert scale for satisfaction ratings

Parikh, Grosch, Graham, Hynan, Weiner, Shore & Cullum , TCN (2013)
Consumer Acceptability of Teleneuropsychology

• 98% satisfied with videoconference testing

• Instructions during VC testing easy to understand

• Not concerned about privacy during VC testing

• 60% no preference for test condition (30% preferred FF vs, 10% VC)

Parikh, Grosch, Graham, Hynan, Weiner, Shore & Cullum (2013)
Consumer Acceptability of Teleneuropsychology

- 29% felt VC was more “fun”
- 34% felt it was easier to communicate with examiner FF
- 15% felt VC made them less nervous
- What about effects of cognitive impairment on acceptability?

Parikh, Grosch, Graham, Hynan, Weiner, Shore & Cullum (2013)
Consumer Acceptability of Teleneuropsychology

Parikh, Grosch, Graham, Hynan, Weiner, Shore & Cullum (2013)
Provider pros and cons of Telepsychology

Benefits of Telepsychology:
- Increased family motivation
- Understanding family dynamics/home environment
- Decreased stigma/negative attitudes
- Ease of scheduling & better family attendance
- Therapeutic alliance equivalent to face-to-face
- Weekly progress equivalent to face-to-face
- Homework completion equivalent to face-to-face

Benefits of Face-to-Face:
- Fewer disruptions during sessions
- Easier to read nonverbal communication
- Easier to establish rapport
- Increased parent/child/therapist engagement and family comprehension

Wade, Raj, Moscato & Narad, Rehab. Psychology, 2019
Teleneuropsychology Assessment: Summary

• Telecognitive testing or teleneuropsychology results suggest*:
  
  • Feasibility  
  • Applicable in rural and urban settings  
  • Reliability  
  • Validity  
  • Accepted & well tolerated by subjects  

*for those tests studied to date
Teleneuropsychology Assessment

• Neuropsychological testing via telemedicine can bring these specialized neurodiagnostic procedures to rural and underserved populations.

• Though promising, telecognitive testing is still in early stages, with more to be learned about reliability and validity of different neurocognitive tests in various populations (e.g. children).
"Telepresence" technology

Opportunities for Neuropsychology!
State Laws
Kenneth Podell, PhD
State Laws

• Define telehealth services
  – Who, what, how of practice

• Determine reimbursement and policies covered
  – Medicaid, third-party, etc

• Pay attention to ability to practice across state lines
  – Individual states determine participation in PsyPACT

APA Newsletter, winter 2019
“Nonprofit, nonpartisan organization working to maximize telehealth’s ability to improve health outcomes, care delivery, and cost effectiveness.”

https://www.telehealthpolicy.us/

- Center of excellence
- Born out of the CA telehealth policy initiative
- Federally designated, independent, National Telehealth Policy Resource Center
A formal, legal agreement between 2 or more states that allows individuals from the agreeing states to participate in a joint program outside federal regulations

- Must be consistent with intent of congress
- Allows flexibility and functionality by the compact states to devise a mutually beneficial, self-regulatory program.
- States maintain their autonomy and independency in decision making and functioning.
- Allows flexibility and functionality by the compact states to devise a mutually beneficial program.
- States maintain control through coordinated legislation and administrative board
  - Often using national organizations.
- There are over 150 interstate compacts
PSYPACT

Created by the Association of State and Provincial Psychology Boards (ASPPB), the Psychology Interjurisdictional Compact (PSYPACT) is an interstate compact that facilitates the practice of psychology using telecommunications technologies (telepsychology) and/or temporary in-person, face-to-face psychological practice.

ABOUT PSYPACT

- PSYPACT is a cooperative agreement enacted into law by participating states.
- Addresses increased demand to provide/receive psychological services via electronic means (telepsychology).
- Authorizes both telepsychology and temporary in-person, face-to-face practice of psychology across state lines in PSYPACT states.
- PSYPACT states have the ability to regulate telepsychology and temporary in-person, face-to-face practice.
HOW PSYPACT WORKS

PSYPACT must be enacted by a state legislature. Once enacted, a state joins the PSYPACT Commission, the governing body of PSYPACT.

Psychologists licensed in a PSYPACT state can practice under PSYPACT via two different methods:

- **Telepsychology:** Psychologists obtain an Authority to Practice Interjurisdictional Telepsychology from the PSYPACT Commission, which requires an active ASPPB E.Passport.

- **Temporary Practice:** Psychologists obtain a Temporary Authorization to Practice from the PSYPACT Commission, which requires an active ASPPB IPC.

PSYPACT states communicate and exchange information including verification of licensure and disciplinary sanctions.

BENEFITS OF PSYPACT

- Increases client/patient access to care
- Facilitates continuity of care when client/patient relocates, travels, etc.
- Certifies that psychologists have met acceptable standards of practice
- Promotes cooperation between PSYPACT states in the areas of licensure and regulation
- Offers a higher degree of consumer protection across state lines

HOW PSYPACT IMPACTS PSYCHOLOGISTS

- Allows licensed psychologists to practice telepsychology and/or conduct temporary in-person, face-to-face practice across state lines without having to become licensed in additional PSYPACT states
- Permits psychologists to provide services to populations currently underserved or geographically isolated
- Standardizes time allowances for temporary practice regulations in PSYPACT states

EMAIL: info@psypact.org  WEBSITE: www.psypact.org  SOCIAL: @PSYPACT
The PSYPACT Commission is the governing body of PSYPACT responsible for oversight of the compact and for writing the Rules and Bylaws that govern PSYPACT. Each PSYPACT state has appointed a representative to serve as their state's Commissioner.

The PSYPACT Commission recently held its first inaugural meeting on July 22nd-23rd, 2019. For more information about the meeting, please visit the Commission page at www.psypact.org.
PROPOSED TIMELINE

**September 2019** Public Comment Period Opens for any Additional Rules created by the PSYPACT Commission

**October 9, 2019** PSYPACT Commission Meeting and Public Hearing for Proposed Rules from July 2019 Meeting (via teleconference)

**November 21-22, 2019** PSYPACT Commission Meeting and Public Hearing for Proposed Rules developed after July 2019 Meeting (in-person)

**GOAL! Quarter 1 2020** Authorization Application Process to Practice under PSYPACT Opens

### FEES FOR PSYCHOLOGISTS

<table>
<thead>
<tr>
<th>Service</th>
<th>Fee</th>
<th>Temp. In-Person, Face-to-Face Practice</th>
<th>Fee</th>
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<tbody>
<tr>
<td>Authorization to Practice</td>
<td>$40</td>
<td>Temporary Authorization to Practice</td>
<td>$40</td>
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<tr>
<td>Interjurisdictional Telepsychology</td>
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<tr>
<td>E.Passport Application Fee</td>
<td>$400</td>
<td>Interjurisdictional Practice Certificate (IPC) Application Fee</td>
<td>$200</td>
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<tr>
<td>E.Passport Annual Renewal Fee</td>
<td>$100</td>
<td>Interjurisdictional Practice Certificate (IPC) Annual Renewal Fee</td>
<td>$50</td>
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PsyPACT Endorsements
1. Know the laws and regulations of PsyPACT and both states!
2. Know your technology – competent in using and does it fit client.
   • Identify emergency resources in client’s area
3. Same ethical standards and quality of care
4. Clear and accurate informed consent is to be obtained
   • Issues of technology, data, jurisdiction
5. Maintain confidentiality
   • Warn about increased risk of confidentiality breach using telecommunication
6. Secure your data – minimize risk of breach or hack of client data.
7. Test Administration – know limitations and what tests can be used
   • Impact of technology on testing
   • Maintaining test security – client not recording/saving questions or answered

American Psychologist, 2013: 68(9); 791-800
1. Apply same standard of care as in-person care.
2. Know the location of the client throughout all of the tele-visit.
3. Let client know your location and state licensure(s).
4. Know all rules and regulations (state and insurance, if applicable).
5. Let patient know about all conflicts and confidentiality limitations, duty to report, etc.
6. Competent in the technology being used.
7. Maintain confidentiality and “ensure” electronic and physical security and integrity of records, electronic data and communications and proper disposal of such.
8. Provide client with the contact info and process for filing a complaint in your jurisdiction.
9. Before each session verify client’s identify and anyone privy to electronically transmitted service during that contact.
10. Warn patient about potential breech of confidentiality specific to technology.
Suggestions
Suggestions

• Written policies and procedures
  – Emailing, data security, consent, destruction of data, patient recording session, etc

• HIPPA compliance of technology
  – Emails secured?
  – Cloud storage HIPPA compatible?
  – Review terms and conditions for HIPPA compatibility

• Using separate computers for professional and personal telecommunications

• Strong encryption of data

• Practice and know your technology

• Make sure malpractice policy covers tele-visits

• Local zoning ordinances?
  – Can you practice from your residence?
Suggestions

- Informed consent specific to tele-health technology
- Confirm client’s physical location – each time.
  - Get verbal attestation each time
- Ensure client is not recording or storing session info on their computer
- Background of video and background lighting
- Accentuate your animation
- Where to look
- Train your client/patient ahead of visit to minimize problems
- Know the laws
Tele-Sport Concussion Care Model Using ATCs

• Philanthropic funded program
• Coverage in rural areas around Houston using business Skype.
• Consent obtained.
• Trained ATCs do evaluation during schedule tele-visit
  – Brief neuro and neck exams
  – BESS, VOMS
  – ImPACT? (prior to tele-visit)
  – BSI, RADS
• Use ImPACT passport for monitoring sx
• Educate student-athlete and parent(s) – multiple flyers
• Submit treatment plan and accommodations to school via ATC
• ATCs can demo Eply’s and ocular-motor exercises, and do neck treatment
• Averaging 2.25 follow-up visits (total of 3.25)
  – at least one follow-up is with physician per Texas state law
• Must follow RTP with documentation of completion (PCSS after each step)
• Report in EPIC
Telehealth Resources
Interactive State-by-State Map

CCHP helps you stay informed about telehealth-related laws, regulations, and Medicaid programs. The map and search options below cover current laws and regulations for all fifty states and the District of Columbia. The information provided is only for research and informational purposes and should not be construed as legal counsel. Please consult with an attorney if you are seeking a legal opinion. To view the full report, visit the 50 State Report PDF.

Current State Laws & Reimbursement Policies

Search by Filter

- All 50 States & D.C.
- All Categories
- All Topics

Search by Keyword

APPLY

Data Last Updated Oct 15, 2019

*Key applicable only to topics indicated with an asterisk in drop-down menu.
A Telepsychology Casebook: Using Technology Ethically and Effectively in Your Professional Practice

Editor: Linda F. Campbell, Fred Millán, and Jana N. Martin

Pages: 198
Item #: 4317474
ISBN: 978-1-4338-2858-4
Copyright: 2018
Format: Hardcover
Availability: In Stock
Other Format: Softcover

Examine or adopt this book for teaching a course


Palomares, R.S. et al. Critical Concerns When Incorporating Telepractice in Outpatient Settings and Private Practice J Child and Adol Psychopharm, 2016:26(3); 252-59.
Myers & Turvey (2012). *Telemental Health*. Elsevier

The National Consortium of Telehealth Resource Centers (NCTRC) is funded by the U.S. Department of Health and Human Services (HHS) and Health Resources and Services Administration (HRSA).

Wealth of unbiased information geared towards Medicare practice
Four Page Compendium of Telehealth Resources


- [https://www.hrsa.gov/](https://www.hrsa.gov/)
CMS – very helpful link specific to Medicare

- Hyperlink URLs at the end


https://www.cms.gov/Medicare/Medicare-General-Information/Telehealth/
APA - Winter 2019 newsletter
APA telehealth resources - Not current?
APA Telepsychology guidelines set up in 2013
https://www.apa.org/practice/guidelines/telepsychology

The Office of the National Coordinator for Health Information Technology (ONC)

https://www.healthit.gov/topic/health-it-initiatives/telemedicine-and-telehealth

Telemedicine and Telehealth

The Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services defines telehealth as the use of electronic information and telecommunications technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health and health administration. Technologies include videoconferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications.

Spotlight on ONC Telehealth Resources and Reports
- The Federal Telehealth Compendium contains telehealth activities and resources available across the federal arena.
- Designing The Consumer-Centered Telehealth & eVisit Experiences Considerations for the Future of Consumer Healthcare
- Health IT Playbook Telehealth

Telehealth applications include:
- Live (synchronous) videoconferencing: a two-way audiovisual link between a patient and a care provider.
- Store-and-forward (asynchronous) videoconferencing: transmission of a recorded health history to a health practitioner, usually a specialist.
- Remote patient monitoring (RPM): the use of connected electronic tools to record personal health and medical data in one location for review by a provider in another location, usually at a different time.
- Mobile health (mHealth): health care and public health information provided through mobile devices. The information may include general educational information, targeted tests, and notifications about disease outbreaks.

Resources

The Telehealth Start-Up and Resource Guide provides a background and introduction to telehealth and telemedicine concepts, benefits, and resources.

The Federal Telehealth Compendium lists many federal telehealth activities and programs.

HRSA has information about funding programs available through the Office for the Advancement of Telehealth (OAT).

CMS maintains information about telehealth physician fee schedules, and the CMS Medicare Learning Network includes a summary of telehealth services.

Ethical Considerations in the Use of Telemedicine in Neuropsychology

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Ethical Considerations in the Use of Telemedicine in Neuropsychology

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Ethical practice in Telehealth and Telemedicine

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This article summarizes the report of the American Medical Association’s (AMA) Council on Ethical and Judicial Affairs (CEJA) on ethical practice in telehealth and telemedicine. Through its reports and recommendations, CEJA is responsible for maintaining and updating the AMA Code of Medical Ethics (Code). CEJA reports are developed through an iterative process of deliberation with input from multiple stakeholders; report recommendations, once adopted by the AMA House of Delegates, become ethics policy of the AMA and are issued as Opinions in the Code. To provide enduring guidance for the medical profession as a whole, CEJA strives to articulate expectations for conduct that are as independent of specific technologies or models of practice as possible. The present report, developed at the request of

Prior to recent innovations in information technology, individuals who had a medical concern turned to hardcopy publications, spoke with family or friends, or made an appointment to see their physician. Now, a growing number of these individuals are seeking answers online and can obtain them at virtually any time from virtually anywhere.¹ Evolving technologies also allow patients to receive care remotely through telemedicine applications, which offer opportunities for patients who are home-bound, who live in rural or underserved areas, or who face other impediments that limit their access to care. Likewise, new technologies make it possible for patients
Application of Ethics for Providing Telemedicine Services and Information Technology

Mostafa Langarizadeh¹, Fatemeh Moghbeli¹, Ali Aliabadi²

ABSTRACT
Introduction: Advanced technology has increased the use of telemedicine and Information Technology (IT) in treating or rehabilitating diseases. An increased use of technology increases the importance of the ethical issues involved. The need for keeping patients’ information confidential and secure, controlling a number of therapists’ inefficiency as well as raising the quality of healthcare services necessitates adequate heed to ethical issues in telemedicine provision. Aim: The goal of this review is gathering all articles that are published through 5 years until now (2012-2017) for detecting ethical issues for providing telemedicine services and Information technology. The reason of this time is improvement of telemedicine and technology through these years. This article is important for clinical practice and also to world, because of knowing ethical issues in telemedicine and technology are always important factors for physician and health providers. Material and methods: the required data in this research were derived from published electronic sources and credible academic articles published in such databases as PubMed, Scopus and Science Direct. The following key words were searched for in searching and publication: telemedicine, telehealth, telemedicine, ethical issues.
Guidelines for the Practice of Telepsychology

Joint Task Force for the Development of Telepsychology Guidelines for Psychologists

These guidelines are designed to address the developing area of psychological service provision commonly known as telepsychology. Telepsychology is defined, for the purpose of these guidelines, as the provision of psychological services using telecommunication technologies, as expounded in the Definition of Telepsychology section of these guidelines. The expanding role of technology in the provision of psychological services and the continuous development of new technologies that may be useful in the practice of psychology present unique opportunities, considerations, and challenges to practice. With the advancement of technology and the increased number of psychologists using technology in their practices, these guidelines have been prepared to educate and guide them.

These guidelines are informed by relevant American Psychological Association (APA) standards and guidelines, services. They are not intended to change any scope of practice or define the practice of any group of psychologists.

The practice of telepsychology involves consideration of legal requirements, ethical standards, telecommunication technologies, intra- and interagency policies, and other external constraints, as well as the demands of the particular professional context. In some situations, one set of considerations may suggest a different course of action than another, and it is the responsibility of the psychologist to balance them appropriately. These guidelines aim to assist psychologists in making such decisions. In addition, it will be important for psychologists to be cognizant of and compliant with laws and regulations that govern independent practice within jurisdictions and across jurisdictional
Competence of the Psychologist

Guideline 1. Psychologists who provide telepsychology services strive to take reasonable steps to ensure their competence with both the technologies used and the potential impact of the technologies on clients/patients, supervisees, or other professionals.
Psychologists delivering telepsychology services apply the same ethical and professional standards of care and professional practice that are required when providing in-person psychological services.
Informed Consent

Guideline 3. Psychologists strive to obtain and document informed consent that specifically addresses the unique concerns related to the telepsychology services they provide. When doing so, psychologists are cognizant of the applicable laws and regulations, as well as organizational requirements, that govern informed consent in this area.
Confidentiality of Data and Information

Guideline 4. Psychologists who provide telepsychology services make reasonable efforts to protect and maintain the confidentiality of the data and information relating to their clients/patients and inform them of the potentially increased risks of loss of confidentiality inherent in the use of the telecommunication technologies, if any.
Security and Transmission of Data and Information

Guideline 5. Psychologists who provide telepsychology services take reasonable steps to ensure that security measures are in place to protect data and information related to their clients/patients from unintended access or disclosure.
Disposal of Data and Information and Technologies

Guideline 6. Psychologists who provide telepsychology services make reasonable efforts to dispose of data and information and the technologies used in a manner that facilitates protection from unauthorized access and accounts for safe and appropriate disposal.

Rationale. Consistent with the APA “Record Keeping Guidelines” (APA, 2007), psychologists are en-
Interjurisdictional Practice

Guideline 8. Psychologists are encouraged to be familiar with and comply with all relevant laws and regulations when providing telepsychology services to clients/patients across jurisdictional and international borders.
Testing and Assessment

Guideline 7. Psychologists are encouraged to consider the unique issues that may arise with test instruments and assessment approaches designed for in-person implementation when providing telepsychology services.
Most psychological test instruments and other assessment procedures currently in use were designed and developed originally for in-person administration.

Psychologists are thus encouraged to be knowledgeable about, and account for, the unique impacts of such tests, their suitability for diverse populations, and the limitations on test administration and on test and other data interpretations when these psychological tests and other assessment procedures are considered for and conducted via telepsychology.
• Psychologists also strive to maintain the integrity of the application of the testing and assessment process and procedures when using telecommunication technologies.

• In addition, they are cognizant of the accommodations for diverse populations that may be required for test administration via telepsychology.

• These guidelines are consistent with the standards articulated in the most recent edition of *Standards for Educational and Psychological Testing*.
• Psychologists are encouraged to consider whether modifications to the testing environment or conditions are necessary to accomplish this preservation.

• For example, a test taker’s access to a cell phone, the Internet, or other persons during an assessment could interfere with the reliability or validity of the instrument or its administration.
• Psychologists are encouraged to ensure that the integrity of the psychometric properties of the test or assessment procedure (e.g., reliability and validity)

• And the conditions of administration indicated in the test manual are preserved when adapted for use with such technologies
Supervised Administration of Neuropsychological Tests in Sports: A Position Statement of the Sports Neuropsychology Society
The position of the Sports Neuropsychology Society (SNS) is that the administration of clinical tests, including computerized concussion baseline testing, should be supervised by a trained healthcare professional. Supervision of test administration by an appropriately trained healthcare professional is necessary when using any neuropsychological test, including those administered by computer, to ensure validity of results and comply with long established test standards\(^1\) and ethical guidelines\(^2\) for practice.
After an athlete sustains a concussion, neuropsychological test results are compared often to pre-injury, “baseline” test results to help determine whether the athlete has returned to her or his baseline or preinjury level of functioning.

To make a valid comparison, it is essential that baseline test results are accurate and reflect the true pre-injury functioning of the athlete.
• Administration of baseline testing should be conducted in a consistent and standardized manner for all athletes and supervised by an individual with proper training and knowledge of the test.

• Supervised test administration by qualified individuals greatly increases the likelihood of accurate and reliable test results, which is essential to support clinical decisions to return an athlete to play. This also reduces the risk of endangering the health and safety of the athlete.
Proper supervision and administration of neuropsychological testing, whether baseline or post-injury, are necessary components for ensuring accurate test results by:

- Validating the identity of the athlete
- Ensuring that the test is being taken without undue or inappropriate assistance from others
- Monitoring the testing environment (e.g., lighting, distractions, noise)
- Assessing individual athlete factors that affect test results, such as fatigue, illness at the time of testing, mobility restrictions, etc.
- Determining whether the computer and its accessories are working properly
- Monitoring the athlete’s ability to read and follow the test instructions
- Answering the athlete’s questions regarding the test and test instructions
- Monitoring the athlete’s motivation and effort throughout testing
- Reviewing the test results for accuracy and validity
Summary

• The application of telepsychology/telemedicine technology to psychological/neuropsychological disorders is a growing and exciting field, allowing substantially greater access to our services.

• Psychologists must apply the same ethical principles to their practice in the telemedicine context as they would in person.

• Testing standards have been proposed, and risks identified that must be attended to in this service delivery method.

• Home-based testing must undergo significant critical analysis to ensure proper administration to ensure appropriate reliability and validity of the results.
References

2. APA Ethical Principles of Psychologists and Code of Conduct (2017)
Thank you!

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