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

Munro Cullum, PhD, Gerald Gioia, PhD and Kenneth Podell, PhD

Conflict of Interest/Financial Disclosure

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 – Dr. Podell
2. Historical Perspectives – Dr. Cullum
   • Psychotherapy
   • Neuropsychological testing
3. Rules/Regulations – Dr. Podell
4. Technology – Dr. Podell
   • Commercially available platforms
5. Concussion Consults and Evaluations – Dr. Podell
6. Resources – Dr. Podell
7. Ethical and practical considerations – Dr. Gioia
   • Ethical considerations
   • Future of Neuropsych in the age of technology
8. Q & A

What’s In a Name?

Telehealth  Telemedicine  E-health

Telepsychology  Teleneuropsychology

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

Not specific to any type of health care specialty
   tele-dentistry, tele-stroke, tele-urolgy, telepsychology

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

• Expand access of care
  – Rural areas/prisons
  – Areas lacking expertise
  – Transportation and convenience
• Improve outcome and overall health
  – Often same as face-to-face
• Ease of scheduling and preferred by clinicians
• Expand business/practice
• Cost Efficiencies
• Patients want it – convenience and savings
  – Over 90% patient satisfaction
    • improved outcomes (20%), preferred modality (10%),
    • ease of use (9%), low cost (8%), improved communication (8%)
    • decreased travel time (7%)


Is the Public is Ready for Tele-Health

• At least 50% were interested in ≥1 of the services
• Yet only 21% had used tele-health

Accenture 2017 Consumer Survey on Virtual Health
Mechanisms of Telehealth

• Live interactive video (synchronous)
  – Web-based e-health consumer sites
  – Point-to-point (organization specific)
  – 3rd party monitoring systems
    • EEG, ECG, PCSS

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

• Remote patient monitoring (RPM)
  – Remote collection of data that is stored and forwarded to provider

• Telephone, faxes, emails
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 location of patient
- HIPPA compliant technology that is truly secured
  - Same level of compliance as in-office/person
  - Additional state laws?

Issues to Ponder

- Proper consent for telehealth
- Confidentiality by the practitioner
- Confidentiality by the patient
  - Recording the session
  - Posting a confidential communication to a listserv
- 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
Historical Perspectives

Dr. Cullum

Teleneuropsychology

Munro Cullum, PhD, ABPP
University of Texas Southwestern Medical Center
National Academy of Neuropsychology Annual Meeting, November, 2019
Telemedicine / telehealth: “The use of electronic communications to deliver health-related services from a distance.”

**Telehealth Techniques**

- Telephone
- Email
- EMR communications
- Listserves
- **Videoconference (VC)**
- Podcasts
- Social Media
- Smartphone Apps / mobile technologies
- In-home monitoring
Growth of Telehealth

- Growing shortage of mental health providers
  - Rural, child, elderly, disaster, prisons
- Advances in video teleconference technology
  - Cost, availability, familiarity
- Approved for reimbursement*
- Health care reform mandates
- Growing evidence base


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)
Telepsychology/Tele psychiatry 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

*Outcome data generally lacking in pediatric trials
Typical Videoteleconference (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 this condition?
  • Modified instructions/administration effects

• Applicability of norms?

• What populations are suitable for this medium?

Teleneuropsychology Literature

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

• Sample Early studies
Teleneuropsychology Literature

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

Pilot Study

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 diagnoses 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 14 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

Assessment, 2006, 13, 385-390
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

- Consistent, fast audiovisual connection
  - Audio clarity, consistency, loudness essential

- Clear view of subject / examiner
  - Adequate monitor size, resolution, recovery rate*
  - Responses, writing/motor behavior, attitude
  - Useful for examiner to view subject and self
  - Camera mobility useful
  - Where do I look / how do I look?
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

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<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
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<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>
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</table>

ICC = .91, p < .0001

Results: MMSE x Condition: Total Sample

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

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

<table>
<thead>
<tr>
<th></th>
<th>VC</th>
<th>FF</th>
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<tbody>
<tr>
<td>Digits Fwd</td>
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<tr>
<td>Digits Bkwd</td>
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<tr>
<td>Clock Draw</td>
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39

Digit Span & Clock Drawing x Test Condition

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<tr>
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</tr>
<tr>
<td>Digits Bkwd</td>
<td>.55</td>
<td></td>
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<tr>
<td>Clock Draw</td>
<td>.71</td>
<td></td>
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</tbody>
</table>

40
HVLT-R Learning x Test Condition

HVLT Total score ICC = .80
VC Administration of RBANS

Video Teleconference Administration of the Repeatable Battery for the Assessment of Neuropsychological Status.

Galuha-Glasscock DM, Horton DI, Weiner MF, Caufield CA.

Abstract
Telemuropsychology 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

Galusha-Glasscock et al., 2016
Teleneuropsychology in American Indians

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

Wadsworth HE, Galache-Glasscock JM, Womack KL, Quinero M, Weiner MI, Hyman LS, Shore J, Cullum CM.

@ Author information

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 (Mage = 64.69 (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.

Teleneuropsychology Validity

Validity of Teleneuropsychological Assessment in Older Patients with Cognitive Disorders

Hannah E. Wadsworth1,4, Kaltra Dhim1, Kyle B. Womack1,2, John Hart Jr1,2, Myron F. Weiner1, Linda S. Hyman3,3, C. Munro Cullum1,2,4

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Tel.: +1(214)-648-4675; fax: +1(214)-648-4660.
E-mail address: hannah.wadsworth@utsouthwestern.edu (H.E. Wadsworth).

Editorial Decision 11 December 2017; Accepted 16 December 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

**GLOBAL COGNITIVE**
MMSE, Ammons Quick Test, Camcog, NART, SPMSQ, WASI

**ATTENTION / INFO PROCESSING**
Digit Span, Symbol Digit Modalities, Trail Making Test, Brief Test of Attention, Seashore Rhythm Test, Adult memory & Info Processing

**EPISODIC MEMORY**
HVLT, CVLT-II Short form, RAVLT, Modified Rey-O Figure, WMSR Logical Memory, Benton Visual Retention Test, Adult Memory & Information Processing

**LANGUAGE**
Phonemic & Category Fluency, Boston Naming Test, WAIS-3 Vocabulary, BDAE Picture Description, MAE Aural Comprehension

**VISUOSPATIAL**
Clock Drawing, WAIS-3 Matrix Reasoning, Beery VMI, Visual Object & Space Perception

**PSYCHOMOTOR**
Grooved Pegboard

Cullum & Grosch, in Myers & Turvey (2012)

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)

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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)
Provider pros and cons of Telepsychology

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)

Opportunities for Teleneuropsychology

• Pediatric teleneuropsychology
  • Teleneurology applications

  In-home assessment
Telemental Health Web Sites

- American Psychological Association [www.apa.org](http://www.apa.org)
- American Telemedicine Association
  - [www.americantelemed.org](http://www.americantelemed.org)
  - Telemental health scientific interest group
- American Psychiatric Association [www.psychiatry.org](http://www.psychiatry.org)

Practice Resources

- State Licensing Boards
- Association of State and Provincial Psychology Boards (ASPPB)
  - Psychology Interjurisdictional Compact (PSYPACT)
- Guidelines for the Practice of Tele-psychology provided by the APA, ASPPB, APAIT Joint Task Force
- American Telemedicine Association
  - March 2017: Practice Guidelines for Tele-mental Health with Children and Adolescents
Telemental Health Texts

- Myers & Turvey (2012). *Telemental Health*. Elsevier

"Telepresence" technology

A new generation of robots is making possible telecommunication in real-time, in two places at once, from clinic to home and vice versa. Telepresence is a new and exciting form of communication. The technology can use the robot to telecommute, telework, and teleoperate. The robots can be programmed to perform various tasks, such as handling documents, conducting medical exams, and providing psychological support. This technology is particularly useful in fields such as psychology, where telepsychology provides opportunities for neuropsychology.
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
“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


Interstate Compacts
Interstate Compact

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
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

PSYPACT COMMISSION

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.
PSYPACT

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)
- 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>Temporary In-Person, Face-To-Face Practice</th>
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<td>Interjurisdictional Practice Certificate (IPC) Application Fee</td>
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<td>E.Passport Annual Renewal Fee</td>
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<td>Interjurisdictional Practice Certificate (IPC) Annual Renewal Fee</td>
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PsyPACT Endorsements

The Community for Psychologists in Independent Practice

State, Provincial & Territorial Affairs

American Board of Professional Psychology

American Telemedicine Association

THE TRUST

APPIC
Guidelines for the Practice of Telepsychology

Joint Task Force for the Development of Telepsychology Guidelines for Psychologists

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 – not recording/saving questions or answered

American Psychologist, 2013: 68(9); 791-800

Association of State and Provincial Psychology Boards
Serving member jurisdictions by promoting excellence in regulation and advancing public protection.

ASPPB Telepsychology Task Force Principles and Standards

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 breach of confidentiality specific to technology

April 5, 2013
Tele-health Resources

Interactive State-by-State Map

https://www.cchpca.org/

Center for Connected Health Policy
IS A NONPROFIT, NONPARTISAN ORGANIZATION WORKING TO MAXIMIZE TELEHEALTH'S ABILITY TO IMPROVE HEALTH OUTCOMES, CARE DELIVERY, AND COST EFFECTIVENESS.

HGON TH Methodist
NEUROLOGICAL INSTITUTE


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

[Website](https://www.telehealthresourcecenter.org/)
Four Page Compendium of Telehealth Resources


### CPT/HCPCS Codes Eligible for Medicare Reimbursement if Delivered Via Telehealth (CY 2016)

<table>
<thead>
<tr>
<th>Telehealth Service</th>
<th>CPT Codes</th>
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<tbody>
<tr>
<td>Individual Psychotherapy</td>
<td>90832–90834 &amp; 90836–90838</td>
</tr>
<tr>
<td>Individual and group health and behavior assessment and intervention</td>
<td>96150–96154</td>
</tr>
<tr>
<td>Psychiatric diagnostic interview examination</td>
<td>90791 and 90792</td>
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<tr>
<td>Neurobehavioral Status Examination</td>
<td>96116 and 96121</td>
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<tr>
<td>Family psychotherapy (with or without the patient present)</td>
<td>90845 and 90846</td>
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Resources

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

Suggestions

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

• HIPPA privacy of technology

• Using separate computers for professional and personal telecommunications

• Strong encryption of data

• Practice and know your technology

• Informed consent

• Confirm physical location of client

• Know the laws

Accreditation?

• Only formal accreditation is via private corporation
  – None accredited by major health organizations or accrediting agencies such APA, AMA
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

Limitations

- Buy in from community/school
- Cannot do physical exam
- Difficult observing ocular-motor and pupillary reactions
- “Connectedness” of face-to-face
  - Truthfulness of student-athlete
- Regional/cultural differences
- Guardian not present
  - Guardian speaking different language
- Bandwidth/technology limitations
- Paper work completed
Ethical Considerations in the Use of Telemedicine in Neuropsychology

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PRESS RELEASES

AMA adopts 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 (ICDE). 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. This report was 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. Evolving technologies also allow patients to receive care remotely through telemedicine applications, which offer opportunities for patients who are homebound, 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

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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 ethical issues involved. The need for keeping patients’ information confidential and secure, controlling a number of therapists’ inefficiencies 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...
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.

Standards of Care in the Delivery of Telepsychology Services

Guideline 2. Psychologists make every effort to ensure that ethical and professional standards of care and practice are met at the outset and throughout the duration of the telepsychology services they provide.

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 telepsychotherapy 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 telepsychotherapy 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
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 and ethical guidelines 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 undo 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

References

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

Thank you!