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Telehealth Terminology, Evidence-Supported Clinical Applications, and Practice Considerations for Occupational Therapy Practitioners

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LEARNING OBJECTIVES

• Identify key telehealth terms, technologies, and practice considerations.

• Recognize evidence-based clinical applications of telehealth in occupational therapy.

• Identify available practice guidelines, official documents, resources and state regulations to ensure legal and ethical practice using telehealth technologies.
How my telehealth journey began...

- Personal experiences as a pediatric OT
- Grant funding/early research

A Pilot Telerehabilitation Program: Delivering Early Intervention Services to Rural Families
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Alfred School of Occupational Therapy, Spalding University, Louisville, KY


Telehealth with the school-aged population

Areas addressed:
- Motor planning/bilateral coordination
- Reflex Integration
- Upper body strengthening
- Core strengthening
- Visual-perception/visual-motor
- Handwriting
- Fine motor/hand skill development
- Cutting/scissor skills
- Sensory strategies
- Activities of daily living (self-help)
Telehealth Terminology

WFOT Telehealth Definition

“Telehealth is the use of information and communication technologies (ICT) to deliver health-related services when the provider and client are in different physical locations.” (WFOT, 2014, p. 1)

AOTA'S TELEHEALTH POSITION PAPER
Definition of telehealth

• "...the application of evaluative, consultative, preventative, and therapeutic services delivered through telecommunication and information technologies" (AOTA, 2013, S69)

• AOTA Telehealth Position Paper (2013)
• AOTA Ethics Advisory Opinion (2013)

Areas addressed in AOTA Telehealth Position Paper

DECIPHERING THE TERMINOLOGY

• Telemedicine
• **Telehealth** (AOTA endorsed term)
• Telerehabilitation/Telerehab
• Teleoccupational therapy
• Telepractice
• Telecare

• e-health (i.e. apps, blogs, health info., gaming technologies)
• m-health - “mobile health”

• Terms describing the service: Tele-intervention, tele-monitoring, tele-evaluation, tele-supervision, tele-mentoring
Telehealth Technologies
Overview of Telehealth Technology

**Synchronous “Live”**
- Videoconferencing
- Real-time monitoring devices
- Interactive virtual reality devices

**Asynchronous “Store-and-forward”**
- Recorded video
- Recorded data from monitoring devices
- Digital photographs
- Electronic communication

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**Telehealth Technology Options**

- Use existing technology in the natural environment
- Loan equipment to the client/caregiver(s)
- Technology brought in by a provider to support consultation/collaboration with remote provider
- Leverage existing technology infrastructure within the community

Federal Legislation

- Health Insurance Portability and Accountability Act (HIPAA)
- Health Information Technology for Economic and Clinical Health Act (HITECH)
- Family Educational Rights and Privacy Act (FERPA) [Educational setting]

As a practitioner, it is important to select technologies and implement processes that will protect patient privacy and security of protected health information (PHI)

Videoconferencing Technologies

Note: 1) This list is not all inclusive nor intended to endorse/recommend any specific software; 2) The examples provided should be evaluated further for their intended purposes prior to use; and 3) Consider compatibility with available browsers/devices.

- BlueJeans (subscription-based; https://www.bluejeans.com/video-collaboration/video-solutions-that-are-hipaa-compliant)
- Cisco WebEx (subscription-based; http://www.cisco.com/web/strategy/healthcare/webex_for_healthcare.html)
- Citrix Go-to-Meeting (subscription-based; https://www.gotomeeting.com/meeting/hd-video-conferencing-resources/documents-reports/gotomeeting-and-hipaa#.VmNYjbiDFBc)
- Doxy.me (FREE; https://doxy.me/)
- Vidyo (subscription-based; http://www.vidyo.com/solutions/healthcare/)
- VSee (subscription-based; https://vsee.com/)
- Zoom for Healthcare (subscription-based; https://zoom.us/plan/healthcare)

Available at: http://telerehab.pitt.edu/ojs/index.php/Telerehab/article/view/6056
Evidence-Supported Telehealth Applications in Occupational Therapy

Comparative Effectiveness

- **Interventions to support participation in ADLs**
  - Taber-Doughty, Shurr, Brewer, & Kubik, 2010

- **Home, wheelchair & mobility assessment**
  - Barlow, Liu, Sekulic, 2009; Schein, Schmeler, Hohm, Pramuka, Saptomo, & Brienza, 2011

- **Occupational therapy evaluation using a variety of OT assessments**

- **Inter-professional pediatric diagnostic evaluations**
  - Harper, 2006

- **Prescription of adaptive equipment environmental modifications**
  - Hoffmann & Russell, 2008

- **Systematic review of clinical outcomes**

Telehealth services

In-person services

CONTINUED
Growing evidence on the efficacy and effectiveness of telerehabilitation shows that telerehabilitation leads to similar or better clinical outcomes when compared with conventional interventions. Further information on resource allocation and costs is needed to support policy and practice. (p. 119)


Use of Telehealth within Occupational Therapy: Models of Care

### Evidence Supports Tele-evaluation

#### Evaluation areas
- **Wheelchair prescription**
  - Barlow, Liu, & Sekulic (2009)
  - Schein, Schmeler, Holm, Saptono, & Brienza, 2010; Schein, Schmeler, Holm, Parmuka, Saptono & Brienza (2011)
- **Neurological assessment**
- **Adaptive equipment prescription and home modification**
  - Sanford et al. (2007)
- **Ergonomic assessment**
  - Baker & Jacobs (2013)

#### Evaluation Tools
- **Functional Reach Test and European Stroke Scale**
  - Palsbo, Dawson, Savard, Goldstein, & Heuser (2007)
- **Kohlmam Evaluation of Living Skills and the Canadian Occupational Performance Measure**
  - Dreyer, Dreyer, Shaw, & Wittman (2001)
- **Functional Independence Measure, Jamar Dynamometer, Preston Pinch Gauge, Nine Hole Peg Test, and Unified Parkinson’s Disease Rating Scale**

### Evidence Supports Teleconsultation

#### Teleconsultation defined:
- A virtual consultation for the purpose of obtaining and sharing medical information or advice between:
  - Expert provider and client; or
  - Expert provider and local provider *with* the client present; or
  - Expert provider and local provider *without* client present

#### Key Support Studies
- Play performance in children with special needs (Wakeford, 2002)
- Veterans with traumatic brain injury (Girard, 2007)
- Wheelchair seating consultations between distant and local providers (Schein, et.al, 2008)
Evidence: Teleintervention

**Interventions**
Evidence supports the use of telehealth to deliver OT interventions in the areas of:
- Children and Youth
- Productive Aging
- Mental Health
- Rehabilitation and Participation
- Health and Wellness
- Work and Industry

**Key Support Studies/Articles**
- Early intervention services
  - Cason (2009, 2011); Heimerl & Rasch (2009)
  - Kelso, Fiechtl, Olsen, & Rule (2009)
- Older adults
  - Bendixen, Horn, & Levy (2007); Harada et. al (2010); Hori, Kubota, Kihara, Takahashi, & Kinoshita (2009)
- Stroke
  - Chumbler et al. (2010a; 2010b); Hermann et al. (2010)
- Work space modifications
  - Bruce & Sanford (2006)
- Chronic Diseases
  - Darkins et al. (2008); Fairman et al. (2013); Steel, Cox & Garry (2011)

Evidence: Telemonitoring

**Telemonitoring defined:**
Use of telecommunication technology to:
- Monitor a client’s adherence to an intervention program
- Monitor and facilitate progressive therapy program
- Monitor and support client in natural environments (i.e. home, work, community)

**Key Support Studies**
- ADLs (Smartphones)
  - Venables (2000)
- Home exercise programs
  - Popescu, Burdea, Bouzit, & Hentz (2000)
- Chronic disease management
  - Darkins, et.al. (2008)
- Upper extremity prosthetic devices
  - Whelan and Wagner (2011)

(AOTA, 2013)
Evidence: Tele-supervision

Supervision

- Tele-supervision requires consideration of:
  - State licensure laws
  - Institution specific guidelines
  - Supervision, Roles, and Responsibilities During the Delivery of Occupational Therapy Services (edited 2014)

Key Studies

- Telehealth technologies can be used to support students and practitioners working in isolated or rural areas, and nontraditional fieldwork placements that cannot offer on-site supervision
  - Hubbard (2000)

(Adapted from AOTA Telehealth Position Paper, 2013)

New Opportunities on the Horizon

Patient Protection and Affordable Care Act

- Bundled Payment Models
- Accountable Care Organizations

Telehealth, Occupational Therapy, and the ‘Triple Aim’ of Healthcare Reform

- High patient satisfaction with telehealth;
- Improves access;
- Facilitates care coordination and chronic disease management;
- Fosters care in the community.

Analyse client factors, performance skills and patterns, contexts and environments, and activity demands that affect health and engagement in occupations.

Care in the home vs. more costly institutional settings; comparable outcomes; telehealth may lead to improved efficiencies ("right care in the right place at the right time")

Institute for Healthcare Improvement (IHI)
- Care Experience
- Population Health
- Affordability of Care

Healthcare Reform


Important Practice Considerations
Variation among licensure boards!

- Practitioners should **FIRST** consult the state licensure board in the state where the practitioner (and the client if different from the practitioner) is located to ascertain any telehealth-related policies and/or regulation!
- The Center for Connected Health Policy (CCHP), a federally funded national telehealth resource centers highlights Illinois as a model for other states:
  
  "Occupational therapy may be provided via technology or telecommunication methods, also known as telehealth, however the standard of care shall be the same whether a patient is seen in person, through telehealth, or other method of electronically enabled health care" (Illinois Occupational Therapy Practice Act, 2013)

‘Location of Service’

- In reference to interstate practice using telehealth, the **location of the CLIENT** is deemed the ‘location of service.’
- License portability for interstate practice
  
  - Currently being addressed by a joint effort between the Federation of State Boards of Physical Therapy (FSBPT) and the American Physical Therapy Association (APTA) via an **interstate licensure compact**.
  - Other disciplines with (or pursuing) an interstate licensure compact model include nursing, medicine, and psychology.
Administrative, Clinical, Technical, and Ethical Considerations

Adhere to:
• all legal and regulatory requirements guiding practice
• coding/billing requirements (using telehealth modifier as appropriate)
• documentation requirements (including method of service delivery)
• standards and guidelines for privacy and security for protected health information (PHI), client informed consent, and patient safety
• continuing competency standards (clinical practice guidelines and resources such as the AOTA Telehealth Position Paper, Ethics Advisory Opinion, etc.)
• liability insurance requirements (‘services within scope of practice’)

Also consider:
• Technology
  – Device selection
  – Accessibility of the equipment and physical space
  – Videoconferencing software and features and peripheral devices (web camera/document camera, blood pressure cuff, etc.)
  – Infection control policies and procedures for equipment re-use
• Processes for quality improvement and resolution of ethical issues and potential conflicts of interest

Telehealth Resources

Beginning your telehealth journey

National and Regional Telehealth Resource Centers

14 federally funded telehealth resource centers

http://www.telehealthresourcecenter.org/
Telehealth Resource
American Telemedicine Association

Telerehabilitation Special Interest Group

Mission: To enhance access to rehabilitation services through the use of telehealth technologies.

http://www.americantelemed.org/members/ata-member-groups/special-interest-groups/telerehabilitation#.VEFQfldWSo

International Journal of Telerehabilitation

Open access, peer-reviewed, PubMed indexed journal

http://telerehab.pitt.edu/ojs/index.php/telerehab
More resources to start your journey!

- **American Occupational Therapy Association (AOTA)**
  [http://www.aota.org/telehealth](http://www.aota.org/telehealth)

- **World Federation of Occupational Therapists (WFOT) Telehealth Position Statement**

- **Go2Care (e-Learning materials/products)**

- **Social Media:**
  - AOTA OT Connections (Telehealth forum)
  - Facebook OTinTelehealth
  - Twitter (@OTinTelehealth)

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We have reached a tipping point! Telehealth is a disruptive force that is changing the healthcare (and the occupational therapy) landscape

**Key barriers**

- Attitudinal barriers (practitioners, clients, other stakeholders)
- Lack of licensure portability
- Reimbursement*

[*ATA Legislation Telemedicine Tracking Matrix is available in their State Policy Resource Center]
In Conclusion...

• Telehealth will become a mainstream service delivery model within healthcare
• Research supports telehealth as a viable service delivery model for OT
• Opportunities exist for practitioners to incorporate telehealth within all OT practice settings

Questions...
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