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Telehealth OT: Using Pediatric Case Studies to Inform Practice
Dr. Aditi Mehra DHS, OTR/L

Presenter Disclosure: Financial: Aditi Mehra has received an honorarium for presenting this course. Non-financial: Aditi Mehra has no relevant non-financial relationships to disclose.

Content Disclosure: This learning event does not focus exclusively on any specific product or service.

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Learning Outcomes

1. Identify 4 important decision making guidelines before considering telehealth services for pediatric clients.
2. Identify 3 asynchronous and synchronous modes of delivery in pediatric telehealth.
3. Describe the benefits of a parent coaching delivery model in pediatric telehealth.
4. Describe 3 challenges and solutions commonly encountered in pediatric telehealth.

AOTA’S Telehealth Position Paper

“...the application of evaluative, consultative, preventative, and therapeutic services delivered through telecommunication and information technologies” (AOTA, 2013, S69)
State Licensing Requirements

Determine Feasibility of Telehealth

Video Conferencing Software

Asynchronous delivery refers to store-and-forward technologies, such as therapy websites offering informational videos and other tools to families, or self-paced Internet trainings for therapists.

Synchronous delivery refers to telehealth services delivered through interactive technologies in real time, such as a live VoIP consultative or treatment session with a child and their family, while..........

Store-and-forward technology means the asynchronous transmission of a patient’s medical information from a healthcare professional at an originating site to a healthcare professional at a distant site.

(AOTA, 2013)
AOTA Telehealth Decision Guide

Considerations:

- AOTA position paper / research?
- State regulation and agency requirement?
- Payer coverage for Telehealth?
- Consent?
- Technical considerations?
- Ethical considerations?

https://www.aota.org/~media/Corporate/Files/Practice/Manage/Occupational-Therapy-Telehealth-Decision-Guide.pdf

Pediatric telehealth:
Potential challenges/ solutions

- Comfort with technology
- Need of a facilitator
- Receptiveness to parent training
- Keeping children engaged
- Sensory strategies
- Accessibility to devices and supplies
Clinical decision making....

**Occupation based coaching** or **Direct therapy**?

<table>
<thead>
<tr>
<th>Parent Training</th>
<th>Direct Therapy</th>
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**Synchronous**
- Video conferencing
- Phone calls

**Asynchronous**
- Recorded videos
- Digital Resources

**Hybrid**

**Limitations**
- Managing child’s behavior
- Parent coaching
- Hands on sensory strategies
Parent training = Occupation based coaching

- Rooted in principles consistent with Occupational Performance Coaching (Graham, Rodger, & Ziviani, 2009, 2010),
- Directly involves parents in creating goals and strategies to increase child participation in everyday contexts. (see Little et al., 2018a for full description of intervention).
- Reflective questioning and commenting to problem solve through potential strategies.
- This process allows parents to gain a deeper understanding of possible solutions, and ways to implement and evaluate the effectiveness of these solutions (Dunn, Little, Pope, & Wallisch, 2017; Little et al., 2018a; Rush & Shelden, 2011)

Skill focus vs. participation focus

- By focusing on specific child skills (as happens in traditional therapy programs) as opposed to overall family participation, occupational therapists may be limiting the extent to which children are able to attend birthday parties, go to holiday events, or participate in music classes.
- However, when occupational therapists work with parents to practice their own strategies in the everyday occupations that may pose challenges, children may be able to participate more fully.

The 5 key principles of occupation-based coaching

1. Authentic contexts
2. Family’s interests and routines
3. Caregiver interaction and responsiveness
4. Reflection and feedback
5. Joint plans

(adapted from Rush & Shelden, 2011)

OBC : the process

(1) Setting goals
(2) Exploring options
(3) Planning action
(4) Carrying out the plan
(5) Checking performance
(6) Generalizing

(Rush & Shelden, 2011)
Step 5: Guiding parent into creating achievable goals

- Many parents identify children’s adaptive behavior as a target for intervention (Simpson, 2015).
- Caregivers identify goals and therapists ask reflective questions and make reflective comments, affording caregivers an opportunity to gain a deeper understanding of their own current knowledge and the impact of their strategies on their children’s adaptive behavior (Rush & Shelden, 2011).

Tips on Reflective questioning

1. Ask only one reflective question at a time.
2. Be comfortable with silence while waiting for the person to think about his/her response.
3. An analysis question always follows informative feedback (e.g., What are your thoughts about the idea?).
4. A self- attribution question is “what did you do to make that happen/ cause that progress?”
5. A yes/no question should only be used to ask permission or not make an assumption (e.g. would you like to try it?)
6. What if when you ask a reflective question, the person says I don’t know?
   a) rephrase the question to ensure he/she understands, or
   b) provide affirmative feedback about an observation you made in the past that confirms he/she knows.

Tips on providing feedback

- Feedback occurs after the learner has had the opportunity to reflect on his or her observations or actions, or after the learner has practiced a new skill.

Feedback can be affirmative:
Statements that describe, restate, or acknowledge what the person said. “I see what you mean.”

Feedback can be evaluative:
Comments that evaluate or critique the person’s words or actions. Evaluative feedback should be used in moderation so that it does not stifle the person’s efforts.

Feedback can be informative. Informative feedback includes instances where the coach is sharing new information with the person.


Creating a mindful space in everyday parenting

- Shift in parent perception
- Requires non-judgmental intervention
- Team approach
Grading activities at a slower more monitored pace

Telehealth therapy: Families generate their own solutions and are ultimately responsible for carrying out the intervention and evaluating its effectiveness (Dunn et al., 2012; Graham et al., 2013)

Partnering with parents

- In a coaching model, parents’ goals and priorities guide intervention (Rush & Sheldon, 2011).
- ....family-centered care and parent-therapist relationships are active ingredients for interventions (e.g., Foster et al., 2013; Law et al., 2003)
- .........focus on strengths may result in parents increasing positive statements, changing their perception of their child’s disability, and increasing their physical affection with their child (Carlson et al., 2010; Steiner, 2011)
Case Study 1: George

Age: 3yrs.
Diagnosis: Autism
Background: George was referred to OT for sensory processing difficulties. He lives in a rural area and has been unable to receive OT services. He does receive speech therapy in the home setting. He is currently on a waitlist for ABA services. George’s parents are very eager to start with telehealth OT services to address his sensory needs. OT goals established by the team are to help George get ready for pre-school and stay seated for activities like mealtime or other fine motor tasks.

Family:
George has a teenage sister and is primarily cared for by his mother. His father works nights therefore is typically only available on the weekends to help with George. George was recently diagnosed with Autism and was assessed by EI for OT. Parents identified their main concerns are about managing George’s sensory needs. They report that George’s sensory needs continue to seem to impact everyday activities: eating together for family meals, following simple directions and going places.

Step 1:
Evidence based decision making...

What does the research say about efficacy in pediatrics?

- Autism spectrum disorder (Sutherland R., & Trembath D. et al., 2018)
- Children with complex communication needs (Douglas et al., 2018)
- Telepractice when training parents/caregivers of children ages birth to three (Behl et al., 2017)
- Family-Centered occupational therapy and telerehabilitation for children with autism spectrum disorders (Gibbs et al., 2011)
**Step 2: Schedule a pre-session screening**

- Observe the setting.
- Observe the parent interaction with child.
- Build rapport with parent and child.
- Explain the process involved in telehealth.
- Troubleshoot possible technology issues.
- Check logistics (connectivity, privacy etc.).
- Establish parameters for technology issues and sessions.
- Assess child’s behaviors.
- Discuss the child’s preferred vs. non-preferred activities.
- Review evaluation results.

**Step 3: Troubleshooting telehealth: How did the session go?**

- Telehealth appointments initially occurred in the living area of the main floor, which seemed ideal because George was very active and the large open floor plan provided him with plenty of room to run.
- Family positioned a laptop in one corner of the room to provide a wide view of the entire living area.
- George began to run from the living area to rooms outside of the camera’s view and to hide behind furniture in the room when the parent initiated interaction.
- Repositioning the laptop did not provide a complete view of all areas surrounding the large couches and recliner chairs in the room.
- George’s mother blocked attempts to elope from the living area and to move the laptop whenever he hid behind furniture so that he would be in the therapist’s view.
- George’s father also assisted with blocking when he was available.
- However, blocking often evoked aggression toward his parents.
What we learned from the screening?

Behavior:
- He had difficulty sitting still.
- He left the room several times.
- Did not purposefully play with a toy.
- He was not able to follow 1-step directions.
- He was constantly running and jumping on couch.
- He covered his face often with objects and liked to smell things.
- He dumped toys on the floor and walked/laid on them.

Setting:
- Family room with a lot of toys
- A cat named Toby.
- TV on in the background
- Teen sister on the her phone in the room

Parent interaction:
- Mom chased after George most of the session.
- Used bribing to get him to follow directions
- Had difficulty with getting George to listen

George's Preferences
- Loves to eat bacon
- Watching YouTube videos on water parks/slides

Step 4: Exploring options

- Transitioned sessions into a playroom to address the escaping behavior and so parents could gain some control over the session.
- Toys were placed in bins with lids
- Created a sensory bin of activities George enjoys.
**Step 5: George: Establish parent-training friendly goals**

*I want George to sit and actually play with his toys. All he does is throw things, dump containers. He does not follow any directions, and I cannot get him to sit still and to do anything. I am so exhausted with chasing him around all day and trying to keep him quiet so my husband can rest before his night shift. Plus, my daughter needs me too. We are all so tired and frustrated.*

- George’s mom

Parent training goal:
George will sit and complete 1 activity at the table with parent independently.

**Step 6: Sensory vs. behavior?**

**Sensory Profile**
- Need to smell things
- Seeking movement/proprioceptive input
- Visually distracted
- Difficulty with tolerating sounds (multiple directions)

**Behavioral Profile**
- Task avoidance
- Sensory seeking behavior
- Reinforcers: Curious George, water slides YouTube-videos
Step 7: Troubleshooting

Telehealth

Privacy considerations

Behavior

Distinction of Behavior vs. sensory

Instructional control

Collaborate with ABA & SLP

Offer 1 sensory strategy

Create a step by step sensory diet

Introduce 1 table top fine motor task.

Setting – open room

Recorded videos

Family members & Pets

Step by step manageable strategies

Train, observe, reinforce, repeat

Parent Training

Sensory Fine motor goals

Step 7: Consider synchronous methods for George

1. Resources on sensory processing: websites, videos, books, etc.
2. Photographs
3. YouTube videos
4. OT blogs
5. Recorded videos.

* Disclaimer
Synchronous Step 8: Set up a sensory diet starting small...

1. Daily at 8:45 am for 20 mins
2. Transition into George’s bedroom
3. Limit option of toys to 1 box with a lid
4. Let George do what he likes to do: runs, jumps but suggest he carries a heavy backpack while engaging in these activities
5. Have an activity set up at the table and an edible reinforcer

Step 9: Choosing the right fine motor activity

- The activity criteria:
  - Easy motor skill
  - Purposeful play
  - Grasp and release
  - Setting up for success
  - Repetitive
  - Short
Step 10: Change parent behavior to change child’s behavior

**DO’s**
- Set small expectations.
- Short succinct directions.
- Boundaries (table and chair)
- Short sessions (starting with 5 mins)
- Praise desired behavior
- Be a light switch
- 1:1 ratio for reinforcement

**DON’Ts**
- Give attention to undesired behavior.
- Save preferred reinforcer for play time with mom.
- Block and redirect to desired behavior.

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Step 11: Is the intervention working?

- Review warning signs sensory overload.
- Make it easy for parent to collect data.
- Collective data based decisions.

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<thead>
<tr>
<th></th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
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</thead>
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<tr>
<td>Completed an activity at the table.</td>
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<tr>
<td>Refused to carry backpack.</td>
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<tr>
<td>Comments</td>
<td></td>
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<td>Had a birthday party</td>
<td></td>
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Step 12:
Observe & provide reflective feedback

- Vocal prompts and feedback while observing parent implementing the procedures.
- Parent may video record sessions throughout the day/week.
- Generalization?

Step 13:
Grading activities/ reinforcement for success

1. Increase the expectation: Make it a 2-step activity: Find coins in rice and then place in container.
2. Increase the duration: Add a variety of similar activities.
3. Use the 1:3 ratio... i.e. For every 1 (difficult) novel task engage in 3 familiar (easy) activities.
4. Fade out prompts.
5. Decrease frequency of reinforcement: 1:3 ratio...
Parent perceptions of telehealth parent training

- Research suggests that OBC significantly increases parent self-competence (Little et al., 2018a).
- Parents perceived the parent-therapist relationship supported parents’ feelings of self-efficacy.
- Parents reported that the process of analyzing and reflecting with the therapist serving as the ‘coach’ was a core component of increasing self-efficacy (Foster, Dunn, Mische, Lawson, 2013).

Feedback is important for Growth

- What was different about your experience with telehealth versus other services?
- What was the quality of your experience?
- What did you like most about telehealth?
- What did you like least or would like to change about telehealth?
- What would you like to share with other parents about this experience?
- Tell me some things that you understand differently after our experience together.
- How was the telehealth intervention consistent with services you have used in the past?
- Is there anything that you are doing differently after the telehealth intervention?
- How do you problem-solve challenges now?
- What was the most helpful component of the intervention process?

(Walksch et al., 2019)
Research Findings.....

PARENT PERSPECTIVES OF AN OCCUPATIONAL THERAPY TELEHEALTH INTERVENTION.

(Wallis et al., 2019)
International Journal of Telerehabilitation

- [The intervention] was very customized to our life and our routine and how we did things. It was awesome, instead of being like ‘here’s this technique make it work for you’. It was, ‘what did you do? Oh, maybe we can improve upon that. Let’s try a few different strategies.’

(Wallis et al., 2019)
Case Study 2: School referral

Ryan
7 yrs. Old
Handwriting goals:
- letter reversals
- sizing & placement
- letter formation

Step 1: Informed consent and parent expectations

- Become familiar with and maintain the video technology.
- Communicate with me before each session through emails to receive documents and a list of materials that would be needed for the session.
- Plan and set up the treatment area prior to the session.
- Review the session plans and gather materials prior to the session.
- Photograph and email their child’s completed homework before the session.
- Provide guidance prompts to the child if required during the session.
- Meet during last 5-10 minutes at the end of the session to allow for questions, feedback, and goal review.
- Provide feedback to therapist and engage in open communication to problem solve concerns.
Step 2: Review the research


Assess the efficacy of telehealth OT for school related goals

- Direct OT services in the public school environment, typically consisting of 20-30 minutes per week, do not always result in the most ideal or effective outcomes if there is limited follow-through in the classroom or home environments during other times of the week.

- The most successful outcomes: consultation OT services, in which the therapist provides strategies and solutions to staff and caregivers to use at school and at home with the student.

- There is some conflicting evidence: several studies reveal positive outcomes, including functional outcomes and teacher perceptions, with it's use (Bayona et al., 2006; Casillas, 2010; Dreiling & Bundy, 2003; Dunn, 1990)
Step 3: Pre-session screening observations

- Fairly compliant- moderate cues to stay on task
- Would walk away randomly
- Verbal outbursts
- Does get distracted easily
-Responds well to a visual schedule
- Does not need a facilitator present
- Likes tactile activities i.e. sensory play and candy
- Send parent with available items checklist (sample attached in downloads)

Step 4: Environmental Modifications

- Use of a pencil grip
- Modified paper style
- Change in paper position
- Slant of paper on desk
- Use of easel
- Seating position
- Distractions
- Parent engagement during session
- Siblings
Step 4: Create a schedule on PowerPoint
What are you working for today?

Do we have what we need?

- Puzzle
- Play-Doh toys: rolling pin
- Computer Mouse
Are you ready?

Puzzle

Play-Doh toys:
rolling pin

Computer Mouse

Let's get started
Hooray! You have earned:

3 M&Ms

&

a 3 Minute Break

Step 5:
Review the research on handwriting

- The use of a combination of intervention approaches has been found to be effective in improving handwriting performance (Peterson & Nelson, 2003)
Employing multisensory strategies in telehealth

- Finding treasures in therapy putty, feeding “tennis buddy,” and playing frog jump races using finger isolation to make plastic frogs bounce across the table.
- Sensory, strengthening, stretching to prepare the student for seat work...eg.“boxing” or “archery” using therapy band, treasure go noodle and brain gym exercises.
- Stamp-and-See Screen, as well as the Wet-Dry-Try Method using sponges, chalk, and chalkboard.
- Building and tracing letters using manipulatives such as Wikki Stix, Play-Doh, or spaghetti.
- The whiteboard tools to trace or dot to dot activities.
- Other kinesthetic strategies included air writing and palm writing with eyes open and closed.
- Visual charts and/or checklists were also used to encourage the students to evaluate their written work.

Step 6:
Handwriting Synchronous vs. Asynchronous Methods

**Synchronous**
- Mirror iPad to draw.
- Doc- cam
- Sign in with 2 devices

**Asynchronous**
- Workbook
- Printable sheets
- Send Photograph of work
Step 7: Keeping students engaged

- Pair yourself with reinforcement
- Fixed ratio 1:1 of reinforcement
- Stickers on your face
- Puppets
- I Spy game
- Visual timers
- Reinforce desired behavior
- Trade places
- Withhold reinforcer
- Difficulty of exercises

Step 8: Parent perceptions

- 86% observed improvements in the students’ school performance related to the IEP goals as a result of telehealth OT.
- 71% disagreed with the statement, “I would prefer that occupational therapy in a clinic instead of virtually.”
- 86% of the learning coaches (all but one who checked the neutral response) revealed that they were happy that the services were provided in an online format.
“It took a little work to set up the sessions, and I was not sure if it would be effective...but after a week or so, it was very manageable and easy to incorporate into our daily schedule.”

- Ryan’s Mom

Had my first not-so-good telehealth session today. The mom said “I’m not having fun, this is too much work, I don’t like seeing you sitting there and me doing all the work, and I want to be done.” So there is that side of things.

Jane Smith
Telehealth OT
Step 8:
Always consider clinical & ethical judgment

AOTA clearly states in its 2013 paper titled, “Telehealth,” ........
It is not an indication that it is appropriate for all situations.
The fact is that telehealth as a service modality “has potential”
and should be utilized only after each case has been
evaluated individually based on “the variability of client
factors, activity demands, performance skills, performance
patterns, and contexts and environments using clinical
judgment, client’s informed choice, and professional
standards of care
(p. P 70)"

Time for Telehealth.....

• Session preparation for items to sent to parents
• Preparing scanned items
• Additional emailing required
• Receiving and printing items sent from the parents
• Troubleshooting technology
• Lesson planning
Questions

Questions

References


7. To cite this article: Sheryl Eckberg Zylstra MS OTR/L (2013). Evidence for the Use of Telehealth in Pediatric Occupational Therapy, *Journal of Occupational Therapy, Schools, & Early Intervention, 6*(4), 326-355. DOI: 10.1080/19411243.2013.850765
