Clinical Models in Telehealth

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Telehealth Delivery Models

- Parent Training/Coaching
- Supervisor Mediated Telehealth
- Direct Therapy via Telehealth
Parent Training/Coaching Model

- Clinicians train/coach caregivers via telehealth
  - Research supports the use of telehealth to train/coach parents to deliver various ABA strategies
    - Functional Analyses (Wacker et al., 2013)
    - Functional Communication Training (Suess et al., 2014; Wacker et al., 2013)
Supervisor Mediated Telehealth

• Clinician/Registered Behavior Technician (RBT) is in person and connects with a supervisor via telehealth

• Research supports the use of telehealth to train/coach RBTs to deliver ABA treatment (Ausenhus & Higgins, 2019; Higgins et al., 2017; Fisher et al., 2014)
Direct Therapy via Telehealth

- RBT delivers applied behavior analytic (ABA) treatment via telehealth
- Little to no research to support direct ABA treatment via telehealth

**BUT**
- Vast amount of research related to direct therapy via telehealth
  - Cognitive Behavioral Therapy
  - Counseling Services
  - Exposure Therapy
- American Telemedicine Association
  - Published guidelines for telehealth with children and adolescents (Myers, 2017)
Case Study #1: Jacob – Parent Training Model

- **Diagnosis:** Autism Spectrum Disorder
- **Age:** 6 years old
- **Brief History:**
  - Lived at home with Mom
  - Attended 1st grade @ local elementary school
  - Vocal language
- **Reason for Referral**
  - Lost eligibility for clinic-based services
  - Referred to our team for telehealth consultation of his problem behavior
Telehealth Risk Assessment

- South Carolina Association for Behavior Analysis
  - Risk-Benefit Analysis Tools
- Cox, Plavnick, & Brodhead (2020)
  - A Proposed Process for Risk Mitigation During the COVID-19 Pandemic
Telehealth Risk Assessment

• **Question 1: What is/are the behaviors of concern?**
  - Jacob engaged in tantrums which consisted of crying, kicking, property destruction, and hitting
  - Jacob engaged in some pre-cursor behaviors
    - Jacob would scream at Mom prior to engaging in tantrums

• **Question 2: Does the family have adequate resources?**
  - Mom was very motivated to participate
  - Family had reliable internet and laptop at homes
  - Former clinicians were willing to come in for emergency help if needed

Based on this information, we determined Jacob was a good candidate for this model of telehealth
Pre-Intake Process

- Consent for Telehealth Services
  - Consent for video/audio use and recording during assessment and treatment
  - Consent for telehealth consulting services
    - Assessment
    - Treatment
    - Parent Training
Pre-Intake Process

• Sent equipment to Mom
  • Equipment
    • Logitech c903e webcam
    • Plantronics Voyager Legend Bluetooth Headset
  • University Google Hangouts Account
• Equipment Loan Agreement
Pre-Intake Process

- Once Mom received all the materials, we conducted a phone conference and reviewed consent forms with Mom
- Helped Mom install and test equipment via telephone
  - If In-Person is Needed During Covid-19 Pandemic -
    - Ensure you have safety equipment for entering home
      - Face mask
      - Gloves
      - Disinfecting spray
    - All non-essential individuals asked not to be present during this meeting
    - Choose isolated room ahead of time so you are not walking around the home
Pre-Intake Process

• Trained mom on technology
  • Reviewed Pre-Session Technology Checklist
  • Reviewed Technology Troubleshooting Sheet
Technology Troubleshooting

1. What to do if connection is interrupted
   • For Jacob, this was super important!
     • Because of the problem behavior, if connection was weak, Mom was instructed to immediately end session in order to avoid any harm.

2. What to do if problem behavior becomes too intense?
   • We developed a termination criteria
     • Level 1 – Screaming
     • Level 2 - Crying
     • Level 3 – Throwing Items (not at people)
     • Level 4 - Throwing Items (at people)
     • Level 5 – Hitting
       • If Jacob engaged in 5 or more instances of Level 5 problem behavior, we terminated the session.
       • We also always checked with Mom and asked her if she was okay to keep going.
Treatment Intake

- Functional Assessment Interview (FAI)
  - Conducted FAI with Mom via telehealth
- Collected ABC Data
  - Based on FAI, we identified hypothesized maintaining antecedent and consequences for problem behavior
  - Scheduled a meeting with Mom to conducted Trigger Analysis via Google Hangouts
    - Decided to conduct trigger analysis in order to increase efficiency of observations via telehealth
Trigger Analysis

• Coached Mom via Bluetooth to deliver various antecedents in order to evoke problem behavior
  • Mom did not collect data!
    • Clinician collected data on antecedents
Things We Learned

- Prior to session – ensure equipment is working
- Remind parent of goals of session
- Remind parent of position of camera
  - Unless you purchase a web cam with at least 180 degree zoom, parent must place camera in the corner of the room (preferably up high)
- Before coaching – decrease reactivity by interacting with client
  - Stimulus fading of telehealth
Based on the trigger analysis, we identified potential maintaining variables.

Designed functional analysis (FA) procedures:
- Trained Mom to conduct FA using remote behavioral skills training.
Remote Behavioral Skills Training (BST)

■ Instructions
  – Read and explained the written description of each condition and answered questions

■ Modeling
  – Showed video model of each condition through screen-share app
  – Video model was 2 minutes in duration

■ Rehearsal
  – Practiced each condition with simulated client

■ Feedback
  – Provided at the end of each condition
  – Corrective and behavior specific
  – Continued until mastery criterion was met
    (2 consecutive sessions at 90% or above)
Video of Training
Video of Rehearsal
Behavior Plan Development

• Based on Functional Behavior Assessment
  • Jacob’s problem behavior was found to be maintained by access to tangibles
  • Function-based intervention plan:
    • Choice Intervention Plan w/ Tolerance Training (Peck Peterson & Royster, 2001)
  • Began intervention plan training with Mom via telehealth
• Using the same remote BST method, we trained Mom to implement choice intervention.

• Before First Training Meeting
  • Created Choice Intervention Instructions and emailed to Mom 1 day prior to meeting.
  • Instructed Mom to have the following materials during meeting:
    • Potential reinforcers
    • Treatment plan materials
      • 1 green cup, 1 red cup, and 1 yellow cup
      • iPad
      • Moderately preferred materials.
Choice Intervention Plan

Green Choice (Wait)

2 minutes

Yellow Choice (Ask for Break)

30 seconds

Red Choice (Problem Bx.)

10 seconds
**Choice Intervention Training**

- Shared screen with Mom and reviewed instructions
- Showed video model of choice intervention
- Rehearsal and Feedback
  - Mom practiced with BCBA pretending to be client
  - Continued until Mom met mastery criteria
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<td>If problem behavior occurs</td>
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Choice Intervention Sessions

- Scheduled sessions 3x a week with Mom
  - Mom did not implement intervention on the other weekdays
- Prior to Treatment Sessions
  - Reminded Mom of pre-session checklist
  - If needed, provided “booster” training session
- During Treatment Sessions
  - Coached Mom via Google Hangouts
  - Collected data on Jacob’s problem Bx. – Mom Did Not Take Data!
Video of Choice Intervention Session
Choice Intervention Sessions - Fading

• Began to fade coaching sessions per week to be less intrusive
  • After two weeks of successful treatment, began to fade number of days with telehealth coaching

• Fading Plan
  • Level 1: Mom began to run intervention 5 days a week, 3 days involved direct coaching
    • Mom would email data sheet to clinician
      • Through HIPAA secure cloud storage system, clinician stored data sheets that Mom emailed
Choice Intervention Sessions - Fading

• If there were any issues during the non-coached days
  • Mom and clinician would meet without Jacob to troubleshoot
  • On some occasions, Mom would record session and would scan the video into HIPAA secure cloud storage
  • If more intrusive support needed, clinician would observe more sessions in-vivo
• Fading Plan
  • Level 2: Mom ran intervention 5 days a week, 2 days involved direct coaching
  • Mom was comfortable at this level and so we decided to stay at Level 2
• After 2 months, faded telehealth services completely
Fading Timeline - Jacob

November
- Started Telehealth Services
- Began fading – Level 1
  - Mid November

December
- Fading – Level 2

January
- Continued Level 2

February
- Terminated Telehealth Services
Case Study #2 – Erica – Supervisor Mediated Model

• **Diagnosis:** Autism Spectrum Disorder
• **Age:** 4 years old

**Brief History:**
• Lived at home with Mom and Dad
• Attended local pre-school
• Basic echoic repertoire
• Point and lead parents for communication

**Reason for Referral**
• Not eligible for services through insurance
• Parents seeking private consultation
• Referred to our team for telehealth consultation
Telehealth Risk Assessment

- **Question 1: What is/are the behaviors of concern?**
  - Mom wanted to increase Erica’s communication
  - Erica did not engage in any severe problem behavior
    - Minimal crying/tantrums
- **Question 2: Does the family have adequate resources?**
  - RBT was willing to come into home to assist
  - Family had reliable internet and laptop at homes

Based on this information, we determined that Erica would be a good candidate for telehealth
Pre-Intake Process

- Consent for Telehealth Services was sent to both Mom and RBT
  - Mom
    - Received consent for video/audio use and recording AND consent for consulting services
  - RBT
    - Received consent for video-audio use and recording
    - Letter of commitment
    - Reimbursement contract
Pre-Intake Process

• Sent equipment to family
  • Equipment
    • WebCamera (for better view)
    • Bluetooth Device
    • VSee (video conferencing software)
  • Equipment Loan Agreement
Pre-Intake Process

- Established two separate agendas for RBT and Mom
  - RBT
    - Training and supervision relationship
  - Mom
    - Treatment consulting
RBT Training and Supervision

- Developed training goals directly related to treatment with Erica
- Scheduled separate meetings with RBT to work on training goals
RBT Training and Supervision

• Developed telehealth supervision session checklist for clinician

FBA.com Clinical Meeting & Session
Task Analysis for WMU Consultants

To clinical meetings and sessions with clients:

› Prepare your daily goal
› Prepare:
  o Reading materials
  o Graphs from previous session for review
  o Data sheets
  o Protocols
  o Material checklists for upcoming sessions
› Touch base with RBT to make sure everyone is on the same page with
  to prepare for the next session
› Upload the following materials to Box and/or email your teams
  o A clinical meeting/session agenda (see team “E” folder for exar
  o Any necessary reading materials, protocols, lists of needed stim
    sheets
Consultation w/ Erica’s Mom

- Once Mom received all the materials, we conducted a phone conference and reviewed consent forms with Mom
- Helped Mom install and test equipment via telephone
- Reviewed pre-session checklist and technology troubleshooting
  1. **What to do if connection is interrupted?**
     - Given that RBT was implementing sessions for skill acquisition, we determined that RBT would continue session if connection was dropped
  2. **What to do if problem behavior becomes too intense?**
     - Similar to Jacob, we developed levels of problem behavior for Erica
     - If Erica cried for more than 20 minutes and was not able to be calmed down, RBT ended session
Treatment Intake Process

- Intake Interview
  - Conducted intake interview via telehealth
    - Coached RBT via Bluetooth
    - Both RBT and BCBA took data
Skills Assessment Training

• Identified through interview that Erica needed a skills assessment
• Scheduled meeting with RBT via VSee
  • Trained on one milestone assessment at a time
    • Began with Mand Assessment Training
• Before Meeting
  • Created Mand Assessment Instructions and emailed to RBT 1 day prior to meeting
  • Instructed RBT to have the following materials during meeting
    • Potential reinforcers
    • Extra person to act as simulated client
Mand Assessment Training Session

• Shared screen with RBT and reviewed Mand Assessment Instructions
• Showed video model of mand assessment
• Rehearsal and Feedback
  • At this time, we asked RBT to give Bluetooth to rehearsal partner
  • Continued until RBT met mastery criteria
Video of Mand Assessment Training

• NEED TO FILM THIS!
Mand Assessment Session

- Coached RBT via Bluetooth device during Mand assessment with Erica
- RBT and BCBA both collected data
- Things we learned:
  - Prior to session – ensure equipment is working
  - Remind parent of goals of session
  - Remind parent of position of camera
    - Unless you purchase a web cam with at least 180 degree zoom, parent must place camera in the corner of the room (preferably up high)
  - Before coaching – decrease reactivity by interacting with client
    - Stimulus fading of telehealth
  - Conducted post-session meeting to go over session for the day
Video of Mand Assessment Session

• NEED TO FILM
Treatment Training

- Developed treatment plan based on assessment results
- Created mand training protocol for RBT
- Followed same steps for Mand Training as we did for Mand Assessment Training
- Once RBT met mastery criteria, began treatment implementation
Treatment Sessions

• Scheduled Mand Training sessions 5x a week with RBT

• Prior to Mand Training Session
  • Reminded RBT of pre-session checklist
  • If needed, provided “booster” training session

• During Mand Training Session
  • Coached RBT via Vsee
  • RBT and BCBA continued to take data

• After Erica mastered her first mand target, began to fade coaching
Video of Treatment Session

Need to film!
Fading Coaching

• During fading, RBT continued to implement mand training 5x a week
  • Created systematic plan to fade out coaching
  • Developed system for sharing data electronically
    • RBT scanned data sheets with her phone and emailed de-identified data to my work email
    • Once received, we uploaded data onto HIPAA compliance cloud storage system and deleted data through email
Fading Coaching

- Adopted asynchronous telehealth model
  - RBT would video record sessions periodically to send to BCBA for supervision
March
Level 1
Coached RBT 80% of sessions
- 4 sessions of telehealth coaching
- RBT implemented 1 session independently

April
Level 2
Coached 70% of sessions
- 3 sessions of telehealth coaching
- RBT implemented 2 sessions independently

May
Level 3
Coached 50% of sessions
- 2 sessions of telehealth coaching
- RBT implemented 3 sessions independently

June
Level 4
Coached 20% of sessions
- 1 session of telehealth coaching
- RBT implemented 4 sessions independently

July –
Continued Level 4
Continued
Case Study #3 – Erica

- **Diagnosis:** Autism Spectrum Disorder
- **Age:** 14 years old
- **Brief History:**
  - Lives at home with Mom, Dad, Brother, Sisster
- **Reason for Referral**
  - Was receiving services at an autism clinic in Iowa, but moved to a rural area in Michigan
  - Looking for a continuation of services for Erica
Pre-Intake Process

• Telehealth Risk Assessment
  • Using the referral files and contacting Mom via telephone, we asked the following questions
    • **Question 1: What is/are the behaviors of concern?**
      • Erica’s Mom wanted to continue ABA services in Michigan
    • **Question 2: Does the family have adequate resources?**
      • Mom has an iPad that Erica can use for herself
      • Mom has reliable internet
Pre-Intake Process – Additional Questions

• Question 3: Does the client have some necessary pre-requisite skills for direct therapy via telehealth
  • Erica has rule-governed behavior and can sit for more than 10 minutes at a time in front of a computer with little help
  • Erica engaged in minor problem behaviors

Based on the information, Erica is a good candidate for direct telehealth
Pre-Intake Process

• Consent for Telehealth Services sent to Mom
• Assent form should was sent to Erica
  • Letter was sent to Erica via Mom
    • Outlined the direct therapy relationship in terms that Erica could understand
• Equipment was not sent to Erica because we decided to use her iPad and University Google Hangouts
Assent Form for Erica
Intake Process

• Conducted Functional Assessment Interview (FAI) with Erica’s Mom via Google Hangouts to identify needs for Erica
• After FAI, we determined that Erica’s direct therapy goals would include
  • Social Skills
    • Conversations
  • Tolerance Training and FCT (Austin et al., 2015; Fisher et al., 2000; Hagopian et al., 2005)
    • Teaching to Wait for Access to Reinforcers
Intake Process

• Met with Erica’s Mom to outline session format
  • Outline programs for direct telehealth services
  • Outline rules for Erica and rules for the rest of the family during sessions
• Identify schedule
Programs for Direct Telehealth Therapy

• Reviewed program for teaching conversations to Erica with Mom
  • Therapist would use remote BST to teach Erica conversational skills
  • Therapist sent laminated instructions on how to have conversations to Mom to give to Erica

• Reviewed tolerance training program
  • Therapist would use remote BST to teach Erica how to wait for access to reinforcers when someone tells her to wait

• For both programs
  • Reinforcement: Token Economy
    • Erica earned stars
    • Once Erica earned 5 stars, she could exchange for 5 minutes of iPad time
  • Reinforcer delivery would be facilitated by Mom and/or brother (only for access to iPad)
• Mom was instructed to have Erica sit at the kitchen table with iPad and program materials ready
• Mom was instructed to help Erica get on Google Hangouts and to answer clinicians call
• Mom and/or older brother would need to be available during session
  • Help serve as conversational partners
  • Help deliver iPad time when iPad time was used as a reinforcer

Rules for Telehealth Sessions
Pre-Session Process

• Met with Erica
  • Tested equipment
  • Decrease reactivity with Erica by having short sessions where we just talked and played games
  • Once reactivity has decreased, we had a short session where we went over the session format
• Using Google Hangouts
  • Asked Erica to take out instructions for how to have a conversation
• Instructions - Reviewed steps for having a conversation
• Model - Shared screen and showed video model of correct conversation skills
• Rehearsal – Therapist asked Erica to find Mom or Older brother to practice conversations
• Feedback - Provided feedback to Erica
  • Delivered praise for correct responses
  • Delivered corrective feedback
    • “You forgot to ask a question. Next time, you can ask How are you, What are you doing, etc.”
  • Showed Erica how many stars she had earned
• Repeat Rehearsal and Feedback until Erica earned 5 stars
How to Talk to Friends

Say Hello

Wait

Ask Questions
*Mark a “+” if Anna completes the step correctly and independently. Mark a “-” if Anna needs help or completes the steps incorrectly.

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<td>1) Make eye contact</td>
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<td>2) Wait before talking</td>
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<td>3) Ask question (who, what when, where, how)</td>
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Video of Conversations

• NEED TO FILM
1. Contrive a situation in which Erica must wait for a preferred activity and/or item
   • Mom and/or Older Brother asked to facilitate
     • Example: Older Brother asked for Erica’s iPad, Mom ask Erica to wait for a snack
   • Mom and/or Older Brother were instructed to say “You have to wait for ______”
     1. Therapist started timer

2. Continue Steps 1 for 15 minutes
Video of Tolerance Training

• NEED TO FILM
Session Format

1. Say “Hello” and talk about how Erica’s morning was going – 5 minutes
2. Ask Erica to make a choice on which program she wanted to work on first – 2 minutes
3. Began program (either Conversational Skills OR Tolerance Training) - 15 minutes
4. Break – 5 minutes
5. Repeat Step 3 for 2nd program – 15 minutes
6. Break – 5 minutes
7. Therapist choice what program we worked on next – 2 minutes
8. Began program – 15 minutes
9. Break – 5 minutes
10. Began 2nd program – 15 minutes
11. Said goodbye to Erica
12. Go over session with progress with Mom
Video of Session

• NEED TO FILM 15 MINUTES