Reaching Families Through Telemedicine

Vanderbilt’s Early Assessment, Intervention, and Part C Mentorship Program for ASD

Katie Wood (EI Emory Valley Center)  Mary Fleck, MEd, BCBA (VKC TRIAD)
Karen Olson (EI Emory Valley Center)  Jeffrey Hine, PhD, BCBA (VKC TRIAD)
Jamie Sharpe (Proud Parent)
Collaborators

VANDERBILT KENNEDY CENTER
TREATMENT & RESEARCH INSTITUTE FOR AUTISM SPECTRUM DISORDERS

Department of Intellectual & Developmental Disabilities
Tennessee Early Intervention System
The Guiding Question

How do we...

1) Provide best-quality services in rural, underserved, and low resource communities
2) While optimizing innovation and efficiency for sustainable programming
3) Embed within existing systems of medicine, education, and care?
Objectives for Today

• Provide a brief history of TRIAD’s partnership with TEIS

• Discuss use of telemedicine as a service delivery model for providers and families of young children with autism

• Early Interventionist and parent perspectives
2014 2015 2016 2017 2018 2019 and on

Caregiver follow-up

Co-treating

Professional Development & Tele-consultation

Curriculum Development & Tele-diagnostic Consultation

Tele-extensions and district level experts
Tele-diagnostic Consultation Service Model

- Telediagnostic program designed to:
  - Streamline care in an efficient manner
  - Rapidly and accurately identify ASD (or clearly rule out)
  - When clear/pressing issue for family
  - Not for those where more substantial evaluation is needed over time (family offered choice)
Triage

- Families enrolled in State’s Part C
- ASD concerns identified
**Triage**
- Families enrolled in State’s Part C
- ASD concerns identified

**Streamlined Telediagnostic Evaluation**
- STAT
- Record review
- Caregiver Interview
- Structured behavior observations
- Feedback and next steps
- Home follow-up
TELE-SUPPORT, RESEARCH, & SERVICE

We have found:

- It is feasible and valid to use an abbreviated autism evaluation process
- *Families* highly prefer telediagnostic services over traveling to a distant diagnostic center
- We are increasing the number of families we serve
- We are decreasing wait times
- We save *families* time/financial costs
- We start intervention for *families* faster
“Can Novel Telemedicine Tools Reduce Disparities Related to Early Identification of Autism?”

- Designed for use by during a telemedicine-based assessment
- Designed for open and free use
- Uses widely available/cheap materials
- Time-sensitive
- Play-based procedures could be performed by novel users
  
https://vkc.vumc.org/vkc/triad/tele-asd-peds
Parent is walked through a set of play tasks that can be modified, repeated as needed

- Prepare/orient families for visit
- Call/info in advance
- EI joins via Zoom
TELE-SUPPORT, RESEARCH, & SERVICE

We have found:

• Providers
  • Comfortable completing assessments
  • Making diagnoses
  • Providing feedback

• Families
  • Comfortable playing with child
  • Instructions easy to follow
  • Took right amount of time
  • Comfortable discussing diagnosis
  • Provider had seen behaviors of concern
Increasing Access to Specialized Early Intervention Services

Caregiver and Provider Support Services (EI CAPSS)
Basic Online Training Resources

Challenging Behavior Five: Preventing Challenging Behavior and Planning for Change

From Early Intervention to Preschool: A Toolkit for Parents

Vkclearning.org
Diagnostic Evaluation
Traditional or Telemedicine

6 follow-up visits (in person or via telemedicine) in collaboration with the EI provider.

Ongoing support and consultation as needed from TRIAD.
The potential of telemedicine...

Program Mission: Increase access to autism evaluation and intervention services for families while mentoring rural providers
Pre-COVID Telemedicine Efforts

- Tele-diagnostic consultation
- Hybrid behavioral intervention services

COVID Response Telemedicine Efforts

- 100% tele delivery of services
- Development of new tools/trainings for other service providers
# Outcome Data Comparisons

<table>
<thead>
<tr>
<th>In-person Only</th>
<th>Hybrid</th>
<th>Telemedicine Only</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="In-person Only" /></td>
<td><img src="image2.png" alt="Hybrid" /></td>
<td><img src="image3.png" alt="Telemedicine Only" /></td>
</tr>
<tr>
<td>N = 49</td>
<td>N = 20</td>
<td>N = 46</td>
</tr>
</tbody>
</table>

Corona et al. (in review). *Utilization of Telemedicine to Support Caregivers of Young Children with ASD and their Part C Service Providers: A Comparison of Intervention Outcomes Across Three Models of Service Delivery*
Average treatment fidelity did not differ significantly between groups.
More improvement reported by the in-person group
*No significant differences between groups on the CSBS-DS or MCDI*
Service Provider Satisfaction

Higher ratings in the telemedicine only group vs. the hybrid group/in person groups

<table>
<thead>
<tr>
<th>Objective</th>
<th>Overall</th>
<th>In-Person</th>
<th>Tele-Medicine</th>
<th>Hybrid</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>The objectives of the consultation were clear.</td>
<td>3.72</td>
<td>3.58</td>
<td>3.91</td>
<td>3.00</td>
<td>3.55</td>
</tr>
<tr>
<td>Appointments and home visits were appropriate in length and were scheduled at convenient times.</td>
<td>3.72</td>
<td>3.58</td>
<td>3.91</td>
<td>3.00</td>
<td>3.55</td>
</tr>
<tr>
<td>The consultant was knowledgeable about interventions.</td>
<td>3.76</td>
<td>3.67</td>
<td>3.96</td>
<td>3.00</td>
<td>3.60</td>
</tr>
<tr>
<td>The consultant was knowledgeable about child development and the child's specific developmental challenges</td>
<td>3.76</td>
<td>3.67</td>
<td>3.96</td>
<td>3.00</td>
<td>3.60</td>
</tr>
<tr>
<td>The consultant understood and addressed the family's needs.</td>
<td>3.74</td>
<td>3.67</td>
<td>3.91</td>
<td>3.00</td>
<td>3.58</td>
</tr>
<tr>
<td>The consultant was well prepared and well organized.</td>
<td>3.77</td>
<td>3.67</td>
<td>3.96</td>
<td>3.00</td>
<td>3.60</td>
</tr>
<tr>
<td>The consultant communicated clearly throughout the process.</td>
<td>3.84</td>
<td>3.91</td>
<td>3.96</td>
<td>3.00</td>
<td>3.68</td>
</tr>
<tr>
<td>The consultant provided recommendations that were useful.</td>
<td>3.74</td>
<td>3.64</td>
<td>3.91</td>
<td>3.00</td>
<td>3.57</td>
</tr>
<tr>
<td>The child's target behavior(s) and skills improved during this service.</td>
<td>3.7</td>
<td>3.62</td>
<td>3.87</td>
<td>3.00</td>
<td>3.55</td>
</tr>
<tr>
<td>The final report provided was understandable and useful.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.56</td>
</tr>
<tr>
<td>I was pleased with the outcome of TRIAD services for me and this family.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.61</td>
</tr>
<tr>
<td>I would recommend TRIAD services to other parents of children with ASD or related developmental delays</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.63</td>
</tr>
<tr>
<td>Was the amount of time spent on this service realistic?</td>
<td>3.92</td>
<td>4.00</td>
<td>3.92</td>
<td>No Response</td>
<td>3.95</td>
</tr>
<tr>
<td>Was the amount of time and support adequate for your needs?</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>No Response</td>
<td>4.00</td>
</tr>
<tr>
<td>Did this service meet your expectations of it?</td>
<td>3.80</td>
<td>3.734</td>
<td>3.94</td>
<td>3.00</td>
<td>3.67</td>
</tr>
</tbody>
</table>

Overall rating of 3.8 out of 4
TRIAD’s TN Early Assessment and Mentorship Opportunity (TEAM Opp)

How do we reach families when a specialist isn’t available to administer the assessment?
STAT Training Procedures for DTs

TRAIN

IMPLEMENT

SUPPORT

Adapted for COVID Protocols
Established Contracted Sites

TEAM Opp
Provider Satisfaction

Providers were asked to rate their agreement with statements about the telediagnostic evaluation on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree)

<table>
<thead>
<tr>
<th>Satisfaction with Tele-Diagnostic Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.78</td>
</tr>
</tbody>
</table>
Provider Satisfaction

Providers were asked to rate their agreement with statements about the professional learning community on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree)

<table>
<thead>
<tr>
<th>Satisfaction with Tele-Diagnostic Evaluation</th>
<th>4.78</th>
</tr>
</thead>
</table>

“Shorter wait time, they don't have to travel, child can be seen in his/her natural environment.

“It allows be to be part of the evaluation. I get to see what specific things the evaluator saw to issue/not issue a diagnosis.”
<table>
<thead>
<tr>
<th>Survey</th>
<th>Average Rating (1-Strongly Disagree to 5-Strongly Agree) (n=5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telemedicine made it easier and more convenient for me to visit with a provider.</td>
<td>5</td>
</tr>
<tr>
<td>My telemedicine visit was just as private as an in-person visit.</td>
<td>5</td>
</tr>
<tr>
<td>I felt it was important that my child's DT/EI was able to participate in the evaluation</td>
<td>5</td>
</tr>
<tr>
<td>I am likely to recommend telemedicine to others.</td>
<td>5</td>
</tr>
</tbody>
</table>
## Satisfaction with Telemedicine Follow-up Services

<table>
<thead>
<tr>
<th></th>
<th>Families (n=7)</th>
<th>Providers (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Design (n=2)</td>
<td>3.86</td>
<td>3.94</td>
</tr>
<tr>
<td>Consultant Knowledge and Skill (n=6)</td>
<td>4</td>
<td>3.92</td>
</tr>
<tr>
<td>Child Outcomes and Program Benefits (n=4)</td>
<td>3.86</td>
<td>3.94</td>
</tr>
<tr>
<td>Overall Average (n=12)</td>
<td>3.93</td>
<td>3.93</td>
</tr>
</tbody>
</table>

4= Strongly Agree 3= Agree 2= Disagree 1= Strongly Disagree
Next Steps

• Return to in-person service delivery as needed/appropriate
• Replication and extension of DT-mediated evaluations
• Pilot alternative models of follow-up consultation
Special Thanks!

TRIAD Directors:
• Zachary Warren, Executive Director
• Pablo Juárez, Director
• Amy Nicholson, Director of Clinic and Research Operations

TRIAD Psychologists
• Neill Broderick, Ph.D.
• Tori Foster, Ph.D.
• Jeff Hine, Ph.D.
• Caitlin Stone, Ph.D.
• Amy Weitlauf, Ph.D.

TRIAD Early Intervention Consultants:
• Kristin Dorris
• Shaunna Foell
• Tori Foster
• LaTamara Garrett
• Stephanie Kretzer
• Marie Martinez
• Mary Morton
• McKenzie Peeler
• Amanda Spiess
• Ashley Vogel

And to TEIS and all the families that have welcomed us into their homes and lives.
• What perceived difference did you observe from live assessments and teleassessments/interventions?
• What differences in enrollment did you experience after going from in-person to virtual services? Do you think decreases could be because families or overwhelmed? Financially hurting? Other reasons?
• Have you asked parents for feedback on the differences between in-person and virtual services? How did you do this?
• How did you address equity and inclusion in going from in-person to virtual services?
Follow Us, Like Us
Web: triad.vumc.org
Twitter and Facebook: @VKCTRIAD
Alacia.Stainbrook@vumc.org

Thank You!