Telehealth Advances for Autism Spectrum Disorder

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- Consultant for Jaguar Therapeutics and Forge Therapeutics
- Board Member of the National Fragile X Foundation
- Creator and Trainer of Regulating Together



Overview

Treatment

Diagnostics

Family Experience

Reimbursement

Provider Accessibility

Research Needs

^{*}A recent set of recommendations for removing ableist language from autism research (Bottema-Beutel et al., 2021) will inform my terminology use throughout this presentation.*

"In regard to neurodevelopmental psychiatry, it is possible to manage medications on video with yearly in person visits for labs, vital signs, and physician exam.

I started telemedicine 15 years ago and the only thing that has changed, in a good way, is acceptance of telemedicine. It has always been feasible"

- Craig Erickson, MD

Director of the Cincinnati Fragile X Center



Treatment: Does it Work

- Very Promising Evidence!
 - Adapted and New Programs
- Example Programs
 - Regulating Together for ASD Experience
 - Fragile X Telehealth Program





"Telehealth assessment is feasible and accepted among clinicians and families. Children who have more impairment and higher ASD concern appear to be an ideal group for telehealth diagnostics and primary care screening can be used to triage patients into the right diagnostic setting.

The biggest barrier has been insurance company recognition of diagnoses from telehealth. Unfortunately, we have had to spend significant time educating insurance companies."

- Debra Reisinger, PhD Riley Hospital for Children

Diagnostics: Is it Possible?



- Early Positive Evidence!
- Comparable outcomes (80-95%)
- Provides More Naturalistic
 Information
- New Measure Development
- Must identify best candidates
- New collaborative models of diagnosis

"An in-person 30-60 minute appointment at our clinic is an entire day activity. Every aspect of the day has to be considered. From leaving the house early in case you have traffic delays, to planning for food throughout the day, to having a "reward" at the end of the day, etc. And that does not include all the hours of planning done ahead of time for that day, from scheduling the appointment at a time that will minimize traffic delays, to taking care of all the home parts (time off work, other children, etc).

You have to think of everything, because if one thing goes wrong..... It takes a lot of time and emotional energy. Plus you have to plan for the actual appointment.

Summarize what has been going on with your child, write down your questions....

With telehealth, you only need to think about the actual appointment. Easy-peasy.

When possible, telehealth visits are a wonderful option."

- Caregiver

What Do Families Think?

- Overall Positive Feedback!
- High rates of satisfaction during the pandemic
- Decreased caregiver and child burden
- Hybrid preference when possible
- Do we have a complete picture?
 - Need more diverse perspectives
 - Need more involvement of self-advocates





"It would be an incredible disservice to families of children with developmental disabilities to limit an evidenced- based service just because it is provided via Telehealth, especially when we have emerging research data to suggest comparable efficacy of telehealth services."

- Sarah Greenwell, PsyD Cincinnati Children's Hospital



Are We Being Reimbursed?

- Mostly Yes... But Not for Everything...
- The Treatment Gaps
 - Employer Opt-In
 - Family Therapy
 - Multi-family Group Therapy
- Diagnostics Impact
 - Recognition and future coverage





For our family, telehealth has significantly improved access to professionals and clinicians. We are two hours from the closest FX clinic making our regular visits a full day endeavor when in-person. Through telehealth we can have both boys seen in about 30-45 minutes without the expense of traveling.

Telehealth takes away so many barriers and provides access without the added stress/anxiety/etc. just by allowing us to be in a familiar setting.

- Caregiver

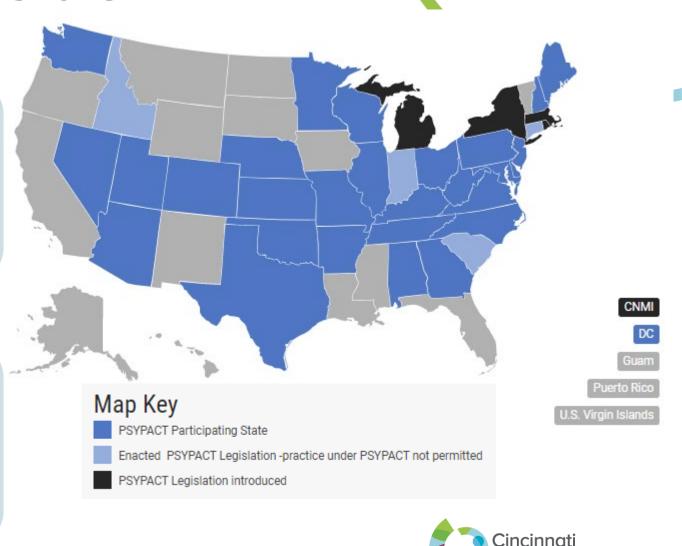
Are Providers Accessible?

PsyPACT

 Psychology Leading the Way!

Fragile X

- Only 31 Centers Across the US
- Telehealth Opens Care



Where are the Research Needs?



ClinicalTrials.gov

- 28 open trials
 - Only 3 Diagnostic Related
 - Adult Assessment
 - Disparity focused
 - Outcomes for Families
 - Treatment Related
 - Primarily Caregiver Training
 - Very few examining direct intervention

Gaps

- Comparison Trials of Diagnostic Tools
- Diverse and Self-Advocate Involvement
- Direct Intervention Trials with Autistic Individuals
- Examination of Disparities and Access
- Interventions for Profound Autism





Future Focus

Increase Direct Intervention Decrease Disparities

Licensure across state lines

Validate
Diagnostic
Tools

Specialized, Accessible Care for All Increase Profound Autism Options

Include Self-Advocates

Ease Family Burden Evaluate
New
Technology
Tools &
Models



Thank You

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References

- Avoiding Ableist Language: Suggestions for Autism Researchers. (2021). Autism in Adulthood, 3(1), 18-29. https://doi.org/10.1089/aut.2020.0014
- Hall, S. S., Monlux, K. D., Rodriguez, A. B., Jo, B., & Pollard, J. S. (2020). Telehealth-enabled behavioral treatment for problem behaviors in boys with fragile X syndrome: a randomized controlled trial. *J Neurodev Disord*, 12(1), 31. https://doi.org/10.1186/s11689-020-09331-4
- Hepburn, S. L., Blakeley-Smith, A., Wolff, B., & Reaven, J. A. (2016). Telehealth delivery of cognitive-behavioral intervention to youth with autism spectrum disorder and anxiety: A pilot study. *Autism*, 20(2), 207-218. https://doi.org/10.1177/1362361315575164
- Ingersoll, B., Wainer, A. L., Berger, N. I., Pickard, K. E., & Bonter, N. (2016). Comparison of a self-directed and therapist-assisted telehealth parent-mediated intervention for children with ASD: A pilot RCT. *J Autism Dev Disord*, 46(7), 2275-2284.
- La Valle, C., Johnston, E., & Tager-Flusberg, H. (2022). A systematic review of the use of telehealth to facilitate a diagnosis for children with developmental concerns. Res Dev Disabil, 127, 104269. https://doi.org/10.1016/j.ridd.2022.104269
- Monlux, K. D., Pollard, J. S., Bujanda Rodriguez, A. Y., & Hall, S. S. (2019). Telehealth Delivery of Function-Based Behavioral Treatment for Problem Behaviors Exhibited by Boys with Fragile X Syndrome. *J Autism Dev Disord*, 49(6), 2461-2475. https://doi.org/10.1007/s10803-019-03963-9
- Stavropoulos, K. K.-M., Bolourian, Y., & Blacher, J. (2022). A scoping review of telehealth diagnosis of autism spectrum disorder. *PLOS One*, *17*(2), e0263062. https://doi.org/10.1371/journal.pone.0263062
- Wacker, D. P., Lee, J. F., Dalmau, Y. C. P., Kopelman, T. G., Lindgren, S. D., Kuhle, J., Pelzel, K. E., & Waldron, D. B. (2013). Conducting functAdams, L., Adamo, N., Hollocks, M. J., Valmaggia, L., Brewster, A., Watson, J., Krisson, M., & Simonoff, E. (2022). Examining clinicians' concerns delivering telemental health interventions directly to autistic individuals during COVID-19. Res Autism Spectr Disord, 94, 101956. https://doi.org/10.1016/j.rasd.2022.101956
- Araiba, S., & Čolić, M. (2022). Preliminary Practice Recommendations for Telehealth Direct Applied Behavior Analysis Services with Children with Autism. J Behav Educ, 1-35. https://doi.org/10.1007/s10864-022-09473-6
- Aranki, J., Wright, P., Pompa-Craven, P., & Lotfizadeh, A. D. (2022). Acceptance of Telehealth Therapy to Replace In-Person Therapy for Autism Treatment During COVID-19 Pandemic: An Assessment of Patient Variables. *Telemed J E Health*. https://doi.org/10.1089/tmj.2021.0397
- Bearss, K., Burrell, T. L., Challa, S. A., Postorino, V., Gillespie, S. E., Crooks, C., & Scahill, L. (2018). Feasibility of Parent Training via Telehealth for Children with Autism Spectrum Disorder and Disruptive Behavior: A Demonstration Pilot. *J Autism Dev Disord*, 48(4), 1020-1030. https://doi.org/10.1007/s10803-017-3363-2
- Buranova, N., Dampf, M., Stevenson, B., & Sohl, K. (2022). ECHO Autism: Early Intervention Connecting Community Professionals to Increase Access to Best Practice Autism Intervention. Clin Pediatr (Phila), 99228221090710. https://doi.org/10.1177/00099228221090710
- Davis, T. N., Gerow, S., Wicker, M., Cosottile, D., Exline, E., Swensson, R., & Lively, P. (2022). Utilizing Telehealth to Coach Parents to Implement Trial-Based Functional Analysis and Treatment. *J Behav Educ*, 1-23. https://doi.org/10.1007/s10864-022-09468-3
- Dobrusin, A., Hawa, F., Gladshteyn, M., Corsello, P., Harlen, K., Walsh, C., Alaparthi, L., Weinstein, M., Baig, N., Sousa, A., & Gunaratnam, N. T. (2020). Gastroenterologists and Patients Report High Satisfaction Rates With Telehealth Services During the Novel Coronavirus 2019 Pandemic. Clin Gastroenterol Hepatol. https://doi.org/10.1016/j.cgh.2020.07.014
- Dow, D., Holbrook, A., Toolan, C., McDonald, N., Sterrett, K., Rosen, N., Kim, S. H., & Lord, C. (2021). The Brief Observation of Symptoms of Autism (BOSA): Development of a New Adapted Assessment Measure for Remote Telehealth Administration Through COVID-19 and Beyond. *J Autism Dev Disord*, 1-12. https://doi.org/10.1007/s10803-021-05395-w
- Estabillo, J. A., Moody, C. T., Poulhazan, S. J., Adery, L. H., Denluck, E. M., & Laugeson, E. A. (2022). Efficacy of PEERS® for Adolescents via Telehealth Delivery. *J Autism Dev Disord*, 1-11. https://doi.org/10.1007/s10803-022-05580-5
- Ferguson, J., Dounavi, K., & Craig, E. A. (2022). The impact of a telehealth platform on ABA-based parent training targeting social communication in children with autism spectrum disorder. *J Dev Phys Disabil*, 1-32. https://doi.org/10.1007/s10882-022-09839-8
- Gentile, M., Messineo, L., La Guardia, D., Arrigo, M., Città, G., Ayala, A., Cusimano, G., Martines, P., Mendolia, G., & Allegra, M. (2022). A Parent-Mediated Telehealth Program for Children with Autism Spectrum Disorder: Promoting Parents' Ability to Stimulate the Children's Learning, Reduce Parenting Stress, and Boost Their Sense of Parenting Empowerment. *J Autism Dev Disord*. https://doi.org/10.1007/s10803-022-05482-6



- Harris, L., Gilmore, D., Hanks, C., Coury, D., Moffatt-Bruce, S., Garvin, J. H., & Hand, B. N. (2021). "It was surprisingly equivalent to the appointment I had in person": Advantages and disadvantages of synchronous telehealth for delivering primary care for autistic adults. Autism, 13623613211060589. https://doi.org/10.1177/13623613211060589
- Hilty, D. M., Serhal, E., & Crawford, A. (2022). A Telehealth and Telepsychiatry Economic Cost Analysis Framework: Scoping Review. Telemed J E Health. https://doi.org/10.1089/tmj.2022.0016
- Jones, M. K., Zellner, M. A., Hobson, A. N., Levin, A., & Roberts, M. Y. (2022). Understanding Caregiver Satisfaction With a Telediagnostic Assessment of Autism Spectrum Disorder. *Am J Speech Lang Pathol*, 31(2), 982-990. https://doi.org/10.1044/2021_ajslp-21-00139
- Keder, R. D., Mittal, S., Stringer, K., Wallis, K. E., Wallace, J. E., & Soares, N. S. (2022). Society for Developmental & Behavioral Pediatrics Position Statement on Telehealth. *J Dev Behav Pediatr*, 43(1), 55-59. https://doi.org/10.1097/dbp.000000000001046
- Kennelly, A. M., McIntyre, B., Wood, A. C., Monteiro, S., & Voigt, R. G. (2022). Patient Satisfaction in Neurodevelopmental Pediatrics: In-Person vs Telemedicine. *J Child Neurol*, *37*(3), 181-185. https://doi.org/10.1177/08830738221075451
- Kryszak, E. M., Albright, C. M., Stephenson, K. G., Nevill, R. E., Hedley, D., Burns, C. O., Young, R. L., Butter, E. M., Vargo, K., & Mulick, J. A. (2022). Preliminary Validation and Feasibility of the Autism Detection in Early Childhood-Virtual (ADEC-V) for Autism Telehealth Evaluations in a Hospital Setting. *J Autism Dev Disord*. https://doi.org/10.1007/s10803-022-05433-1
- Lamash, L., Little, L., & Hen-Herbst, L. (2022). Telehealth Interventions to Promote Health and Behavior-Related Outcomes in Adolescents with Autism Spectrum Disorder. *J Autism Dev Disord*, 1-19. https://doi.org/10.1007/s10803-022-05440-2
- McNally Keehn, R., Enneking, B., James, C., Tang, Q., Rouse, M., Hines, E., Raches, C., & Etling, A. (2022). Telehealth Evaluation of Pediatric Neurodevelopmental Disabilities During the COVID-19 Pandemic: Clinician and Caregiver Perspectives. *J Dev Behav Pediatr*, 43(5), 262-272. https://doi.org/10.1097/dbp.000000000001043
- Mootz, C. A., Lemelman, A., Giordano, J., Winter, J., & Beaumont, R. (2022). Brief Report: Feasibility of Delivering the Secret Agent Society Group Social Skills Program via Telehealth During COVID-19: A Pilot Exploration. *J Autism Dev Disord*. https://doi.org/10.1007/s10803-022-05591-2
- Pompa-Craven, P., Tierman, E., Martino, J., & Lotfizadeh, A. D. (2022). Caregiver Satisfaction with Delivery of Telehealth Autism Services. *Adv Neurodev Disord*, 1-10. https://doi.org/10.1007/s41252-022-00256-8
- Reisinger, D. L., Hines, E., Raches, C., Tang, Q., James, C., & Keehn, R. M. (2022). Provider and Caregiver Satisfaction with Telehealth Evaluation of Autism Spectrum Disorder in Young Children During the COVID-19 Pandemic. *J Autism Dev Disord*, 1-15. https://doi.org/10.1007/s10803-022-05576-1
- Spain, D., Stewart, G. R., Mason, D., Robinson, J., Capp, S. J., Gillan, N., Ensum, I., & Happé, F. (2022). Autism Diagnostic Assessments With Children, Adolescents, and Adults Prior to and During the COVID-19 Pandemic: A Cross-Sectional Survey of Professionals. *Front Psychiatry*, *13*, 789449. https://doi.org/10.3389/fpsyt.2022.789449
- Stavropoulos, K. K. M., Heyman, M., Salinas, G., Baker, E., & Blacher, J. (2022). Exploring telehealth during COVID for assessing autism spectrum disorder in a diverse sample. *Psychol Sch.* https://doi.org/10.1002/pits.22672
- Suess, A. N., Romani, P. W., Wacker, D. P., Dyson, S. M., Kuhle, J. L., Lee, J. F., Lindgren, S. D., Kopelman, T. G., Pelzel, K. E., & Waldron, D. B. (2014). Evaluating the treatment fidelity of parents who conduct in-home functional communication training with coaching via telehealth. *Journal of Behavioral Education*, 23(1), 34-59.
- Young, L. M., Moylan, S., John, T., Turner, M., Opie, R., Hockey, M., Saunders, D., Bruscella, C., Jacka, F., Teychenne, M., Rosenbaum, S., Banker, K., Mahoney, S., Tembo, M., Lai, J., Mundell, N., McKeon, G., Yucel, M., Speight, J., . . . O'Neil, A. (2022). Evaluating telehealth lifestyle therapy versus telehealth psychotherapy for reducing depression in adults with COVID-19 related distress: the curbing anxiety and depression using lifestyle medicine (CALM) randomised non-inferiority trial protocol. *BMC Psychiatry*, 22(1), 219. https://doi.org/10.1186/s12888-022-03840-3