

Maintaining Treatment Integrity in the Face of Crisis:

A Treatment Selection Model for Transitioning Direct ABA Services to Telehealth

Kristine A. Rodriguez

Department of Clinical Development and Outcomes, Autism Learning Partners

Accepted Author Manuscript, In Press, Behavior Analysis in Practice

Abstract

With healthcare funders increasing approval of telehealth service as an emergency measure to provide continuity of care during the COVID-19 crisis, practicing behavior analysts have an unprecedented opportunity to demonstrate that essential, medically necessary behavior analytic services can be provided via telehealth in a manner that maintains treatment integrity and produces meaningful client outcomes. This telehealth treatment selection guide was designed to assist practicing behavior analysts in determining an appropriate protocol for delivery of 1:1 telehealth service (i.e., a behavior technician providing instruction directly to a client, with or without assistance by the client's caregiver, through video conferencing). This tool aims to help behavior analysts make thoughtful clinical decisions to maintain continuity of care for the vulnerable ASD population, while adhering to safety measures providing protection to society.

Keywords: telehealth, COVID-19, social distancing, treatment integrity

Maintaining Treatment Integrity in the Face of Crisis: A Treatment Selection Model for Transitioning Direct ABA Services to Telehealth

Editor's Note

This manuscript is being published on a highly expedited basis, as part of a series of emergency publications designed to help practitioners of applied behavior analysis take immediate action to mitigate and adjust to the COVID-19 crisis. This article was submitted on 3/27/20 and received final acceptance on 3/29/20. The journal would like to especially thank Jennifer Zarcone for her insightful and expeditious review of this manuscript. The views and strategies suggested by the articles in this series do not represent the positions of the Association for Behavior Analysis, International or Springer Nature.

Introduction

At the time of publication, a global pandemic (COVID-19) has necessitated drastic changes to societal structures the world over: entire states, provinces, and even countries have been placed under government orders for citizens to remain at home, allowing only essential services to continue. Centers for Disease Control and Prevention (CDC) and World Health Organization (WHO) have released guidance on community mitigation strategies (CDC, n.d., WHO, 2020); limiting close social contact (i.e. social distancing) has previously been identified as critical to slowing the spread of pandemics and is ultimately expected to save countless lives (CDC, 2017). In the United States, a national state of emergency was declared on March 13, 2020. During the state of emergency, applied behavior analysis (ABA) as a treatment for autism has generally been allowed to continue as an essential health service. However, as social

distancing restrictions tighten, the entire field is beginning to vet the feasibility and appropriateness of transitioning – at least temporarily – to telehealth, a service delivery model that for the purpose of this article will focus on live (synchronous) video conferencing to deliver behavior analytic services (i.e., the behavior therapist delivers instruction to the client via video conferencing).

There exists a growing body of research dedicated to evaluating the effectiveness of telehealth as a viable modality for delivering behavior analytic services, encompassing a variety of interventions from teaching functional communication skills (Simacek, Dimian, & McComas, 2017) to treating problem behavior (Lindgren et al., 2016). Researchers have written about the need to consider ethics when implementing services via telehealth (Pollard, Karimi, & Ficcaglia, 2017; Romani & Schhieltz). Pollard and colleagues published a thorough and practical article outlining clinical and business infrastructure considerations in the development of ethical telehealth services (Pollard et al., 2017). Additionally, systematic reviews of telehealth as a model for delivery of behavior analytic services have been conducted (Ferguson, Craig, & Dounavi, 2019; Tomlinson, Gore, & McGill, 2018). A distinction between the services outlined in the majority of these articles and the model presented here is the focus on direct service delivery. As much of the literature focuses on parent consultation between a behavior analyst and the caregiver, there is limited guidance for a direct model (that is, beyond parent consult, working directly with the client from a remote location). There also is no published guidance we are aware of to inform a systematic process for vetting the appropriateness of different telehealth models or structures based on a client and caregiver's presentation of various skill sets and individual needs. As healthcare funders quickly move to allow telehealth service as an emergency provision to facilitate continuity of care during this crisis, practitioners have an

unprecedented opportunity to demonstrate that essential, medically necessary behavior analytic services can be provided remotely, in a manner that maintains treatment integrity and upholds meaningful client outcomes.

This telehealth treatment selection guide was designed to assist behavior analysts in determining an appropriate protocol for delivery of direct, 1:1 telehealth services. Specifically, that involves a behavior technician (BT) providing instruction directly to a client, with or without assistance by the client's caregiver using video-conferencing technology. Admittedly, this modality may not be a clinical fit for all clients, and some programs may be more readily modified to suit the distance-model than others. This model was created in an attempt to provide a tool for behavior analysts and provider organizations to take a systematic approach in determining: 1) which clients are ready for immediate treatment, with minimal program modifications, 2) which clients' programs would require substantial modifications to goals, teaching procedures, and/or behavior intervention plans, and 3) which clients present with barriers requiring advanced problem-solving to access the benefits of direct telehealth services.

This tool, like all decision models and clinical tools, is *not intended as a replacement for sufficient clinical judgment and training* on the part of the behavior analyst. That is, decision models cannot give directives for what to do; they merely provide a framework to aid in taking a structured approach during the decision-making process. All treatment decisions must then be evaluated carefully with data and adjusted appropriately, as is always the case in ABA services, regardless of whether telehealth is being used.

The treatment guide consists of two components: a brief assessment (to be conducted via telehealth consultation with a behavior analyst), followed by a corresponding treatment selection matrix. Both are designed to assist the behavior analyst in efficiently determining a potentially

appropriate telehealth model, considering both the repertoires presented by client and caregiver, and to provide recommendations for subsequent training of the behavior analyst and behavior technician.

Program Modifications Assessment for Direct (1:1) Telehealth Services (PMA)

Designed to be conducted via telehealth consultation by the behavior analyst, the PMA entails two components: 1) assessment of client ability to attend/respond to skill acquisition programs and 2) assessment of caregiver ability to facilitate the skill acquisition program and the behavior intervention plan(s). The components may be interspersed in any way that facilitates the behavior analyst's ability to complete the assessment. As with any assessment, the consulting behavior analyst should first obtain consent, briefly describe the purpose of the assessment, and outline the entailed procedures (Behavior Analyst Certification Board, 2014).

PMA Part 1: Skill Acquisition

Figure 1 depicts the data sheet for Part 1, Skill Acquisition. The behavior analyst first instructs the caregiver to gather any required materials and reinforcers, then requests the caregiver to direct the client to attend to the screen (i.e. the synchronous video display of the behavior analyst). The BCBA attempts to run several client goals: three that have been previously mastered and generalized across people and/or settings; three that have met mastery criteria under strict stimulus conditions but are not yet meaningfully generalized; and three that are in acquisition/in progress. While running these programs, the behavior analyst records clinical impressions across the following fields: number of redirections needed for client to attend to the screen/BCBA, number of minutes/trials to which client attends, least intrusive successful prompts, and schedule of reinforcement required to maintain correct responding. The

BCBA should additionally note the caregiver's ability to prompt, redirect, and deliver reinforcement.

PMA Part 2: Behavior Management

Figure 2 depicts the data sheet for Part 2, Behavior Management. The behavior analyst starts by reviewing the intervention plan with the caregiver. During the review, the behavior analyst guides the caregiver to create a naturalistic routine, during which time the caregiver implements antecedent strategies and prompts replacement behaviors. Next, the behavior analyst guides the caregiver to create the contingencies to evoke moderate (i.e. manageable) intensity problem behavior. Care should be taken to avoid triggering severe problem behavior that cannot be safely managed by the caregiver. The behavior analyst provides real-time feedback and guidance to the caregiver as they work to implement the behavior plan. The behavior analyst assesses whether the caregiver can implement all strategies within the plan independently, with repeated reminders, or whether they are unable to implement the plan, even with prompting.

Telehealth Model Selection Matrix

The BCBA uses the Telehealth Model Selection Matrix (Figure 3) to help guide them in assessing the client and caregiver readiness for telehealth services, by considering the extent to which program modifications and caregiver coaching are needed to support client progress. Based on the results from the PMA, along with information about the client and caregiver repertoires, the behavior analyst uses the matrix to assess what they predict will be the most appropriate telehealth treatment model. The matrix serves as a tool to categorize client repertoires based on their prompting needs, responses to reinforcement schedules, and intensity of problem behaviors. The tool further helps the BCBA to assess caregiver repertoires based on

ability to facilitate session structure and to manage problem behaviors. Selection of repertoires leads to selection of a corresponding treatment structure. Finally, the tool lists potential training topics for BCBA's and BTs to support of the selected model. Figure 4 provides an example of a template that may be used to summarize modifications to the skill acquisition program, modifications to the behavior intervention plan, or additional goals for caregivers.

Minimal Modifications

Presentation

Clients well-suited for minimal program modifications in a telehealth modality likely demonstrate moderate to strong attending skills. The number of minutes or trials attended in the assessment should indicate that the client can engage in learning opportunities successfully. The exact duration of attending will vary based on the age of the learner, individual learner characteristics, and the needs of the program. The client demonstrates the ability to respond to distance prompts, that is, prompts that would be delivered by the BT via video meeting. It is optimal that the client does not rely on physical prompting to respond to learning trial. Alternatively, the client may require physical prompts, but in that case, the BCBA notes during the assessment that the caregiver is adept at delivering these consistently, and is ideally able to fade prompts with coaching from the BT. The client demonstrates the ability to self-manage a reinforcement system or tolerate delayed reinforcement, or they respond consistently to a reinforcement schedule delivered by the caregiver. In some instances, the repertoire presented by the learner may include an advanced skill set (e.g. a client being treated primarily for impacted social skills). Problem behavior may be infrequent or low intensity, or alternatively, may be moderate but well-managed by the caregiver.

Indicated Model

Based on the presenting repertoire described above, the client may be considered a strong candidate for telehealth services requiring few or minimal modifications. If the client attends well, responds to distance prompts, tolerates delayed reinforcement, and engages in only mild and/or infrequent problem behavior, they may be a candidate for remote direct instruction (i.e. client and BT) without requiring facilitation from the caregiver. If the client demonstrates a more impacted repertoire (e.g. difficulty attending, requiring more intrusive prompting, exhibiting challenging behaviors), but the caregiver demonstrates a strong repertoire to redirect, prompt, provide reinforcement and managing challenging behavior, then the client may also be a strong candidate for a telehealth program with minimal modifications. In this case, the caregiver acts as the facilitator in person, while the BT provides the direct service by delivering instructions, coaching caregiver to prompt/deliver reinforcement/navigate behavior plan, and collecting data.

Indicated Training

Given that minimal modifications are required, it follows that minimal training specific to this model is required. Basic procedural support for setting up video sessions, maintaining confidentiality, and assessing treatment integrity should be provided. Continued program monitoring is required to assess the integrity of this expanded modality of services and provide any needed support. Training on general safety, confidentiality, and technology set up are prerequisite skills or needed training topics, but they are outside the scope of this tool. For guidance on developing and troubleshooting telehealth services, the reader may consult guidelines such as those submitted by Lee and colleagues (Lee et al., 2015).

Modifications to Skill Acquisition/Behavior Intervention Plan

Presentation

More substantial modifications are likely needed for skill acquisition programs when the client demonstrates heavy reliance on physical prompting and continuous schedules of reinforcement in order to respond correctly to learning trials. This increases the reliance on skillful, consistent facilitation by the caregiver. Additionally, if the behavior intervention plan relies heavily on consequent strategies or extinction, there is greater reliance on the caregiver's ability to provide consistently accurate implementation of those strategies. Given that some caregivers report dissatisfaction or discomfort with some extinction procedures, modification to the behavior intervention plan (if appropriate) may lead to improved social validity and improved treatment adherence by the caregiver, as well as an overall reduced intensity of challenging behavior throughout telehealth sessions.

Model

For the client who demonstrates reliance on intrusive prompts and dense schedules of reinforcement, the BCBA is advised to consider adjusting the focus of the skill acquisition program to promote attending to distance prompts, and to program tolerance to thinner, more naturalistic schedules of reinforcement. The addition of a self-management program may also result in significant benefit for telehealth services. For example, teaching the client to travel to the caregiver to recruit reinforcement once earned may improve the client's likelihood of obtaining reinforcement under generalized contingencies. Such programming could also provide benefit to the caregiver, who may need to attend to other priorities that conflict with fully facilitating sessions. Additionally, it may be appropriate to temporarily place certain program goals on hold, focusing on the client's goals that are more readily addressed with a telehealth modality.

For caregivers who demonstrate a reluctance to implement extinction or other consequence-based strategies consistently, the matrix suggests that modification to the behavior plan may be appropriate. Targeted, function-based antecedent strategies may have higher social validity and be more acceptable to some caregivers. For example, a behavior analyst may elect to omit extinction from the behavior intervention plan, and instead focus heavily on caregiver implementation of noncontingent reinforcement throughout telehealth sessions.

Training

Providing behavior analytic services in-person allows the behavior analyst and BT to benefit from strong stimulus control that may not be present in the home setting. Some behavior analysts may not be well versed in least intrusive prompting methods or effective procedures for thinning schedules of reinforcement. To address these needs, a behavior analyst may benefit from learning strategies to facilitate transfer of stimulus control from the in-person instructional setting to the tele-health setting. Training on how to successfully implement a variety of effective, less intrusive prompting strategies, as well as training in reinforcement schedules and thinning and self-management protocols, may be beneficial.

Due to the general effectiveness of consistently used extinction procedures, a behavior analyst may rely heavily on extinction procedures when the team includes BTs who are skilled in implementing extinction. In cases of heavy reliance on extinction procedures, the behavior analyst may be less fluent in the use of certain effective antecedent strategies. Additional training focusing on function-specific antecedent strategies and programs targeting replacement behaviors may be needed.

Caregiver Coaching

Presentation

There are two particularly relevant aspects of caregiver repertoires: 1) implementation skill set and 2) alignment with the clinical direction of the program. In the event that the caregiver and clinical team are in agreement with the focus and direction of the program and the caregiver is relatively well trained, the caregiver may simply require coaching to sharpen their skill set for foundational skills related to facilitating the treatment plan (e.g., redirection, prompting, and delivery of reinforcement). In other cases, the caregiver and clinical team may be well aligned, but the caregiver requires more advanced training and coaching (e.g., implementation of behavior management strategies or specific prompting and fading strategies). Alternatively, if there is misalignment between the caregiver and the clinical team, there may be the need to provide additional consultation from the BCBA or clinical director in order to strengthen the alignment with the clinical direction of the treatment plan, or make reasonable adjustments to the plan where appropriate.

Model

In some cases, if the BT has demonstrated the ability to successfully coach the specific targeted skills, they may be able to deliver caregiver coaching for sharpening basic caregiver skills. If more complex skills must be taught, especially given the challenge presented by a remote behavioral skills training model, consultation with the behavior analyst directly is most appropriate. In instances where additional consultation is needed to create stronger clinical team-caregiver alignment or make appropriate adjustments to the programming, consultation should be provided by the behavior analyst or clinical director. In some instances, multiple consultation sessions may be needed before it is advisable to move forward with direct telehealth services between the BT and the caregiver/client.

Training

In either model, the behavior analyst should ensure that they and the BT have received training in effective consultation, particularly in use of a behavioral skills training model.

Additionally, the behavior analyst should seek training in working with caregivers to create a treatment plan that supports the client's self-determination and is strongly aligned with the family's values and priorities, as this has been shown to improve caregiver adherence to treatment and overall success with the intervention (Martin, Williams, Haskard, & Dimatteo, 2005; Gould, Tarbox, & Coyne, 2018).

Advanced Problem Solving

Presentation

Clients whose cases comprise the final category may present with particularly challenging repertoires for the telehealth model. These presentations may include extremely limited joint attention, necessity of frequent redirection, scarcity of potent reinforcers, and presence of intense and/or dangerous problem behaviors. Additionally, caregivers may be unavailable or unable to facilitate services, or may be opposed to the treatment plan.

Model

Some clients may present with unique challenges or barriers to a quick roll-out of the telehealth model for 1:1 services. It is beyond the scope of this matrix to recommend, concisely, the path forward for this group of clients. It is critically important, however, that care is taken to explore potential solutions and innovations in service delivery to overcome the barriers presented for this group. In no way should this tool be used to suggest that these clients may not benefit from telehealth services outright. To the contrary, these may be many of the clients most in need

of continuity of care and maintained service delivery during these times of unprecedented disruption to their daily routines and social structures. It is, however, likely that the need for more robust consultation with a behavior analyst, or more tailored trouble-shooting for teaching these clients remotely will lead to a longer period of preparation before beginning 1:1 telehealth services, compared to the models discussed up to this that allow for more immediate implementation of a telehealth model.

Training

The professional development and training required to serve this group of clients will vary widely based on the individual barriers to treatment and relevant risks. These include, but are by no means limited to, advanced training in creating caregiver alignment, training in technological solutions for engaging clients remotely, and maintaining safety. Behavior analysts should seek mentorship from clinicians experienced in managing the particular barriers presented by the client's (or caregiver's) repertoire, as well as behavior analysts with substantial experience treating challenging cases over telehealth.

Discussion

Potential Limitations

This clinical tool was developed under extremely time-sensitive circumstances and, like all tools, is not without limitations. First, although the content of this tool consists of evidence-based practices, this tool, itself, has not yet undergone empirical field testing. Therefore, the potential added benefit of using this tool has not been confirmed by research. It would be valuable to conduct formal research on the effectiveness of this model, as a practical tool for transitioning clients historically served in-person to a fully telehealth model.

A second potential limitation relates to the very use of telehealth for delivery of direct ABA services. Multiple studies, such as those summarized by Healy & Lydon in 2013, support that robust intensity of direct service (typically falling between 20-40 hours per week) is associated with optimal outcomes in behavior analytic treatment. Although caregiver consultation is a valuable element to incorporate into behavior analytic programs, the literature does not suggest that a caregiver-led model would outperform a model implemented directly by a professional trained extensively in ABA. A potential limitation of telehealth services in general, particularly in models indicating caregiver facilitation, is that the intensity of services may be particularly limited, based on caregiver availability. This is problematic, in that the outcome literature does not suggest that some small amount of treatment is better than nothing. Therefore, care should be taken to maintain an intensity of services that reflects best practice literature and is matched to the individual needs of the client, even while pursuing a telehealth model. This is why it is so critical to move clients toward a model that lessens reliance on caregiver facilitation (i.e. through less intrusive prompting and thinned schedules of reinforcement). Although this potential limitation is a grave concern, if in-person services are not possible due to the COVID-19 pandemic, it seems plausible that delivery of telehealth services is likely to produce some benefits to the client over no services at all.

A third limitation is that this tool is not (and is not intended to be) a comprehensive tool encompassing all aspects of clinical and business infrastructure related to rolling out telehealth services. It is simply one tool, developed and disseminated rapidly, for the purposes of helping fellow behavior analysts take a structured approach to decision making during a crisis. Many others are also developing useful resources, including the Behavior Analyst Certification Board (2020), the Behavioral Health Center of Excellence (2020), and the Council of Autism Service

Providers (n.d.), among others. These will continue to be highly valuable resources for the field even after the current crisis subsides.

Finally, a critical limitation of any telehealth model is the potential to limit care for those most in need. Not only does this pertain to those who present with the most intense problem behaviors and the poorest attending skills, but also to those whose socioeconomic status or physical geography limits access to reliable internet connection or internet-enabled devices to facilitate a secure video connection. These same factors may limit caregiver availability to facilitate as well, especially amidst a crisis that has led to some caregivers managing multiple contingencies, as caregiver, employee, homeschooler, and more. However, it may be the case implementing telehealth services in appropriate cases will allow for the allocation of resources to the smaller subset of clients for whom in-person service delivery is essential to maintain their safety (e.g., reducing the number of clients being seen in a clinic, or reducing the number of clients and homes with which a BT comes in contact).

Critical Opportunity

Even in the face of the limitations discussed above, the current reality provides a unique opportunity for behavior analysts to fulfill a very immediate need – to safely provide continuity of essential care for clients while complying with regional social distancing mandates – while potentially fulfilling a broader and longer-lasting purpose. When all social functioning has returned to normal, or the new picture of normal, there will still be clients to serve who do not have access to consistent, in-person ABA services. A number of logistical challenges can be resolved by delivering telehealth services. If through this crisis, the field of ABA can uncover tools to responsibly transition to telehealth services in a way that maintains clinical integrity and desired client outcomes, there are a number of beneficial potential outcomes. Immediately,

clients will continue to access services and countless jobs will be saved during the greatest crisis of a generation. In the long run, ultimately the field may emerge with a powerful new skill set to conquer the clinical and logistical challenges of the future.

Accepted Author Manuscript, In Press, Behavior Analysis in Practice

References

- Behavior Analyst Certification Board. (2020, March 20). *Ethics guidance for ABA providers during covid-19 pandemic*. <https://www.bacb.com/ethics-guidance-for-aba-providers-during-covid-19-pandemic-2/>
- Behavior Analyst Certification Board. (2014). *Professional and ethical compliance code for behavior analysts*. http://www.bacb.com/wp-content/uploads/BACB-Compliance-Code-english_190318.pdf
- Blanco, S., Meisels, M., Blair, B.J., & Leonard, L. (2020, March 27). Telehealth: Evidence-based practice in the time of COVID-19. Behavioral Health Center of Excellence. <https://bhcoe.org/category/blog/applied-behavior-analysis/>
- Centers for Disease Control and Prevention. (2017, April 21). *Community Mitigation Guidelines to Prevent Pandemic Influenza*. <https://stacks.cdc.gov/view/cdc/45220>
- Centers for Disease Control and Prevention. (n.d.) *Implementation of mitigation strategies for communities with local covid-19 transmission*. <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community-mitigation-strategy.pdf>
- The Council of Autism Service Providers. (n.d.) *Telehealth and crisis management guidelines*. <https://casproviders.org/telehealth-and-crisis-management-guidelines/>
- Ferguson, J., Craig, E. A., & Dounavi, K. (2019). Telehealth as a model for providing behaviour analytic interventions to individuals with autism spectrum disorder: A systematic review. *Journal of autism and developmental disorders*, 49(2), 582-616.

Gould, E. R., Tarbox, J., & Coyne, L. (2018). *Journal of Contextual Behavioral Science*, 7, 81-88.

Healy, Olive, and Sinéad Lydon. 2013. "Early Intensive Behavioural Intervention in Autism Spectrum Disorders."

Lee, J. F., Schieltz, K. M., Suess, A. N., Wacker, D. P., Romani, P. W., Lindgren, S. D., ... & Dalmau, Y. C. P. (2015). Guidelines for developing telehealth services and troubleshooting problems with telehealth technology when coaching parents to conduct functional analyses and functional communication training in their homes. *Behavior Analysis in Practice*, 8(2), 190-200.

Lindgren, S., Wacker, D., Suess, A., Schieltz, K., Pelzel, K., Kopelman, T., Lee, J., Romani, P., & Waldron, D. (2016). Telehealth and Autism: Treating Challenging Behavior at Lower Cost. *Pediatrics*, 137 Suppl 2(Suppl 2), S167–S175. <https://doi.org/10.1542/peds.2015-2851O>

Martin, L. R., Williams, S. L., Haskard, K. B., & Dimatteo, M. R. (2005). The challenge of patient adherence. *Therapeutics and Clinical Risk Management*, 1, 189-199.

Pollard, J. S., Karimi, K. A., & Ficcaglia, M. B. (2017). Ethical considerations in the design and implementation of a telehealth service delivery model. *Behavior Analysis: Research and Practice*, 17(4), 298-311. <http://dx.doi.org/10.1037/bar0000053>

Romani, P. W., & Schieltz, K. M. (2017). Ethical considerations when delivering behavior analytic services for problem behavior via telehealth. *Behavior Analysis: Research and Practice*, 17(4), 312. doi: 10.1037/bar0000074.

Simacek, J., Dimian, A.F. & McComas, J.J. Communication Intervention for Young Children with Severe Neurodevelopmental Disabilities Via Telehealth. *Journal of Autism and Developmental Disorders*, **47**, 744–767 (2017). <https://doi.org/10.1007/s10803-016-3006-z>

Tomlinson, S. R., Gore, N., & McGill, P. (2018). Training individuals to implement applied behavior analytic procedures via telehealth: A systematic review of the literature. *Journal of Behavioral Education*, *27*(2), 172-222.

World Health Organization. (2020, March 22). *Critical preparedness, readiness and response actions for COVID-19*.
<file:///C:/Users/KristineRodriguez/Downloads/Critical%20preparedness%20readiness%20and%20response%20actions%20COVID-10%202020-03-22.FINAL-eng.pdf>

Accepted Author Manuscript, In Press Behavior Analysis in Practice

Figure 2

Program Modifications Assessment for Direct (1:1) Telehealth Services (PMA)

Part 2: BEHAVIOR MANAGEMENT

Instructions: Review behavior plan with caregiver for 1 - 3 problem behaviors. BCBA first guides caregiver to create a naturalistic daily routine (such as snack time or independent work time), with caregiver implementing prescribed antecedent strategies and prompting replacement behaviors.

Next, BCBA guides caregiver to create contingencies to trigger medium/moderate levels of target challenging behavior. If caregiver cannot safely manage moderate level of problem bx based on past visits, guide to trigger mild intensity problem behavior. BCBA provides verbal prompts to caregiver throughout event if needed. Record caregiver responses below.

	Challenging bx	Caregiver ability to correctly implement antecedent strategies	Caregiver ability to correctly implement replacement behavior programs	Caregiver ability to correctly implement consequence strategies	Minimal modifications needed	Requires modifications to skill acquisition program/BIP (see recommendations)	Requires caregiver coaching (see recommendations)	Requires advanced modifications (see recommendations)
Bx 1		<ul style="list-style-type: none"> ○ Independent ○ With support ○ Unable/unwilling 	<ul style="list-style-type: none"> ○ Independent ○ With support ○ Unable/unwilling 	<ul style="list-style-type: none"> ○ Independent ○ With support ○ Unable/unwilling 				
Bx 2		<ul style="list-style-type: none"> ○ Independent ○ With support ○ Unable/unwilling 	<ul style="list-style-type: none"> ○ Independent ○ With support ○ Unable/unwilling 	<ul style="list-style-type: none"> ○ Independent ○ With support ○ Unable/unwilling 				
Bx 3		<ul style="list-style-type: none"> ○ Independent ○ With support ○ Unable/unwilling 	<ul style="list-style-type: none"> ○ Independent ○ With support ○ Unable/unwilling 	<ul style="list-style-type: none"> ○ Independent ○ With support ○ Unable/unwilling 				

Figure 3

Treatment Model Selection Matrix

Telehealth Model Selection Matrix															
		Minimal Modifications Required		Modifications to Skill Acquisition/Behavior Intervention Plan (BIP) Required		Caregiver Coaching Required		Advanced Problem-solving Required							
PRESENTATION	CLIENT	<ul style="list-style-type: none"> Attending: sufficient for learning Prompting: responds to distance prompts (e.g. model); within-stimulus Reinforcement: tolerates thin schedule of SR+ Problem behavior (bx): low frequency/intensity 	<ul style="list-style-type: none"> CLIENT Attending: redirectable Prompting: responds to caregiver prompts Reinforcement: responds to established schedule Problem bx: well managed by caregiver Skills: may have advanced repertoire CAREGIVER Prompting: sufficient Reinforcer delivery: delivers as directed, and is available for session 	CLIENT	<ul style="list-style-type: none"> Prompting: relies on physical prompting Reinforcement: relies on 1:1 fixed schedule of reinforcement 	CLIENT	<ul style="list-style-type: none"> Problem Bx: client responds to antecedent strategies; current BIP relies heavily on extinction 	CAREGIVER	<ul style="list-style-type: none"> Clinical Alignment: caregiver is in agreement with intervention plan Prompting: may need coaching Reinforcer Delivery: may need coaching Behavior Management: able to manage BIP 	CAREGIVER	<ul style="list-style-type: none"> Clinical Alignment: may require consultation to build consensus Behavior Management: may need coaching to adequately manage BIP 	CLIENT	<ul style="list-style-type: none"> Attending: significantly impacted attending skills Reinforcement: lack of potent reinforcers 	CAREGIVER	<ul style="list-style-type: none"> Clinical Alignment: not aligned with clinical team or treatment plan Availability: may be unavailable to facilitate program where clinically necessary
	MODEL	BT delivers 1:1 directly to client without caregiver facilitation	BT directs session, delivers trials, and collects data; parent prompts, delivers reinforcement, manages problem bx	Modify teaching procedures (i.e. prompting, reinforcement schedules)	Modify BIP (i.e. heavy antecedent strategies)	BT: Coach foundational skills (prompting, reinforcement, stimulus control)	BCBA: Coach advanced skills (behavior management, ABA concepts); establish clinical alignment	Advanced trouble-shooting required; seek mentorship before proceeding with 1:1 telehealth							
TRAINING	No additional clinical training; BCBA prime caregiver/BT with next steps	No additional clinical training; BCBA prime caregiver/BT with next steps	BCBA <ul style="list-style-type: none"> Modifying prompts Thinning reinforcement schedules Self-management 	BCBA <ul style="list-style-type: none"> rewriting BIP BT <ul style="list-style-type: none"> Implementing antecedent strategies 	BT <ul style="list-style-type: none"> Behavioral skills training Caregiver coaching 	BCBA <ul style="list-style-type: none"> Behavioral skills training Caregiver coaching Building clinical alignment 	Seek clinical mentorship/professional development								

