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PRACTICE BRIEF

# Settings of Care for Applied Behavior Analysis Services for Children with Autism

Applied Behavior Analytic (ABA) services are provided in a range of settings with great success. For example, several studies have demonstrated successful outcomes for children with autism served in the home setting (Lovaas, 1987; Luiselli, Cannon, Ellis & Sisson, 2000; McEachin, Smith & Lovaas, 1993). Other studies have demonstrated successful outcomes when comprehensive services (i.e., early intensive behavioral intervention; EIBI) are provided in center-based autism programs (Cohen, Amerine-Dickens & Smith, 2006; Freeman & Perry, 2012; Howard, Sparkman, Cohen, Green & Stanislaw, 2005) or mainstream preschools (Eldevik, Hastings, Jahr, & Hughes, 2012) or a combination of settings (Sallows & Graupner, 2005). In summary, the variables that have consistently been shown to predict EIBI outcomes are the intensity and duration of services and age of onset of services as well as qualifications of the supervisor (Granpeshah, Dixon, Tarbox, Kaplan & Wilke, 2009; LeBlanc, Parks & Hanney, 2014; Luiselli et al, 2000) while setting of service HAS NOT been shown to be predictive of EIBI outcomes (LeBlanc, Parks & Hanney, 2014).

Other studies illustrate the effects of problem-focused ABA services in community settings including homes (e.g., Najdowski, Wallace, Reagon, Penrod, Higbee & Tarbox, 2010; Veazey, Valentino, Low, McElroy & LeBlanc, 2016), neighborhoods (Gunby, Carr & LeBlanc, 2010), schools and combined settings (Valentino, LeBlanc & Raetz, 2018; Jessel, Hanley & Ghaemmaghmi, 2016), inpatient hospital units (Rooker, Jessel, Kurtz & Hagopian, 2013), and outpatient clinics (Hanney, Jostad, LeBlanc, Carr & Castille, 2014; Jessel, Hanley & Ghaemmaghmi, 2016). Thus, it is reasonable to provide ABA services in homes, schools, community, residential treatment, inpatient/outpatient programs, and other settings as shown in Figure 1 below.



Figure 1. Behavior Analyst Certification Board. *Applied Behavior Analysis Treatment of Autism Spectrum Disorder: Practice Guidelines for Healthcare Funders and Managers (2nd ed.)*

While it may be appropriate for services to be provided in a variety of settings, providers and funders must carefully consider the most appropriate setting for treatment for a client’s specific circumstances and goals. There should be no elimination of a potential setting for treatment services. Instead, the determination of whether a treatment setting is appropriate should be based on the following factors:

1. Match between the client needs and the opportunities afforded in that environment
2. Assessment of the barriers that might impeded programming in one environment versus another
3. Strategies for facilitating parent involvement

Additionally, when there is a transition between settings (e.g., home to preschool), there should be a clear plan in place to facilitate a successful transition and the plan should be developed well in advance of the transition.

### Client Needs and Opportunity in the Proposed Treatment Environment

Different environments offer different opportunities to learn and different demands for the child with autism. It is important that the client is able to receive behavioral intervention for their most critical targets and that the setting of service match the treatment goals. For example, a child who rereacts strongly to changes in their environment should be in an environment that will naturally

change in small ways (e.g., furniture or materials are moved, different people are there, décor changes, food changes) on a frequent basis in order to create consistent exposure to change and actively treat problem behavior that occurs in response to change or interruptions of rituals (Rispoli, Carmargo, Malichek, Lang & Sigafoos, 2014). As another example, a child who needs to learn social behavior and peer play skills should have a treatment environment that includes a variety of other children who can be involved in programming such as a center-based program, preschool or school (Reeve, Reeve, Townsend & Poulson, 2007), or home setting if there are siblings of appropriate age (Grosberg & Charlop, 2017). Most young children with autism (i.e., age 3 or younger) in comprehensive programming likely need to have at least some services in the home setting or a plan for targeting implementation in the home setting (e.g., parent and sibling training, treatment of sleep problems) and at least some services in a center-based or community setting as social targets and preparation for success in a school environment become the primary treatment goals (see MacDonald, Sacramone, Mansfield, Wiltz, & Ahearn, 2009 for examples).

As the client ages, the targets of behavioral intervention change and these new targets may be more likely to be well-suited to home, community, or an outpatient clinic setting. For example, for a pre-teen who is learning hygiene skills, the program might be best implemented in a home setting (Veazey et al., 2016) unless there is also severe destructive behavior that must simultaneously be treated making an inpatient or outpatient setting more appropriate (Piazza, Contrucci, Hanley & Fisher, 1997). For a client who is learning to plan meals, shop for ingredients, and assist in cooking; home, residential and community settings are likely to be most appropriate (MacDuff, Krantz & McLannahan, 1993). The most important consideration is that the essential elements of behavior analytic practice are able to be implemented or accommodated in that setting to target skills that will maintain under naturally occurring conditions once the ABA services are completed.

## **Barriers to Programming**

The appropriateness of the setting is also partially determined by consideration of the potential barriers that might impede programming in each of the possible settings. There are generally two categories of barriers that should be considered: 1) logistical barriers, and 2) family considerations. For instance, a family might have multiple children in the home at the time of service delivery, which could distract and reduce the effectiveness of the intervention or could serve as an opportunity for facilitating sibling social interactions. The family might also have transportation issues that limit the consistency with which they could access a center-based program. The clinician and family would need to discuss the nature of the potential barriers to determine how these barriers will impact the location of services.

Some of the most common logistical barriers for center-based settings are: a) mismatch of age and developmental needs of the child and other children served in the setting, b) lack of appropriate space for the target programs (e.g., no shower facilities for targeting showering) and c) health and safety considerations (e.g., the child has a compromised immune system that would likely result in frequent illness if exposed to other children).

Some of the most common logistical barriers for home-based services are a) limited space in the home suited for programming, b) excessive distractions that interrupt programming (e.g., a business is also run out of the home), and c) health and safety considerations (e.g., environmental hazards that cannot be controlled by the treatment team).

Some of the most common logistical barriers for community-based settings are safety issues (e.g., elopement is a behavioral concern and the risk of getting lost is higher in the community) and transportation issues. The family considerations that might impact the location of services are often a) discomfort having strangers in the home, b) scheduling or transportation issues that limit access to a center, and cultural practices that are inconsistent with a particular setting.

## **Functional Parent Involvement**

ABA services are likely to have their greatest effect when parents are involved in programming. That involvement might take several forms including collaborating to select goals and targets for programming, learning to implement specific programs, collecting data, and many others. The type of involvement may vary by setting but the location of services should not be seen as directly related to functional parent involvement. Providing services in the home setting does not guarantee functional parent involvement as the parents may not be the responsible adult that is present for services and the parent may be involved in other family and household tasks during intervention. Instead, the proposed treatment plan should describe the expectations for parental involvement (e.g., participating in sessions, implementing programs and facilitating generalization of treatment effects, collecting data, choosing targets) in a manner that is consistent with the setting of service. The plan should also describe the strategies that will be used to facilitate that involvement and build the family's capacity for future success without ABA services.

As an example of planning for parent involvement, a child who is receiving center-based services may have a 2-hour session each week where the parents come to the center, observe programming and learn to implement some of those programs so that they can extend treatment to home and to

center-based services may have a 2-hour session each week where the parents come to the center, observe programming and learn to implement some of those programs so that they can extend treatment to home and to hours other than those of programmed services. As another example, a child receiving services in a community setting (e.g., learning to ride the bus) might have the parent assist them with getting on the bus and finding their seat even if a ABA technician is also present. Once ABA services are removed for that specific goal, the treatment gains are more likely to maintain when the parent is helping the child get on the bus without the technician being present. As a final example of parent involvement, a parent may accompany their child to services in an outpatient clinic where they observe sessions for some period of time before entering the sessions to learn how to implement those services later in their home that are delivered in their home.

### **Communicating a Rationale for the Setting of Care**

A report requesting authorization or re-authorization for services should include a rationale for the setting(s) of care described in the treatment plan. The rationale should not be focused on the provider location preference or typical model of services (e.g., ABA Agency X only provides home-based services therefore we are providing home-based services). Instead, the rationale should focus on the three main categories of issues described above (i.e., match between needs and opportunities, barriers that impeded programming, and parental involvement). If one of these issues was the primary determinant of the decision, it is fine to focus the rationale on that issue.

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