Chapter 13
Training Issues Unique to Autism Spectrum Disorders

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Intensive early intervention training, discrete trials, transitions to new settings, environments and people, tactile defensiveness, difficulty initiating interactions and other factors specific to ASD will be covered. An emphasis on being aware of these specialized problems and how ABA methods have been developed to address them will be reviewed.

Training Issues Unique to Autism Spectrum Disorders

Behavioral researchers have created a substantial literature on staff training in human-service settings for individuals with developmental disabilities (Parsons, Reid, & Green, 1996; Reid & Green, 1990; Reid, Parsons, Lattimore, Towery, & Reade, 2005; Reid et al., 2003; Schepis & Reid, 1994). This literature illustrates the importance of providing effective initial training, either live or by video (Macurik, O'Kane, Malanga, & Reid, 2008) and clear and potentially public feedback (Parsons & Reid, 1995; Reid & Parsons, 1996; Wilson, Reid, & Korabek-Pinkowski, 1991). In addition, curriculum manuals are available for training both direct support staff and supervisory staff to provide effective positive behavior supports (Reid & Parsons, 2007). Providing behavioral interventions to individuals with autism spectrum disorders (ASDs) presents many of the same training and management challenges encountered in all human-service environments (e.g., high turnover, low pay, small training budgets), so the resources mentioned above are pertinent and useful; however, the characteristics of ASDs and associated behavioral interventions pose several unique challenges.

Behavioral characteristics common to the diagnostic profiles of ASDs can create challenges in service provision and staff training. For example, unusual sensitivity to change in environments and behavioral rigidity (Tidmarsh & Volkmar, 2003) necessitate an unusually high degree of consistency across treatment implementers and environments. Most individuals with an ASD will have multiple providers across multiple settings, potentially including their family, school staff, home staff, and eventually work-support staff. Ensuring that behavioral procedures are implemented consistently across settings is logistically difficult but critically important as even small changes in implementation could result in the loss of treatment gains for an individual with an ASD. The greatest difficulties can arise with transitions from one environment and support system to the next (e.g., elementary to middle school, high school to supported employment) unless training is coordinated across environments (Stoner, Angell, House, & Brock, 2007).

In addition to the difficulties created by characteristic features of ASDs, certain aspects of behavioral interventions and the direct support staff who implement them can also complicate training. One unique aspect of behavioral intervention for individuals with an ASD is the exceptional level of precision required to effectively implement highly structured early and intensive behavioral intervention (EIBI). Many EIBI models use extensive strategies and infrastructures to promote treatment fidelity (e.g., Davis, Smith, & Donahoe, 2002; Smith, Donahoe, & Davis, 2001). However, many therapists and parents still have

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difficulty achieving and maintaining optimal levels of procedural fidelity (Johnson & Hastings, 2002; Symes, Remington, Brown, & Hastings, 2006). In addition, the shortage and costs of experienced MA and PhD-level professionals with specific expertise in EIBI and ASDs often result in management of programs by under-qualified individuals (Love, Carr, Almason, & Petursdottir, 2009). It is relatively unique to EIBI that many parents choose to serve as the primary coordinators and supervisors of their child's programming by economic and logistical necessity rather than because of a strong background in behavior analysis and personnel management.

Ideally, we recommend that program coordinators of services for individuals with ASDs should have strong backgrounds in the disorders, behavioral treatment, staff training, and performance management. These recommendations are admittedly difficult to achieve. Thus, the purpose of the present chapter is to guide the program supervisor through several of the most common and challenging training issues unique to providing services to individuals with ASDs and to offer some potential solutions and resources for creating organizational performance improvement. The remainder of this chapter is structured according to three categories of common training issues. For each issue, the most likely problems are described along with basic recommendations for solutions and additional resources that practitioners and program coordinators might pursue.

Issue One: Workforce and Organizational Challenges

As is the case with the workforce in many disability-related human services, this group is often underpaid for the relative difficulty and social importance of their jobs. Direct-service providers are responsible for everyday personal care and physical activities and are also the primary implementers of instructional programs, behavior management programs, and data collection systems. Despite the importance of these tasks to the well-being of those with disabilities, direct-service staff in disability services are paid an average wage of only $7.97 in the United States (Wage Rates:...And Could We Care Less?, n.d.), though the demand for EIBI staff has driven wages higher for this subset of providers. In general, low wages often result in a workforce with a lower overall level of education and higher rates of adverse conditions leading to absenteeism and high turnover (Hirschfield, Schmitt, & Bedeian, 2002; Lakin & Larson, 1992).

The rate of turnover in the workforce for EIBI programs is often high for several other reasons besides wages, including: (a) job difficulty associated with the technical precision requirements for instruction with this population, (b) the high risk of injury due to aggression or other problem behavior, and (c) the strong appeal of higher education for many of the very best direct-service staff. In programs serving individuals with ASDs there are typically extensive training requirements prior to initiating contact with the consumer. These training requirements make every instance of turnover costly to the employer in terms of both time and financial resources (Larson & Hewitt, 2005). In-home programs may have particularly limited resources for adjusting to employee absenteeism resulting in loss of therapeutic services when staff members are unavailable for their scheduled shifts.

There are several potential solutions to the difficulties associated with workforce issues and the solutions begin with effective personnel selection (Larson & Hewitt, 2005). Agencies should determine the most difficult-to-train skills they deem essential to providing effective services and hire new employees based on the presence of those skills. For example, communicating effectively and empathetically with parents may be a more difficult skill to train compared to conducting a preference assessment, so staff might be screened for those social skills. Highly engaging incidental or naturalistic teaching may be more difficult to train than structured discrete-trial instructional procedures, so staff might be screened for play skills and the ease with which they notice and use natural learning opportunities. Having interviewees demonstrate these targeted skills in practice scenarios during the interview process is considered superior to other selection procedures in predicting future performance (Campion, 1972).

Designing Effective Training

When hiring is complete, training systems that create an efficient transfer of knowledge and development of skills for new staff are critical (Larson & Hewitt, 2005). Prior to the first day of work, staff should be provided with background information on the organization

and services. Testing their knowledge over those materials may provide incentives for new employees to review the information thoroughly. It may also be more efficient to determine the skills the new staff have already mastered so time is not wasted on skills that do not require extensive training.

In addition, to making materials available for review, active-response training procedures such as Behavioral Skills Training (BST) are quite effective for teaching staff new skills (e.g., Fleming, Oliver, & Bolton, 1996). Rather than passively listening to lectures or watching videos, training should involve interactive components such as modeling and role-playing with performance feedback until a preset performance criterion is met (e.g., 80% accurate; 100% accurate on a critical component). When face-to-face instruction is not feasible, interactive computer training that requires the viewer to answer questions and make evaluations has been demonstrated to be more effective than lecture (Williams & Zahad, 1996) and reading (Eckerman et al., 2002). Additionally, video presentation has proven as effective as and more efficient than live training for behavioral intervention plan implementation, though live training was rated more highly by staff (Macurik et al., 2008). See Reid and Green (1990) for excellent additional recommendations for designing your initial training procedures.

Another effective training tool is viewing and scoring videos of performance of the targeted procedures. Video can provide an effective and immediate strategy for training new procedures without lengthy delays for arranging group-training opportunities. Self-evaluation of videotaped performance can enhance awareness of error patterns and evaluating someone else's performance has been demonstrated to improve the same performance of the evaluator (Alvero & Austin, 2004). Videos are particularly useful for direct service staff who work in environments with little supervision as they allow for direct objective feedback to the performer and supervisor feedback and performance consequences that might not otherwise be available. When using video as a training tool, carefully select the skills for which demonstration of subtle features is critical.

Maintaining Staff Performance

After the necessary skills have been acquired, the environment must support their use without creating substantial additional costs or effort for the employer or supervisor. Low-cost incentives such as supervisor feedback and praise are highly effective at improving and maintaining performance (Alvero, Bucklin, & Austin, 2001) and have no additional monetary cost. Praise is most effective when it directly follows monitoring of performance and when it is directly contingent upon and descriptive of aspects of the performance (Komaki, Desselles, & Bowman, 1989). Performance-contingent feedback and praise are closely linked with job satisfaction (Podsakoff & Schriescheim, 1985) and job satisfaction is often associated with employee retention (Eskildsen & Dahlgaard, 2000). Therefore, praise of effective performance can be a high-impact organizational tool because it directly relates to improving and maintaining performance, improving job satisfaction, and minimizing turnover without extensive additional cost to the employer.

Other low cost incentives that can be utilized to reinforce maintenance of skills include access to ongoing training, schedule flexibility, small tangible rewards, and small bonus payments. Research on monetary incentives has indicated that even very small financial incentives produce increases in performance equivalent to those produced by comparatively larger financial incentives (Dickinson & Gillette, 1993). Therefore, small bonus payments or entering staff into a raffle for an opportunity to win a desirable prize are reasonable alternatives when funding for incentives is negligible. If performance-based pay is a possibility for an organization, see Abernathy (1996) for a guide to creating pay-for-performance systems.

Managing Performance Problems

When staff members have difficulty performing their job efficiently and effectively (e.g., poor data collection, poor procedural implementation), a common misconception is that more training is required to correct the performance problem. However, training is only likely to produce improvements if performance problems are the result of lack of knowledge or understanding. Several other factors may come into play and affect performance such as fluctuating motivational levels and equipment problems.

Mager (1997) suggests that a supervisor consider whether, with a strong enough incentive, the employee could perform the task perfectly. If the answer is no, it

is likely a training issue. If the answer is yes, it is likely a motivation issue. Additional training is unlikely to impact problems that are motivational in nature. For example, an EIBI instructor may know how to implement a procedure correctly but over time may elect to use a shortcut because it is faster or easier. There may be no immediately evident consequences to using the shortcut, although its use may adversely impact treatment outcome in the long term. For example, failure to follow correct prompt fading procedures may result in immediate skill performance, but could later result in prompt dependence and slower skill acquisition. The staff member may not recognize that the deviation from the protocol is related to the latter problem, which suggests a different type of training is needed. The instructor may need to learn more about the potential long-term impact of his or her performance rather than only about accurate implementation of the procedure. In addition, direct consequences for accurate implementation may be needed to supplement the relatively delayed natural consequences that often cannot be linked to one specific employee (i.e., the child has several instructors, the same instructor works with children who do not develop prompt dependence in spite of similarly faulty prompting procedures).

Factors other than motivation or deficit training can also affect performance. Austin (2000) developed the Performance Diagnostic Checklist for determining potential causes of performance issues. One portion of the checklist identifies training factors due to knowledge and skills. The remaining items on the checklist identify challenges in three areas – antecedents and information, equipment and processes, and consequences. Examples of the way antecedents may negatively impact performance would be misplaced data sheets leading to no data and stalled progress because a program does not specify mastery or prompt fading criteria. Examples of deficiencies in equipment and processes that may impact performance include running out of reinforcers during instruction, nonportable communication or data collection systems, or data collection systems that are not well-suited to the task and therefore are not used. One of the most common and frustrating problems with poor implementation of the Picture Exchange Communication System (PECS) intervention is that the communication book remains out of reach on a shelf or does not get regularly transported from home to school or work.

Lastly, just as consequences are extremely important in teaching and maintaining client behavior, they are equally important for developing and maintaining staff behavior. Staff might deviate slightly from a teaching procedure and not notice the change in their own behavior. If the consumer does not provide immediate feedback (e.g., confusion, problem behavior), the slight deviation may continue because there are no immediate consequences to deter the change. This phenomenon is referred to as procedural drift. Many staff work under minimal supervision in home-based programs, residential facilities, and schools, which means that supervisors may not provide sufficient feedback on performance to maintain adherence to specific procedures. For example, a staff member may know that antecedent-behavior-consequence data should be recorded after each occurrence of problem behavior, but he may wait to record until the end of the day because the data sheet is not readily accessible. This data collection strategy may not produce many errors if the problem behavior is infrequent but the quality of the data may decrease with this strategy as the frequency of problem behavior increases and they become more difficult to remember.

We acknowledge the fact that many clinical supervisors and coordinators (including parents) do not receive formal education in organizational behavior management. Nonetheless, careful attention to staff training, maintenance, and performance management is critical for the long-term success of any ASD intervention effort. See Daniels and Daniels (2004) and Reid (1998) for additional information on performance management.

Issue Two: Detection and Management of Subtle Behavioral Patterns

After hiring, training, and retaining a sufficient number of well-qualified staff, the next task for the program coordinator will be teaching those individuals a wide range of difficult and subtle repertoires in order to ensure delivery of effective services. Effective teaching of individuals with ASD requires one to use precise sequences of discriminative stimuli, prompts, and consequences while constantly tracking the type of instructions given, the degree of prompting required, and the response of the learner (Green, 1996; Smith, 2001).

Effective management of prosocial and problem behavior requires one to detect the emergence of subtle behavioral patterns and employ preventative strategies such as prompting alternative behaviors before problems arise. Many program supervisors teach the implementation of specific skills (e.g., least-to-most prompt hierarchies, PECS, functional communication training) according to available manuals. However, most supervisors do not directly target generalized repertoires such as detecting, preventing, and reporting problems, which can drastically improve the overall quality of services.

The ability of direct service staff to quickly detect developing patterns of problem behavior allows them to maximize the usefulness and efficiency of the clinical supervision they receive (Komaki et al., 1989). However, effective detection, reporting, and prevention of important environmental events require discrimination of subtle factors in the midst of many irrelevant background events. Problem behaviors are often so salient that they overshadow the important environmental conditions with which they are correlated, resulting sometimes in a seemingly random pattern. Teaching staff constantly surveying aspects of the physical environment (e.g., minimal attention, loud noises) and their own behavior (e.g., prompt types, allowing response-contingent escape) as potential determinants of problem behavior can result in quicker and more accurate detection of important patterns, potentially facilitating prevention.

Development of problem behavior is common for individuals with developmental disabilities and even young typically developing children. The most common functions of problem behavior are (a) escape from ongoing unpleasant stimuli (e.g., difficult task demand), (b) attention from others, (c) access to preferred tangibles, and (d) sensory or automatic reinforcement (Iwata et al., 1994). In addition to these more common functions of problem behavior, two unique functions are likely for individuals with an ASD due to the characteristics of the disorders (Tidmarsh & Volkmar, 2003). Repetitive behavior and restricted patterns of interests and preferences can lead to problem behavior maintained by disruption of rituals or by daily transitions (Reese, Richman, Belmont, & Morse, 2005; Reese, Richman, Zarcone, & Zarcone, 2003).

A strong preference for a certain chain of behavior, placement of objects, or complex interaction pattern (e.g., verbal rituals) can lead to aggression or tantrums when the pattern is disrupted until the ritual is eventually accommodated (Murphy, Macdonald, Hall, & Oliver, 2000). Rituals evolve from repetitions of patterns, so the beginning of a ritual may not be particularly noticeable unless one is vigilant for its development. Subtle contingencies (e.g., escape from a client's mild distress) can gradually shape a care provider's behavior to conform to unstated rituals to avoid more intense problem behavior associated with ritual disruption (LeBlanc & Fisher, 1997). The provider may be unaware that he has begun to carefully avoid disruption of rituals, but that avoidance can actually strengthen rituals and contribute to more intense problem behavior over time as ritual disruption becomes increasingly aversive to the individual with an ASD.

Rituals and resulting problem behavior are typically noticed when rituals and avoidance of ritual disruptions are strongly engrained even more carefully. It is more effective to detect the rituals and avoidance behavior quickly, before rituals become highly ingrained. Systematic exposure to mild and signaled disruptions of the patterns could then be employed to *prevent* the development of intense and complex rituals and the problem behaviors that typically accompany them. Frequent and signaled exposure to unexpected events or changes in patterns can be incorporated into activity schedules using a salient visual stimulus to represent the occurrence of an unknown event. The unknown or unexpected event should initially be highly preferred (e.g., go to a new place to do a favorite activity) and brief. Tolerance of the unexpected events could then be differentially reinforced, with problem behavior never resulting in access to the ritual (or proto-ritual). Over time, the duration of exposure to the unexpected events can be increased and their preference can be shifted from highly preferred to neutral to nonpreferred. This progression should continue until the client can tolerate ritual disruption.

Similarly, transitions from activity to activity can precipitate problem behavior for individuals with ASDs, potentially limiting their community-based opportunities (McCord, Thomson, & Iwata, 2001; Schreibman, Whalen, & Stahmer, 2000; Sterling-Turner & Jordan, 2007). Flannery and Horner (1994) suggest that individuals with ASDs have a uniquely high need for predictability. If naturally occurring cues for upcoming transitions are not salient to the individual with an ASD, then transitions may be experienced

as highly unpredictable environmental changes. If teaching staff attend to a change in activities as a potentially important environmental event, it can lead to more rapid identification of this unique function of problem behavior and effective treatment or prevention (Flannery, O'Neill, & Horner, 1995). Sterling-Turner and Jordan reviewed the literature on several viable behavioral interventions for transition-related problem behavior and determined that verbal and auditory cues (e.g., "we will switch activities in 2 min") and salient visual cues (e.g., photos, activity schedules, video priming) may be prove useful if predictability (or lack thereof) was the primary contributing factor for problem behavior.

Regardless of the predictability of an upcoming transition, the behavioral practitioner should be aware of the likelihood that the value of the activities themselves may lead to subtle operant contingencies that support problem behavior (Sterling-Turner & Jordan, 2007). If the transition is from a highly preferred activity to a less preferred activity or from a neutral activity to an aversive activity, problem behavior may still arise despite a clearly signaled transition. The problem behavior is likely to be maintained by the resumption of the prior preferred activity or by avoidance of the upcoming aversive activity and cuing is unlikely to be effective unless extinction is also in effect (i.e., no problem-behavior contingent failure to transition). To detect this type of contingency, staff will need to attend to the occurrence of the transition as an event and also to the probable value of the events for the client. Supplemental strategies to use in these instances include (a) altering the schedule of activities to minimize the contrast in value between contiguous activities, (b) changing aspects of the aversive activities to make them more enjoyable (i.e., curricular revision, inserting pleasant stimuli into unpleasant self-care routines), and (c) differential reinforcement of smooth transitions.

Several training strategies and organizational systems can prove useful in creating a treatment environment that is focused on prevention and is quickly responsive to the development of problems. It is important to explicitly train staff on accurate detection of subtle behavior and environmental events that should trigger increased vigilance on their part. Positive behavior supports curricula such as the one developed by Reid and Parsons (2007) provide instructional resources for the most common environmental antecedents that can contribute to problem behavior – presentation of difficult tasks, low attention or overall stimulation, and unavailability of preferred items. The occurrence of any of those environmental events should be established as a cue to notice any associated problem behavior. Of course, staff should already be trained to not deliver the potentially reinforcing consequences associated with these antecedents (e.g., problem behavior-contingent escape, attention, and tangible items). An unusual pattern of behavior or repetition of a pattern of behavior and transition between events can also be established as a cue for vigilant observation (Flannery et al., 1995).

Training videos can be used to establish the aforementioned events as reliable triggers for data collection and reporting. Videos should include extensive footage of a variety of clients with ASDs in a variety of situations. It is important that many of the situations should *not* depict problem behavior because you want to establish the environmental events rather than problem behavior as the trigger for detection. Set up training sessions in which staff practice recording problem behaviors and appropriate behaviors that occur during or within 2 min of one of the triggers and provide performance feedback (i.e., differential reinforcement of accuracy, corrective feedback for errors). The most likely errors to occur early on are errors of omission where instances of important situations are not detected.

In addition to training for detection of important environment-behavior relations, there should be a system that is easy, intuitive, and automatic when possible for reporting incidents. Reporting is often done informally during team meetings or supervision with emphasis on recently developed or ongoing problem behaviors. There are multiple limitations of reporting that is focused on episodes of problem behavior. First, staff may become reluctant to report for fear of negative evaluation of their performance. Second, and perhaps most importantly, the reporting is not triggered until it is already too late to prevent problem behavior from developing. Setting up a system for low-effort and frequent reporting of important environmental variables can facilitate a quick start on developing solutions to emerging problems.

One strategy a supervisor might use is daily completion of a structured reporting form that prompts identification of the subtle variables mentioned above. By including nomination responses for important

environmental events and places to note concerning behaviors, there is a daily reminder to pay attention to those environmental variables and their impact on the individual with an ASD. Note, however, that completion of the form should take less than 3–5 min or low levels of compliance or insufficiently detailed reporting may occur. Once an effective and efficient reporting form is created, make completion and submission of that form as automatic as possible. The form should be completed as part of a regular chain of end-of-shift activities as a standard employee responsibility. Finally, consider using some of the strategies for performance management described earlier (see *Issue One: Workforce and Organizational Challenges*) to facilitate consistent and detailed reporting (e.g., monetary incentives, behavior-specific praise).

Issue Three: Promoting Consistency Across Providers and Environments

Individuals with ASDs, like everyone else, need to function in multiple environments (e.g., school, home, work) and they often require supports to do so effectively. Consistency across caregivers and service providers (e.g., family, in-home staff, school, or work support staff) at any given time is critical to ensure the integrity of behavioral treatment and to minimize problem behavior. Furthermore, transitions from one setting to another are critical junctures for success but individuals with ASDs are particularly susceptible to problems in the transition process (Forest, Horner, Lewis-Palmer, Todd, & McGee, 2004). Consistency during times of transition from one provider to another often requires even more planning and management of additional organizational challenges. Each of these two issues of consistency is addressed below.

Consistency Across Caregivers and Environments

At any point in the life of an individual with ASD, there will be at least two major environments that can strongly impact his quality of life, rate of learning, and level of problem behavior. During childhood and adolescence, the critical environments are likely to be home, school, and daycare or after-school care. During adulthood the critical environments are likely to be an employment setting, home, and the community. In addition, college is more frequently becoming an option for those individuals who respond well to behavioral intervention and/or flourish in their secondary educational setting (Van Bergeijk, Klin, & Volkmar, 2008). Within each major environment, several key players (e.g., home: parents, siblings, grandparents, tutors; school: teachers, aides, principal) should be targeted for consistency of implementation of behavioral supports.

The effects of inconsistency across care providers can be potentially detrimental. Poor consistency in response to problem behavior can establish intermittent schedules of reinforcement, which can be resistant to extinction (Mackintosh, 1974). If teaching and prompting procedures vary too greatly across staff and environments, the likely effects are prompt dependency, confusion and impaired rates of acquisition, and increased problem behavior making procedural integrity an important concern (Belfiore, Fritts, & Herman, 2008; Johnson & Hastings, 2002; Smith et al., 2001). Even mastered self-care tasks such as independent toileting skills can regress if one environment requires independent skill use while another environment does not. It is often difficult to identify inconsistency as the source of problems because individuals in one environment may have limited access to information about intervention and performance in others.

The practitioner can use several strategies to facilitate consistency across implementers of behavioral and instructional supports. Actively monitor procedural integrity using structured checklists for either live or videotaped performance (Smith et al., 2001). Observe performance on a regular basis so that monitoring is viewed as a constant and accepted part of the job rather than as a punitive measure for suspected poor performance (Leblanc, Riccardi, & Luiselli, 2005). Video-based self-monitoring has proved effective for individuals implementing discrete-trial early intervention (Belfiore et al., 2008), which can be particularly useful if the staff has limited direct contact with coworkers or supervisors. Self-monitoring and monitoring by coworkers (Alvero & Austin, 2004) may be combined with supervisor monitoring to reduce the effort of assessing procedural integrity.

Planning for regular and effective communication across sites or across direct service staff within a site is a critical part of promoting consistent services. Design the communication system to include daily, weekly,

monthly, and quarterly components as needed for different parts of the system. For example, staff on different shifts with the same consumer should have a method for communicating daily and school-to-home communication should occur on a daily basis for behavioral targets relevant to both environments (e.g., toileting, problem behavior, prompt levels for requests). Other information might be best summarized on a weekly or monthly basis (e.g., overall progress on acquisition goals, changes in behavioral intervention plans) in supervision meetings or by written communication summaries.

Design supervision or team meetings to ensure optimal efficiency and accuracy of information. First, always use a structured agenda to guide the content of the meeting and to specify who is responsible for providing important information. Second, provide a rubric for reporting progress in programs in relation to a well-specified criterion for progress (e.g., 30% change in percent accuracy over 1 week) and mastery (e.g., 90% accuracy over 3 days with two different staff). Have staff list the programs that are progressing well and then focus the majority of supervision time on problem-solving for ones that are not progressing well. Staff should be trained to either provide specific data or a brief targeted report on critical variables that are likely to impact performance on a program (e.g., duration of time delay, exact prompting strategy, error pattern analysis). Third, train staff to report to their supervisor and to each other on three categories of information potentially related to problem behavior: (a) data on the ongoing occurrence of problem behavior for which there is a plan, (b) data on the occurrence of potentially problematic environmental conditions (e.g., unsignaled transitions, low-attention periods) and (c) information about any potentially emerging concerns.

Consistency During Major Transition Periods

There are several critical points throughout the first third of the lifespan associated with transitions across environments and major task requirements. Transition planning is important for all children with disabilities; however, the likelihood of resistance to change, social skills deficits, and poor skill generalization make individuals with ASDs particularly vulnerable during times of transition (Forest et al., 2004; Luce & Dyer, 1995). The first significant transition that a child with an ASD is likely to encounter is from in-home or preschool intervention services to kindergarten (Forest et al.). The next is from elementary to middle school and high school. Variables such as the changing of classrooms, increased requirements for independence, presence of new peers, etc., can be overwhelming to an individual with an ASD. Furthermore, many teachers, rather than one primary teacher, are likely to have instructional responsibility for the student. The stressors associated with this transition can be detrimental for both the student and his family, creating risks for increased anxiety, problem behavior, and decline in academic performance unless effective planning and transition management occurs (Schall, Cortijo-Doval, Targett, & Wehman, 2006; Stoner et al., 2007). The next major transition point is from the school environment to a triad of typical providers for adult services – supported employment or college, residential supports, and mental health services (Moxon & Gates, 2001; Van Bergeijk et al., 2008). All major transition points will serve as an assessment of how well previous environments prepared an individual (e.g., targeting meaningful skills, programming for maintenance and generalization, managing anxiety about impending changes) for subsequent environments.

Transition planning for individuals with ASDs creates unique training challenges associated with the transfer of services from one system to another, that is, the most knowledgeable individuals about the client's work in a different organization or location than the individuals who need the training. Employees of the new service agency may not have the same familiarity with ASDs, behavioral interventions, data collection, training, and supervisory infrastructures as the prior providers. Each environment is also likely to have its own hierarchical power structure that should be identified and targeted to ensure optimal support for behavioral programming. For example, in some school settings special education teachers operate independently with proximal support from their in-class aides and distal support from their principal. In other settings, the principal may exert a more direct influence upon educational services.

To facilitate effective training, the practitioner should consider the following recommendations. First, meet with the receiving providers 6 months to 1 year in advance to determine the required skill sets and social or noise tolerance levels for the client, and likely levels

of direct support available in the new environment. This information should be incorporated into the annual behavioral goals for the client (e.g., can work independently for 15 min in an environment with four other individuals), minimizing the need for the new providers to teach these skills during the transition period. When possible, teach pivotal skills that will allow the client to manage more of their environment and individual needs (e.g., self-management, requesting assistance or attention) (Koegel, Koegel, & McNerney, 2001; Lee, Simpson, & Shogren, 2007; Reichle, Dropik, Alden-Anderson, & Haley, 2008). Second, create a brief communication document that clearly describes information about (a) the important ASD characteristics of the consumer (e.g., rituals, social aloofness, use of PECS or sign language), (b) the prior program, (c) the skills that have been targeted to facilitate success in the new environment and the level of progress on those skills, (d) the current behavioral challenges, and (e) the behavioral supports that have proven effective. Third, create accompanying training materials that can be delivered either by the prior practitioner (if the new agency is willing) or by an identified partner at the new agency. Use video extensively to demonstrate critical aspects of behavioral supports and attempt to anticipate questions of the new care providers. Fourth, schedule a series of pretransition visits to the new setting so the client can meet the new care providers. View these visits as gradual exposure to stimuli that are potentially aversive; thus, these visits should be brief, social demands should be kept to a minimum, and highly preferred stimuli should be available. Subsequent visits can focus on establishing for the client important aspects of the routine (e.g., opening the locker, finding the bathroom and classrooms, putting on a work uniform) using visual supports (e.g., activity schedules, written task analyzes) and live demonstration of implementation of behavior management strategies and instructional procedures for care providers.

Summary and Conclusions

Certain features of ASDs and the behavioral interventions that have proved effective in treating them create unique training issues that practitioners should be prepared to address. Most practitioners have extensive experience in curriculum and instruction and management of problem behavior, but less education and experience in organizational and training issues. However, those organizational and systems issues can have a substantial impact on the quality of services for individuals with ASDs who are particularly vulnerable to problems of inconsistency, imprecision, and unexpected change. The information and resources provided in this chapter should guide practitioners to relatively simple but useful strategies to facilitate workforce management and training, development of effective detection and reporting systems to prevent problem behavior and rituals, and improved quality assurance and procedural consistency across environments and during important transition periods.

References

Abernathy, W. B. (1996). *The sin of wages: Where the conventional pay system has led us, and how to find a way out*. USA: PerfSys Press.

Alvero, A. M., & Austin, J. (2004). The effects of observing on the behavior of the observer. *Journal of Applied Behavior Analysis, 37*, 457–468.

Alvero, A. M., Bucklin, B. R., & Austin, J. (2001). An objective review of the effectiveness and essential characteristics of performance feedback in organizational settings. *Journal of Organizational Behavior Management, 21*(1), 3–29.

Austin, J. (2000). Performance analysis and performance diagnostics. In J. Austin & J. E. Carr (Eds.), *Handbook of applied behavior analysis* (pp. 321–349). Reno, NV: Context Press.

Belfiore, P. J., Fritts, K. M., & Herman, B. C. (2008). The role of procedural integrity: Using self-monitoring to enhance discrete trial instruction (DTI). *Focus on Autism and Other Developmental Disabilities, 23*, 95–102.

Campion, J. E. (1972). Work sampling for personnel selection. *Journal of Applied Psychology, 56*, 40–44.

Daniels, A. C., & Daniels, J. D. (2004). *Performance management: Changing behavior that drives organizational effectiveness*. Atlanta, GA: Performance Management Publications.

Davis, B. J., Smith, T., & Donahoe, P. (2002). Evaluating supervisors in the UCLA treatment model for children with autism: Validation of an assessment procedure. *Behavior Therapy, 31*, 601–614.

Dickinson, A. M., & Gillette, K. L. (1993). A comparison of the effects of two individual monetary incentive systems on productivity: Piece rate pay versus base pay plus incentives. *Journal of Organizational Behavior Management, 14*, 3–82.

Eckerman, D. A., Lundeen, C. A., Steele, A., Fercho, H., Ammerman, T., & Anger, W. K. (2002). Interactive training

versus reading to teach respiratory protection. *Journal of Occupational Health Psychology, 7*, 313–323.

Eskildsen, J. K., & Dahlgaard, J. J. (2000). A causal model for employee satisfaction. *Total Quality Management, 11*, 1081–1094.

Flannery, K. B., & Horner, R. H. (1994). The relationship between predictability and problem behavior for students with severe disabilities. *Journal of Behavioral Education, 4*, 157–156.

Flannery, K. B., O'Neill, R., & Horner, R. H. (1995). Including predictability in functional assessment and individual program development. *Education and Treatment of Children, 18*, 499–509.

Fleming, R. K., Oliver, J. R., & Bolton, D. M. (1996). Training supervisors to train staff: A case study in a human service organization. *Journal or Organizational Behavior Management, 16*(1), 3–25.

Forest, E. J., Horner, R. H., Lewis-Palmer, T., Todd, A. W., & McGee, G. (2004). Transitions for young children with autism from preschool to kindergarten. *Journal of Positive Behavior Interventions, 6*, 103–112.

Green, G. (1996). Early behavioral intervention for children with autism: What does research tell us? In C. Maurice, G. Green & S. C. Luce (Eds.), *Behavioral intervention for young children with autism: A manual for parents and professionals* (pp. 29–44). Austin, TX: Pro-Ed.

Hirschfield, R. R., Schmitt, L. P., & Bedeian, A. G. (2002). Job-content perceptions, performance-reward expectancies, and absenteeism among low-wage public-sector clerical employees. *Journal of Business and Psychology, 16*, 553–564.

Iwata, B. A., Pace, G. M., Dorsey, M. F., Zarcone, J. R., Vollmer, T. R., Smith, R. G., et al. (1994). The functions of self-injurious behavior: An experimental-epidemiological analysis. *Journal of Applied Behavior Analysis, 27*, 215–240.

Johnson, E., & Hastings, R. P. (2002). Facilitating factors and barriers to the implementation of intensive home-based behavioural intervention for young children with autism. *Child: Care, Health and Development, 28*, 123–129.

Koegel, R. L., Koegel, L. K., & McNerney, E. K. (2001). Pivotal areas in intervention for autism. *Journal of Clinical Child Psychology, 30*, 19–32.

Komaki, J. L., Desselles, M. L., & Bowman, E. D. (1989). Definitely not a breeze: Extending an operant model of effective supervision to teams. *Journal of Applied Psychology, 74*, 522–529.

Lakin, C. K., & Larson, S. A. (1992). Satisfaction and stability of direct care personnel in community-based residential services. In J. W. Jacobson, S. N. Burchard & P. J. Carling (Eds.), *Community living for people with developmental and psychiatric disabilities* (pp. 244–262). Baltimore, MD: Johns Hopkins University Press.

Larson, S. A., & Hewitt, A. S. (eds). (2005). *Staff recruitment, retention, and training strategies for community human services organizations*. Baltimore, MD: Brookes Publishing.

LeBlanc, L. A., & Fisher, W. W. (October, 1997). A preliminary examination of the relation between "insistence on sameness" and maladaptive behavior in individuals with autism. In M. H. Charlop-Christy (Chair), *Procedures for treating young children with autism*. Symposium presented at the Southern California Association for Behavior Analysis and Therapy, Pasadena, CA.

Leblanc, M., Ricciardi, J. N., & Luiselli, J. K. (2005). Improving discrete trial instruction by paraprofessional staff through an abbreviated performance feedback intervention. *Education and Treatment of Children, 28*, 76–82.

Lee, S., Simpson, R. L., & Shogren, K. A. (2007). Effects and implications of self-management for students with autism: A meta-analysis. *Focus on Autism and Other Developmental Disabilities, 22*, 2–13.

Love, J. R., Carr, J. E., Almason, S. M., & Petursdottir, A. I. (in press). Early and intensive behavioral intervention for autism: A survey of clinical practices. *Research in Autism Spectrum Disorders, 3*, 421–428.

Luce, S. C., & Dyer, S. C. (1995). Providing effective transitional programming to individuals with autism. *Behavioral Disorders, 21*, 36–52.

Mackintosh, N. J. (1974). *The psychology of animal learning*. London: Academic Press.

Macurik, K. M., O'Kane, N. P., Malanga, P., & Reid, D. H. (2008). Video training of support staff in intervention plans for challenging behavior: Comparison with live training. *Behavioral Interventions, 23*, 143–163.

Mager, R. F. (1997). *Analyzing performance problems: Or, you really oughta wanna – How to figure out why people aren't doing what they should be, and what to do about it*. Atlanta, GA: CE Publishers.

McCord, B. E., Thomson, R. J., & Iwata, B. A. (2001). Functional analysis and treatment of self- injury associated with transitions. *Journal of Applied Behavior Analysis, 34*, 195–210.

Moxon, L., & Gates, D. (2001). Children with autism: Supporting the transition to adulthood. *Educational and Child Psychology, 18*, 28–40.

Murphy, G., Macdonald, S., Hall, S., & Oliver, C. (2000). Aggression and the termination of "rituals": A new variant of the escape function for challenging behavior? *Research in Developmental Disabilities, 21*, 43–59.

Parsons, M. B., & Reid, D. H. (1995). Training residential supervisors to provide feedback for maintaining staff teaching skills with people who have severe disabilities. *Journal of Applied Behavior Analysis, 28*, 317–322.

Parsons, M. B., Reid, D. H., & Green, C. W. (1996). Training basic teaching skills to community and institutional support staff for people with severe disabilities: A one-day program. *Research in Developmental Disabilities, 17*, 467–485.

Podsakoff, P. M., & Schriescheim, C. A. (1985). Field studies of French and Raven's bases of power: Critique, reanalysis, and suggestions for future research. *Psychological Bulletin, 97*, 387–411.

Reid, D. H. (1998). *Organizational behavior management and developmental disabilities services: Accomplishments and future directions*. Binghamton, NY: Haworth Press.

Reid, D. H., & Green, C. W. (1990). Staff training. In J. L. Matson (Ed.), *Handbook of behavior modification with the mentally retarded* (2nd ed., pp. 71–90). New York: Plenum Press.

Reid, D. H., & Parsons, M. B. (1996). A comparison of staff acceptability of immediate versus delayed verbal feedback in staff training. *Journal of Organizational Behavior Management, 16*, 35–47.

Reid, D. H., & Parsons, M. B. (2007). *Positive behavior support training curriculum* (2nd ed.). Washington, DC: AAIDD.

Reid, D. H., Parsons, M. B., Lattimore, L. P., Towery, D. L., & Reade, K. K. (2005). Improving staff performance through

clinician application of outcome management. *Research in Developmental Disabilities, 26*, 101–116.

Reid, D. H., Rotholz, D. A., Parsons, M. B., Morris, L., Braswell, B. A., Green, C. W., et al. (2003). Training human service supervisors in aspects of PBS: Evaluation of a statewide, performance-based program. *Journal of Positive Behavior Interventions, 5*, 35–46.

Reese, R. M., Richman, D. M., Belmont, J. M., & Morse, P. (2005). Functional characteristics of disruptive behavior in developmentally disabled children with and without autism. *Journal of Autism and Developmental Disorders, 35*, 419–428.

Reese, R. M., Richman, D. M., Zarcone, J., & Zarcone, T. (2003). Individualizing functional assessments for children with autism: The contribution of perseverative behavior and sensory disturbances to disruptive behavior. *Focus on Autism and Other Developmental Disabilities, 18*, 89–94.

Reichle, J., Dropik, P. L., Alden-Anderson, E., & Haley, T. (2008). Teaching a young child with autism to request assistance conditionally: A preliminary study. *American Journal of Speech-Language Pathology, 17*, 231–240.

Schall, C., Cortijo-Doval, E., Targett, P. S., & Wehman, P. (2006). Applications for youth with autism spectrum disorders. In P. Wehman (Ed.), *Life beyond the classroom: Transition strategies for young people with disabilities* (4th ed., pp. 535–575). Baltimore, MD: Brookes Publishing.

Schepis, M. M., & Reid, D. H. (1994). Training direct service staff in congregate settings to interact with people with severe disabilities: A quick, effective and acceptable program. *Behavioral Interventions, 9*, 13–26.

Schreibman, L., Whalen, C., & Stahmer, A. C. (2000). The use of video priming to reduce disruptive behavior in children with autism. *Journal of Positive Behavioral Interventions, 2*, 3–11.

Smith, T. (2001). Discrete trial training in the treatment of autism. *Focus on Autism and Other Developmental Disabilities, 16*, 86–92.

Smith, T., Donahoe, P. A., & Davis, B. J. (2001). The UCLA treatment model. In S. L. Harris & J. S. Handleman (Eds.), *Preschool education programs for children with autism* (2nd ed., pp. 23–39). Austin, TX: Pro-Ed.

Sterling-Turner, H. E., & Jordan, S. S. (2007). Interventions addressing transition difficulties for individuals with autism. *Psychology in the Schools, 44*, 681–690.

Stoner, J. B., Angell, M. E., House, J. J., & Brock, S. J. (2007). Transitions: Perspectives from the parents of young children with autism spectrum disorder (ASD). *Journal of Developmental and Physical Disabilities, 19*, 23–39.

Symes, M. D., Remington, B., Brown, T., & Hastings, R. P. (2006). Early intensive behavioral intervention for children with autism: Therapists' perspectives on achieving procedural fidelity. *Research in Developmental Disabilities, 27*, 30–42.

Tidmarsh, L., & Volkmar, F. (2003). Diagnosis and epidemiology of autism spectrum disorders. *The Canadian Journal of Psychiatry, 48*, 517–525.

Van Bergeijk, E., Klin, A., & Volkmar, F. (2008). Supporting more able students on the autism spectrum: College and beyond. *Journal of Autism and Developmental Disorders, 38*, 1359–1370.

Wage Rates:...And Could We Care Less? (n.d.) Retrieved December 21, 2008, from http://www.afscme.org/publications/2261.cfm.

Williams, T. C., & Zahad, H. (1996). Computer-based training versus traditional lecture: Effect on learning and retention. *Journal of Business and Psychology, 11*, 297–310.