Parent–Professional Collaboration for Positive Behavior Support in the Home

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Over the past few years, a number of studies have demonstrated the efficacy of combining positive behavior support and family-centered intervention in home settings. Family-centered positive behavior support is often conducted within the context of natural routines that occur regularly in home or community settings. The purpose of this article is to describe many of the unique challenges and benefits related to assessment, intervention design, and implementation that are inherent in parent–professional collaboration for positive behavior support. This is accomplished through an example of a partnership that resulted in the provision of a variety of visual supports to a young child with autism who exhibited severe problem behaviors during daily routines.

If professionals and parents can accept the challenge of taking on new roles and expectations by working creatively and cooperatively with each other and by establishing an atmosphere of mutual trust and respect, children with diverse needs and capabilities can benefit enormously. (Wood, 1996, p. 173)

Over the past decade, the field of positive behavior support has grown rapidly as a set of practices that focus on the function(s) of problem behaviors in order to develop and teach functional alternatives (Horner, 2000). Based solidly on both a values base about the rights of people with disabilities and the principles of applied behavior analysis, positive behavior support interventions (a) consider the contexts within which the behavior occurs; (b) address the functionality of the behavior; and (c) result in outcomes that are acceptable to the individual, the family, and the supportive community (Koegel, Koegel, & Dunlap, 1996).

When problem behavior occurs in the family home, parent–professional collaboration is needed in order to design interventions that fit the context for intervention. Moving toward a truly collaborative approach with regard to intervention planning should reduce the occurrence of "systems that fail," whereby "a fix [that is] effective in the short term [may have] unforeseen long term consequences which . . . require even more use of the same fix" (Senge, 1990, p. 388). Often, traditional behavioral interventions fail due to a lack of "buy in" from the family, or because there is "poor fit" between the problem behavior and the behavioral intervention. When either of these consequences occurs, more time and effort are required by the behavior support interventionist and the family to arrive at an effective solution.

A small number of studies have demonstrated the efficacy of parent–professional collaborative partnerships related to the design and implementation of positive behavior support interventions in the context of natural family routines. For example, Lucyshyn, Albin, and Nixon (1997) described a 26-month intervention conducted by the parents of an adolescent girl with multiple disabilities in the context of dinner time, home leisure, restaurant, and grocery store routines. Vaughn, Dunlap, Fox, Clarke, and Bucy (1997) provided support to a boy with Cornelia DeLange syndrome, severe intellectual disabilities, and chronic medical problems. In this case, a positive behavior support intervention was implemented during family-centered community routines that included shopping in a grocery store, eating at a fast-food restaurant, and banking at a drive-through window. Vaughn, Clarke, and Dunlap (1997) worked with the family of a boy with multiple disabilities and agenesis of the corpus callosum to decrease problem behaviors during fast-food restaurant and home toileting routines. Finally, Clarke, Dunlap, and Vaughn (1999) described an intervention with a boy with Asperger syndrome who exhibited severe problem behaviors during his morning "getting ready for school" routine. In each case, the intervention resulted in a marked decrease in the frequency and intensity of problem behavior as well as an improved quality of life for both the child and his or her family.

Typically, collaborative behavior support planning requires professionals and family members to participate together in five successive phases that involve "reciprocal information sharing, creative problem solving, and shared decision mak-

ing" (Snell, 1997, p. 219). The five phases include

1. building relationships between the family and the professionals,
2. conducting a functional assessment of the behaviors of concern,
3. identifying natural routines as contexts for intervention,
4. developing behavior support plans related to each of the routines, and
5. implementing and revising the support plans as needed.

Such collaborative efforts have the potential of resulting in substantial and enduring behavior change and improved quality of life for the children involved and their families through the use of multicomponent intervention packages (Carr & Carlson, 1993).

The purpose of this article is to describe the process of parent–professional collaboration for positive behavior support and illustrate it with an example of Wyatt, a preschooler with autism, and his family. In order to accomplish this, the article will operate simultaneously on two levels: (a) the *general* level, with regard to principles and practical strategies that apply to family-centered positive behavior support interventions, and (b) the *specific* level, with regard to how these principles and strategies were actualized on behalf of Wyatt by his family and the consultant who provided them with support. The article will address many of the unique challenges that must be faced when implementing such interventions in homes, including those related to assessment, intervention design, and implementation within the family context.

Introducing Wyatt and His Family

At the time of intervention, Wyatt Mallard was a high-spirited and active 4-year-old with an engaging smile who had been diagnosed with mild/high-functioning autism at the age of 3 years by a multidisciplinary hospital team in the Canadian province where he lives (see Note).

He enjoyed playing with trains, using a computer, watching videos, riding his bicycle outside, and swimming at a local community pool. Although he was verbal, his language comprehension and production were delayed for his chronological age. Wyatt used both immediate and delayed echolalia as well as generative language and problem behaviors to make his wants and needs known and to comment. His social skills were markedly impaired; he usually played by himself and had difficulty interacting with other children, joining them in play, knowing the rules of play activities, taking turns, and sharing materials.

Wyatt lived at home with his mother and father, Laura and Martin, and with his younger brother, Elliott. Laura was a full-time homemaker at the start of the intervention, and Martin was employed as a medical instrument repair technician. A respite worker provided childcare in the family's home two mornings a week and some evenings. Wyatt attended an inclusive preschool program for children with autism and their typical peers every weekday afternoon for 3 hours.

The intervention was carried out collaboratively by Wyatt's parents with the support of a consultant (the first author), who was then the coordinator of his preschool. Wyatt's parents were highly motivated to address his problem behavior using a collaborative approach because Wyatt was eligible for behavioral support services through his preschool for only 1 year due to his upcoming transition to kindergarten, and his family had no access to alternative behavior support services. They were aware of the time commitment that would be required and they agreed to record and share their perceptions of the experience. Table 1 summarizes the major phases and subphases of the assessment and intervention process.

Phase 1: Building Relationships

The positive behavior support paradigm exemplifies a systems model of support in which each participant affects the others as learning and change occur among all. A family-centered orientation to positive behavior support requires consultants and family members to work together by first establishing trust, openness, and reciprocity (Dunst, Trivette, & Deal, 1988). This means that the first step in any intervention involves developing a relationship between the consultant and family that enables the former to better understand the family's structure, strengths, routines, capacities, and needs. In so doing, positive behavior support offers an opportunity for both the consultant and the family to engage in a mutual problem-solving process. This process can lead to more relevant questions, more acceptable and feasible interventions, and more meaningful outcomes in relevant contexts (Dunlap, Fox, Vaughn, Bucy, & Clarke, 1997; Graves, 1991; Turnbull & Reuf, 1996; Turnbull & Turnbull, 1993; Vaughn, Dunlap, et al., 1997).

Table 1
Summary of Assessment and Intervention Phases

Phase 1: Building Parent–Professional Relationships

Phase 2: Conducting a Functional Assessment of the Behaviors of Concern
- Identifying Behaviors of Concern
- Conducting a Functional Assessment
- Collaborating to Develop a Hypothesis
- Identifying Family Routines for Intervention

Phase 3: Collaborating to Develop a Behavior Support Plan

Phase 4: Collaborating to Implement and Revise the Support Plan
- Regular, planned snacks
- Visual schedules and choice symbols

The Mallard Family

Initially, the consultant spent time getting to know Wyatt and his family outside of the preschool environment. She visited the family home several times during the day when Wyatt, Elliott, and Laura were present. She also accompanied the three of them to a community pool on several occasions and cared for Elliott while Laura and Wyatt were at Wyatt's swimming lesson. A visit to the family home in the evening allowed her to establish rapport with Martin and observe the family's evening routines. During this visit, Laura, Martin, and the consultant also discussed the process of collaboration and what it meant to each of them. They concurred that *collaboration* meant working together on a common goal and agreed to attempt to work together in a partnership of equals.

Phase 2: Conducting a Functional Assessment of the Behaviors of Concern

This phase of assessment is quite complex and can be divided into four main substeps: (a) identifying the behaviors of concern, (b) conducting a functional assessment, (c) collaborating to develop hypotheses, and (d) identifying family routines as contexts for intervention. Each of these will be described in the sections that follow and illustrated with examples from the Mallard family.

Identifying Behaviors of Concern

Donnellan and Mirenda (1984) recommended that parents have access to all necessary information that affects their child, be directly involved in the intervention process, and participate in critical decisions. One such decision involves the focus of an intervention, particularly when there are multiple behaviors of concern. Often, decisions in this area are made by a consultant "expert," who determines which behaviors are most important and how to address them. However, as Snell (1997) noted, the efficacy of behavior support interventions largely depends on the degree to which the pro-

cedures used fit the ecological and familial contexts in which they are implemented. Dunlap et al. (1997) remarked that "such congruence cannot be accomplished without access to the distinctive preferences, beliefs, habits, and world views of the participants" (p. 222).

The Mallard Family. During the second evening visit with the consultant, Laura and Martin reported that, in general, Wyatt was well behaved in the community and when he was in the company of people other than themselves. Because of this, the family was able to enjoy a variety of community outings together, including Wyatt's weekly swimming lessons with his mother, a sports class with his father, and family outings to fast-food restaurants and shopping malls. In contrast, they recited an extensive list of home behaviors that were of concern. These included having problems with toileting, refusing to share toys with Elliott or include him in activities, refusing to take turns or share (e.g., in a game setting), demonstrating aggression toward his brother and peers, picky eating, screaming, saying "no" when asked to participate in daily routines, hitting, kicking, and refusing to go to bed at night, among others.

Because the list was quite extensive, Laura and Martin were asked to prioritize their concerns. After considerable discussion, they agreed that Wyatt's insistence on "following his own agenda" was their top priority because if his agenda was violated he engaged in a variety of noncompliant and aggressive behaviors that were disruptive to the entire family. During an initial interview with the consultant, Laura and Martin together described Wyatt as "having some little game plan in his head about how it should work and if it doesn't work that way, he loses it and it takes forever to calm him down." However, they admitted to being unaware of the "rules" in his "game plan" and offered that "Sometimes we don't know what we're battling. Usually, we scramble and try to back up our steps and think about what was the last thing that happened. Sometimes that's not possible or practical." They voiced the hope that by addressing

this problem first, Wyatt's increased compliance might decrease some of their other concerns, such as those related to turn-taking and sharing.

Conducting a Functional Assessment

The purpose of a functional assessment is to understand a person's strengths, preferences, and communication strategies in addition to the events and circumstances that influence his or her problem behavior (Koegel et al., 1996). Many useful tools have been devised over the years to accomplish this (e.g., Carr, Levin, McConnachie, Carlson, Kemp, & Smith, 1994). One of the most commonly used functional assessment approaches involves two primary assessment tools, the functional analysis interview (FAI) and the functional analysis observation (FAO), and a process for analyzing and summarizing them (O'Neill et al., 1997). The FAI provides information about 10 aspects related to the problem behavior(s) of concern, including descriptions of (a) the behaviors themselves; (b) the ecological (i.e., setting) events that predict or set up the behaviors; (c) the specific immediate antecedent events that predict when the behaviors are likely and not likely to occur; and (d) the consequences and functions of the behaviors. The FAI can easily be conducted in the home through an interview of one or more individuals who know the person well (e.g., parents) by someone who is familiar with its use (e.g., teacher, behavior support consultant).

The FAO is useful for validating and clarifying hypotheses regarding the function(s) of problem behavior that are generated on the basis of the FAI. According to O'Neill et al. (1997), the FAO documents (a) the number of occurrences of problem behaviors and how they are interrelated; (b) the situations and times of day in which problem behaviors are most and least likely to occur; (c) the events that predict the occurrence of problem behaviors; (d) observers' perceptions of the functions of the problem behaviors; and (e) the consequences that follow the behaviors.

The Mallard Family. All but two meetings related to functional assessment and intervention planning occurred in the family home over the 2-month intervention period. The consultant and the Mallards completed the FAI over three such meetings that totaled approximately 2½ hours. Both parents were provided with copies of the form in advance, so they would be aware of the questions to be asked and could follow along during the interview itself. This approach was used in all situations in which written questions were asked. They were also provided with a packet of written information related to the assessment and planning process and were encouraged to refer to the packet throughout the intervention period.

Following completion of the FAI, baseline data were obtained over a 2-day period at home using the FAO. Laura and Martin were taught by the consultant to use this form to record information regarding the topography and frequency of Wyatt's problem behaviors that were related to following his own agenda. Subsequently, this information was used to confirm the initial hypotheses they developed about the functions of Wyatt's problem behaviors.

When reflecting on the functional assessment phase 2 months later, Laura commented, "The FAI was [really] helpful. In fact, I just went through it again. [It] was thorough . . . and all aspects of Wyatt's routine were covered." Laura also commented that, despite the time it took for her to record data on the FAO, it was a helpful tool and provided her and Martin with insights about Wyatt and his behavior. For example, she offered an anecdote about an incident that occurred on the day that Wyatt returned to preschool after spring break:

> Had I not had to chart this day, I would have said that Wyatt was just being belligerent. But . . . then I thought, now wait a minute. It was his first day back after spring break and he hadn't had a bowel movement and that does make him grumpy. All of a sudden he wasn't a belligerent kid. He was a kid with *issues*. And so it wasn't that he was trying to be bad. It's that his behavior was reflecting things

going on in his head that day, so that helped me see him in a whole new light.

Collaborating to Develop a Hypothesis

Descriptions of the collaborative process (Bruner, 1991; Hargrove, 1998) emphasize that collaboration requires participants to come together around a common goal and to cooperate in ways that consider the perspectives of each of them. In the case of positive behavior support, one of the first such cooperative ventures is the development of hypotheses about the function(s) of the target behavior, based on the information obtained during assessment. This can be both challenging and frustrating, because it requires the collaborators to determine how the "puzzle pieces" gathered during assessment "fit together."

O'Neill et al. (1997) provided a practical approach to assist with hypothesis development and designing related behavior support plans following functional assessment. They suggested that the results of the FAI and FAO be integrated into "summary statements" that describe the setting events, antecedents, problem behaviors, and function(s) of the behaviors. A summary statement typically takes the following form: "When [antecedent] occurs, [person] [behaviors] in order to [consequence/function]. This is more likely to occur if [setting event]." One or more summary statements may result from the assessment process, depending on the specific behaviors, their functions, and the contexts in which they occur. O'Neill et al. suggested that the summary statements also be written in the form of "behavior diagrams" that provide the basic assessment information in a form that can be readily used for intervention planning.

The Mallard Family. Together, Laura, Martin, and the consultant reviewed the FAI and the FAO to form hypotheses about the function of Wyatt's problem behaviors. Several things became clear during this review. First, it appeared that there was a higher frequency of problem behavior in the morning be-

fore Wyatt left for preschool than in the afternoon after he returned home. Second, the number of morning incidents appeared to escalate as the time approached for Wyatt to leave for preschool, especially during dressing, eating, and toileting or diaper-changing routines. Laura noted that the morning was very rushed and that the schedule was often unpredictable and inconsistent. She also reported that as the morning progressed, she tended to become increasingly anxious about completing his personal care and breakfast routines in a timely manner. She observed that the more she tried to hurry Wyatt, the less cooperative he became and the more he insisted on doing only specific, highly desirable activities of his own choosing. Predictably, Laura's stress level escalated as Wyatt's problem behaviors increased, creating an "upward cycle" of maternal tension and increasingly disruptive behavior from Wyatt.
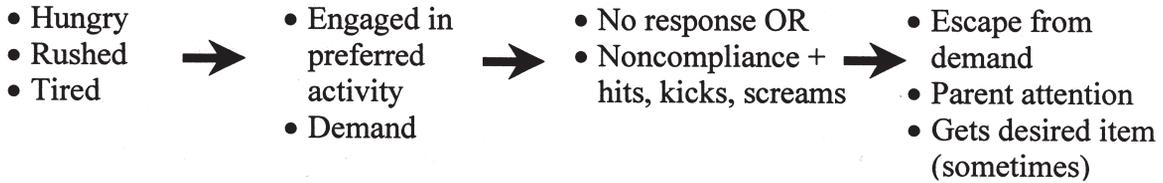
Based on the information gathered from the FAI and FAO and using the O'Neill et al. (1997) procedure, the consultant and the family drafted several summary statements that Laura and Martin agreed represented their experiences with Wyatt and his problem behaviors. After Laura and Martin made revisions and additions, the resulting summary statement read as follows: "When he is engaged in a preferred activity and is presented with a demand related to an unpreferred activity, Wyatt either makes no response or is noncompliant, hits, kicks, and screams in order to escape from the demand. This is more likely to occur if he is hungry, rushed, or tired." The summary statement was also written as a behavior diagram, depicted in the top section of the form in Figure 1.

Identifying Family Routines for Intervention

Routines such as getting dressed for school or work in the morning, eating meals at home and/or in a restaurant, going shopping, bathing, toileting, and engaging in various leisure activities are inherent in the structure of virtually all family ecologies. One of the core components of contemporary family-centered

Assessment Summary and Intervention Planning Form

Diagram of Summary Statement

• Hungry • Rushed • Tired	➡	• Engaged in preferred activity • Demand	➡	• No response OR • Noncompliance + hits, kicks, screams	➡	• Escape from demand • Parent attention • Gets desired item (sometimes)

List Strategies that Make the Problem Behavior Irrelevant, Ineffective, or Inefficient

Provide regular mid-morning and evening snacks	Provide visual schedules depicting the steps of non-preferred routines Provide symbols for food and drink choices	Model and prompt use of visual schedules during non-preferred routines Model and prompt use of choice symbols	If Wyatt completes routine successfully, provide praise and attention If Wyatt requests food/drink with symbol or speech, provide item If noncompliance, etc. occurs, attempt to redirect Wyatt to the routine; do not provide preferred activity
Setting Event Strategies	Antecedent (Predictor) Strategies	Teaching Strategies	Consequence Strategies

FIGURE 1. Hypothesis diagram and intervention plan developed in collaboration with Wyatt's parents regarding problem behaviors at home. *Note.* From *Functional Assessment and Program Development for Problem Behavior: A Practical Handbook, 2nd Edition* by O'Neill/Horner/Albin/Sprague/Storey/Newton. © 1997. Reprinted with permission of Wadsworth, a division of Thomson Learning: www.thomsonrights.com

positive behavior support is the notion that family routines constitute a primary unit of analysis (Lucyshyn, Blumberg, & Kayser, 2000). Thus, behavior support interventions should be designed to help families support children in the midst of daily routines, so that they experience these interventions as practical tools for accomplishing the necessities of life rather than as add-on programs that add to their existing burdens and may actually interfere with their ability to function as a family.

The Mallard Family. In identifying the primary behaviors of concern, Laura and Martin implicitly identified problematic routines for Wyatt as well. For example, they noted that Wyatt "does not get his agenda the majority of the time but it also depends on the severity of the situation—[we] don't sweat the small stuff! . . . Eating, toileting, and sleeping—Wyatt controls." In discussions with the consultant, Laura and Martin were encouraged to identify more explicitly a few key routines for intervention. They selected the aforementioned mealtime and toileting routines, as well as hand washing, tooth brushing, and dressing in the morning as the primary areas of concern. They decided that Wyatt's bedtime routine, although problematic, was not a top priority at that time and could be addressed later on, if necessary.

Phase 3: Collaborating to Develop a Behavior Support Plan

Horner (1997) noted that positive behavior support requires fundamental changes with regard to how support is designed and implemented *vis a vis* traditional approaches to behavior management. These changes fall into three areas. First, a change occurs with regard to the desired outcomes of the intervention because mere reduction of problem behavior is no longer the only goal. Rather, the goal is to produce a substantive, durable behavior change for the child and mean-

ingful lifestyle enhancements for the child and family. Second, a change occurs with regard to the comprehensive nature of the intervention because more than one intervention procedure will almost always be required. Finally, a change occurs in the contexts for intervention because it is applied in the real environments in which people live, learn, play, and work instead of in highly structured and controlled settings.

An effective positive behavior support plan requires more than conceptual changes with regard to the desired outcome, the nature of the intervention, and the intervention contexts. The plan itself may involve changes related to variables such as physical setting, medications, schedule, teaching strategies, interaction style, and/or consequences for behavior. In addition, the process by which the plan is designed and implemented "involves change in the behavior of the family, teachers, staff, or managers in various settings" (O'Neill et al., 1997, p. 65). Given the scope of the changes that may be required, the active involvement of family members in the design and implementation of behavioral interventions "may be the most important variable that determines whether the intervention will be effective and implemented with fidelity and durability" (Vaughn et al., 1997, p. 186). As Dawson and Osterling (1997) noted,

> Because parents spend so much time with their children, it is recognized that they can often achieve greater understanding of their child's needs and provide unique insight into creating a treatment plan. By including parents in the treatment of children, greater maintenance and generalization of skills also can be achieved. . . . [I]ncluding parents in the treatment of young children with autism can [also] increase parents' feelings of relatedness with their child and increase their sense of competence as parents, thereby decreasing emotional stress and facilitating well-being. (p. 320)

Of course, a positive behavior support plan must be directly based on the results of the functional assessment process.

Specifically, interventions related to the identified setting events and antecedents are included in order to make the problem behaviors *irrelevant*. Interventions that involve teaching and promoting desired and alternative behaviors are designed to make the problem behaviors relatively *inefficient*. Finally, interventions related to the consequences or functions are required to make the problem behaviors *ineffective*. O'Neill et al. (1997) suggested that the behavior diagram that was generated from the assessment be used to brainstorm multiple intervention strategies related to each of these components. From this list of systematically derived intervention possibilities, the family members responsible for implementing the support plan can then make decisions about which strategies constitute the best fit with the family's value and belief system, time and resource constraints, and priorities.

The Mallard Family

Once the assessment process was completed, it was not difficult for the collaborators to develop an extensive list of intervention possibilities related to Wyatt's problem behaviors. This was accomplished during a brainstorming session in which all three used the behavior diagram depicted on the top of Figure 1 to generate potential strategies in each of the four main areas. From the extensive list of potential strategies, Laura and Martin selected several to implement at the outset (see the bottom section of Figure 1).

With regard to setting events, the functional assessment suggested that hunger was a major setting event for Wyatt's noncompliant and aggressive behavior. His parents were concerned that his food intake was nutritionally inadequate and observed that "a lot of behavior comes out when he's hungry." Laura felt that she would be more able to ensure that Wyatt ate a balanced diet if she routinely prepared morning and evening snacks for both children. She and Martin decided that, due to time constraints and the fact that hunger was the primary set-

ting event, they would not include interventions related to the other two setting events as part of the initial plan.

With regard to antecedents, the Mallards decided to use (a) visual schedules to enhance the predictability of the routines Wyatt frequently resisted and (b) symbols for food and drink choices to provide Wyatt with opportunities for making choices related to mealtimes. Laura explained, "[We] chose the [visual schedules because] we realized that he was a visual learner, so it was a logical way to go." Within-task visual schedules (Mirenda & Erickson, 2000) were devised to assist Wyatt in completing the identified routines more successfully, thereby reducing the likelihood that he would engage in problem behaviors to escape from them. The visual choice-making symbols were provided to assist Wyatt in choosing the foods he wished to eat for snacks and for some meals, with the hope that this would reduce his food "pickiness" and the problem behaviors that appeared to be related to it. Martin provided this rationale:

> If you start rhyming a whole bunch of [food choices] off, he has absolutely no interest; but if you start showing him the pictures, just point to all of them, he [might] see it and say, 'Oh, *that*.' Because by the time you get to the third thing just verbally, he forgot what the first thing was. At least that's what I think. I think [they'll] work well.

Teaching strategies for modeling and prompting the use of the visual schedules and choice symbols were also included in the plan because it was unlikely that Wyatt would understand how to use these supports without adequate instruction from Laura and Martin. Finally, the Mallards agreed that, when he completed routines successfully or asked for food or drink items using either the symbols or his speech, they would provide enthusiastic praise and extra attention in addition to the item requested. They also agreed that if problem behavior occurred they would attempt to (a) redirect him back to the unpreferred routine rather than allowing him to escape from it and (b) avoid providing him with preferred activities as much as possible at that time.

Phase 4: Collaborating to Implement and Revise the Support Plan

One of the major difficulties in implementing behavioral interventions is related to maintenance and sustainability because the effort and time commitment required to carry out such interventions over time may be beyond the ability of many families. As Schwartz (1997) noted, "Anyone who has conducted a functional analysis of problem behaviors recognizes the difficulty of matching effective interventions to specific behaviors and contexts. The difficulty increases when the emphasis is on do-able and sustainable interventions" (p. 213). However, several recent studies (e.g., Fox, Vaughn, Dunlap, & Bucy, 1997; Lucyshyn et al., 1997; Vaughn, Dunlap, et al., 1997) have provided evidence that a parent–professional collaborative process may substantially increase the willingness of a family to continue the intervention after the initial stages have passed. Part of this collaboration involves handing over to the family as many of the tools and strategies used during intervention as they are able to manage and providing them with instruction and ongoing support regarding implementation.

The Mallard Family

The consultant provided Wyatt's family with access to a software program, Boardmaker™ (Mayer-Johnson Co., 1994), which they used to create the necessary visual supports. The software produces picture communication symbols (PCS; Johnson, 1994) that can be used to design and print visual schedules, scripts, and choice-making displays. One of Wyatt's preschool teachers provided Laura with instruction about how to customize the PCSs in Boardmaker™ to create visual supports specific to Wyatt's needs. As Laura was already computer literate, she quickly learned to use the software and, together with the consultant, developed a number of visual schedules. In addition, midway through the intervention period, Laura and the consultant attended a local workshop conducted by a nationally known expert in the use of visual supports for children with autism. Laura had many ideas about the types of supports that Wyatt needed and throughout the intervention period made modifications to them.

After the visual supports were created, the consultant provided brief written instructions to Laura and Martin about how to use the visual supports on an ongoing basis during daily routines. Using demonstration and role playing, she modeled how to direct Wyatt's attention to the display, point to each of the symbols in sequence, provide verbal directions that were brief and relevant, and provide praise or corrective feedback as appropriate. Following the initial training, the consultant stepped back and offered the family ongoing support only as needed. This support included valuing what each parent had to say, respecting their actions, not taking sides, giving them time to communicate with each other rather than intervening immediately when problems occurred, modeling problem-solving skills, and providing resources and advice when asked to do so. Thus, implementation of the behavior support plan took shape primarily under Laura and Martin's direction.

Morning and Evening Snacks. Despite the Mallards' initial enthusiasm about providing regular morning and evening snacks to Wyatt and his brother, this component of the intervention was not implemented consistently. According to Laura, morning snacks were provided more often than those in the evening:

> I ask [Wyatt] if he wants breakfast and if he says, "No," then at 9:30, I bring out a snack for him and Elliott to eat so that at least he has had something in his stomach. [That way], if by 11:00 I can't get him to eat, he's not going to school on an empty stomach. [But] . . . before bed, it's just so hairy we tend to forget about it. If everybody is very calm, then we will [remember the snack]—but he will often ask us for something if he's hungry when he's going to bed.

The Mallards' inability to implement this component of the support plan consistently can probably be related to the

concept of "goodness of fit" that has been described by several authors (e.g., Albin, Lucyshyn, Horner, & Flannery, 1996; Bailey et al., 1990). Behavior support plans that exemplify goodness of fit include at least the following characteristics: (a) Key players are comfortable with the plans and strategies; (b) plans are consistent with the strongly held values and living patterns of the persons involved; and (c) plans tap into existing resources so that the required time, effort, and dollars are not prohibitive (Snell, 1997). In this case, although the support plan appeared to be consistent with Characteristics (a) and (b), Laura's previous comment suggests that the time and effort required for implementation was perhaps not available as regularly as they initially planned. Thus, implementation failure can be accounted for in this case by a lack of goodness of fit rather than by, for example, lack of motivation or willingness on the part of the family to follow the plan they helped to design.

Visual Schedules and Choice Symbols. In contrast to the strategy for morning and evening snacks, Laura and Martin were able to implement consistently the use of a variety of visual schedules to assist Wyatt through daily routines. Periodic counts of Wyatt's "following his own agenda" behaviors by Laura and Martin suggested that this intervention component was effective in reducing the frequency of his behavioral episodes from approximately 20 per day prior to intervention to 4 or fewer per day 4 and 6 weeks later. In addition, the Mallards reported a marked increase in the frequency of Wyatt's attempts to do things for himself during daily routines. Toward the end of the intervention period, Laura commented, "[We] didn't have a problem implementing the visual schedule. . . . The only problem was where to or what to start with. [We] didn't want to bombard him with stuff so it was just choosing which ones would be most effective at the time." Examples of Wyatt's use of visual schedules and choice-making displays are provided for each of the target routines in the sections that follow.

Toileting. According to Laura, Wyatt immediately recognized and liked the visual schedule that was posted in the bathroom to depict the steps involved in toileting. From the outset, the symbols appeared to exert considerable control over his behavior. For example, the initial toileting schedule contained a PCS symbol of a person sitting on the toilet, and Laura noted that, "Because I suggested sitting rather than standing to pee, he did so." After Laura revised the schedule so that it had two PCS symbols, one of a person standing to urinate and another of a person sitting to defecate, Wyatt "reverted to his preference for peeing—standing." Wyatt's revised toileting schedule is depicted in Figure 2.

Laura reported that, over the intervention period for which documentation was available (i.e., 6 weeks), Wyatt progressed from wearing diapers 100% of the time to urinating in the toilet independently most of the time at home and in untrained settings such as his preschool. Laura offered the following anecdotes:

> The other day they [Wyatt and Elliott] were wrestling. He ran down [the hall] and I thought he was still playing, [but] he ran into the bathroom, [urinated in the toilet], ran back, and continued playing.

> One day I was sitting down here and I hear this ominous noise and I think, "Oh my!" So I go tearing upstairs and Elliott's standing in the bedroom smiling, and I look at Wyatt 'cause I know the toilet's flushed and Wyatt's standing there looking normal, and I thought, "What's going on?" Wyatt goes, "Mommy, I go pee pee." He'd walked in there of his own accord, did everything, flushed it, walked back in the middle of one of his favorite movies . . . completely independently—and he's done that a few times now!

Hand washing. Wyatt watched Laura make a pictorial schedule depicting the steps of his hand-washing routine and place "hot" and "cold" symbols on the taps of the bathroom sink (see Figure 3). Wyatt immediately "read" the hot water and cold water symbols to Laura, and we began to follow the schedule as it was depicted. He began to rinse his hands thor-

oughly only after Laura revised the schedule to include a "rinse hands" step. In addition, he was no longer afraid to turn on the taps by himself after the hot and cold water taps were clearly labeled. Martin reported a concomitant decrease in Wyatt's problem behaviors during this routine as well:

> I found the ones in the wash room [most helpful]—"after you go pee, you wash your hands," which really helps because he would fight you on that. Now you point to the picture and he will do it that way, so that's helped.

Teeth brushing. Like the hand-washing schedule, Wyatt's teeth-brushing schedule depicted all of the essential steps in this routine. Laura noted, "I've got him brushing his teeth before he goes to school, which has never happened before. And he doesn't fight that at all."

Dressing. Shortly after a schedule depicting the steps in his morning dressing routine was put up in Wyatt's room, Laura suffered a back injury and was unable to get out of bed. Laura was so proud to find that "Wyatt got himself completely dressed without help by following the pictures, [except to say] 'I want help' for one sock." Over time, she revised the dressing schedule to include a "What's the weather like, and what do I wear outside?" section, to teach Wyatt to make these decisions. For example, Laura would ask questions such as, "What's the weather like outside?" and "Which coat do you want to wear?" and Wyatt used symbols (e.g., "rainy," "blue coat," "yellow boots") to respond and select the appropriate outerwear. Laura reported that this system helped decrease his problem behaviors prior to leaving the house for preschool.

Mealtime. A simple visual schedule for the mealtime routine also was introduced to remind Wyatt of the expectation that he sit at the table and eat his food. Although use of these supports did not appear to affect Wyatt's mealtime behavior significantly, he would occasionally look at them and comment "Eat" or "Sit on chair." Martin explained, "We've never really fought him on that. . . . We've never really forced the issue of eat-

FIGURE 2. Wyatt's revised toileting schedule.

ing. You can't force-feed a 4-year-old kid no matter how hard you try." From this and similar comments, it appears that the mealtime routine may not have been as high a priority for the family as the other routines.

In addition to the mealtime schedule, Laura used Boardmaker™ to create a number of food and drink choice-making symbols for Wyatt. He watched as Laura selected and printed out these symbols and even requested symbols for a num-

ber of foods when he saw them on the computer screen. For example, at Wyatt's request, Laura included the "ice cream" symbol as one of his food options, even though ice cream was not something he typically chose to eat. The wisdom of involving Wyatt in the symbol selection process was evident when Laura put the food choice PCSs on the fridge and he immediately asked for a hamburger, one of his selections. He had never asked for a hamburger at home be-

fore but happily ate it after Laura quickly prepared it.

Wyatt's use of the symbols to make food choices generalized almost immediately to both Martin and his respite provider, with the result that the range of foods he would eat expanded considerably. Laura recounted how Wyatt used the food choice array in a new way:

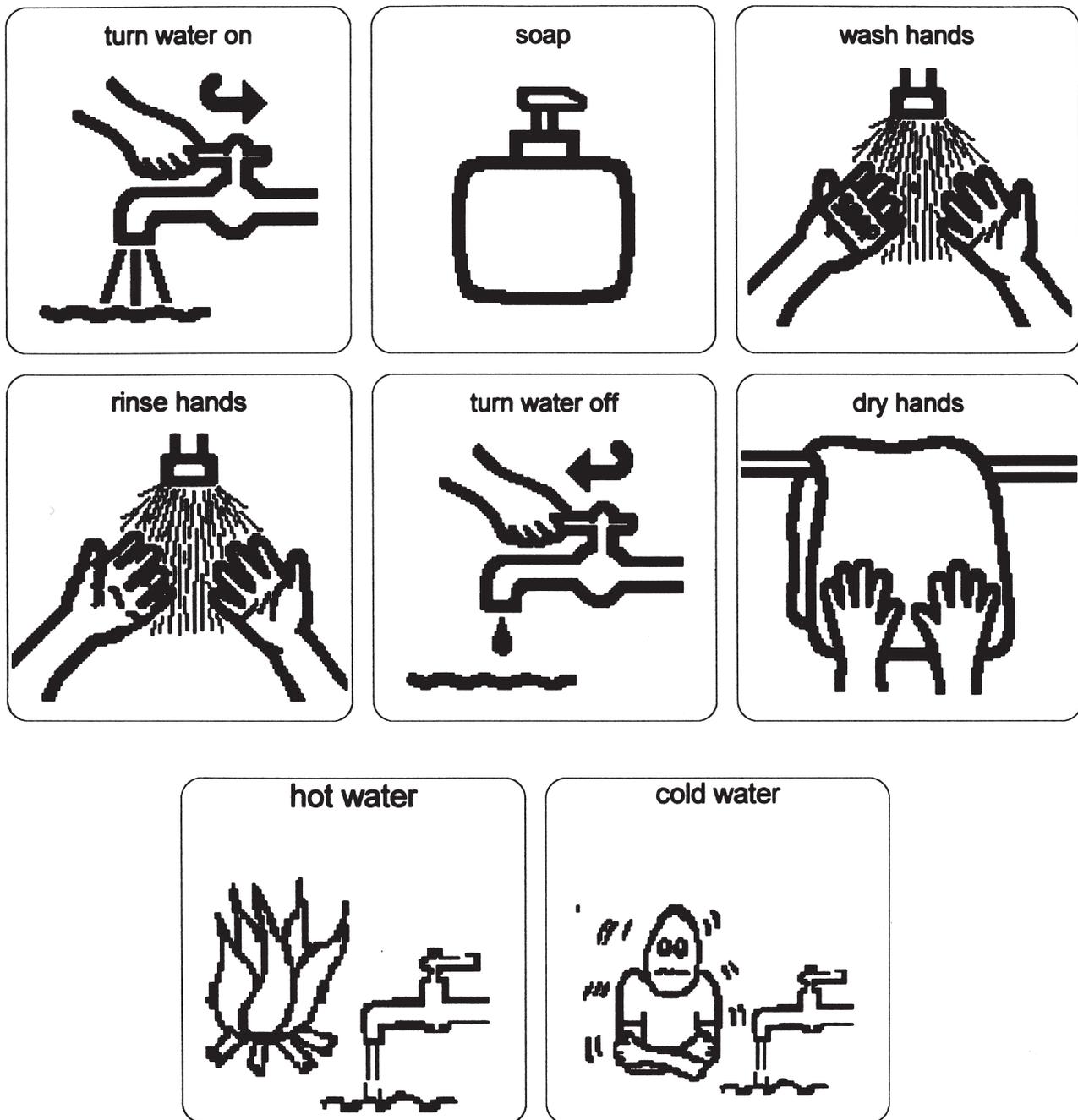Today he came in here, he wanted a hot dog while I was cooking the potatoes [but]

turn water on

soap

wash hands

rinse hands

turn water off

dry hands

hot water

cold water

FIGURE 3. Wyatt's revised hand-washing schedule.

I hadn't started the hot dog yet. He got really mad and he came and he grabbed it [the hot dog PCS] off the fridge, pointed to the hot dog and said, "I want a hot dog." That's the first time I knew he was so aware of it. He grabbed it and pointed directly to it and he was like, "See, this is what I want." So, I said, "Whoa, I'll make the hot dog right now." It thrilled me because he usually just scans it [the choice array] like a menu and picks what he wants. This was the first time he really used it to get his point across.

Conclusions

Previous descriptions of family-centered positive behavior support have emphasized the importance of professionals' "relating to families as colleagues, recognizing family expertise, and conducting assessment and intervention activities with families in their homes and communities" (Lucyshyn et al., 2000, pp. 113–114). The need for participants to come together around a common goal and to cooperate in ways that consider the perspectives of each is also critical to this endeavor. All of these elements were evident throughout the assessment and

intervention period described for the Mallard family, as each participant came to recognize and appreciate the perspectives of the others. As they shared information and perspectives, all three participants arrived at a new, shared understanding of Wyatt and his needs. The successful nature of the collaborative process was reflected in a comment Laura made toward the end of the consultant's formal involvement with the family: "You [the consultant] may have more educational expertise in this [than we do], but you didn't make us feel secondary."

Successful collaboration, however, is not sufficient in order for family-centered positive behavior support interventions to be effective. In addition to reducing or eliminating behavior identified as socially problematic, such interventions should also result in an improved quality of life for the focus individual and his or her family. In this regard, Albin et al. (1996) suggested that positive behavior support plans that "include only child-focused strategies, but fail to address needs of the family as a whole, [are] not likely not to be a good contextual fit" (p. 93). They also noted that, ideally, behavior support plans with good contextual fit "will strengthen the family as a unit" (p. 91). These statements underline the importance of considering factors such as family relationships, communication styles, and cultural backgrounds in both the design and implementation of positive behavior support plans.

The collaboration between the Mallards and their consultant exemplified the need for considering multiple aspects of the family ecology, especially with regard to Laura and Martin's divergent communication and parenting styles. Martin offered this insight:

> What with discussing this whole situation, I find out a lot more about what's going on during the day. Where Laura might take a lot of things for granted that she may not tell me . . . when we're sitting here [at the meetings with the consultant], things will come out and I go, "Really?" It does help in terms of our communication about really what's going on with Wyatt and fill-

ing each other in. We usually talk about things afterwards: "Oh, he does really do that?" It does give me a different outlook on Wyatt.

Laura and Martin also came to understand more about why Wyatt reacted to them differently at different times. Martin noted, "I guess in most cases Laura is at home with the kids all day so she has more contact. Weekends are usually [a] completely different story than the set structure during the week. It's usually a little more open." Laura added, "We've learned that too. And I don't know that we noticed that before. What you [Martin] deal with and what I deal with are not the same . . . necessarily." Out of this understanding came a new appreciation for the positive aspects of their divergent parenting styles. Laura in particular made an effort not to interfere with interactions between Martin and Wyatt. Toward the end of the intervention period, she made the following comment:

> When I hear Martin dealing with Wyatt and . . . realizing our different attitudes to parenting, I've really tried to . . . pull back and not get in their faces about doing it my way. . . . His way is different and so I've tried to accept that his way is different and not wrong—just different. So I really tried to back off, and that's a result of this [support plan] as well.

Laura and Martin were able to use their increased communication and understanding to solve problems that arose during the initial intervention period. For example, during one of the regular meetings, they discussed an incident that had occurred earlier that day with Wyatt, which Laura referred to as a "meltdown." Together, they reviewed and analyzed the incident in detail and developed a plan to prevent its recurrence and to respond to it, if necessary.

In addition to improved parent-to-parent communication, Dunlap and Fox (1996) noted that another important quality-of-life indicator that should result from an effective behavior support program is improved social relationships, both within and outside of the family. Decreased family stress and increased

positive interactions among family members are often seen as positive side effects, once effective behavior supports have resulted in reduced problem behavior. This was certainly the case for Wyatt and his family, as described by Laura:

> Our family certainly benefited [from this intervention]. Life is a little easier and quieter, and our confidence in handling situations and foreseeing situations has grown. . . . Wyatt probably benefited the most without even realizing it because it made his life easier or at least less stressful, which is a good thing for him. And perhaps for Elliott, because they're getting along better and when Wyatt's uptight, Elliott gets nervous—so Elliott's [as] happy as he can be, some days.

With regard to the interaction between the two brothers, Laura reported, "Wyatt and Elliott played puzzles for 20 minutes [yesterday], and that certainly wasn't on his agenda for the day." Martin agreed, "They're playing together much better than they were." Both parents reported that they frequently hear Wyatt call to his brother, "Come on, Elliott, come and play." Wyatt's interest in crafts and drawing activities at home also increased substantially once the intervention was in place, and he began to spend time engaged with his family in these activities. For example, during one of the consultant's visits, his parents proudly displayed a Mr. Potato Head picture on which Wyatt had cut out, glued, and printed his name over a 40-minute period. Laura and Martin also observed Wyatt reaching out more to other children over the course of the intervention. One day, he played at home with the 6-year-old sister of a classmate and asked her to come in to play again on another day. When she responded that she couldn't, Wyatt tried to coax her to change her mind, saying, "Come on, Nina, come on in." He was happy when she agreed to come 2 days later, and gave her a hug as she left. His parents were thrilled and commented that it was "nice to see him inviting others in."

Perhaps the most important test of the effectiveness of any family-centered collaboration is the extent to which its ef-

fects endure over time. Positive behavioral interventions that truly exemplify the concept of goodness of fit (Albin et al., 1996) should continue to be implemented even after formal consultant supports are discontinued because they have become seamlessly integrated into the family's lifestyle and interaction patterns. This appeared to be the case for Wyatt and his family, who continued to use visual supports at home for the remainder of his time at preschool, which extended for 5 months after termination of the initial intervention. One year later, the consultant contacted Laura and Martin to follow up on Wyatt's progress during his kindergarten year in school. They reported that his noncompliant behavior at home was greatly diminished, and they even described him as "eager to please." Laura noted that she also had initiated the use of visual supports in several new areas. For example, symbols for various clothing items were posted on the drawers of his dresser to aid him in dressing more readily and independently. He also used a job chart at home with symbols for tasks such as setting the table, making his bed, and putting his laundry away, as well as a visual schedule at school depicting his activities and choices. Laura also reported that Wyatt's language and play skills had improved dramatically, as had his drawing skills and his relationship with his brother.

Finally, it is important to note that the benefits of family-centered positive behavior support are not achievable without the expenditure of considerable time and effort on the part of both the consultant and the family. It should be clear from the example of the Mallard family that the consultant and the family are required to enter into a reciprocal contract of commitment to both the collaborative process and the implementation of the behavior support plan that results from that collaboration. This may appear, on the surface, to be a much less efficient model for behavior support than the traditional expert model in which a behavior consultant seeks information from the family in order to design a support plan to address a child's problem behavior but then makes all of the necessary decisions

about what to do and how to do it and may implement the plan as well. However, the likelihood of achieving durable, meaningful changes that are integrated into the ecology of the family are much less likely without "buy in" from the family during all phases, including assessment, intervention planning, and implementation. Thus, it can be argued that the expenditure of the additional time and effort required for family-centered behavior support has the potential of being *more* "cost effective" in the long run. This certainly appeared to be so for the Mallards who, when asked to evaluate the success of the collaborative intervention, assigned it a score of 4 on a 5-point scale (1 = *not at all successful* and 5 = *very successful*). When asked if it was worth the effort, Laura emphatically responded,

> Oh, my, and 10 times more. For us it's been immeasurable—the schedules have helped immensely when time is an issue, such as before school. . . . It helps Wyatt because there's a consistency for him. I think . . . the biggest thing was that Martin and I actually sat at a table and discussed it [Wyatt's behavior] together. We didn't used to talk about it; we just dealt with it. There was so much time spent dealing with it that we never actually had time [to talk]. . . . It's just been an incredible experience for us as far as learning goes.

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AUTHORS' NOTES

NOTE

All family names are pseudonyms.

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