NHSA DIALOG, *12*(2), 148–169
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ISSN: 1524-0754 print / 1930-9325 online
DOI: 10.1080/15240750902774726

Large-Scale Implementation of Program-Wide Positive Behavioral Interventions and Supports in Early Childhood Education Programs in New Hampshire

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Early childhood educators are concerned with the growing number of children who enter programs lacking social competence and exhibiting challenging behaviors. This article describes how early childhood programs in New Hampshire are addressing this challenge by adapting evidence-based School-Wide Positive Behavior Supports to meet the needs of young children and their educators. The majority of programs were successful in implementing the preventative features of Program-Wide Positive Behavior Supports with fidelity. Two programs experienced significant program-wide reductions in incidents of challenging behavior. Despite these successes, the vast majority of programs experienced difficulty implementing the response to challenging behavior features, particularly data collection, entry, and analysis.

Keywords: behavior problems, preschool curriculum, emotional development, early intervention policy

Early childhood educators are increasingly finding two types of children in their classrooms: those who arrive ready for schooling with an emerging social competence (National Research Council and Institutes of Medicine, 2000) and those at risk for school failure because they lack the required social-emotional skills (Rimm-Kaufman, Pianta, & Cox, 2000). Young children who arrive at school with this emerging ability to quickly understand and appropriately respond to social situations (Mah, 2007) are likely to experience enhanced cognitive development and academic achievement in the first few years of schooling (Raver, 2002). These socially competent children are likely to maintain this early advantage as initial school success is highly predictive of sustained achievement throughout schooling and life (Raver & Knitzer, 2002; Zins, Bloodworth, Weissberg, & Walberg, 2004).

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In stark contrast to their peers, another group of young children arrive at early childhood and kindergarten programs exhibiting challenging behavior or social incompetence (Rimm-Kaufman et al., 2000; Squires & Bricker, 2007). Children who are poorly attuned to, or unaware of, group social expectations often become socially inept and may exhibit challenging behavior (Mah, 2007). According to the Center on the Social Emotional Foundations for Early Learning (2007), challenging behavior refers to any repeated pattern of behavior that (a) interferes with learning or engagement in prosocial interactions and (b) is nonresponsive to the use of developmentally appropriate guidance procedures or procedures suited for a given child's age and developmental level. The defining elements of challenging behavior are often associated with variables that include (a) frequency, or how often the behavior occurs; (b) topography, or what the behavior looks like; (c) duration, or the amount of time spent engaging in the problematic behavior; (d) severity, or the impact of the behavior on the safety and emotional well-being of those involved; and (e) predictability, or the ability to determine circumstances under which the undesired behavior is likely to occur, also referred to as setting events (Bell, Carr, Denno, Johnson, & Phillips, 2004).

Estimates of the prevalence of challenging behavior in young children, although varied, are alarming in their magnitude. Studies have found between 7% and 25% of preschool-age children experience mild to moderate behavior problems (Campbell, 1995; Webster-Stratton & Hammond, 1998), with estimates for children who live in high-risk populations reaching twice that level (Feil et al., 2005; Qi & Kaiser, 2003; Webster-Stratton, 2000).

The rising incidence of children who exhibit challenging behavior and are unprepared for school has early childhood educators and kindergarten teachers justifiably concerned (Rimm-Kaufman et al., 2000). Studies indicate challenging behaviors in young children present major obstacles to the development of social competence (Campbell, Spieker, Burchinal, Poe, & the NICHD Early Childcare Research Network, 2006; Dunlap et al., 2006; Wood, Cowan, & Baker, 2002). Without early and effective interventions many of these children, especially those with externalizing problems, are likely to experience a predictably negative developmental trajectory (Lipsey & Derzon, 1998; Patterson, Reid, & Dishion, 1992; Wahler & Dumas, 1986). Despite the increasing availability of evidence-based practices, ensuring access to intervention and support remains a major barrier for many young children and their families (Center for Evidence-Based Practice, 2003). Sadly, fewer than 10% of these children receive the supportive services needed to reverse this negative life course (Kazdin & Kendall, 1998).

Fortunately, evidence-based curricula and instructional practices that support the development of positive, prosocial behavior in children are being increasingly identified (Center on the Social Emotional Foundations for Early Learning, 2007; Dunlap et al., 2003; Frey, Faith, Elliott, & Royer, 2006; Muscott, Baker, Lechtenberger, & Pullis, 1997; Smith & Fox, 2003). Research suggests that high-quality, evidence-based programs for children at risk or who have challenging behavior (a) use early screening procedures to identify students at risk and in need of supports; (b) provide instruction to children to support appropriate social skills, compliance, self-regulation and engagement; (c) provide instruction to families focused on child development and behavior management; and (d) engage in family-centered practices (Smith & Fox, 2003).

One evidence-based approach to improving social competence and addressing challenging behavior for school-age children gaining significant traction across the country is School-Wide Positive Behavior Supports (SWPBS). SWPBS refers to a culturally responsive set of evidence-based interventions designed to achieve socially important behavior change and improve academic achievement (United States Department of Education, 2000). SWPBS involves the creation of

a set of universal behavior support features for proactively and systematically (a) identifying, teaching, and reinforcing valued social behaviors and (b) identifying and responding effectively to challenging behaviors that undermine teaching, learning, and social relationships (Sugai & Horner, 1999). Research and program evaluations have shown that schools implementing SW-PBS with fidelity experience improvements in school climate; reductions in problem behaviors, suspensions, and expulsions; increased opportunities for academic engaged time; and gains in student achievement (Bradshaw, 2006; Horner, Sugai, Eber, Phillips, & Lewandowski, 2003; Muscott, Mann, & LeBrun, 2008).

Given the success of SWPBS in public K–12 schools, it should come as no surprise that early childhood educators in states like Florida, Missouri, New Hampshire, Iowa, Kentucky, Oregon, and Rhode Island, among others, have begun adapting it to early childhood. These may include public early childhood special education; Title One; Head Start; and private, community preschool programs. The adapted model is commonly referred to as Program-Wide Positive Behavior Supports (PWPBS; Fox, Dunlap, & Cushing, 2002; Hemmeter & Fox, 2009/this issue; Muscott, Mann, Pomerleau, & Lane, 2005; Stormont, Lewis, & Beckner, 2005). Initial data from program evaluations suggests that PWPBS results in positive outcomes for children, families, and the programs that support them (Dunlap, Fox, & Hemmeter, 2004; Fox, Jack, & Broyles, 2005; Muscott, Pomerleau, & Dupuis, 2009/this issue; Stormont, Covington-Smith, & Lewis, 2007). For example, Fox et al. (2005) found young children in the Southeast Kansas Community Action Head Start program experienced increases in prosocial behaviors, decreases in challenging behaviors, and reductions in the number of children referred for mental health interventions as a result of implementation. In a series of studies, Stormont and colleagues (Stormont, Covington, & Lewis, 2006; Stormont, et al., 2007) found (a) that a majority of Head Start teachers could implement the essential features of PWPBS with minimal technical assistance (TA) and (b) that additional TA and coaching was successful in improving the skills of three teachers with initially low implementation rates who over-relied on reprimands as a response to addressing the challenging behavior of their students. More significantly, the researchers also found the overall rate of problem behavior in each teacher's classroom dropped significantly following intervention.

To replicate and extend these promising findings, there is a need to understand and address the challenges in large-scale training and TA to support the design, implementation, and evaluation of PWPBS in multiple early childhood programs. The purpose of this article, therefore, is to describe the features of such implementation of PWPBS in 16 early childhood and Head Start programs at 47 sites as part of the Positive Behavioral Interventions and Supports-New Hampshire (PBIS-NH) statewide initiative that began in 2002. To that end, we first outline a number of challenges related to implementation of PWPBS in early childhood programs. We then describe how the New Hampshire Center for Effective Behavioral Interventions and Supports (NH CEBIS) at the Southeastern Regional Education Service Center (SERESC) recruited, trained, and provided TA to address the challenges associated with successful implementation of PWPBS in early childhood programs.

CHALLENGES IN IMPLEMENTING PROGRAM-WIDE POSITIVE BEHAVIORAL INTERVENTIONS AND SUPPORTS IN EARLY CHILDHOOD PROGRAMS

A review of the literature and our experiences indicate four important challenges that must be addressed in order to build the capacity of early childhood programs to support students who

lack social competence and exhibit challenging behavior. They include (a) variability in the size, complexity, and quality of the program; (b) variability in access to qualified related service personnel and consultation services; (c) addressing reactive and punitive responses to challenging behavior; and (d) lack of experience in data collection and analysis.

Variability in the Size, Complexity, and Quality of the Program

Early childhood programs vary in size, complexity, and quality. They are generally licensed by state agencies and housed in a variety of locations including (a) private childcare centers, (b) public community preschools (typical, Title One, special education, integrated), and (c) Head Start programs. As a result, programs vary substantially in size and configuration ranging from single classrooms serving a small group of children to multisite programs servicing hundreds of children.

The development of appropriate social behavior in young children is often dependent upon the quality of the early childhood program (Fox et al., 2002; Lamb, 1998; Love, Schochet, & Meckstroth, 1996; Scarr & Eisenberg, 1993). Early childhood programs vary in overall quality as some merely adhere to minimal standards whereas others are accredited using quality rating and improvement systems such as the ones developed by the National Association for the Education of Young Children and the National Association for Family Child Care. Moreover, program quality can be compromised by state credentialing policies. Obtaining credentials to teach in early childhood programs is typically less rigorous than obtaining certification to teach in public schools. In the state of New Hampshire, for example, the Bureau of Child Care Licensing requires lead teachers to have a minimum of 12 credits in early childhood education, including at least one three-credit course in Human Growth and Development (http://www.dhhs.state.nh.us/DHHS/BCCL/LAWS-RULES-POLICIES/default.htm). With the exception of public early childhood special education programs, which require an undergraduate degree in education/special education as well as state teacher certification, staff in Head Start and private, community-based preschool programs may possess little more than the minimum credentials.

Some researchers (Burchinal, Roberts, Nabors, & Bryant, November 1998; Howes, Phillips, & Whitebrook, 1992) have argued there is evidence associating high-quality programs with teacher variables such as staff educational level, salaries, turnover, and training. More recently, Early et al. (2007) challenged the relevance of these structural variables as indicators of program quality, claiming they have not been investigated within causal frameworks and citing only small to modest rather than robust relationships with child outcomes. According to Early and her colleagues, the relationship between teachers' education level is complicated, and the nature of the association with either global measures of process quality or children's academic achievements, once parent (e.g., maternal education, socioeconomic status) and center-level variables (e.g., adult:child ratio, length of day, teacher wages, percentage of children in poverty) are accounted for, is not yet fully understood. These findings do not suggest teacher quality is unimportant but do indicate the correlation between teacher education and teacher quality, for whatever reason, may not be as strong as previously thought. One thing is clear, however: high-quality professional development is required to support teachers' use and maintenance of emerging evidence-based practices (Darling-Hammond & Bransford, (2005). This is particularly important in terms of teachers' use of emerging practices in behavior support.

Teacher burnout and staff turnover rates in early childhood programs remain an undeniable challenge to successful implementation and sustainability of PWPBS. Teaching has been identified as a particularly stressful career. Aspects of the occupation that contribute to high stress in teachers include behavior problems and lack of administrative support (Russell, Altmaier & Van Velzen, 1987). Recent research by Gilliam (2008) reveals that teacher stress also contributes significantly to high expulsion rates of children in early childhood programs. Moreover, longer extended day programs are likely to increase the stress of both children and teachers, thereby explaining the higher rates of expulsions for children in extended care.

These stressors contribute to high rates of turnover within the childcare and preschool teaching profession. The largest study of childcare staffing to date conducted by Whitebook, Howes, and Phillips (1990) contends that preschool teacher turnover rates average 41% per year, severely impacting efforts to create consistent and responsive environments for children and families. These turnover rates often affect the ability of early childhood programs to maintain consistent team members, meeting schedules, and classroom expectations—all important features of implementing positive behavior support. Staff shortages often create an inability for team members to be present at meetings and/or trainings (particularly in programs providing full-day services). The implications for allocating the time and resources required to continually orient newly hired staff is clear.

Variability in Access to Qualified Related Service Personnel and Consultation Services

Early childhood programs also vary widely in their ability to access qualified support staff and consultation services. Fortunately, many public preschool and Head Start programs have access to direct service professionals such as speech and language pathologists, occupational therapists, school psychologists and/or counselors, family workers, and behavior specialists. Unfortunately, such resources are typically nonexistent, highly limited, or unaffordable in private early childhood programs, particularly in smaller programs.

Addressing Reactive and Punitive Responses to Challenging Behavior

Predictably, responses to challenging behavior in early childhood programs with undertrained staff and limited or no access to qualified support specialists tend to be reactive, punitive, rarely individualized, and typically over-reliant on aversive consequences, including expulsion. For example, Dale (2002) found that in the Philadelphia public school system, 33 kindergarten students were suspended from their schools in the first 4 months of the 2002–2003 school year. More recently, a national study of 3,898 prekindergarten teachers serving 3- and 4-year-olds found that pre-K students were expelled at a rate more than three times that of children in grades K–12 (Gilliam, 2005). Results indicated that approximately 7 preschoolers were expelled per 1,000 students nationally, with 10% of pre-K teachers reporting having expelled at least one child in the last 12 months. Expulsion rates were lowest in public school and Head Start programs and highest in faith-affiliated centers and for-profit childcare programs.

Particularly troubling about the use of these punitive yet commonplace responses is the fact that they are not supported by the available evidence. Although traditional punishment and exclusion may provide a temporary reprieve from behavior problems, research has shown these strategies to be ineffective in the long term, particularly when dealing with students whose behavior problems are of a long-standing nature (Gottfredson, 1997; Skiba, 2002). Moreover, there is some emerging evidence to suggest punishment may actually lead to an increase of incidents and intensity and escalation of problem behaviors in this population (Mayer, 1995, 2001). In either case, the research to date is unequivocal that the adoption of policies that result in suspensions and expulsions do not improve behavior or positively impact school safety (Skiba, 2002). The growing consensus is that proactive discipline and individualized approaches are more effective with this population (Council for Children with Behavioral Disorders, 2002; Gottfredson, 1997; Skiba, 2002).

Lack of Experience in Data Collection, Input, and Analysis

Another challenge involves data collection, input, and analysis. Schools typically utilize an office discipline referral (ODR) system to document and collect data targeting specific classrooms, settings, and individual students (Stormont et al., 2005). Using an ODR system, teachers are trained to document instances of challenging behavior such as physical aggression, inappropriate language, and so on, on a referral form, which is then handed in to the office and entered into a database for analysis. Early childhood education centers have not typically developed the systems or the culture necessary to collect behavioral data; nor do they utilize systematic approaches for data analysis and decision making. This limitation presents a very serious problem as data-based decision making is a fundamental feature of PWPBS (Sugai, 2002).

ADAPTING SCHOOL-WIDE POSITIVE BEHAVIORAL INTERVENTIONS AND SUPPORTS IN EARLY CHILDHOOD PROGRAMS IN NEW HAMPSHIRE

PBIS-NH began in 2002–2003 in response to an identified statewide need to support early childhood programs and schools in their ability to adopt, use, and sustain effective behavioral practices and processes for all students (Sugai, 2002; Sugai & Horner, 1999). Specifically, PBIS-NH was designed to (a) decrease rates of punitive responses to challenging behavior, (b) increase time for learning, and (c) improve achievement. The NH CEBIS at SERESC was identified as the statewide technical assistance partner responsible for (a) designing the systems, data, and practices of behavior support; (b) providing the training and TA; and (c) gathering and analyzing statewide data on process and outcomes (see Muscott et al., 2004; Muscott et al., 2008). Our experiences and the literature (Fox et al., 2002; Fox, Dunlap, Hemmeter, Joseph, & Strain, 2003; Lewis, Beckner, & Stormont, 2009/this issue; Stormont et al., 2005) suggest that supporting large-scale systemic change in behavior support practices in early childhood programs is a multiyear process requiring considerable support and adaptations of the SWPBS model. The goal, ultimately, is to establish and sustain a developmentally appropriate model of SWPBS suitable for children 3 to 5 years of age based on the notion that "programs designed *for* young children be based on what is known *about* young children" (Bredekamp & Copple, 1997, p. v). A developmentally appropriate model of SWPBS therefore requires adapting the typical systems, data, and practice

features used in elementary, middle, and high schools based on three foundations of knowledge: (a) what is known about child development and learning; (b) what is known about the strengths, interests, and needs of each individual child; and (c) what is known about the social and cultural contexts in which children live (Bredekamp & Copple, 1997). The adaptations to SWPBS in language, behavioral expectations, teaching procedures, definitions of challenging behaviors, responses to challenging behaviors, and data collection systems outlined in this article adhere to these fundamental principles.

Creating Systems Change With Positive Behavioral Interventions and Supports-New Hampshire

The PBIS-NH initiative is based on a five-stage systems change model (Muscott, Mann, & Berk, 2005). Adaptations to SWPBS for early childhood are presented within the context of this model, which is designed to build the capacity of early childhood programs and schools to create positive, productive, and preventative learning environments.

Stage 1: Awareness. The process began in Stage 1, Awareness, when the NH CEBIS at SERESC marketed the program for the express purpose of recruitment. During this phase, early childhood programs gained awareness that PBIS-NH was an opportunity to address outcomes involving the improvement of social competence and challenging behavior. In the fall of 2002, we began the process of actively recruiting our first PBIS-NH cohort with a statewide summit on school discipline followed by an application process by which early childhood programs and schools could apply for 3 years of training and TA support. In subsequent years, we actively recruited early childhood programs each fall by (a) sending information about the recruitment process to licensed programs in the state, (b) calling all Head Start programs, and (c) contacting programs that had previously expressed interest.

Stage 2: Interest. Stage 2, Interest, emerged as a contemplative process for administration and staff. If the administration committed to learning more, an orientation meeting with staff was scheduled to discuss program requirements, outcomes, commitments, timelines, assessments, training, and resources. The orientation also addressed faculty and administrative questions and paved the way for obtaining commitments. The goal of this stage was for administration, faculty, and staff to gather sufficient information to make an informed decision as to whether PWPBS implementation could be an effective strategy to address *their* priorities and needs. Presentations to early childhood faculty were identical to those made to schools except that the language, examples, and data shared reflected early childhood development and implementation. An 80% faculty/staff vote was also a requirement for being accepted into a cohort and obtaining support.

Stage 3: Readiness. Stage 3, Readiness, included three phases: (a) Obtaining Commitments, (b) Constructing the Universal Leadership Team to Oversee Implementation, and (c) Initial Training and TA.

Phase 1: Obtaining commitments. The Readiness stage officially began when interested early childhood programs determined that PWPBS implementation, with support from the NH CEBIS, was the chosen approach to address their programmatic challenges with respect to social competence, challenging behavior, school climate, or behavior support. For example, the administration of the Belknap-Merrimack Head Start believed PWPBS would adequately address staff concerns about the increasing numbers of children exhibiting extreme types of challenging behavior. The presentation to faculty resulted in a greater than 80% vote to apply. Additional requirements to apply for acceptance into a cohort included a 3-year commitment to (a) behavior support as a top priority; (b) implementing positive, preventative practices; (c) assembling and supporting a universal leadership team; (d) allowing the team release time from duties to attend trainings and team meetings; (e) engaging families; and (f) the use of data-based decision making. Once all the commitments were obtained, the decision to invest in PWPBS was solidified by completing the application packet. This process of awareness, developing interest, and showing readiness resulted in a total of 115 public schools and early childhood programs serving students in 147 sites across New Hampshire being accepted in yearly cohorts over a 5-year period (see Table 1). One hundred seven of the 115 schools and programs completed the 3-year cycle (93%), whereas only 8 dropped out (7%). Sixteen of the 107 active programs (15%) were early childhood programs. One early childhood program dropped out. Data on the early childhood programs presented in Table 2 reveals they served 1,949 preschoolers at 47 different sites. An examination of these programs revealed variability in size, structure, and type. These included five Head Start agencies with a total of 36 sites, seven private center-based programs, and three district preschool programs. A review of the data shows variability in the type of program, number of students served (r = 15–274), and number of locations involved per program (r = 1–9). Nine of the 16 (57%) were large programs with more than 100 students; 7 had enrollments of fewer than 100.

Phase 2: Constructing the universal leadership team to oversee implementation. The next phase of Readiness involved assembling a leadership team to guide the development,

TABLE 1
Number and Percentage of Early Childhood Programs and Schools Involved in Positive Behavioral Interventions and Supports–New Hampshire From 2003–2004 Through 2007–2008 by Cohort and Level of Schooling

Type of School	Cohort 1 03–04	Cohort 2 04–05	Cohort 3 05–06	Cohort 4 06–07	Cohort 5 07–08	Totals	Active Totals	% Active
Early childhood	1	3	6[a]	0	7	17	16	94
Elementary	14	10	10[a]	11[a]	3	48	46	96
Middle	6	4[a]	1	2	4	17	16	94
High	4[b]	2	0	1	3	10	8	80
Multilevel	3[a]	5	3	2	1	14	13	93
Alternative	0	3	1	4[a]	1	9	8	89
Totals	28	27	21	20	19	115	107	93
Dropouts	3	1	2	2	0	8	n/a	n/a
Active totals	25	26	19	18	19	107	107	93

Note. [a] Indicates a program or school dropped out prior to the completion of the 3-year cycle. [b] Indicates two programs or schools dropped out prior to the completion of the 3-year cycle.

TABLE 2
Cohort, Type, Sites Served, and Enrollment Information for Early Childhood Programs Involved in Positive Behavioral Interventions and Supports–New Hampshire from 2002–2003 Through 2007–2008

Cohort	Year of Implementation	Program Name	Type of Program	Number of Sites	Enrollment 3- to 5-Year-Olds
1	2003–04	Southern New Hampshire Services, Inc. Head Start–Nashua	Head Start	4	150
2	2004–05	Community Action Program Belknap–Merrimack Counties, Inc. Head Start	Head Start	5	198
2	2004–05	Rockingham Community Action Head Start/Community Campus	Head Start	9	177
2	2004–05	Visiting Nurses Association Child Care	Private	1	116
3	2005–06	Southern New Hampshire, Inc. Services Head Start–Manchester	Head Start	5	200
3	2005–06	Southwestern Community Services Head Start	Head Start	7	237
3	2005–06	Community Campus Strafford County Head Start	Head Start	6	274
3	2005–06	Creative Years Child Development & Learning Center	Private	1	165
3	2005–06	Derry Early Education Program	District	1	83
5	2007–08	A Place To Grow	Private	1	24
5	2007–08	Above and Beyond Childcare	Private	1	58
5	2007–08	Bright Beginnings Preschool	District	1	17
5	2007–08	Dover Children's Center	Private	2	65
5	2007–08	First Friends Preschool–Antrim	District	1	15
5	2007–08	Lakes Region Child Care Services	Private	1	140
5	2007–08	New Hampton Child Care Center	Private	1	30
Totals		16		47	1,949

implementation, sustainability, and evaluation of the program-wide efforts. Team members were thoughtfully selected to represent major stakeholder groups and included people who were respected by peers. In larger center-based programs, team composition often mirrored that of public schools (Lewis et al., 2009/this issue). For example, the leadership team at Southern New Hampshire Head Start included the education and disability coordinators, classroom teachers, family workers, a family member, and the external NH CEBIS at SERESC facilitator. In smaller programs such as First Friends, a one-classroom integrated preschool program in Antrim, NH, the leadership team consisted of the entire classroom staff and included the program director, lead teacher, three paraeducators, and the external NH CEBIS at SERESC facilitator. Each program was also required to identify one or two internal coaches to assume leadership responsibilities and serve as liaison to NH CEBIS at SERESC. In most of our programs, the coach was typically the program director or disability coordinator.

During this phase, the leadership team was expected to meet regularly, at least twice per month, for approximately an hour per meeting to work on activities from their action plans that led to implementation. Action plans were based on the following process assessments that

were initially completed as baseline at the beginning of the training cycle and at additional times during implementation: (a) the *Collaborative Team Process Checklist* (Mann & Muscott, 2004); (b) the *Universal Team Checklist* (Sugai, Horner, & Lewis-Palmer, 2002), (c) the *Family Engagement Checklist* (Muscott & Mann, 2004a), (d) the *PBIS-NH Rollout Checklist* (Muscott & Mann, 2004b), and (e) *Effective Behavioral Support Survey* (Sugai, Horner, & Todd, 2003). For a detailed description of these assessments, see Muscott et al. (2009/this issue). The NH CEBIS at SERESC provided support to the program by assigning a PBIS-NH facilitator who spent ½ day to 1 day per month consulting with the leadership team, administrators, and coaches at training and on-site at the program.

Phase 3: Initial training and technical assistance. The third phase in the Readiness stage involved the provision of the initial cycle of professional development activities for the members of the universal leadership team by NH CEBIS at SERESC personnel. The initial cycle included 4 full days of training starting with an initial 2-day statewide summit in late January, followed by 1-day trainings after 6 weeks and again at the end of the school year. These trainings occurred in designated locations across the state and all the teams in the cohort attended. Training activities varied and included the delivery of content as well as time for teams to work with external facilitators on assessment, design, skill building, action planning, and other activities. Differentiation of content for early childhood programs occurred during the time designated for teams to work with their external facilitators.

Adaptations to training and professional development. Based on our experiences and available research, we chose to incorporate five major adaptations into PWPBS training and professional development. First, our experiences demonstrated that variability in the size, complexity, and quality of the programs required flexible formats for training and TA. For example, we have found that larger, center-based early childhood programs including the Head Start programs have been able to consistently provide staff coverage and release for universal leadership teams to participate in the regional trainings. In contrast, many of our smaller programs have been unable to overcome the challenge of consistently sending their entire teaching staff to full days of off-site trainings. As a result, we adapted our typical professional development process to address these limitations in smaller programs, such as First Friends in Antrim and Above and Beyond Child Care in Hooksett, NH. These programs received personalized training on-site from their NH CEBIS at SERESC facilitator, typically embedded as part of the regular team meeting process. Decisions regarding the delivery of training and coaching provided to the team were mutually determined by team members, administration, and the NH CEBIS at SERESC and included consistent content of the professional development curriculum as well as individualized pacing of content delivery.

The overall content of professional development was designed to support programs in the systems, data, and developmentally appropriate practices of universal behavior support. Developmentally appropriate practices, whether related to teaching or guidance protocols, involve the use of decisions that are varied for and adapted to the age, experience, abilities, and interests of individual children within a specific age range (Copple & Bredekamp, 2006). Systems features included in the initial training cycle for the first three cohorts included (a) building a representative leadership team, (b) developing group processes and norms, (c) engaging faculty and families, and (d) data-based decision making.

Trainings also addressed how to develop the essential discipline features of PWPBS, including (a) a statement of purpose, (b) clearly defined behavioral expectations, (c) procedures for teaching

expectations and expected behaviors, (d) procedures for encouraging expected behaviors, and (e) procedures for discouraging challenging behaviors (including clear definitions, creating a form for recording incidents, and determining procedures for responding). For more detail on these features, see Muscott et al. (2009/this issue).

In early childhood programs where high turnover, low pay, and other factors resulted in the majority of staff having minimal qualifications and experiences, additional professional development activities for *all* staff, not just the universal team, were required to ensure fidelity of implementation, particularly in areas of child development and classroom management. For example, the external facilitator working with the Visiting Nurses Association Child Care Center provided additional training for all center staff in foundational early childhood principles and developmentally appropriate practices (e.g., child development, classroom management; see Muscott, et al., 2009/this issue).

In a second adaptation, we predictably found that applications of SWPBS to early childhood programs required terminology changes suitable to early childhood programs, such as establishing *program-wide* rather than *school-wide* behavior support systems, using the term *challenging* rather than *problem* to describe behaviors of concern, and documenting *behavior incidents* rather than *office discipline referrals.* Moreover, the training curriculum included a number of adaptations to features of SWPBS to make it developmentally appropriate. First, whereas schools were trained to identify three to five school-wide expectations or social values, early childhood programs are taught to identify only two to three. In addition, the words chosen to describe those expectations should be appropriate for the children's developmental level (e.g., *Make it Better* instead of *Be Responsible*; *Be Kind* instead of *Be Considerate*). Second, whereas schools are taught to develop a behavioral matrix of clearly defined expected behavior within *locations* such as classroom, hallway, cafeteria, bathroom, playground, and so on, early childhood teams are trained to develop those positively stated skills in the context of daily *routines* instead, such as arrival, mealtime, center time, circle, and so on.

The NH CEBIS at SERESC has gathered numerous examples of these features over the past 5 years. Behavioral expectations in PBIS-NH early childhood programs predominantly encompass the following three concepts: safety, kindness/helping others, and taking care of the environment. An example of a behavioral matrix from New Hampton Child Care Center is shown in Figure 1.

The teaching of expected behaviors is generally addressed through teacher-generated lesson plans that stem from the behavioral matrix. Most early childhood centers create a set of lesson plans that address key behaviors within a routine from the matrix. Examples can be found on the NH CEBIS at SERESC Web site at www.nhcebis.seresc.net/universal_pbis.

A third adaptation involved training teams to identify the differences between developmentally appropriate behavior of young children and challenging behavior. If early childhood educators do not fully understand typical social-emotional development, they will not be able to differentiate between typical behavior for a certain age and challenging behavior that goes beyond typical norms and needs to be documented in a data management system. In other words, a number of behaviors that might be typical for a 3- or 4-year-old, such as grabbing toys from each other, need to be differentiated from challenging behavior that is beyond what might be expected for that age. This adaptation typically took the form of changes in the definitions of challenging behavior and was often addressed by adapting the frequency, duration, or severity of the behavior or the conditions under which the behavior was expected. For example, *noncompliance* was defined as refusal to follow a reasonable request, direction, or the established routine, which persists

DAILY ROUTINES	BE SAFE	BE KIND	BE CAREFUL WITH OUR THINGS
Arrival/Departure	• Walk in the parking lot • Take off your outdoor shoes • Put on indoor shoes • Stop, look, listen for cars • Stay near adult	• Greet others in a kind way • Say good-bye to teachers	• Put your things in cubby • Put down what you play with • Put your slippers where they belong
Free Play	• Be aware of others • Use walking feet • Use gentle touch	• Take turns • Give each other space	• Put toys away when done • Step over toys • Walk around toys • Be gentle with books
Cooking Activity	• Wash hands • Listen to teachers	• Take turns	• Clean up
Project	• Sit • Carry scissors correctly • Listen to teachers • Follow directions	• Share materials • Be helpful	• Clean up • Close glue • Replace caps on markers • Keep crayons whole
Circle, Story, Meeting Time	• Be aware of others • Sit	• Listen to others	
Playground	• Dress for weather • Be aware of others • Listen to teacher • Use gentle touch • Keep sand on ground	• Take turns • Be aware of needs of others	• Clean up
Outside or Playground	• Stay with your group • Listen to teachers	• Take turns	• Stay on stones in garden
Mealtime	• Sit • Wash hands • Chew your food • Use a plate or napkin for food • Eat food you bring	• Give each other space • Be helpful • Use manners	• Clean up
Transition	• Listen to teachers • Give each other space	• Be helpful	• Be gentle with books • Clean up
Rest	• Relax on cot • Carry rest items carefully	• Rest quietly	• Put blankets away after rest • Keep blankets and stuffed animals in your space
Field Trip	• Stay with your group • Seats face forward in car • Listen to teachers	• Use manners	• Respect property • Clean up • Know where your things are
Fire Drill	• Make a line • Stay in line • Walk • Listen to teachers	• Be helpful	
Bathroom	• Wash hands • Wipe • Keep water in sink	• Flush • Use good manners	• Clean up

FIGURE 1 New Hampton Child Care Center Behavioral Matrix

after multiple requests and a *reasonable amount of time* because we do not expect most 3- and 4-year olds to follow directions after the first request. Programs have been encouraged to limit the number of documentable behaviors to no more than four to five.

Because many early childhood educators lack experience in data collection and entry, the fourth adaptation included teaching teams to streamline data collection systems in order to

increase the likelihood that behavioral incidents were recorded with fidelity. For example, schools implementing SWPBS typically identified and defined a set of major behavior problems that required intervention from administrators rather than teachers. An ODR form that included the behavior and other information such as the time of day, name of referring staff member, the location, the consequences, and others involved was then developed to document the incident. Once the form was completed, it was typically turned over to an administrator, who addressed the issue with the student. The incident was then entered into a data management system for future analysis. Because early childhood educators lack experience and the expectation of recording instances of challenging behavior, we have taught teams to adapt the recording protocol typically used in schools by (a) determining the challenging behavior within a classroom routine rather than location (e.g., mealtime rather than cafeteria), (b) collecting less information about the context surrounding each instance of challenging behavior, and (c) using a class-wide form to record data rather than an individual form for each incident. The advantage of the class form is that one form can be used for all students on a daily or even weekly basis. The disadvantage is that fewer pieces of information can be tracked. Class forms typically include the date, behavior of concern, routine during which the behavior took place, and sometimes either the perceived motivation or the teacher response. For example, First Friends in Antrim, NH, developed a daily class-wide form to record incidents (see Figure 2).

The fifth adaptation for early childhood involved modifying the School-Wide Information System (SWIS). SWIS is an efficient Web-based system for gathering information, data entry, and report generation that supports data-based decision making. SWIS is being used in more than 5,400 schools across the country. SWIS, which was developed for schools, includes fields that are either inappropriate or not applicable to early childhood. For example, many problem behaviors in SWIS such as combustibles, technology violation, and drug or alcohol possession are not relevant to young children. In addition, whereas schools rely heavily on sending a student to the office as a response to major behavior problems, teachers in early childhood programs typically handle the responses within the classroom environment. As a result, many of the responses to problem behavior on SWIS are not appropriate for young children. Moreover, more developmentally appropriate responses such as verbal reminders and physical guidance are missing. Therefore, teams were initially trained to eliminate certain options or modify the definitions of some of the behavior categories and responses to address these concerns.

Further adaptations to training and technical assistance. In 2006–2007, there were no early childhood program applicants for acceptance into Cohort 4. We capitalized on the opportunity by making additional adaptations to the training curriculum to address ongoing challenges related to the data-based management system and increase the relevance to early childhood. The first adaptation was related to the ongoing and formidable challenge of getting early childhood educators to document, input, and analyze program-wide data on a consistent basis. PBIS-NH program evaluation indicated that only three of the nine programs in Cohorts 1–3 were able to develop a functional data-based system and use the information for decision-making purposes. Moreover, only two were able to sustain that effort beyond the 1st year of implementation. Fortunately, data from the two programs that sustained data collection and analysis showed dramatic reductions in challenging behavior. Children at the Community Action Program Belknap-Merrimack Counties, Inc. Head Start in New Hampshire had 73% fewer reportable behavior incidents after 1 year of implementation. Results at the Visiting Nurses Association (VNA) Child Care and Family Resource Center were also significant as the rate of reportable incidents reduced from 618

Date:

Procedure: Record all incidents of challenging behavior that meet the definitions each day on this sheet in the routine box under the challenging behavior exhibited. Put the child's initials followed by a dash and the motivation code for each incident separately (e.g., HM-ODI)

Routine	Physical Aggression	Self-Injury	Disruption Tantrum	Inappropriate Language	Verbal Aggression	Non-Compliance	Social Withdrawal	Run Away	Property Damage	Unsafe Behavior	Totals
Arrival											
Free Play											
Circle											
Snack											
Free Play											
Clean Up											
Rug Time											
Project											
Book/Puzzle											
Movement											
Outside											

Motivation Codes: ODI = Obtain desired item; ODA = Obtain desired activity; OAA = Obtain adult attention; OPA = Obtain peer attention; OS=Obtain sensory stimulation; AT = Avoid task; AP = Avoid peers; AA = Avoid adults; AS = Avoid Sensory; DK = Do not know

FIGURE 2 Daily Class-Wide Behavior Incident Reporting-NH Form from First Friends in Antrim, NH.

per 100 in the 1st year of implementation to only 67 per 100 in the 3rd year of implementation (see Muscott et al., 2009/this issue).

These two programs notwithstanding, the fact that most programs were unable to regularly document, collect, input, and analyze behavioral infractions required a change. It was decided that the data collection and management system needed to be customized rather than adapted from a mismatched application. The NH CEBIS at SERESC, in collaboration with Lise Fox and her colleagues at the University of South Florida's Louis de la Parte Florida Mental Health Institute, has developed a Web-based relational data management system called the Behavior Incident Reporting System-NH (BIRS-NH), which is intended for preschool data collection, entry, and analysis and modeled after the SWIS. In the BIRS-NH, 10 challenging behaviors that are relevant to early childhood were identified and their definitions are based on the developmental norms of young children. These include physical aggression, self-injury, disruption/tantrums, inappropriate language, verbal aggression, noncompliance, social withdrawal/isolation, running away, property damage, and unsafe behaviors. The BIRS-NH tracks behaviors within routines, rather than locations, in order to provide more precise data based on program characteristics. It also includes both developmentally appropriate teacher and administrator responses to challenging behavior. Cohort 5 programs were trained in the BIRS-NH and have developed challenging behavior definitions, routines, and responses in preparation for data collection, entry, and analysis in school year 2008–2009.

The second adaptation made for Cohort 5 programs was to adopt the *Teaching Pyramid Model* developed by Fox and her colleagues at the University of South Florida's Center (Fox et al., 2003; Hemmeter & Fox, 2009/this issue) as the core framework for behavior support in early childhood. *The Teaching Pyramid Model* is a developmentally appropriate four-level continuum of behavior support. Levels 1 and 2 correspond to the Tier 1 primary prevention in SWPBS. Level 1 incorporates *Positive Relationships with Children, Families and Colleagues*, whereas the second level involves *Classroom Practices, Engaging Children and Developing Social Skills*. Level 3, *Social and Emotional Teaching Strategies*, involves the direct teaching of social emotional skills to support students who do not respond to primary prevention. Skills addressed at this level include teaching students to (a) express emotions, (b) problem solve, and (c) utilize friendship-making skills. These skills are taught in small groups either within the classroom or, in the case of larger programs, across classrooms. In Level 4, *Intensive Individualized Instruction*, a behavior support team is trained in system and practice features of secondary behavior support. This tier corresponds to Tier 3 of SWPBS.

The third adaptation involved changing the instrument used to assess program-wide implementation. Schools implementing SWPBS typically use the Schoolwide Evaluation Tool (SET; Horner et al., 2004) to assess fidelity of implementation. The SET is an objective, research-validated instrument and the most valid and reliable measure of the extent to which SWPBS is being implemented with fidelity. The SET contains 28 items clustered in seven features. These features include (a) expectations defined, (b) behavioral expectations taught, (c) ongoing system of rewarding, (d) system for responding to violations, (e) monitoring and decision making, (f) management, and (g) district-level support. The SET yields an *Average of Features* summary score of overall implementation and scores for each of the seven features. Schools scoring 80% or better on the *Average of Features* and 80% or better on the *Expectations Taught Feature* are considered implementing an effective discipline system (Horner et al., 2004). The early childhood programs in Cohorts 1–3 were assessed using the SET, as no equivalent assessment for early

TABLE 3
Schoolwide Evaluation Tool and Pre-School Evaluation Tool Scores for Early Childhood Programs Involved in Positive Behavioral Interventions and Supports–New Hampshire

Cohort	Program	SET Scores Total/Taught Baseline	SET Scores Total/Taught Year 1	SET Scores Total/Taught Year 2	SET Scores Total/Taught Year 3
1	1	n/a	85/90	80/90	n/a
2	2	35/10	88/100	84/100	n/a
2	3	40/10	91/100	96/100	n/a
2	4	38/0	88/90	84/90	100/86
3	5	n/a	74/90	81/100	n/a
3	6	41/0	77/80	79/80	90/78
3	7	32/0	62/80	71/100	80/64
3	8	19/10	77/100	89/100	100/75
3	9	n/a	89/100	96/90	100/94
Cohort	Program	Pre-SET Scores Baseline Total/Taught			
5	10	32/8			
5	11	40/0			
5	12	64/50			
5	13	30/40			
5	14	n/a			
5	15	32/13			
5	16	39/0			

Note. Score of 80 or better on Total and 80 or better on Taught indicates implementation with fidelity.

childhood existed at that time. All baseline assessments were completed in the spring of the initial cycle of training year. Follow-up SET evaluations were completed each spring, except for Cohort 1, which was conducted in the fall. A review of the SET data for Cohorts 1–3, found in Table 3, show a general trend toward improvement over time for most programs. None of the programs met the 80/80 criteria in the baseline administration. Yet, in the 1st year of implementation five of the nine (56%) programs did achieve or exceed the criteria and three of the nine came within six percentage points or less. By the 2nd year, seven of the nine (78%) earned SET scores indicating effective implementation, with one of the remaining two programs falling only one point below the criteria. More important, all five early childhood programs that achieved fidelity in Year 1 were able to sustain it for a 2nd year. Five programs had available SET data in their 3rd year of implementation. Of those, two sustained fidelity, with two more needing only five points or less to do so. Cohort 3, Programs 6 and 7, consistently missed the criteria over the course of the 3 years of implementation. Both, however, earned 80% on the teaching feature of the assessment. This trend was true across all early childhood programs over the course of implementation. In fact, a closer look at the SET data reveals a compelling pattern in the programs' summary scores. All programs struggled to achieve adequate scores on the *Violations* and *Monitoring* features of the SET. Even those meeting the 80/80 criteria failed to gain more than 75% on the *Violations* feature and only two met the 80% mark in the *Monitoring* feature. For example, Program 2 met criteria in Years 1 and 2; however, they never earned more than 38% on the *Violations* feature. Those programs that

never met criteria failed because of the influence of the *Violations* and *Monitoring* scores on their overall summary score. Program 7's summary score was no doubt heavily burdened by its failure to demonstrate any capacity in the *Monitoring* feature (i.e., they earned 0 in Years 1 and 2) and an inability to achieve better than 63% on its *Violations* score. Put simply, programs in Cohorts 1–3 demonstrated mastery in designing the positive and preventative features of behavior support including identifying, teaching, and acknowledging expected prosocial behaviors. However, they were much less successful in establishing systems associated with responding to behavioral violations including defining and responding to challenging behavior, knowing the emergency plan, and monitoring ongoing data collection and analysis. Unfortunately, the training and TA that was provided was not effective enough to change the ability of more than half of the programs to respond strategically to challenging behavior and use data for decision making.

These findings informed the redesign of the professional development curriculum that began for Cohort 5. In addition, the Pre-School Evaluation Tool (Pre-SET; Horner, Benedict, & Todd, 2005), an adapted version of the SET designed specifically for early childhood settings, became available. We began piloting its use in baseline assessments of the Cohort 5 programs in the spring of 2007 (see Table 3). In using an assessment tool specifically designed for early childhood, we hope to improve the assessment of fidelity of implementation.

Stage 4: Implementation. The fourth stage, Implementation, typically began in the fall at the beginning of the academic school year with a formal introduction or rollout of the program to children and families. Rollout is a systematic set of plans and procedures for communicating, teaching, and practicing the elements of the universal system with school staff, families, students, and community members (Muscott & Mann, 2004c). Rollout activities with students should occur only after (a) the leadership team has identified and ratified all the features of the universal system with input from staff, family members, and other key stakeholders; (b) the faculty understands the universal system of PBS; and (c) families have been informed of the program. There are two types of student rollout activities: initial rollouts and booster rollouts. Initial rollouts occurred at the beginning of implementation and subsequently each year. Although the type of student rollout should be based on the desired outcomes and how to increase the likelihood that students learn the established behaviors, initial rollouts typically included a program-wide activity in the form of a "kickoff" event to introduce the program, expectations, and key behaviors from the teaching matrix. The key behaviors associated with the expectations were taught to students within the routine using effective instructional strategies. Additional teaching activities are individually designed by the leadership team and teachers and taught to the children throughout the year. In addition to involving families on the leadership team and at rollout events, PWPBS emphasizes the relationship between school and home, making educators and family members prominent agents in transforming children's educational experiences (Muscott, et al., 2008). Given the influence of the family in the lives of preschoolers, we adapted PWPBS to further engage families through activities that strengthened parenting and learning at home. For example, the Southern New Hampshire Services, Inc. Head Start in Nashua was the first early childhood program in the PBIS-NH initiative to support parents with basic parenting skills using an adapted home matrix based on their Heads Up program (Be Safe, Be Kind, and Take Care of Our Things). Family workers visited families to help them create positively stated, observable behaviors for home routines such as bedtime, mealtime, and peer play. To enhance connections between school and home, the Lakes Region Child Care Services Center surveyed parents to assess interest and barriers and partnered

with another local agency, UpStream, to offer a five-part parenting series. Educators and family members involved in creating and delivering the "Parenting Series" considered the universal needs of the families by conducting surveys; providing training, materials, practice, and feedback in natural settings; including parents in decision making and leadership; and emphasizing positive behavioral expectations (Be Safe, Be Kind, and Take Care). Results included high and consistent attendance, high graduation rates from the training series, continued participation after the training concluded, reports of improved family functioning, and creation of a community of leaders and learners.

During the 2nd year of universal implementation, the NH CEBIS at SERESC provided one additional training day for leadership teams and two for coaches; one in the fall and one in the spring. The leadership teams continued to meet regularly to oversee implementation using data-based decision making while ongoing TA continued. The leadership teams updated the process assessments, got faculty input through the EBS, and action planned.

Stage 5: Sustainability. Although efforts to increase the likelihood of PWPBS sustainability were addressed throughout the Readiness and Implementation phases in the first 2 years, assuring that PWPBS practices continue to be implemented successfully requires ongoing commitment and effort in the 3rd year and beyond. Stage 5 targets Sustainability. During this stage, coaches and administrators were provided with ongoing training at forums with other coaches from around the state. These forums occur three times a year and with ongoing peer support through Listserves. Access to monthly TA from an assigned NH CEBIS at SERESC facilitator remained available during the 3rd year. The forums and ongoing TA addressed information and strategies essential to determining how PWPBS will be sustained and embedded in the culture of the program. The coaches' sessions also featured showcases, roundtables, and case studies to share ideas and help staff keep PWPBS "fresh." Coaches routinely described these sessions as exciting and re-energizing, often providing mutual support and networking opportunities among staff who may feel isolated.

SUMMARY

In this article, we have described challenges and adaptations associated with training 16 early childhood programs at 47 different sites across New Hampshire in PWPBS as part of a statewide PBIS-NH initiative that began in 2002. The majority of the programs were successful in designing and implementing the preventative features of defining, teaching, and acknowledging children who exhibit behavioral expectations with fidelity. Two programs were able to show significant program-wide reductions in incidents of challenging behavior as a result of implementation. Despite these successes, the vast majority of programs had difficulty implementing the response to challenging behavior features, especially in the area of collecting, inputting, and analyzing data using a data management system. Without accurate outcome data, it is impossible to measure the effectiveness of any intervention effort. In order to offset this challenge, the PBIS-NH training curriculum was redesigned to strengthen the response to challenging behavior features, including the development of an early childhood data management system known as BIRS-NH. The redesigned training curriculum was introduced to 7 Cohort 5 programs and implementation began in 2007–2008. Program evaluation is being conducted to see if these adaptations can

build the capacity of early childhood programs to implement PWPBS with fidelity and improve outcomes for children, families, and the early childhood educators who work on their behalf.

ACKNOWLEDGMENTS

Support and funding for the project was provided by the New Hampshire Department of Education, Bureau of Special Education and the United States Department of Education, Office of Special Education and Rehabilitation Services.

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