

# Tier II Interventions within the Framework of School-Wide Positive Behavior Support: Essential Features for Design, Implementation, and Maintenance

Cynthia M. Anderson, Ph.D., University of Oregon  
Chris Borgmeier, Ph.D., Portland State University

## ABSTRACT

To meet the complex social behavioral and academic needs of all students, schools benefit from having available multiple evidence-based interventions of varying intensity. School-wide positive behavior support provides a framework within which a continuum of evidence-based interventions can be implemented in a school. This framework includes three levels or tiers of intervention; Tier I (primary or universal), Tier II (secondary or targeted), and Tier III (tertiary or individualized) supports. In this paper we review the logic behind school-wide positive behavior support and then focus on Tier II interventions, as this level of support has received the least attention in the literature. We delineate the key features of Tier II interventions as implemented within school-wide positive behavior support, provide guidelines for matching Tier II interventions to school and student needs, and describe how schools plan for implementation and maintenance of selected interventions. Keywords: prevention, problem behavior in schools, school-wide positive behavior support, secondary interventions, Tier II interventions

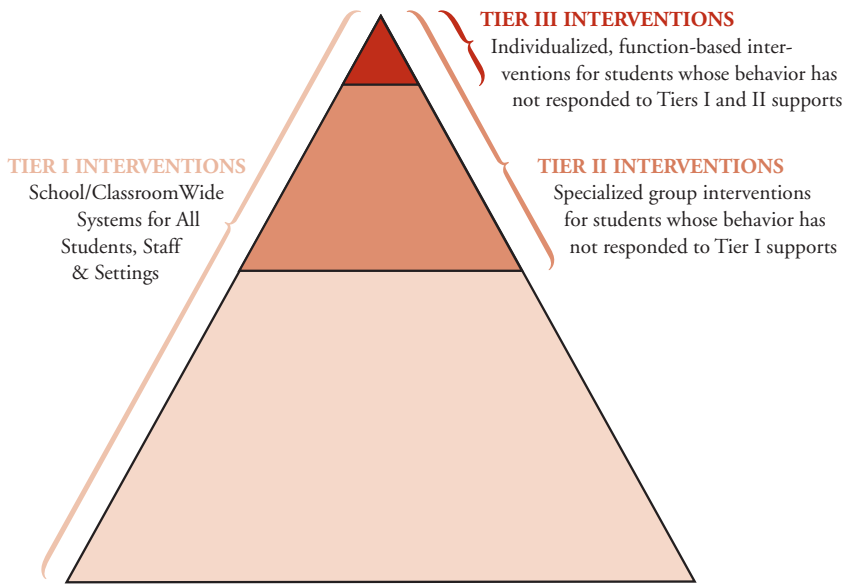


The range of behavioral and academic challenges exhibited by students in schools poses complex challenges requiring sophisticated, systemic solutions. Although a substantive body of literature has identified effective interventions for supporting students who engage in problem behaviors, successful and sustained implementation of these interventions in schools has been challenged by limited time, resources, and training (Adelman & Taylor, 2000; Noell & Gansle, 2009). School-wide positive behavior support (SWPBS) offers a promising systems approach to these challenges via use of a three-tiered model of increasingly intensive interventions (see Figure 1) arranged to facilitate sustained and effective implementation. Within SWPBS, specific interventions are not dictated within tiers; instead, SWPBS is a framework to guide schools in the selection, implementation, and maintenance of evidence-based interventions.

Tier I supports, implemented with the entire student population, are designed to prevent the development and exacerbation of problem behavior. These strategies draw from the large behavior analytic literature base documenting effective strategies for supporting pro-social behavior (Ayllon & Roberts, 1974; Becker, Madsen, & Arnold, 1967; Fishbein & Wasik, 1981; Madsen, Becker, & Thomas, 1968; Mayer, 1995; Murphy, Hutchison, & Bailey, 1983; Ringer, 1973). Schools implementing Tier I of SWPBS develop and explicitly teach behavioral expectations (e.g., be safe, be respectful) that are defined for various settings in the school. For example, “be responsible” might be defined as “pick up after yourself” in the cafeteria and “be in your seat with your materials ready when the bell rings” in the classroom. A reinforcement program such as a token economy is used to reinforce the occurrence of pro-social behavior, and schools define and use a continuum of

logical consequences for inappropriate behavior. A growing body of research supports the utility of Tier I supports within the framework of SWPBS for decreasing discipline problems and enhancing pro-social behavior and academic success (Bohanon et al., 2006; Duda, Dunlap, Fox, Lentini, & Clarke, 2004; Leedy, Bates, & Safran, 2004; Lewis, Powers, Kelk, & Newcomer, 2002; Markey, Markey, Quant, Santelli, & Turnbull, 2002; Metzler, Biglan, Rusby, & Sprague, 2001; Taylor-Greene et al., 1997; Warren et al., 2003). Readers interested in learning more about Tier I of SWPBS are referred to [www.pbis.org](http://www.pbis.org), which provides literature reviews and information on the implementation of SWPBS.

Students who are not responsive to the Tier I supports may receive a Tier II intervention. These students continue to receive the Tier I intervention, but more structure and guidance is provided to assist them in meeting school-wide



*Figure 1. A graphic representation of the intervention tiers of school-wide positive behavior support. A triangle is used to show that Tier I supports are in place for all students and successively fewer students will require additional, increasingly intensive levels of intervention.*

Gresham, Cook, Crews, & Kern, 2004). Although a thorough review of each of these programs is beyond the scope of this article, interested readers will find Hawken, Adolphson, Macleod, and Schumann's (2009) review of the evidence-based and key features of several Tier II interventions particularly helpful.

Tier III supports are provided for students whose behavior is not responsive to Tier I and II interventions. Tier III supports are individualized interventions that require more extensive expertise to develop and often necessitate a significant amount of resources to implement. Tier III supports build upon the large literature base documenting the effectiveness of functional behavior assessment for guiding development of interventions (e.g., Fox & Davis, 2005; Gettinger & Stoiber, 2006; Hanley, Iwata, & McCord, 2003; Iwata, Dorsey, Slifer, Bauman, & Richman, 1994; McLaren & Nelson, 2009; Neef & Iwata, 1994) and thus consist of functionally-derived interventions matched explicitly to the needs of the student. At Tier III, interventions usually are

expectations. Students receiving Tier II supports typically exhibit behavior that is not dangerous to themselves or others, but that is disruptive to their learning or the learning of their peers. Tier II interventions are implemented similarly across groups of students who exhibit similar behavior problems and are therefore likely to benefit from the same type of intervention. For example, students who exhibit deficits in social competence (e.g., conflict resolution skills) might participate in a skills group in which all students in the group receive the same level and intensity of instruction, as well as similar feedback on their behavior.

Although the application of the three-tiered framework to social behavior is somewhat new, there is a relatively large literature documenting effectiveness of treatments that could be considered Tier II interventions. Examples include check and connect (Anderson, Christenson, Sinclair, & Lehr, 2004; Evelo, Sinclair, Hurley, Christenson, & Thurlow, 1996; Lehr, Sinclair, & Christenson, 2004), check-in/check-out (Fairbanks, Sugai, Guardino, & Lathrop, 2007; Filter et al., 2007; Hawken, MacLeod, & Rawlings, 2007; Todd, Campbell, Meyer, & Horner, 2008), and First Step to Success (Carter & Horner, 2007; Filter et al., 2007; Golly, Stiller, & Walker, 1998; Walker et al., 1998). Beyond these packaged interventions, there are numerous other strategies that have proven effective when implemented in a small group context. These include activity schedules (e.g., Bryan & Gast, 2000; O'Reilly, Sigafoos, Lancioni, Edrisinha, & Andrews, 2005), group contingencies (e.g., Bushell, Wrobel, & Michaelis, 1968; Embry, 2002; Hayes, 1976), increased supervision (Atkins et al., 1998; Lewis, Colvin, & Sugai, 2000), and select social skills programs (for a review of the evidence on social skills training see Cook et al., 2008;

multi-component, consisting of antecedent strategies to prevent problem behavior, instructional strategies to teach desired behavior, and consequence components to decrease problem behavior and increase the occurrence of desired behavior (for more detailed information on Tier III supports within the SWPBS framework, see Anderson & Scott, 2009).

Across all tiers of SWPBS, the enhancement of student academic and social outcomes is rooted in evidence-based practices supported by (a) the use of data to guide decision making on all aspects of interventions, and (b) systems to support effective implementation. The rationale for this is that simply choosing to implement an intervention that has empirical support does not guarantee that it can or will be implemented effectively or sustained over time in a school. Effective and sustained implementation requires that schools invest in data systems to determine which students are most likely to benefit from a given intervention, and also to assess whether students are making adequate progress (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Fuchs & Fuchs, 2004; Stecker & Fuchs, 2000). In addition, schools must invest in systems-features to support effective implementation. Systems needed for implementation may include providing access to technical assistance, ensuring initial and on-going training in the intervention is available, providing adequate time for key stakeholders to plan, assess, and guide implementation of the intervention, and ensuring that those involved with the intervention have the skills, time and resources to implement it.

When a school implements an intervention without careful consideration of the systems features necessary to guide implementation, the intervention is likely to disappear quickly, be implemented with poor fidelity, or becomes part of a

hodgepodge of interventions, none of which have documented effects (Adelman & Taylor, 2003; Gottfredson & Gottfredson, 2002; Gregory, Henry, & Schoeny, 2007; Walker, 2004). As an alternative to this piecemeal approach, SWPBS provides a framework within which schools can select evidence-based interventions that match the needs of their school, implement the interventions with fidelity and over time, and use data to guide decision-making around the intervention. Research on sustaining evidence-based practice suggests that contextual features such as these are useful for ensuring the durability of interventions (Adelman & Taylor, 2003; Fixsen et al., 2005; Gregory et al., 2007; Gresham, 2004; Schaughency & Ervin, 2006; Walker, 2004).

Although interventions implemented at Tiers I and III of SWPBS have been described in the literature and have substantive empirical support, the middle tier has, until recently, received relatively little attention. Further, although there is a wealth of evidence-based interventions that could be implemented at Tier II, very little research has focused on implementation of these interventions within a continuum of behavior supports. As a result, contextual factors within the school that may be needed to support the sustained implementation of particular interventions have not been delineated (Gregory, et al., 2007; Schaughency & Ervin, 2006; Walker, 2004). In this paper, we define essential features of Tier II interventions within the framework of SWPBS and provide guidelines for determining which Tier II interventions best match the needs of students. We then describe how schools plan for both initial and sustained implementation of Tier II interventions and conclude with a description of possible directions for future research and practice.

### Essential Features of Tier II Interventions

Consistent with the empirically validated components of behavioral skills training (Botvin, 2000; Frey, Hirschstein, & Guzzo, 2001; Miltenberger et al., 2004; St. Lawrence, Jefferson, Alleyne, & Brasfield, 1995), Tier II interventions include (a) explicit instruction of skills (e.g., pro-social skills, academic skills), (b) structured prompts for appropriate behavior, (c) opportunities for the student to practice new skills in the natural setting, and (d) frequent feedback to the student. In addition, many Tier II interventions might include a mechanism for fading support when appropriate, and a means for communicating regularly with a student's parents.

First, Tier II interventions focus on increasing pro-social behavior and thus involve *explicitly teaching* expected behavior to the student. Explicit teaching is accomplished by reviewing what is expected and providing both examples and non-examples of the expected behaviors. Many times role-playing with feedback occurs as well. For example, a counselor teaching

a social skills lesson on sharing might define sharing and then ask group members to provide examples and non-examples. Students then might practice sharing with one another and then receive feedback on their skills.

Second, Tier II interventions include *structured prompts* for appropriate behavior. These help to prevent problem behavior by prompting more appropriate behavior *before* a problem has occurred. Check-in/check-out (Fairbanks et al., 2007; Filter et al., 2007; Hawken et al., 2007; Hawken, Vincent, & Schumann, 2008), a frequently used Tier II intervention for

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students with disruptive or inattentive behavior, is a point-card intervention that is aligned with the Tier I component of SWPBS (i.e., students earn points throughout the day for exhibiting behaviors aligned with the school's school-wide expectations). In check-in/check-out, students meet with an intervention coordinator at the beginning of the day to receive their point card and review behavioral expectations. Expected behaviors are printed on the point card, which students carry with them and turn in to their teachers at the start of each class period. Teachers then rate the students' behaviors according to how well they have met the expectations. This provides teachers with multiple opportunities to review and prompt desired behaviors.

Third, all Tier II interventions provide *opportunities to practice skills*. Following explicit instruction and daily review of the desired behaviors, students are regularly provided with opportunities to practice desired behaviors and receive regular feedback. For example, if a counselor works with a small group of students on responding to adult-provided feedback appropriately, the counselor might role-play different situations by giving mock critical feedback to a student and having them practice responding. In addition, the counselor might inform teachers and parents of the skills covered during a given week and ask that they help students practice in natural settings.

Fourth, Tier II interventions provide *frequent opportunities for feedback*. Although teachers certainly can praise or correct a student at any time, establishing certain times for feedback makes it more likely that the student will receive this important information regularly. For example, in First Step to Success (Golly et al., 1998; Walker, Golly, McLane, & Kimmich,

2005; Walker et al., 1998), frequent feedback is provided via presentation of a green (for appropriate behavior) or red (for inappropriate behavior) card upon which points are tallied. Points are delivered every 30 s and as long as a student engages in desired behavior, points are accumulated on the green card; however, any inappropriate behavior results in presentation of the red card and accumulation of points on this card. At the end of the period, the student earns a free-time activity for the class if 80% or more points were accumulated on the green card.

In addition to explicit instruction, prompts, opportunities to practice, and feedback, Tier II interventions might also include strategies for *fading support* as the student gains new skills. Given that the ultimate goal of Tier II interventions should be to provide students with the skills needed to succeed in school with minimal supports, fading often is a crucial component of an intervention plan. Of course, not all interventions can be faded entirely. For example, if an anger management group is designed to be conducted for 14 weeks, a plan should be developed to ensure that students will receive some support—although in a less intensive fashion—after the group ends. The manner in which intervention fading occurs will vary greatly according to the specifics of the intervention. However, in all cases, progress monitoring data should be used to guide decisions regarding intervention fading. Fading should be attempted only after improvements in target responses have consistently occurred for a sufficient period of time. For example, it is recommended that fading of check-in/check-out not be attempted until a student has been meeting their goals (i.e., earning a minimum of 80% of possible points per day) for at least 4 weeks (Crone, Horner, & Hawken, 2003).

Finally, many Tier II interventions include a *system for communicating with parents*. This provides a means for parents to become a part of their child's education by staying informed of progress, and also by encouraging expected behaviors at home. Some interventions (e.g., check-in/check-out, check and connect) include a specific format for connecting parents and educators (such as a home note with check boxes to indicate student performance each day).

### Selecting Tier II Interventions to Meet School Needs and Resources

Implementing a continuum of interventions in a school requires careful planning to determine which interventions are needed. To identify an appropriate Tier II intervention, schools first need to identify frequently occurring problems exhibited by students who are not responsive to Tier I interventions. One way to do this is to review data sources that occur naturally in the school (such as office discipline referrals, attendance records, and academic reports) to identify common characteristics across groups of students. These reviews should focus on the entire population of students who are not responding to Tier I, not on the behavior problems exhibited by any student in particular. For example, if a large number of office discipline

referrals in a school are coming from classrooms (as opposed to common areas) and are for disruptive types of behavior, a Tier II intervention designed for implementation within classrooms could be selected (Crone et al., 2003; Fairbanks et al., 2007). Similarly, if a significant number of students with recurring problem behavior are English language learners who are avoiding academic tasks related to reading, a Tier II intervention could be developed that allows students to review vocabulary and specific content prior to a particular assignment (e.g., Preciado, Horner, & Baker, 2009). Likewise, if multiple students struggle with organizational skills, the school could implement a program that teaches self-management skills (for a comprehensive review of the use of self-management interventions in educational settings, see Briesch & Chafouleas, 2009).

Many schools appear to select an intervention based on recommendations from local experts, such as counselors, teachers returning from a conference, the SWPBS district coach, or district administrators. Although these sources *might* provide useful information, before an intervention is selected, it is critical that the school ensure that empirical research supports the efficacy of the intervention (Kratochwill, Albers, & Shernoff, 2004; Kratochwill & Shernoff, 2003; Kratochwill & Stoiber, 2002). Along with conducting literature searches of particular interventions, school personnel might also access web-based resources such as the What Works Clearinghouse (<http://ies.ed.gov/ncee/wwc/>) and the Promising Practices Network ([www.promisingpractices.net](http://www.promisingpractices.net)) to identify interventions with empirical documentation of efficacy.

In addition to making sure a particular intervention is evidence-based, schools must ensure that they have the capacity and resources to implement the intervention effectively and to sustain implementation over time (Fixsen, & Blase, 2009; Fixsen, Blase, Naoom, & Wallace, 2009). Key issues to consider include the level of expertise required to implement the intervention, the number of staff hours (coordinators, teachers, etc.) required to implement the intervention, and the cost of any materials that must be purchased. This knowledge will allow a school to determine whether the intervention can be adequately implemented with available resources and expertise.

After an intervention has been selected, effective and sustained use of the intervention will require identification of the behavior problems best suited to the intervention, the settings in which the intervention can be used, the skills needed by the implementer, and the criteria by which intervention success or failure will be judged. Table 1 provides an example of a template schools might use to define these features using check-in/check-out as an example. Guiding questions are presented in the left-hand column, whereas answers specific to check-in/check-out are provided in the right-hand column.

### Planning for Initial and Sustained Implementation

If an intervention is to be implemented with fidelity and if that implementation is to be sustained over time, careful

*Table 1. Group Intervention Template Completed for Check-in/Check-out.*

Intervention decisions	Information specific to intervention
Description of intervention	Check-in/check-out is in place throughout the day, in all academic settings.
What are the behavior(s) to increase?	Behaviors aligned with definitions of school-wide expectations
What are the behavior(s) to decrease?	Behaviors that violate school rules
What are the inclusion criteria—for which students is this intervention a good fit?	<ul style="list-style-type: none"> <li>• Student receives 2 or more office referrals in a month or 4 across the school year for social behavior concerns during academic routines.</li> <li>• Teacher requests assistance for social behavior concerns during academic routines.</li> </ul>
What are the exclusion criteria—who will not begin this intervention?	<ul style="list-style-type: none"> <li>• Student avoids adult attention.</li> <li>• Student’s behavior is dangerous to self or others.</li> <li>• Student’s behavior occurs only during one academic routine.</li> <li>• Student’s behavior is due to academic skill deficits not currently addressed.</li> </ul>
What is the goal?	Earning 80% or more of possible points each day
What defines lack of progress toward the goal – when will modification or discontinuation of the intervention be considered?	Two consecutive weeks with less than an average of 70% of points earned per day
What is a successful outcome; when will intervention fading be considered?	90% or more points earned, on average, per day, for 6 consecutive weeks
What data will be collected, by whom and how frequently?	Teacher(s) complete the point card at scheduled checks each day.
Who will graph the data?	The intervention coordinator or an assignee
How often will progress monitoring occur and who is responsible?	Graphs are examined at least weekly by the intervention coordinator.
How will fidelity be assessed--are we doing what we said we would do?	If a student earns less than 80% of points on average for 2 consecutive weeks, the coordinator will meet with the student’s teacher(s) to review the program and pinpoint possible fidelity problems.

*Note. The questions in the left-hand column guide school teams in defining how data-based decision-making will occur for a given Tier II intervention. Teams record their decisions in the right column. The right-column of this table was filled out for check-in/check-out to illustrate how the table might be used. Different decision rules might be reached by a team for check-in/check-out or for other interventions.*

attention must be paid to designing a system to support implementation. Although several behavior analytic studies have shown that consultation and direct training increases the fidelity of interventions implemented by educators (Burns, Peters, & Noell, 2008; Coddington, Feinburg, Dunn, & Pace, 2005; Noell et al., 2005; Sterling-Turner, Watson, & Moore, 2002), relatively little research has focused on the variables necessary to ensure initial and sustained implementation. Recent reviews of the literature (Fixsen et al., 2005; Gregory et al., 2007; Schaugency & Ervin, 2006), along with experience gleaned from studying implementation of Tier I strategies (Benazzi, Horner, & Good,

2006; Colvin, 2007; Horner, Sugai, Todd, & Lewis-Palmer, 2005; Sugai & Horner, 2009a, 2009b; Sugai, Sprague, Horner, & Walker, 2001), suggest the following features are important for successful implementation: (a) team-based planning to drive implementation, (b) data-based decision-making, and (c) building the intervention infrastructure.

### *Teams to Drive Implementation*

All Tier II interventions must be grounded in an effective teaming process to provide individual student support and data-based decision making. The team is responsible for

(a) selecting students who might benefit from the intervention, (b) determining which intervention a student receives, and (c) monitoring progress. Although the specific members of a team will vary from school to school, certain roles are critical. First, effective teams include someone who can allocate resources (i.e., an administrator). In addition, teams should include a staff member with training and expertise in behavioral assessment (and function-based support, if this team makes decisions about Tier III interventions), and a staff member who oversees implementation of the Tier II intervention(s). Teams also should include representation from both regular and special education. In our experience, teams generally are more effective if they consist of 6 or fewer individuals, and thus one person might serve multiple roles. In larger schools (i.e., over 600 students), the sheer number of students who are unresponsive to Tier I may require the development of multiple intervention teams to adequately address the number of student referrals. For example, in a middle school of 800 students, if only 10% of students are not responding to Tier I, there would be 80 students who might benefit from a Tier II intervention. Meeting the needs of all students might require the formation of one team that oversees implementation of Tier II interventions and several smaller teams focused on progress monitoring specific interventions.

Critical to the success of any Tier II intervention is identifying a person to coordinate implementation. The role of the coordinator involves ensuring decision rules are used for the intervention (described next), training new teachers and staff in the intervention, making certain that needed resources (e.g., items for reinforcers, daily progress report cards) are available, meeting with teachers, students, and parents when a student is going to begin an intervention, problem solving with involved parties

as needed to facilitate success, graphing each student's progress data, and providing updates of progress to the implementation team. Clearly, these responsibilities will not be accomplished easily by a teacher with a full teaching schedule. In some schools, these roles are divided amongst two or more people. If this is not possible, one person may be assigned an overall coordination role to ensure all tasks are done in a timely and effective manner. The coordinator will need to have the training, background knowledge, time, and resources to effectively manage the program with fidelity. For example, coordination of check-in/check-out requires about 10 hours per week for 30 students (Crone et al., 2003).

### *Data to Guide Decision-Making*

Within SWPBS, all decisions regarding interventions are data-based. Such decisions include determining (a) which intervention a student should receive, (b) whether individual students are making adequate progress, (c) whether the intervention is being implemented with fidelity, and (d) the extent to which the intervention is beneficial overall.

*Matching interventions to student needs.* A variety of data sources can be used to determine which students might benefit from Tier II supports and what interventions might be most effective. One commonly used source is office discipline referral patterns. When office discipline referral patterns are used, "not responding to Tier I" must first be defined. For example, a school might define non-responders as students earning more than a certain number of referrals in a given month (e.g., two in one month) or across the entire year (e.g., four in a year). These data are examined on a regular schedule, typically monthly, to determine which students might benefit from additional supports. Office



referral information also can be used to guide selection of a Tier II intervention by noting the problems resulting in an office referral (e.g., frequent truancy) and the location of most referrals (e.g., classroom).

A second source of information is a teacher-completed request for assistance. Using this data source, any student for whom a teacher requests assistance due to problem behavior could be considered as unresponsive to the Tier I intervention (if the teacher is implementing good classroom behavior management aligned with the school's universal intervention). A request for assistance form should provide information such as a definition of the problem, the setting(s) in which the problem most often occurs, whether academic skills are involved, and what interventions have been tried previously. School teams usually review request for assistance forms weekly to match students to available Tier II interventions or to begin a functional behavior assessment for Tier III supports.

A third strategy for early identification of students needing Tier II supports is to use periodic school-wide screening (Albers, Glover, & Kratochwill, 2007; Walker, Cheney, Stage, Blum, & Horner, 2005). School-wide screening most often occurs in one or more of three ways: multi-gated screening, administration of a scale to assess teacher judgment, and/or teacher nomination. Multi-gated screening tools use multiple methods to select students who might need additional supports. For example, the Systematic Screener for Behavior Disorders (Walker et al., 2005; Walker & Severson, 1992; Walker et al., 1994) begins with teacher nomination of students suspected to be in need of intervention (gate 1). Teachers are then asked to complete rating scales for each of those students (gate 2). Students whose behavior is rated as significantly problematic pass on to gate 3, which involves direct observation and administration of parent questionnaires. Students passing all gates then receive a Tier II intervention or evaluation for Tier III supports. As an alternative to multi-gated procedures, teachers might simply complete a rating scale for each student. An empirically-validated teacher report measure is the *Student Risk Screening Scale* (Drummond, 1993), which requires teachers to rate each student in the class on seven behavioral criteria associated with antisocial behavior. Finally, teacher nomination involves asking teachers to indicate students whose behavior matches provided descriptions (e.g., students with acting out behaviors, students whose behavior is suggestive of anxiety or depression). Severson, Walker, Hope-Doolittle, Kratochwill, and Gresham (2007) suggest that a teacher nomination process be followed by the completion of norm-referenced rating scales such as the Social Skills Improvement System (Gresham & Elliott, 2008) or the Child Behavior Checklist (Achenbach, 1991). It is important to note that although behavioral function is considered (discussed) when selecting an intervention,

a functional behavior assessment typically is not conducted prior to implementation of Tier II supports. The rationale is that Tier II interventions should be implemented quickly and efficiently, and conducting a functional behavior assessment requires extensive time and resources. Thus, the functional behavior assessment typically is reserved for the design of Tier III interventions.

*Progress monitoring of Tier II interventions.* As shown in Table 1, school teams develop data-based rules to guide decisions regarding whether a student is making adequate progress on a Tier II intervention. The first step in this process

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is identifying objective, measurable outcomes and setting an intervention goal. For example, if a homework club is used in the school, the goal might be “*Students will turn in 50% of homework by week 2 and 80% by week 6.*” Goals are not set for individual students; rather, a general goal is set for all students to facilitate efficient planning and monitoring. These predetermined decision rules allow for easy progress monitoring of individual student outcomes. In most schools with which we work, one or two people on the team review graphs of student progress every few days and the entire team meets every other week to monitor the progress of all students. At this bi-weekly meeting, the intervention coordinator provides a summary of all students receiving the intervention. For example, “*Of the 28 students on homework club, 25 are meeting their goals. Also, 5 students have been on homework club for 10 weeks and have met criteria for fading.*” The team would then review the data only for those students who were not meeting goals and for students who were ready for fading. The team uses data to guide decisions regarding whether to (a) maintain the current intervention, (b) fade the current intervention, (c) increase the intensity of the intervention or (d) change the intervention altogether. If the intervention requires significant modification, or if it is to be terminated due to lack of progress, a functional behavior assessment is conducted to determine a more appropriate intervention. For example, if a student is not responding to an intervention that relies on teacher-provided feedback, and a functional behavior assessment interview suggests the student's disruptive behavior is sensitive to peer attention, the

intervention might be modified such that peer attention (rather than adult attention) is provided for appropriate behavior.

*Monitoring fidelity of implementation.* Assessment of fidelity is important, as research shows that interventions in schools often are not implemented as designed and that poor implementation can have deleterious effects on outcomes (Gresham, MacMillan, Beebe-Frankenberger, & Bocian, 2000; Lane, Bocian, MacMillan, & Gresham, 2004). Further, monitoring fidelity and providing feedback can enhance the integrity of the intervention (DiGennaro, Martens, & McIntyre, 2005; Sterling-Turner et al., 2002). Measuring fidelity can be a complex or a simple process. A complex measurement of fidelity might include having someone collect direct observation data to assess the extent to which key features of the intervention were implemented as planned (DiGennaro et al.). At the other end of the spectrum, fidelity might be assessed by asking teachers to complete a weekly rating scale indicating the extent to which they implemented the intervention as planned (e.g., 1 = "I did not implement this as planned" and 4 = "I implemented this intervention exactly as planned"). Complexity is usually negatively correlated with reliability; therefore, the benefits of a complex system must be weighed against the time needed to implement it and the benefits received.

The implementation status of the overall Tier II intervention system within a school can be measured via a systems-level tool such as the Individual Student Systems Evaluation Tool (Anderson et al., 2008) which is completed by external reviewers, or the Benchmarks for Advanced Tiers (Anderson et al., 2009), which is completed by the school team. Both of these instruments allow for comprehensive assessment of the systems, data management, and practices involved in Tiers II and III behavior supports. Further, both measures provide quantifiable documentation of the level of implementation, which can be monitored over time. In addition, the Benchmarks for Advanced Tiers assists teams in building an action plan to guide further implementation of Tiers II and III supports.

*Monitoring overall effectiveness and value of an intervention.* If the program is being implemented with fidelity, the team should then determine whether the investment of resources in the intervention is providing a sufficient return, or if another intervention might be a better investment. In addition, outcomes achieved via Tier II interventions must be reviewed periodically because the needs of a school might change over time. For example, 10 years ago a middle school might have been concerned primarily with increasing positive student interactions. Although this might still be important, an additional focus might now be on early drop-out prevention, as research suggests that intervention programs to prevent school dropout can be highly effective (Christenson & Thurlow, 2004). Changes in the characteristics of students with challenging behavior, shifts in student demographics, and improvements in school-wide programming all could potentially have an impact on the types of Tier II interventions that may be most beneficial in a school. Therefore, teams should regularly evaluate the number

of students being referred to each Tier II intervention and also examine the percentage of those students who are responding successfully (i.e., meeting behavioral goals).

### Building the Intervention Infrastructure

Tier II interventions are designed to be implemented within 5 days of an identified need. Schools can meet this criterion only if staff members are trained in implementation of the interventions, have agreed to use them, and have the needed materials readily accessible. Thus, school administrators should allocate resources to the purchase (if needed) and maintenance of any necessary supplies. Equally important is ensuring that all staff who might be involved with selected interventions (e.g., referring a student, prompting appropriate behavior, recording data) are sufficiently trained. Many schools accomplish this by holding annual staff in-services in which features of the interventions are reviewed. When a student begins an intervention, the coordinator might simply meet with the student's teachers briefly to review the intervention and to address any concerns.

Implementation of Tier II interventions is more likely to occur with fidelity and to be sustained over time if the school has a written procedures manual. The manual should contain documentation of key features of the intervention, as well as information about how the intervention is implemented within that particular school (or school district). A written procedures manual that is reviewed periodically will help ensure that the intervention continues to be implemented as designed. Although a written manual may seem unnecessary in a school where most teachers are familiar with the intervention and the coordinator is in charge of all key aspects, maintaining a manual will help ensure sustainability over time. For example, if there is a change in roles (e.g., a new coordinator is appointed), a written manual will assist with the transition and ensure that the intervention is not person-dependent.

### Directions for Future Research and Practice

Effectively meeting the social and academic needs of all students in a school requires a continuum of interventions varying in intensity. With regards to Tier II interventions, more research is needed to (a) define systems for data use, (b) delineate effective interventions for anxious, depressed, and withdrawn behavior, and (c) document sustainability over time.

First, research is needed to define and document effects of systems for data-based decision-making that are efficient and effective in school settings. For Tier I interventions, office discipline referrals often are used to assess outcomes. Although office discipline referral patterns might be one indicator of overall effects of a Tier II intervention within a school, they are unlikely to be useful for progress monitoring because they do not provide frequent and repeated measurement. Daily report cards (Chafouleas, McDougal, Riley-Tillman, Panahon, & Hilt, 2005; Chafouleas, Riley-Tillman, & Sassu, 2006) have promise in this area, but have been used primarily for interventions in place across the school day. Research is needed



to determine whether daily report cards can be used to monitor a wider variety of interventions, including those that occur for brief periods of time during a school day (such as social skills groups). In such a scenario, the daily report card might target skills addressed in the group (e.g., “uses problem-solving skills as taught”). Provided that teachers were familiar with skills taught in the intervention, they could then provide periodic ratings of the extent to which a student used—or failed to use—newly acquired skills.

Second, most Tier II interventions are designed for students who engage in disruptive behavior. However, many children have difficulty at school due to “internalizing” behaviors, such as social withdrawal and behaviors labeled as shy, anxious, or depressed. Within clinical behavior analysis and behavior therapy, there are a variety of evidence-based interventions for these problems; however, most are designed for implementation by psychologists in clinical settings. Given that children spend a large amount of time at school and likely experience problems there, assessing the use of clinical strategies in school settings is an important area of investigation. Successful transportation of interventions from clinic to school will require that pulling students out of class for intervention is avoided whenever possible and that the integrity of interventions is maintained with limited staff time and training. While it is the case that some clinical interventions likely cannot be transported effectively to school settings (e.g., long-term group therapy for children meeting criteria for major depressive disorder), it seems feasible that less intensive interventions could be implemented for students who do not present with severe behavioral concerns. For example, perhaps a mentor program could be adapted for children who report being anxious about school.

Third, research is needed to evaluate the sustainability of Tier II interventions over time. Although a growing body of work supports the utility of Tier II interventions within a three-tiered framework, most studies focus on implementation within a single year (e.g., Carter & Horner, 2009; Hawken et al., 2007; McCurdy, Kunsch, & Reibstein, 2007). Research is needed to document outcomes across multiple years and to document the systems features that facilitate or inhibit successful implementation.

If Tier II interventions are to be applied and used systematically in schools, then school-based, behavior-analytic practitioners will play an important role. These practitioners can help move schools away from reactive, highly resource intensive assessment and intervention models, and instead guide them to a data-driven, prevention-oriented approach. Using a multi-tiered, data-based approach will allow behavior analysts to assist schools in maximizing resources by providing low to moderate intensity interventions (i.e., Tier II) to the majority of students, thereby reserving highly resource intensive assessment and intervention (i.e., functional behavior assessment and function-based intervention) for those few students with significant need.

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