A major focus for current policy and systems change efforts in education and mental health is the extent to which states are investing in practices and procedures that are supported by rigorous research evidence. Evidence-based practices have been demonstrated in formal research studies to be related to valued outcomes for children and their families.

A reasonable question is if School-wide Positive Behavior Interventions and Supports (PBIS) is an evidence-based practice. The purpose of this document is to lay out the current evidence assessing SWPBIS and the considerations that may be relevant for state, district and national decision-makers.

Any claim that a practice or procedure is “evidence-based” should be framed in the context of (a) explicit description of the procedure/practice, (b) clear definition of the settings and implementers who use the procedure/practice, (c) identification of the population of individuals who are expected to benefit, and (d) the specific outcomes expected. Given this context, the research involving the practice/procedure may be reviewed, and an array of criteria have been proposed by different agencies and organizations (c.f. American Psychological Association, What Works Clearinghouse, SAMSA, Institute for Education Science) for how this literature may be examined to determine the level of experimental rigor, and the confidence with which any statement about “evidence-based” effects can be claimed. A summary of suggestions for defining evidence-based practices from Quantitative (Gersten et al., 2005), Correlational (Thompson et al., 2005) and Single Subject (Horner et al., 2005) research methods was reviewed for educational literature in special section of Exceptional Children (Odom et al., 2005).

We provide here (a) the citations defining the context content for SWPBS, (b) the current status of evidence for each of the three tiers of the SWPBS approach (Primary Prevention, Secondary Prevention, Tertiary Prevention), and (c) summary of current and expected directions.

School-wide Positive Behavior Support

School-wide Positive Behavior Interventions and Supports is a systems approach to establishing the social culture and behavioral supports needed for all children in a school to achieve both social and academic success. PBIS is not a packaged curriculum, but an
approach that defines core elements that can be achieved through a variety of strategies. The core elements at each of the three tiers in the prevention model are defined below:

<table>
<thead>
<tr>
<th>Prevention Tier</th>
<th>Core Elements</th>
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<tbody>
<tr>
<td><strong>Primary</strong></td>
<td>Behavioral Expectations Defined</td>
</tr>
<tr>
<td></td>
<td>Behavioral Expectations Taught</td>
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<tr>
<td></td>
<td>Reward system for appropriate behavior</td>
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<td></td>
<td>Clearly defined consequences for problem behavior</td>
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<td></td>
<td>Differentiated instruction for behavior</td>
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<tr>
<td></td>
<td>Continuous collection and use of data for decision-making</td>
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<tr>
<td></td>
<td>Universal screening for behavior support</td>
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<tr>
<td><strong>Secondary</strong></td>
<td>Progress monitoring for at risk students</td>
</tr>
<tr>
<td></td>
<td>System for increasing structure and predictability</td>
</tr>
<tr>
<td></td>
<td>System for increasing contingent adult feedback</td>
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<tr>
<td></td>
<td>System for linking academic and behavioral performance</td>
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<tr>
<td></td>
<td>System for increasing home/school communication</td>
</tr>
<tr>
<td></td>
<td>Collection and use of data for decision-making</td>
</tr>
<tr>
<td></td>
<td>Basic-level function-based support</td>
</tr>
<tr>
<td><strong>Tertiary</strong></td>
<td>Functional Behavioral Assessment (full, complex)</td>
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<tr>
<td></td>
<td>Team-based comprehensive assessment</td>
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<tr>
<td></td>
<td>Linking of academic and behavior supports</td>
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<tr>
<td></td>
<td>Individualized intervention based on assessment information focusing on (a) prevention of problem contexts, (b) instruction on functionally equivalent skills, and instruction on desired performance skills, (c) strategies for placing problem behavior on extinction, (d) strategies for enhancing contingency reward of desired behavior, and (e) use of negative or safety consequences if needed.</td>
</tr>
<tr>
<td></td>
<td>Collection and use of data for decision-making</td>
</tr>
</tbody>
</table>

The core elements of PBIS are integrated within organizational systems in which teams, working with administrators and behavior specialists, provide the training, policy support and organizational supports needed for (a) initial implementation, (b) active application, and (c) sustained use of the core elements (Sugai & Horner, 2010).

Is there evidence indicating that SWPBS can be implemented with fidelity and is related to improved social and/or academic outcomes for students?

Among the most rigorous standards for documenting that a practice/procedure is “evidence-based” is demonstration of at least two peer-reviewed randomized controlled trial research studies that document experimental control. To meet this standard the practice/procedure must be operationally defined, there must be formal measures of fidelity, there must be formal outcome measures, and these elements must be used within a randomized control trial group research design. The citations below summarize first the technical adequacy of relevant research measures, then randomized controlled trials, and evaluation studies examining the effects of PBIS.
Measures

SWPBS measures documenting fidelity


**Primary Prevention Tier of School-wide Positive Behavior Support**

**Randomized Controlled Trials** assessing PBIS


This paper documents that typical state agents were successful in implementing SWPBS practices, and that these practices were experimentally linked to improved perception of school safety, with preliminary support that implementation was associated with improved proportion of students at 3rd grade who met the state reading standard.


A randomized control trial documenting change in the organizational effectiveness of schools as a function of implementing SWPBS.


Bradshaw et al., document that implementation of school-wide PBIS by typical implementation personnel was successful in achieving high fidelity of adoption, and improved “organizational health” within the schools.


This randomized control trial documents experimentally that implementation of SWPBIS was related to (a) high fidelity of implementation, (b) reduction in office discipline referrals, (c) reduction in suspensions, and (c) improved fifth grade academic performance


The authors document a randomized control trial of SWPBIS with observations from school implementers.


k. Sprague, J., & Biglan, A., et al. (in progress). A Randomized Control Trial of SWPBS with Middle Schools.

This research in currently in data-collection phase, with preliminary results presented a professional conferences indicating reduction in problem behavior levels when SWPBS core features were implemented. Publishable results are anticipated for 2010.


Quasi-experimental design documenting improved perception of safety linked to implementation school-wide positive behavior support.


**Syntheses of School-wide PBS from Mental Health Institute**


“Most experts in the field agree that school-wide PBS is in its infancy (Dunlap, 2006). However, the early results of PBS interventions implemented at the indicated level, and the growing body of support for implementation at the universal and selective levels for children who have emotional/behavioral problem is very promising.” P. 32
“Because the roots of PBS are in applied experimental analysis of behavior, the evidence for PBS, at this time, is primarily derived from single subject designs. This research, while not in the traditional empirical mode, is nevertheless rigorous, generalizable, and strong in social validity (Sugai & Horner, 2002). Therefore, administrators have a preponderance of evidence to support their exploration of PBS as a viable model for School-based Mental Health programs.” P. 33

**Evaluation and Quasi-Experimental studies** examining SWPBS that used research quality measures, but did NOT employ experimental designs document both implementation of the core feature by typical school personnel, and either improved academic performance, or reductions in office discipline referrals.


behavioural and instructional support systems: An integrated approach to behaviour and academic support at the district level, *Advances in School Mental Health Promotion*, 5:3, 161-176


**Bully Prevention within PBIS**


**Secondary Tier of School-wide Positive Behavior Support.**

Randomized Controlled Trials


Randomized trial of Check-in/ Check-out procedures. Results indicate functional effect between use of procedures and both improved scores on standardized assessment instruments, and direct observation of problem behavior.

Materials and Research on Specific Secondary Interventions.


Miller, M., Fenty, N., & Scott, T. M. (in press). An examination of the effects of social skills instruction in the context of small group reading. *Preventing School Failure*.


**Daily Report Card Interventions (e.g. Check & Connect; Check-in/ Check-out)**


Swoszowski, N. C., McDaniel, S., C., Jolivette, K., & Melius, P. (in review). The effect of Check in/Check out including adaptation for non-responders on the off-task behavior of students with E/BD. *Education and Treatment of Children (invited special issue)*


Other Refereed Journal Articles: Secondary Interventions


**First Steps to Success**


Social Skills Training – Research Summary Articles


Tertiary Prevention
The research supporting the effectiveness of functional behavioral assessment, the design of individualized behavioral interventions, and the active use of data in the implementation of behavior support is perhaps the most robust of the databases within SWPBS. The majority of this research has employed single-case designs to examine the effects of specific interventions, but increasingly studies are linking behavioral and academic interventions to reduction in problem behavior.

This research has not at this time assessed the interaction effects associated with implementation of elements at all three tiers in the SWPBS prevention framework.


