A Review of State-Level Procedural Guidance for Implementing Multitiered Systems of Support for Behavior (MTSS-B)

Amy M. Briesch, PhD[1] [iD], Sandra M. Chafouleas, PhD[2],
Kristin Nissen, MS[1], and Stephanie Long, MS[1]

Abstract

Given the authority of state government over public education, one means of narrowing the best-practice to actual-practice gap in education is by putting forth clear state guidance and recommendations to schools. To date, however, little is known about the national landscape of procedural guidance that is readily available to practitioners looking to implement multitiered systems of support for behavior (MTSS-B). The purpose of the current study was to conduct a systematic review of state department of education websites to understand what guidance is afforded to local education agencies regarding MTSS-B. Results supported that roughly half of the states provided some form of procedural guidance for MTSS-B; however, both the type (e.g., what interventions to use, how often to progress monitor) and level of guidance varied widely. When states did provide behavior-specific guidance, documents were most likely to include specification of what types of interventions and measures to utilize; information less typically focused on assessment such as indications as to how often data should be collected and reviewed or what decision rule(s) should be used to determine student responsiveness. Implications for local implementation and strengthening future state-level guidance for MTSS-B are discussed.

Keywords

behavioral, assessment, public policy, law/legal issues

Although much attention has been paid to the use of multi-tiered systems specifically to identify students with specific learning disabilities (SLDs; i.e., response to intervention), a shift has been made in recent years toward emphasizing multitiered systems of support (MTSS) that integrate both academic and behavioral supports. The main components of MTSS include the use of (a) universal screening to identify risk proactively, (b) evidence-informed intervention supports of increasing intensity that are matched to need, and (c) ongoing assessment to inform decision-making (e.g., Lane, Oakes, & Menzies, 2014). Conceptual models of MTSS are frequently presented as a "double triangle," which simultaneously incorporates tiers of intervention and assessment designed to improve both academic and behavioral outcomes. Although this double triangle has helped to visually reinforce that academic and behavioral success are intertwined, and therefore should be considered in tandem, the use of parallelism across domains may also present drawbacks. For example, Hawken, Vincent, and Schumann (2008) noted that although manuals and implementation blueprints put forth by the National Association of State Directors of Special Education in the 2000s (Batsche et al., 2005; Elliott & Morrison, 2008) indicated that MTSS applies to both academics and behavior, most of the implementation guidance provided was strictly academic in nature (and related to the identification of SLDs in particular). This may lead consumers to assume that those procedures outlined for addressing academic concerns should extend to behavioral domains as well; however, there are unique considerations that must be made in implementing multitiered systems of support for behavior (MTSS-B).

Considerations in MTSS-B

Although the core features and conceptual logic of MTSS are common across both academic and behavioral domains, there are key differences with regard to what actual use looks like when implementing MTSS-B (Hawken et al., 2008). Perhaps most obvious are differences in the types of interventions that educators use to address academic versus

[1]Northeastern University, Boston, MA, USA
[2]University of Connecticut, Storrs, USA

Corresponding Author:
Amy M. Briesch, Department of Applied Psychology, Northeastern University, 360 Huntington Avenue, Boston, MA 02115, USA.
Email: a.briesch@northeastern.edu

Action Editor: Dan Maggin

behavioral concerns. Much work has been conducted in recent decades to build the evidence base for a variety of behavioral interventions for use at Tier 2. For example, across two reviews of the literature on tiered systems of support (i.e., Bruhn, Lane, & Hirsch, 2014; Mitchell, Stormont, & Gage, 2011), researchers identified two categories of intervention that were predominantly used to address student behavioral outcomes. The first category included intervention approaches in which a student meets with an adult to establish behavioral goals and then receives behavioral feedback throughout the course of the day (e.g., Check, Connect, & Expect, Cheney et al., 2009; Check-In/Check-Out/the Behavior Education Program, Crone, Hawken, & Horner, 2004/2010). The second category involved social skills instruction provided in small groups. The National Center on Intensive Intervention (NCII) has also summarized and reviewed the evidence for several behavioral support strategies within their Behavioral Intervention Tools Chart (https://charts.intensiveintervention.org/chart/behavioral-intervention-chart), including antecedent strategies (e.g., using choice, increasing opportunities to respond), consequence strategies (e.g., differential reinforcement of other behavior, noncontingent reinforcement), and packaged interventions (e.g., group contingencies, self-management).

Another key difference across MTSS for academic and behavioral domains relates to the tools that educators use to assess student behavior. Whereas agreement is established regarding general outcome measures for assessing areas of academic skill within MTSS (e.g., oral reading fluency, math computation), consensus surrounding general outcome measures for behavioral competence is lacking (Chafouleas, Volpe, Gresham, & Cook, 2010). The extent to which tool development in behavioral assessment has lagged behind that for academic assessment is evident in the screening and progress monitoring tool charts published by the NCII. For example, whereas the *Academic Screening and Progress Monitoring Tools Charts* (https://charts.intensiveintervention.org/chart/academic-screening; https://charts.intensiveintervention.org/chart/progress-monitoring) highlight emerging to convincing evidence in support of a wide range of tools from various authors, there is currently only one measure featured within the *Behavior Screening Tools Chart* (i.e., Social, Academic, and Emotional Behavior Risk Screener) and three within the *Progress Monitoring Tools Chart* (i.e., BASC-3 Flex Monitor, Direct Behavior Rating, systematic direct observation).

In addition to different assessment tools across academic and behavioral domains, guidance may also differ with regard to how frequently assessment should occur. For example, whereas nearly all state departments of education either required or recommended triennial academic screening as of 2010 (Zirkel & Thomas, 2010), only nine of the states reviewed in 2017 recommended frequencies for behavioral screening, which ranged from 1 to 4 times per year (Briesch, Chafouleas, & Chaffee, 2018). This

lack of guidance on behavioral screening frequency may have resulted from studies that showed the scores on behavioral rating scales designed for screening purposes tend to remain stable over time (Dever, Dowdy, & DiStefano, 2018; Dowdy et al., 2014; Miller, Chafouleas, Welsh, Riley-Tillman, & Fabiano, 2018), suggesting that additional screenings beyond a fall administration may only be necessary for those students exceeding a certain level of risk. In addition, guidance has generally stated that academic progress monitoring should occur at least monthly at Tier 2 and biweekly or weekly at Tier 3 (e.g., Gersten et al., 2008; Kurns & Tilly, 2008; Zirkel & Thomas, 2010), given that the academic skills being assessed (e.g., oral reading fluency) are unlikely to fluctuate significantly from 1 day—or even 1 week—to the next. In contrast, student behaviors such as academic engagement or social interactions are more likely to fluctuate over time in response to either internal (e.g., mood, health) or external (e.g., instruction, peers) factors. As a result, a single data point may be insufficient to adequately represent the student's level of functioning (Ferguson, Briesch, Volpe, & Daniels, 2012).

Finally, criteria for assessing responsiveness to intervention may look different across academic and behavioral domains. Criteria across domains may differ because well-defined benchmarks for performance or expected rates of growth do not exist for behavior in the same way that they do for academic concerns (Chafouleas, Volpe, et al., 2010). Whereas educators typically use standard benchmarks (e.g., correct words per minute) to set goals for academic progress monitoring, acceptable behavioral performance tends to be more contextually defined (Hawken et al., 2008). Furthermore, although steady, incremental growth in academic skills may be expected as a function of intervention, student behavior is much less likely to respond in this manner (Chafouleas, Volpe, et al., 2010). For example, behavioral intervention may result in an immediate decrease in the level of a behavior (e.g., reducing the number of call outs) or may gradually reduce variability in responding over time (e.g., promoting more consistent levels of engagement in the classroom). Given unique patterns of behavioral responding, experts have suggested that student progress may be most appropriately assessed through the use of visual analysis (i.e., examination of changes in level, trend, and variability; McIntosh, Bohanon, & Goodman, n.d.; NCII, 2013).

In summary, the distinguishing features of MTSS-B may necessitate deviance from the guidance on implementation of MTSS for academics. Particularly as related to assessment, unique considerations are presented for MTSS-B, such as choice of assessment tool and schedule, selection of more intensive support strategy, and expected performance over time. As such, it is important to understand how these unique considerations have been articulated within policy and practice guidelines supporting use of MTSS-B.

Guidance Regarding MTSS-B

Substantial work has been conducted in recent years to build the evidence base for individual components of MTSS-B; however, estimates suggest that the gap between the availability of best practices and their routine usage in school settings is decades (Walker, 2004). One means of shortening the latency between evidence availability and use is by making practices or initiatives a priority at the policy levels. Policies communicate a vision for where practice is or should be moving (Cohen & Ball, 1990), whereas guidance documents facilitate building a shared understanding of what best practices should look like to support local understanding and implementation (National Center on Response to Intervention, 2010). Clear recommendations put forth at the federal and state levels therefore have the power to influence day-to-day school practices, provided that sufficient training and supports are put into place locally (Doolittle, Horner, Bradley, Sugai, & Vincent, 2007). For example, the history of federal legislation regarding school wellness policy addressing nutrition and physical domains has demonstrated improved quality of state policy and subsequent district goals (e.g., Piekarz et al., 2016), and that state laws do impact school practices in favor of increased best practices (e.g., Turner et al., 2018).

To date, the most well-known MTSS-B has been Positive Behavioral Interventions and Supports (PBIS; www.pbis.org). Funded by the U.S. Department of Education's Office of Special Education Programs (OSEP) and the Office of Elementary and Secondary Education (OESE), the Technical Assistance Center on PBIS offers substantial implementation guidance and resources on both assessment and intervention across tiers of increased support through their website, events, and trainings. Within a PBIS framework, it is recommended that teams use multiple sources of data (e.g., academic performance data, attendance data, office discipline referrals, screening measures) to identify students in need of additional supports (Algozzine et al., 2014). In addition, the Tiered Fidelity Inventory (TFI; Algozzine et al., 2014) provides several examples of interventions that may be used at the Tier 2 (e.g., Check-In/Check-Out [CICO], Social Skills Club, Reading Buddies, Homework Club, Lunch Buddies), whereas teams are encouraged to develop behavioral support plans that are student-specific for those who need Tier 3 support. Once behavioral interventions are put into place, it is noted that progress monitoring should be frequent and continuous (OSEP Technical Assistance Center on PBIS, 2015). Finally, data should be reviewed at least monthly at Tiers 2 and 3 to determine whether changes are needed to the plan (Algozzine et al., 2014).

Although guidance regarding implementation of a PBIS framework has been provided at the national level through the Technical Assistance Center, much of the authority for directing local education practice within the United States lies at the state level (Cohen & Spillane, 1992). As noted by Doolittle and colleagues (2007), "a central assumption of any state department of education is that recommendations, guidelines, regulations, laws, and initiatives developed by the state will influence educational practices available in schools" (p. 239). To date, however, little is known about the guidance provided by state departments of education regarding the implementation of MTSS-B. One exception was a recent study that sought to examine the extent to which guidance is specifically available regarding universal screening for social, emotional, and behavioral concerns (Briesch, Chafouleas, & Chaffee, 2018). Results of this study found that less than half of states (43%) provided any level of guidance regarding how to implement screening to identify students at-risk for social, emotional, and behavioral concerns (e.g., what measures to use, how often to conduct assessment). When behavior-specific guidance was provided, however, states were most likely to provide examples of measures that could be used (e.g., office discipline referrals, rating scales) and least likely to indicate decision rules for identifying students at-risk (Briesch et al., 2018). Although results of this study suggest that guidance in the behavioral domain may be underdeveloped, it is unknown whether this is specific to behavioral screening or extends to MTSS-B more broadly.

Purpose of Study

The purpose of the current study was therefore to gain a national understanding of guidance provided by states regarding implementation of MTSS-B, particularly focused on assessment and intervention at Tiers 2 and 3. To achieve this goal, we conducted a systematic review of state department of education websites to identify applicable guidance documents. Specifically, we sought to answer the following research questions:

Research Question 1: To what extent do state departments of education provide information regarding

a. The types of social, emotional, and behavioral interventions that should be used with those students identified as at-risk for or exhibiting behavioral concerns?
b. Appropriate measures to use in progress monitoring for behavioral concerns?
c. How often behavioral progress monitoring data should be collected?
d. How often behavioral progress monitoring data should be reviewed?
e. What decision rule(s) should be used for evaluating response to behavioral intervention?

Method

Procedures

To determine the degree to which states have provided guidance regarding implementation of MTSS-B, the research team conducted a systematic review of state department of education websites. According to the Cochrane Collaboration,

> a systematic review attempts to collate all empirical evidence that fits pre-specified eligibility criteria in order to answer a specific research question [and] uses explicit, systematic methods that are selected with a view to minimizing bias, thus providing more reliable findings from which conclusions can be drawn and decisions made. (Higgins & Green, 2011, 1.2.2)

Review procedures were guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Moher, Liberati, Tetzlaff, & Altman, 2009). PRISMA is a 26-item checklist for reporting quality features of systematic reviews of the empirical literature. Although several of the PRISMA items are only applicable to systematic reviews of the empirical literature (e.g., describing methods for combining results across studies, assessing risk of bias), our aim was to make transparent the process by which we identified and selected state department of education documents for inclusion in the current study. In this way, we hoped to increase reader confidence that the obtained results accurately depicted the national landscape concerning MTSS-B guidance.

Members of the research team included one faculty member and two graduate students in school psychology, all of whom possessed both conceptual and applied knowledge of MTSS. These three individuals—herein referred to as researchers—were involved in both carrying out the search procedures and coding the identified documents, as described below.

Search procedures. The research team conducted a systematic search to identify each state's MTSS implementation and guidance documents in spring 2017. To complete this search, we located the department of education websites for each U.S. state and the District of Columbia. Researchers then entered the following search terms into the website's search bar sequentially: *multitiered systems of support, MTSS, positive behavior support, PBIS, response to intervention, RTI, Tier 2, Tier 3, progress monitoring*, and *formative assessment*. If there was any mention of a multitiered system in the document (e.g., RTI, MTSS, PBIS), then it was saved in a PDF format for further review. In many cases, the department of education webpage or document listed external links; however, researchers only followed the links if the department of education clearly indicated what was included (e.g., noting that examples of assessment measures were provided by the NCII). This was because, in

many cases, state department of education websites included a long list of external links that were not curated. The initial search process was independently completed by the two graduate student researchers and any documents identified through either search were included to ensure that we captured as many potentially relevant documents as possible.

Inclusion criteria. For documents to be coded, they had to pass through two gates related to inclusion criteria. The first phase consisted of three initial criteria. First, documents had to make some mention of the fact that a multitiered system (e.g., RTI, MTSS, PBIS) could be applied to behavior. This excluded any documents that focused exclusively on academics (e.g., MTSS guidance for reading, SLD identification manuals). Second, documents had to provide some aspect of procedural guidance for implementing an MTSS at Tier 2 or 3. Specifically, the document needed to address at least one of the five types of guidance outlined in the research questions at either Tier 2 or 3: (a) the types of interventions that should be used, (b) appropriate measures to use in progress monitoring, (c) how often progress monitoring data should be collected, (d) how often progress monitoring data should be reviewed, and (e) what decision rule(s) should be used for assessing response to intervention. This excluded any documents that simply identified the components of an MTSS without explaining how these processes might be carried out. Third, documents had to contain some mention of progress monitoring as applied to the general population of students in K-12 settings. This thereby excluded any documents that focused solely on specific populations (e.g., students with emotional and behavioral disorders) or applied to nonschool settings (e.g., afterschool programs). The documents that were identified for coding included MTSS implementation or guidance manuals, self-assessment rubrics, and "Frequently Asked Questions" documents related to implementation procedures.

The goal of the second inclusion criteria gate was to ensure that coding only occurred for those documents in which procedural guidance was unquestionably specific to the behavioral domain. This inclusion criterion was applied to differentiate between guidance that might be assumed to apply to behavior and guidance that was clearly intended for behavior. As such, researchers were instructed to assess whether the documents met one of the three criteria. First, we included all documents that exclusively focused on behavior (i.e., behavior-specific document). This included documents such as PBIS manuals or guidance documents for implementing MTSS-B in particular. Second, we included documents that addressed both academics and behavior (i.e., integrated MTSS), but included a section or sections that dealt specifically with behavior (i.e., behavior-specific section). For example, an integrated MTSS manual might include a section entitled "What does MTSS look like for behavior?" Third, if neither of the preceding inclusion

criteria were met (i.e., behavior-specific document or section), a document could be included if behavior-specific examples were provided (i.e., behavior-specific example). For example, when discussing types of progress monitoring tools to use within an integrated MTSS, the document might note that that tools for progress monitoring student behavior include observations and rating scales. If none of these criteria were satisfied—meaning that the research team could not be sure that the provided guidance applied specifically to behavior—the document was labeled as a general document and was not coded further.

Coding procedures. If documents met all three initial inclusion criteria, the researcher next reviewed the eligible document and recorded any guidance that directly addressed the five primary research questions into a spreadsheet. First, researchers sought any references to specific social, emotional, and behavioral interventions that may be utilized at Tier 2 and/or 3. Specific interventions refer to those named in the document and could include commercially available (e.g., First Step to Success; Walker et al., 1998) or nonpackaged (e.g., mentoring) supports. Second, researchers identified any references to specific types of progress monitoring measures that may be utilized at Tier 2 and/or 3 when assessing the effectiveness of behavioral interventions. Progress monitoring measures could include both validated measures (e.g., rating scales, systematic direct observation) and sources of extant data (e.g., attendance records, detentions). Third, researchers looked for any indication of how often behavioral progress monitoring should occur at Tier 2 and/or 3. Guidelines for data collection could be either quantitative (e.g., ratings should be conducted once per week) or qualitative (decisions regarding the frequency of data collection should be made in consideration of X, Y, or Z factors) in nature. Fourth, researchers sought to determine whether the document specified how often educators should review behavioral progress monitoring data. Similarly, this information could be either quantitative (e.g., data should be reviewed at least monthly) or qualitative (e.g., teams should establish a data review schedule in consideration of X, Y, or Z factors) in nature. Fifth, researchers sought to determine whether the document specified procedures or decision rules for making decisions regarding response to intervention (e.g., compare with a goal line, utilize visual analysis). To promote understanding of the type of information being sought within each question, researchers were provided with examples of a few of the more common responses that they might expect to find (e.g., progress monitoring might occur weekly, biweekly, or monthly). For any procedural guidance recorded, it was also noted whether the document provided separate guidance for Tier 2 versus Tier 3 implementation, or if no tier was specified.

If the research team identified more than one relevant document for a given state, information from all documents was considered together. A copy of the coding protocol is available from the first author.

Training procedures and interrater reliability. All documents were reviewed, evaluated in relation to the inclusion criteria, and subsequently coded by one of the three members of the research team. Training procedures focused on ensuring that each researcher could accurately identify the language within each document that pertained to implementing an MTSS. The first author reviewed two pre-identified documents with the graduate student researchers to model how to search for answers to the five primary research questions. The graduate student researchers next received a series of practice documents to review independently so that the accuracy of both the inclusion determination and coding could be assessed. Once all members of the research team had achieved 100% accuracy on the criterion documents, they moved on to independently review and code the documents identified through the web search. The reliability of both the inclusion/exclusion decision and document coding were assessed by having two independent researchers review each document. For each category, intercoder reliability was assessed by dividing the number of agreements (conservatively defined as the number of documents across which perfect consistency in coding was noted) by the number of agreements plus disagreements and multiplying this value by 100 to obtain a percentage. Although interrater reliability was found to be high (perfect consistency across 98% of documents for inclusion decision; 86% for interventions used, 89% for progress monitoring measures used, 100% for frequency of progress monitoring, 91% for frequency of data review, 95% for analysis of progress monitoring data), any discrepancies that were identified were then discussed and resolved by the larger research team.

Results

The research team downloaded a total of 181 MTSS implementation and guidance documents from state department of education websites. These documents were then narrowed down using the aforementioned inclusionary criteria (see Figure 1). This process resulted in a total of 61 documents that were found to meet initial inclusionary criteria and coded. After reviewing these 61 documents more closely, we found that three documents were duplicates and an additional 14 did not provide behavior-specific guidance. Therefore, the final analyses included a total of 44 documents.

State-Level Guidance Regarding Implementation of MTSS-B

Of the 51 websites reviewed, we were unable to find any state department of education-produced documents that provided procedural guidance regarding implementation of
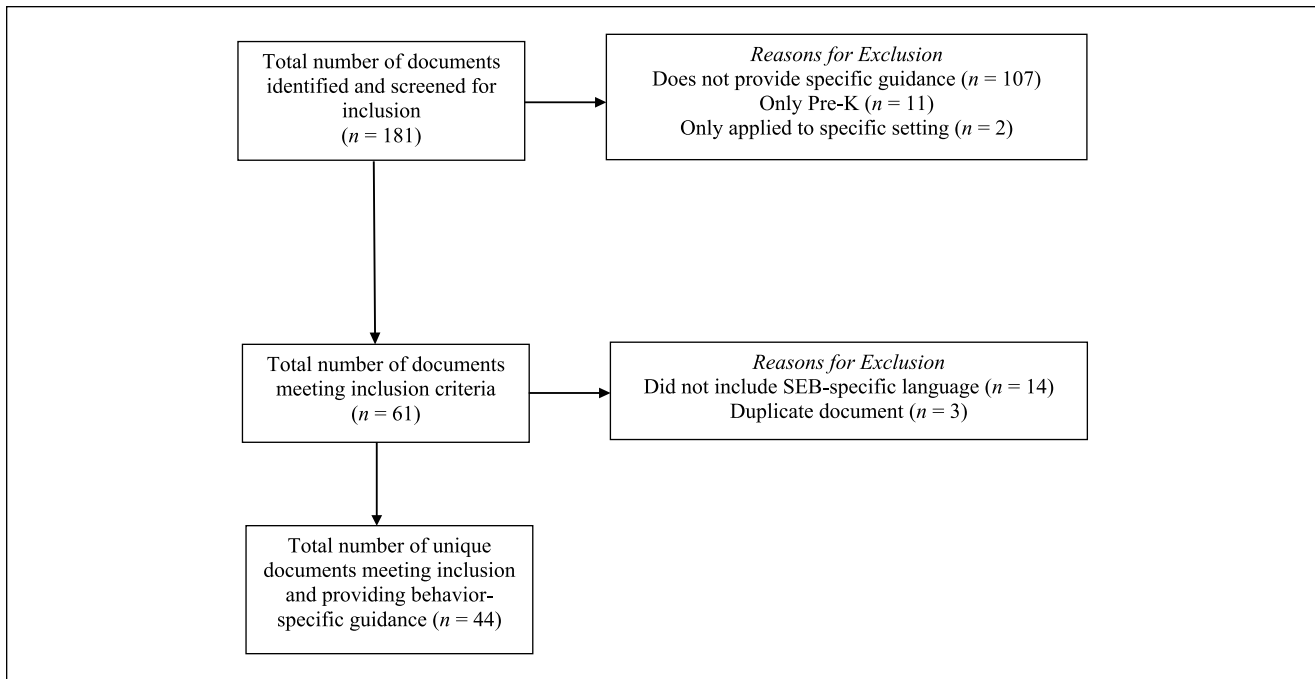
Figure 1. Document inclusion flowchart.

Tiers 2 and 3 within an MTSS-B for 11 states (22%; CA, DC, IN, LA, MA, MN, NE, NV, PA, RI, TX). In several cases, reviewed documents defined MTSS as involving the use of tiered interventions and progress monitoring; however, they did not provide any procedural detail that would answer one of the five research questions. In addition, there were 14 state departments of education (27%; AK, AL, AR, DE, HI, IA, IL, KY, NH, OH, SC, TN, VT, WI) that provided procedural guidance regarding Tiers 2 and 3 within a general MTSS document but did not include behavior-specific guidance (i.e., the procedural guidance was not provided in a behavior-specific document/section and language did not clearly state that the guidelines applied to behavior). Ranging from implementation checklists to technical assistance papers to comprehensive manuals, these documents typically began with the specification that MTSS applies to both academics and behavior. For example, *Alaska's Using Response to Instruction/Intervention (RTI) for Alaska's Students* guide noted that "RTI can be applied to all academic content areas, such as math, written language and reading. It can also be applied to social behavior and school environment" (p. 3). Subsequent procedural guidance (e.g., how often data should be collected, how often data should be reviewed) was therefore assumed to apply similarly to either academic or behavioral domains, despite the fact that the specific examples provided were often academic in nature. For example, four of the state departments of education only made reference to curriculum-based measurement (CBM) when discussing possible progress monitoring tools.

Roughly half of the state departments of education (*N* = 26, 51%) provided some level of procedural guidance regarding the assessment of student response to social, emotional, and behavioral intervention (see Table 1). First, nine of these state departments of education produced behavior-specific documents (AZ, FL, KS, MI, MO, NC, NJ, OR, SD), meaning that the entire webpage, guide, or manual dealt exclusively with the behavioral domain. Whereas some of these documents focused exclusively on implementation of PBIS (e.g., Michigan's *Schoolwide Positive Behavioral Interventions and Supports Implementation Guide, Missouri Schoolwide Positive Behavior Support Tier 2 Team Workbook*), others addressed MTSS-B more broadly (e.g., Florida's *Response to Intervention for Behavior: A Technical Assistance Paper, South Dakota Multi-Tiered Systems of Support: Implementing a Behavioral Model Process Guide*). Second, 11 of the state departments of education produced integrated MTSS documents that included a behavior-specific section (CO, CT, GA, ID, MD, ME, MS, MT, NM, NY, VA). As one example, the document *Response to Intervention: Georgia's Student Achievement Pyramid of Interventions* (Georgia Department of Education, 2011) included a section entitled *RTI and Behavior* that outlined how the RTI framework might be applied to behavioral concerns. Finally, six of the state departments of education produced integrated MTSS documents that included behavior-specific language or examples (ND, OK, UT, WA, WV, WY). For example, the

Table 1. Response to Behavioral Intervention Procedural Guidance by State.

State	Document type	Interventions	Progress monitoring measures	Data collection frequency	Data review frequency	Decision rules for response to intervention
AK	GD	—	—	—	—	—
AL	GD	—	—	—	—	—
AR	GD	—	—	—	—	—
AZ	BSD	T2, T3	T2, T3	—	—	—
CA	—	—	—	—	—	—
CO	BSS	—	NTS	—	—	—
CT	BSS	T2, T3	T2	—	—	—
DC	—	—	—	—	—	—
DE	GD	—	—	—	—	—
FL	BSD	T3	T2, T3	T2, T3	T2	NTS
GA	BSS	T2, T3	T2	—	—	—
HI	GD	—	—	—	—	—
IA	GD	—	—	—	—	—
ID	BSS	T3	NTS	—	—	—
IL	GD	—	—	—	—	—
IN	—	—	—	—	—	—
KS	BSD	T2, T3	T2	T3	T2	T2
KY	GD	—	—	—	—	—
LA	—	—	—	—	—	—
MA	—	—	—	—	—	—
MD	BSS	—	—	—	—	—
ME	BSS	—	NTS	—	—	—
MI	BSD	T2, T3	T2	—	T2, T3	—
MN	—	—	—	—	—	—
MO	BSD	T2	T2	T2	T2	T2
MS	BSS	T2	—	—	—	NTS
MT	BSS	—	T2	—	—	—
NC	BSD	—	NTS	—	—	—
ND	BSE	—	T2	T2	T3	—
NE	—	—	—	—	—	—
NH	GD	—	—	—	—	—
NJ	BSD	T2	—	—	—	—
NM	BSS	—	T2	T2, T3	T2, T3	T2, T3
NV	—	—	—	—	—	—
NY	BSS	T2, T3	—	—	—	—
OH	GD	—	—	—	—	—
OK	BSE	T2	T2	—	—	—
OR	BSD	T2, T3	T2, T3	NTS	NTS	—
PA	—	—	—	—	—	—
RI	—	—	—	—	—	—
SC	GD	—	—	—	—	—
SD	BSD	T2, T3	T2, NTS	T2, T3	T2	—
TN	GD	—	—	—	—	—
TX	—	—	—	—	—	—
UT	BSE	T2	—	—	—	—
VA	BSS	—	NTS	—	—	—
VT	GD	—	—	—	—	—
WA	BSE	T2	NTS	T2, T3	—	—
WI	GD	—	—	—	—	—
WV	BSE	T2, T3	T2	—	—	—
WY	BSE	T2, T3	T2, NTS	T3	T3	—
No. (%)		18/51 (35)	21/51 (41)	9/51 (18)	9/51 (18)	5/51 (10)

Note. GD = general document; BSD = behavior-specific document; T2 = Tier 2; T3 = Tier 3; BSS = behavior-specific section; NTS = no tier specified; BSE = behavior-specific example.

Table 2. Recommendations for Tiers 2 and 3 Behavioral Intervention.

Intervention	Tier 2	Tier 3
Academic support	AZ, CT, MI, MO, NY, OK	AZ
Behavior contract	CT, MI, NY, OR, WV, WY	
Behavioral skill instruction	GA, KS, MS, NJ, OR, SD, WA, WV	CT, WY
Character education	MS	
Check and Connect	KS, MO, NY, SD	
Check-in/Check-out	CT, KS, MI, MO, NJ, NY, OR, SD, UT, WY	
Class intervention	SD	
Community referral	WV	WV
Contingency management	AZ, CT, MS, WV	
Daily report card	MS, WY	
Family therapy		WY
First step	MO	OR
Group counseling	AZ, SD, WA, WV, WY	
Homeschool collaboration	CT, MI	CT
Individual counseling		CT, WY
Individualized behavior support plan	MI	AZ, CT, FL, GA, ID, KS, MI, NY, OR, SD, WV, WY
Juvenile court counseling		OR
Lunch buddies	MI	
Mentoring	AZ, CT, MI, NY, OK, OR, SD, WV, WY	
Newcomers club	KS, MI	
Parent training	OR, WV	CT, WV
School climate	CT, OK	
Self-management	AZ, CT, KS, MO, NY, OK, SD, WV	
Social skills instruction	AZ, CT, GA, KS, MI, MO, MS, NY, OK, SD, WY	AZ, WV
Wraparound services		AZ, CT, OR, WV, WY

Introduction to UMTSS: Utah Multi-Tiered System of Supports manual did not have a behavior-specific section but did provide examples of tools that could be used specifically for behavioral progress monitoring within a table.

Guidelines for Implementing MTSS-B

As noted above, a total of 26 state departments of education-produced documents provided some form of procedural guidance for implementing Tier 2 and/or 3 of an MTSS-B. However, both the type (e.g., what interventions to use, how often to progress monitor) and level of guidance varied widely (see Table 1).

Use of social, emotional, and behavioral interventions. Roughly one third of the state departments of education ($N = 18$, 35%) provided examples of the types of social, emotional, and behavioral interventions that might be used within an MTSS-B (see Table 2). The interventions most frequently referenced at the Tier 2 level included social skills instruction ($N = 11$), CICO ($N = 10$), mentoring programs ($N = 9$), behavioral skills instruction ($N = 8$), and self-management ($N = 8$). Although many documents simply

provided a list of interventions appropriate for Tier 2 intervention, some documents included more detailed implementation guidance. For example, the *Missouri Schoolwide Positive Behavior Support Tier 2 Team Workbook* devoted chapters to how to create, implement, and monitor CICO, social skills groups, and Check & Connect (Missouri Department of Elementary and Secondary Education, 2014). At the Tier 3 level, state departments of education were most likely to recommend the development of an individualized behavior support plan (BSP; $N = 12$); however, other recommendations included either intensifying the small group supports provided (e.g., homeschool collaboration skills instruction) or providing more comprehensive, multifaceted supports (e.g., individual/family therapy, wraparound services).

Behavioral progress monitoring tools. When state departments of education provided some level of guidance regarding Tier 2 and/or 3 of an MTSS-B, they were most likely ($N = 21$; 41%) to make some mention of specific assessment tools that could be used for formative decision-making (see Table 3). The most commonly referenced tools for progress monitoring were office discipline referrals ($N = 12$), systematic direct observation ($N = 11$), point sheets/teacher

Table 3. Recommendations for Behavioral Progress Monitoring Measures.

Measure	Tier 2	Tier 3	No tier specified
Academic performance			ID
Attendance	KS, MI, MO, SD		ID, OR
Behavior incident reports	MI, MO		ID
Behavior report cards/point sheets/ checklists	CT, FL, GA, KS, NM, OR, SD, WV	WV	ME, SD, VA
Counselor/mentor reports	WV	WV	
Detentions			ID
Direct behavior rating	WY	FL	NC
Individualized data collection methods		OR	
Intervention data	AZ, CT, MI, MO	AZ, FL, WV	OR
Interviews/surveys		FL	
Office discipline referrals	AZ, CT, FL, MT, ND, OK, WV, WY	FL, WV	ID, OR, SD, VA, WA, WY
Parent data	CT	WV	
Permanent products			NC
Rating scales	AZ, GA, WY	FL	ME
Requests for assistance	FL		
Suspension/expulsion records	FL	FL	ID, OR
Systematic direct observation	AZ, CT, FL, ND, OK, WV, WY	FL, WV	CO, NC, VA, WA
Teacher ratings	FL, KS, MI, SD, WV	WV	WA
Work completion/samples	MO		

Table 4. Recommendations for Frequency of Behavioral Progress Monitoring Data Collection and Review.

Activity	Tier 2	Tier 3	No tier specified
Data collection	Daily (FL, SD)	Hourly, daily, or weekly (FL, KS, SD)	Daily (OR)
	Weekly (MO)	Weekly (WA)	
	Bimonthly (WA)		
	Monthly (ND)		
	Team decision (NM)	Team decision (NM, WY)	Team decision (SD)
Review of data	Biweekly (FL, KS, SD)	Weekly (ND)	4–6 weeks (OR)
	Eight data points in 3 weeks (MO)		
	Bimonthly to monthly (MI)		
		Ongoing (MI)	
	Team decision (NM)	Team decision (NM, WY)	

checklists ($N = 9$), data generated through an intervention ($N = 7$), and teacher ratings ($N = 6$).

Frequency of data collection and monitoring. When progress monitoring, it is important that data are not only collected repeatedly but that teams also review these data regularly to assess whether modifications to the intervention are needed. Few state department of education-produced documents ($N = 9$) recommended how frequently schools should collect and review behavioral progress monitoring data (see Table 4). At Tier 2, recommended timelines for data collection ranged from daily (i.e., FL, SD) to monthly (i.e., ND), whereas the review of data would take place every 2 to 4 weeks. At Tier 3, documents recommended that data collection occur more

frequently, ranging from hourly to weekly. Recommendations for data review at Tier 3—although rare—also tended to be more frequent (i.e., weekly, ongoing). Although state departments of education tended to provide specific timelines when data collection and monitoring were addressed, in some cases it was simply noted that school teams should establish timelines on a case-by-case basis (i.e., NM, WY).

Decision rules for assessing student response. State department of education documents were least likely to include guidance around how to analyze behavioral progress monitoring data to determine student responsiveness ($N = 5$; 10%). In all five of these cases (FL, KS, MS, MO, NM), however, it was recommended that progress monitoring

data points be compared with a goal or aim line to determine whether the intervention had the desired effect.

Discussion

Given the role that state agencies can play in describing best practices and guiding local practice (Doolittle et al., 2007), the purpose of the current study was to examine the extent to which state departments of education have provided guidance that could be used to inform implementation of MTSS-B, with a specific focus on Tiers 2 and 3. Results of the current review found that the majority of state departments of education provided guidance regarding integrated models of tiered support that address both academics and behavior. However, there was great variability in both the breadth and specificity of guidelines related to implementation of MTSS-B in particular. For example, although roughly half of the state departments of education provided guidance around Tier 2 and/or 3 implementation, only three (i.e., FL, KS, MO) addressed all five questions posed in the current review (i.e., What social, emotional, and behavioral interventions should be used? What behavioral progress monitoring measures should be used? How often should behavioral progress monitoring data be collected? How often should behavioral progress monitoring data be reviewed? What decision rule(s) should be used for assessing response to social, emotional, and behavioral intervention?). As illustrated in Table 1, some components of MTSS-B received greater emphasis than others.

Within any MTSS, it is understood that students who have been identified as at risk through systematic screening procedures are provided with tiered, evidence-based intervention supports to address identified areas of need. What is perhaps less clear, however, is what interventions are appropriate and available for use within the behavioral domain. As noted previously, reviews of the literature on tiered systems of support (i.e., Bruhn et al., 2014; Mitchell et al., 2011) have consistently identified two categories of evidence-based Tier 2 intervention: mentoring interventions (e.g., CICO, Crone et al., 2004/2010; Check & Connect; Cheney et al., 2009) and social skills groups. The frequency with which these two categories of intervention have been represented in the empirical literature interestingly aligned with their frequency within the current review. That is, the two most frequently referenced Tier 2 interventions by state departments of education were CICO and social skills instruction. There were, however, many more social, emotional, and behavioral interventions referenced (i.e., 21 at Tier 2, 12 at Tier 3) than fit within these two categories. Several of these interventions have strong empirical support and are featured within the NCII's *Behavioral Intervention Tools Chart* (e.g., contingency management, daily report card, and self-management). At the same time, however, there were several interventions referenced for which both

implementation guidance and empirical support is less clear (e.g., Lunch Buddies, Newcomers Club). Given the power of suggestion that state-produced guidance may have on local practice, it is important that those interventions endorsed—whether directly or indirectly—have sufficient evidence to support their use. The Missouri Department of Elementary and Secondary Education's (2014) *Schoolwide Positive Behavior Support Tier 2 Team Workbook* was one of the only resources identified that both provided detailed implementation guidance for recommended interventions and described their evidence base.

Although the implementation of evidence-based interventions is essential to effective MTSS-B, the assessment of students' response to social, emotional, and behavioral interventions is equally critical. This involves not only measuring student behavior in a formative fashion but also making decisions as to whether the behavior has improved. Although CBM has long been the gold standard in academic progress monitoring, there has been less consensus within the field regarding behavioral progress monitoring tools (Chafouleas, Volpe, et al., 2010). Briesch and Volpe (2007) suggested that there may be four categories of behavioral progress monitoring tools (i.e., direct behavior rating, permanent products, rating scales, systematic direct observation), and the majority of measures identified within the current review fell under one of these categories. In addition to 11 state departments of education referencing systematic direct observation and 10 state departments of education referencing some form of teacher ratings (i.e., point sheets, Direct Behavior Rating, rating scales, teacher ratings), it was also very common for state departments of education to recommend the use of permanent product data, including attendance, behavior incident reports, detentions, intervention data, office discipline referrals, suspension/expulsion records, and work completion/samples. Unfortunately, however, very few documents included an explanation of what the progress monitoring tool looked like or how it could be used. As such, it was often difficult to ascertain whether the same tool was potentially referenced by different names (e.g., point sheets, teacher ratings) or to know how one might access/develop the tool referenced.

Descriptions of MTSS-B typically specify that the frequency of data collection should increase as students move to subsequent tiers; however, relatively few state departments of education ($N = 9$) provided specific timelines for data collection at each tier. In examining state department of education guidance surrounding the use of RTI to identify students with SLD, Zirkel and Thomas (2010) found the greatest level of consensus around bimonthly progress monitoring at Tier 2 and weekly progress monitoring at Tier 3. In contrast, the timelines for data collection within the current review were often more intensive (e.g., as often as daily at Tier 2 and hourly at Tier 3). This discrepancy seems to make sense given the nature of the constructs involved.

For example, as noted previously, whereas one would not expect a student's rate of oral reading fluency to substantially fluctuate within a given week, the measurement of student social behavior (e.g., academic engagement, noncompliance) is influenced to a greater degree by both internal (e.g., mood, motivation) and environmental factors (e.g., quality of instruction, peer influences). For this reason, studies have shown that 1 to 2 weeks' worth of daily data may be needed to obtain a dependable estimate of student behavior at one point in time (e.g., Chafouleas, Briesch, et al., 2010; Volpe, McConaughy, & Hintze, 2009). Although limited, the guidance identified within this review seems to indicate that more frequent assessment may be needed to obtain a dependable estimate of student behavior than is necessary when assessing academic skills.

Within MTSS-B, the decision of whether to move a student from one tier of intervention to the next is made based on how well the student responds to evidence-based intervention. There are two questions that must be answered in judging responsiveness: How long should the intervention be in place and what decision rules will be used to judge responsiveness? When considering the use of RTI to identify students with SLD, it has been most common for state departments of education to recommend implementing an intervention for 6 to 8 weeks before assessing student responsiveness (e.g., Hauerwas, Brown, & Scott, 2013; Zirkel & Thomas, 2010). Within the current review, however, timelines for the review of behavioral data were notably shorter (e.g., ranging from biweekly to monthly at the Tier 2 level and weekly to ongoing at the Tier 3 level). This is not surprising, given the recommendations that behavioral data be collected more frequently than academic data. With more frequent data collection, it is therefore possible to more quickly establish whether there has been an adequate pattern of responding. Where behavior-specific guidance appears to be particularly underdeveloped is concerning the decision rules for determining intervention response. Only five state departments of education provided guidance in this area, and all focused on approaches that have traditionally been used for determining response to academic intervention (e.g., comparison with goal line; Fuchs, 2003). Unfortunately, problems may arise in extending this decision rule to behavioral domains. As noted previously, baseline levels of behavior may be so variable as to make establishing a goal line difficult and behavioral growth is often nonlinear (Chafouleas, Volpe, et al., 2010). Researchers have suggested that the effectiveness of social, emotional, and behavioral interventions may best be assessed using the analytic conventions of single-case design, given that we are often interested in whether patterns of behavior changes in response to intervention (Chafouleas, Riley-Tillman, & Sugai, 2007; Gresham, 2005; NCII, 2013). That is, one may use visual analysis examine changes in level, trend, and/or variability across baseline and intervention phases, or may calculate quantitative estimates of reliable change in behavior, such as the percent of nonoverlapping data points (Mastropieri & Scruggs, 1985–1986) or the standardized mean effect size estimate (Busk & Serlin, 1992). No reference was found to either analytic convention of single-case design, however, within the documents reviewed.

Limitations

Although the results of the current study serve to highlight the range of guidance that exists for implementing MTSS-B, there are limitations that should be noted. First, we chose to restrict the document search to information publicly posted on state department of education websites to ensure standardization across states. States may provide materials to school districts through other avenues, such as in-person trainings; however, such information was not accounted for given that our goal was to identify guidance that would be universally accessible to all schools in the state. We also acknowledge that school districts may receive—and, in fact, possibly rely on—guidance from other agencies as well. As one example, the Delaware Positive Behavior Support project hosts a website (http://wh1.oet.udel.edu/pbs/) that provides extensive guidance to schools regarding PBIS implementation; however, this information was not referenced within the Delaware Department of Education website.

Related, we used the search bar within each state department of education website to identify documents; however, it is possible that some potentially relevant documents were missed through this process. The extent to which individual state departments of education regularly update their websites, as well as the quality of the search tool, was unknown. Verifying each of the identified documents with the respective state department of education would have increased confidence in the study results.

Third, the documents described herein were identified during spring 2017, and therefore only represent a snapshot of what publicly available guidance looked like at one point in time. We acknowledge that work continues to be done in this area, and that the information presented here may already be changing. For example, in reaching out to stakeholders, we were informed that the Michigan Department of Education is working with the National Implementation Research Network to develop an MTSS Practice Profile, which was not yet available to the public. In addition, we learned that the Missouri Council of Special Education Administrators was developing a guide that would provide MTSS guidance more broadly.

Conclusion

Studies assessing teacher knowledge, skills, and attitudes with MTSS implementation have demonstrated a resounding need:

Educators want to be equipped with tangible tools and resources, as well as ongoing professional development, to increase their confidence and efficiency in carrying out intervention and assessment practices (Castro-Villareal, Rodriguez, & Moore, 2014; Meyer & Behar-Horenstein, 2015). Although the research community has offered recommendations surrounding how to implement components of MTSS-B (e.g., Chafouleas, Volpe, et al., 2010; Gresham, 2005; Hawken et al., 2008; NCII, 2013), findings of the current study indicate that the guidance provided by state departments of education has been somewhat limited to date. The fact that only three state departments of education provided comprehensive procedural guidance regarding implementation of MTSS-B suggests that much work needs to be done in this area. The documents produced by Florida, Kansas, and Missouri may serve both as models for other state departments of education, and as important references for school-based practitioners, in thinking about the implementation of MTSS-B.

At the same time, however, it is important to note that the guidance provided within any one of these documents is not definitive, and that the results of the current review suggest that a great deal of variability exists across states currently with regard to MTSS-B implementation guidelines. This lack of consensus across state-level documents has important implications for both future research and policy. For one, lack of consensus indicates that additional research is warranted to understand which procedures facilitate the most effective and efficient decision-making, and thus have the greatest impact on student outcomes. For example, although more frequent monitoring may be warranted when assessing student behaviors, it is unclear whether there is added value in conducting assessments daily as opposed to weekly. In addition, numerous intervention strategies and progress monitoring tools were noted in the documents reviewed; however, these tools vary widely with regard to the evidence behind them. Careful curating, whether by individual states or national agencies/organizations, would be helpful in ensuring that best practices are advocated. Finally, one way in which to promote greater consistency across state-produced documents is through the development of model blueprints at the national level. The RTI implementation blueprints put forth in the 2000s by the National Association of State Directors of Special Education (i.e., Batsche et al., 2005; Elliott & Morrison, 2008), for example, served as models for the development of state-level guidance documents. Although such implementation blueprints are available for PBIS implementation (e.g., TFI), they do not currently exist for MTSS-B more broadly. Establishing such guidance at the national level, however, could help to move schools toward more unified implementation of MTSS-B.

Authors' Note

Declaration of Conflicting Interests

Funding

ORCID iD

Amy M. Briesch ![ORCID] https://orcid.org/0000-0002-8281-1039

References

Algozzine, B., Barrett, S., Eber, L., George, H., Horner, R., Lewis, T., . . . Sugai, G. (2014). *School-wide PBIS Tiered Fidelity Inventory*. OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports. Available from www.pbis.org

Batsche, G., Elliot, J., Graden, J. L., Grimes, J., Kovaleski, J. F., Prasse, D., . . . Tilly, W. D. (2005). *Response to intervention: Policy considerations and implementation*. Alexandria, VA: National Association of State Directors of Special Education.

Briesch, A. M., Chafouleas, S. M. & Chaffee, R. K. (2018). Analysis of state-level guidance regarding school-based, universal screening for social, emotional, and behavioral risk. *School Mental Health*, *10*, 147. https://doi.org/10.1007/s12310-017-9232-5

Briesch, A. M., & Volpe, R. J. (2007). Important considerations in the selection of progress monitoring measures for classroom behaviors. *School Psychology Forum*, *1*, 59–74.

Bruhn, A. L., Lane, K. L., & Hirsch, S. E. (2014). A review of Tier 2 interventions conducted within multitiered models of behavioral prevention. *Journal of Emotional and Behavioral Disorders*, *22*, 171–189.

Busk, P., & Serlin, R. (1992). Meta-analysis for single-case research. In T. Kratochwill & J. Levin (Eds.), *Single-case design and analysis* (pp. 187–212). Hillsdale, NJ: Lawrence Erlbaum.

Castro-Villareal, F., Rodriguez, B. J., & Moore, S. (2014). Teachers' perceptions and attitudes about Response to Intervention (RTI) in their schools: A qualitative analysis. *Teaching and Teacher Education*, *40*, 104–112. doi:10.1016/j.tate.2014.02.004

Chafouleas, S. M., Briesch, A. M., Riley-Tillman, T. C., Christ, T. J., Black, A., & Kilgus, S. P. (2010). An investigation of the generalizability and dependability of Direct Behavior Rating Single Item Scales (DBR-SIS) to measure academic engagement and disruptive behavior of middle school students. *Journal of School Psychology*, *48*, 219–246. doi:10.1016/j.jsp.2010.02.001

Chafouleas, S. M., Riley-Tillman, T. C., & Sugai, G. (2007). *School-based behavioral assessment*. New York, NY: Guilford Press.

Chafouleas, S. M., Volpe, R. J., Gresham, F. M., & Cook, C. R. (2010). School-based behavioral assessment within problem-solving models: Current status and future directions. *School Psychology Review*, *39*, 343–349.

Cheney, D., Stage, S., Hawken, L., Lynass, L., Mielenz, C., & Waugh, M. (2009). A two-year outcome study of the check, connect, and expect intervention for students at-risk of severe behavior problems. *Journal of Emotional and Behavioral Disorders*, *17*, 226–243. doi:10.1177/1063426609339186

Cohen, D. K., & Ball, D. L. (1990). Relations between policy and practice: A commentary. *Educational Evaluation and Policy Analysis*, *12*, 330–338.

Cohen, D. K., & Spillane, J. P. (1992). Policy and practice: The relations between governance and instruction. In G. Grant (Ed.), *Review of research in education* (pp. 3–49). Washington, DC: American Education Research Association.

Crone, D. A., Hawken, L. S., & Horner, R. H. (2010). *Responding to problem behavior in schools: The Behavior Education Program* (2nd ed.). New York, NY: Guilford Press. (Original work published 2004)

Dever, B. V., Dowdy, E., & DiStefano, C. (2018). Examining the stability, accuracy, and predictive validity of behavioral-emotional screening scores over time to inform repeated screening procedures. *School Psychology Review*, *47*, 360–371.

Doolittle, J. H., Horner, R. H., Bradley, R., Sugai, G., & Vincent, C. G. (2007). Importance of student social behavior in the mission statements, personnel preparation standards, and innovation efforts of state departments of education. *The Journal of Special Education*, *40*, 239–245.

Dowdy, E., Nylund-Gibson, K., Felix, E. D., Morovati, D., Carnazzo, K. W., & Dever, B. V. (2014). Long-term stability of screening for behavioral and emotional risk. *Educational and Psychological Measurement*, *74*, 453–472.

Elliott, J., & Morrison, D. (2008). *Response to intervention blueprints: District level edition*. Alexandria, VA: National Association of State Directors of Special Education.

Ferguson, T. D., Briesch, A. M., Volpe, R. J., & Daniels, B. (2012). The influence of observation length on the dependability of data. *School Psychology Quarterly*, *27*, 187–197.

Fuchs, L. S. (2003). Assessing intervention responsiveness: Conceptual and technical issues. *Learning Disabilities Research and Practice*, *18*, 172–186. doi:10.1111/1540-5826.00073

Georgia Department of Education. (2011). *Response to Intervention: Georgia's student achievement pyramid of interventions*. Atlanta: Author.

Gersten, R., Compton, D., Connor, C. M., Dimino, J., Santoro, L., Linan-Thompson, S., & Tilly, W. D. (2008). *Assisting students struggling with reading: Response to Intervention and multi-tier intervention for reading in the primary grades. A practice guide* (NCEE 2009-4045). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from https://ies.ed.gov/ncee/wwc/PracticeGuide/3

Gresham, F. M. (2005). Response to intervention: An alternative means of identifying students as emotionally disturbed. *Education and Treatment of Children*, *28*, 328–344.

Hauerwas, L. B., Brown, R., & Scott, A. N. (2013). Specific learning disability and response to intervention: State-level guidance. *Exceptional Children*, *80*, 101–120. doi:10.1177/001440291308000105

Hawken, L. S., Vincent, C. G., & Schumann, J. (2008). Response to intervention for social behavior: Challenges and opportunities. *Journal of Emotional and Behavioral Disorders*, *16*, 213–225. doi:10.1177/1063426608316018

Higgins, J. P. T., & Green, S. (2011). *Cochrane handbook for systematic reviews of interventions 5.1.0*. London, England: The Cochrane Collaboration. Available from http://www.handbook.cochrane.org

Kurns, S., & Tilly, W. D. (2008). *Response to intervention blueprints: School level edition*. Alexandria, VA: National Association of State Directors of Special Education.

Lane, K. L., Oakes, W. P., Menzies, H. M. (2014). Comprehensive, Integrated, Three-Tiered (CI3T) Models of Prevention: Why does my school – and district – need an integrated approach to meet students' academic, behavioral, and social needs? *Preventing School Failure*, *58*, 121–128. doi:10.1080/1045988X.2014.893977

Mastropieri, M., & Scruggs, T. (1985–1986). Early intervention for socially withdrawn children. *The Journal of Special Education*, *19*, 429–441. doi:10.1177/002246698501900407

McIntosh, K., Bohanon, H., & Goodman, S. (n.d.). *Integrating academic and behavior supports within an RtI framework, Part 3: Secondary supports*. Retrieved from http://www.rtinetwork.org/learn/behavior-supports/integrating-academic-and-behavior-supports-secondary-supports

Meyer, M. M., & Behar-Horenstein, L. S. (2015). What leadership matters: Perspectives from a teacher team implementing response to intervention. *Education and Treatment of Children*, *38*, 383–402. doi:10.1353/etc.2015.0022

Miller, F. G., Chafouleas, S. M., Welsh, M. E., Riley-Tillman, T. C., & Fabiano, G. A. (2019). Examining the stability of social, emotional, and behavioral risk status: Implications for screening frequency. *School Psychology*, *34*(1), 43–53. http://dx.doi.org/10.1037/spq0000252

Missouri Department of Elementary and Secondary Education. (2014). *Missouri schoolwide positive behavior support tier 2 team workbook*. Columbia: Missouri Schoolwide PBS.

Mitchell, B. S., Stormont, M., & Gage, N. A. (2011). Tier two interventions implemented within the context of a tiered prevention framework. *Behavioral Disorders*, *36*, 241–261.

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine*, *6*(7), e1000097. doi:10.1371/journal.pmed.1000097

National Center on Intensive Intervention. (2013). *Monitoring student progress for behavioral interventions*. Washington, DC: U.S. Department of Education, Office of Special Education Programs, National Center on Intensive Intervention. Retrieved from https://intensiveintervention.org/resource/monitoring-student-progress-behavioral-interventions-dbi-training-series-module-3

National Center on Intensive Intervention. (n.d.). *Behavioral progress monitoring tools chart*. Retrieved from https://charts.intensiveintervention.org/chart/behavioral-progress-monitoring-tools

OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports. (2015). *Positive Behavioral*

Interventions and Supports (PBIS) implementation blueprint: Part 1—Foundations and supporting information. Eugene: University of Oregon. Available from www.pbis.org

Piekarz, E., Schermbeck, R., Young, S. K., Leider, J., Ziemann, M., & Chriqui, J. F. (2016). *School district wellness policies: Evaluating progress and potential for improving children's health eight years after the federal mandate. School years 2006–07 through 2013–14*. Chicago: Institute for Health Research and Policy, University of Illinois at Chicago.

Turner, L., Leider, J., Piekarz-Porter, E., Schwartz, M. B., Merlo, C., Brener, N., & Chriqui, J. F. (2018). State laws are associated with school lunch duration and promotion Practices. *Journal of the Academy of Nutrition and Dietetics*, *118*, 455–463. doi:10.1016/j.jand.2017.08.116

Volpe, R. J., McConaughy, S. H., & Hintze, J. M. (2009). Generalizability of classroom behavior problem and on-task scores from the Direct Observation Form. *School Psychology Review*, *38*, 382–401.

Walker, H. M. (2004). Use of evidence-based interventions in schools: Where we've been, where we are, and where we need to go. *School Psychology Review*, *33*, 398–407.

Walker, H. M., Kavanagh, K. A., Stiller, B., Golly, A. M., Severson, H. H., & Feil, E. G. (1998). First step to success: An early intervention approach for preventing school antisocial behavior. *Journal of Emotional and Behavioral Disorders*, *6*, 66–81.

Zirkel, P. A., & Thomas, L. B. (2010). State laws and guidelines for implementing RTI. *Teaching Exceptional Children*, *43*, 60–73. doi:10.1177/004005991004300107