**COMPREHENSIVE BEHAVIORAL HEALTH MODEL**

**ANNUAL REPORT | SCHOOL YEAR 2017-18**

<table>
<thead>
<tr>
<th><strong>60</strong> BPS Schools</th>
<th><strong>26,692</strong> Students Served</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 serving elementary grades</td>
<td>26,692 Total Students Served in CBHM Schools</td>
</tr>
<tr>
<td>18 serving middle school grades</td>
<td>58% First Language other than English</td>
</tr>
<tr>
<td>18 serving high school grades</td>
<td>38% English Language Learners</td>
</tr>
</tbody>
</table>

For social, emotional & behavioral health

- **26,692** Total Students Served in CBHM Schools
- **58%** First Language other than English
- **28%** Students Receiving Special Education Services
- **94%** High Needs
- **72%** Economically Disadvantaged

**60** BPS Schools implemented CBHM during SY 17-18

**58** Schools with Tier 1 Fidelity data reported for SY 17-18

**33%** of all BPS Students With Screening Data Available

**46%** of all BPS schools with Tier 1 Fidelity Data available

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1 As reported by MA DESE, [http://profiles.doe.mass.edu/help/data.aspx?section=students#selectedpop](http://profiles.doe.mass.edu/help/data.aspx?section=students#selectedpop)
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EXECUTIVE SUMMARY

The Boston Public Schools’ Comprehensive Behavioral Health Model (CBHM) is designed to provide a system-wide framework for the implementation of behavior intervention and supports, including tiered interventions and the collection of data to examine effectiveness. The CBHM is built on the premise that by integrating behavioral health services into schools, we will create safe and supportive learning environments that optimize academic outcomes for all students.

The CBHM is in its seventh year of implementation, and is overseen by an Executive Workgroup with representation from Boston Public Schools, Boston Children’s Hospital and UMass Boston. The evaluation of CBHM is overseen by the CBHM Research Committee, which also includes representation from all three partner agencies. The present Annual Report seeks to address the following evaluation questions based on information collected during the 2017-18 school year:

1. Did students attending CBHM schools demonstrate improvement in academic and social competence?
2. Did schools implementing CBHM demonstrate increases in capacity to provide safe and supportive learning environments?
3. Did BPS as a district demonstrate increases in capacity to provide high quality, equitable behavioral health services?

Based upon the data collected across each of these levels, meaningful improvements were realized for students, schools, and the BPS district as a whole.

At the student level, decreases in risk levels were observed, particularly for the most at-risk students. Likewise, increases in positive behaviors were observed, with the largest growth demonstrated by the most at-risk students.

At the school level, the 2017-18 school year saw increases in capacity through access to social emotional learning curricula and universal screening. As a result, professional development opportunities to support the implementation of Tier 1 across CBHM schools continues to support school teams to collaboratively build strong systems of support for students.

At the district level, schools’ access to licensed mental health professions who are highly trained to support a preventative framework (e.g. MTSS) and practice within an expanded role is highly valued. School leaders’ recognition of this added value has contributed to increases in district wide capacity. Likewise, the leveraging of partnerships to build strong, cohesive systems for schools and systems is helping achieve equitable access to high-quality behavioral health services within BPS.
MODEL OVERVIEW

The Boston Public Schools’ Comprehensive Behavioral Health Model (CBHM) is designed to provide a system-wide framework for the implementation of behavior intervention and supports, including tiered interventions and the collection of data to examine effectiveness. The CBHM is built on the premise that by integrating behavioral health services into schools, we will create safe and supportive learning environments that optimize academic outcomes and meet the social, emotional, and behavioral health needs for all students.

This model outlines strategies for the district to provide high-quality behavioral health services that can be equitably accessed by all students. It begins at the school level with professional development, Tier 1 social emotional learning, and universal screening to identify students with elevated risk for developing behavioral health issues, and then organizes and monitors targeted interventions for those with an elevated risk and/or behavioral health needs. Over time, this information will guide district-wide planning and will initiate more effective referral processes with partnering mental health agencies, particularly for those students with the greatest needs.

The Comprehensive Behavioral Health Model (CBHM) was developed in collaboration between Boston Public Schools’ Behavioral Health Services Department, the Boston Children’s Hospital (BCH) and UMass Boston/School Psychology Program. The CBHM provides a district-wide framework for the implementation of behavior intervention and support. It is conducted within the context of a data-driven format of evidence-based service delivery with the goal of providing high quality behavioral health services to all students of the Boston Public Schools (BPS). This is accomplished in partnership with principals, school staff, community agencies, students and parents.

EVALUATION QUESTIONS

The CBHM is in its seventh year of implementation, and is overseen by an Executive Workgroup with representation from Boston Public Schools, Boston Children’s Hospital and UMass Boston. The evaluation of CBHM is overseen by the CBHM Research Committee, which also includes representation from all three partner agencies. This Annual Report seeks to address the following evaluation questions based on information collected during the 2017-18 school year:

1. Did students attending CBHM schools demonstrate improvement in academic and social competence?
2. Did schools implementing CBHM demonstrate increases in capacity to provide safe and supportive learning environments?
3. Did BPS as a district demonstrate increases in capacity to provide high quality, equitable behavioral health services?
METHODS

Participants

STUDENT LEVEL

Students included in the present analysis were:

- Enrolled in a CBHM school during the 2017/2018 school year, with implementation rates of 60% or higher
- Screened in both the Fall and Spring of the 2017/2018 school year
- In grades Kindergarten through 12th

A total of 17,370 K2-12th grade students in CBHM schools were screened in Fall 2017, and a total of 14,368 students in CBHM schools were screened in Spring 2018. Of these, 12,894 students attending 47 CBHM Schools were screened at both Fall and Spring timepoints. Of those students, a total of 7,327 students attending 25 CBHM schools met both criteria of being screened at both time points within schools with 60% or higher implementation fidelity of Tier 1 supports. Based on inclusion criteria of both data available from sites with demonstrable implementation fidelity, a total of 7,327 students were included in this evaluation sample.

The demographics of the evaluation sample presented in this report is reflective of both the BPS student demographics at large, as well as the demographics of all students served in CBHM schools. However, the demographic information presented here refers specifically to the students included in the present analyses (N = 7,327). Of this sample, 21% of students received special education services, and 35% of students were English Language Learners. Overall, this evaluation sample is reflective of the BPS District enrollment overall in terms of students with disabilities (19.6%), and English Language Learners (31.7%).

Student grades in the present sample ranged from K through 12th while the majority of students (60%) enrolled in grades K through 5. The next highest percentage of students (23%) were enrolled in middle school, grades 6 through 8, while the smallest percentage of students (17%) were enrolled in high schools, grade 9 through 12.

With regard to race and ethnicity, the majority of students in the present sample were identified as Hispanic (47%) or Black (29%). Other students were identified as White (12%), Asian (8%),

<table>
<thead>
<tr>
<th>Race</th>
<th>District Total</th>
<th>Evaluation Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>32%</td>
<td>29%</td>
</tr>
<tr>
<td>Asian</td>
<td>9%</td>
<td>8%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>42%</td>
<td>47%</td>
</tr>
<tr>
<td>Native American</td>
<td>0.3%</td>
<td>0.2%</td>
</tr>
<tr>
<td>White</td>
<td>14%</td>
<td>12%</td>
</tr>
</tbody>
</table>

2 Pre-K students were excluded from this sample due to the low percentage (40%) of students who were screened at both Fall and Spring time points
3 DESE 2017-18 enrollment data
Native American (0.2%) while an additional small percentage (1%) did not have race information available. Again, the representativeness of this sample is very representative of the overall district demographics as reported to DESE for the 2017-18 School year.

SCHOOL LEVEL

There were a total of 60 schools implementing CBHM in the 2017/2018 school year. Of those schools implementing CBHM, 40 (67%) serve students in elementary grades, 18 (30%) serve students in middle grades, and 18 (30%) serve students in high school. In addition to grade configuration, the schools implementing CBHM are largely representative of the racial/ethnic, geographical, and special populations educated within the Boston Public Schools.

Schools implementing CBHM are grouped into cohorts based on the year that the school began implementing the model. CBHM implementation began during the 2012-13 school year with a cohort of 10 schools. Each year, an additional cohort (approximately ten schools) join the model, with the sixth cohort of schools joining during the 2017-18 school year.

During the initial year of implementation, schools send a school team focused on universal “Tier 1” social emotional and behavioral programming to the CBHM New Team Training. Additionally, throughout the year teams from all CBHM cohorts have the opportunity to receive coaching to support the model and learn together through a variety of professional development opportunities.

CBHM Schools By Cohort

<table>
<thead>
<tr>
<th>Cohort 1</th>
<th>Cohort 2</th>
<th>Cohort 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-13</td>
<td>2013-14</td>
<td>2014-15</td>
</tr>
<tr>
<td>Boston Arts Academy</td>
<td>Boston Community Leadership Academy</td>
<td>Boston Teachers Union K-8 Pilot</td>
</tr>
<tr>
<td>Boston Latin School</td>
<td>Ellison/Parks Early Education School</td>
<td>Brighton High School</td>
</tr>
<tr>
<td>Conley Elementary</td>
<td>Haley Pilot School</td>
<td>Charlestown High School</td>
</tr>
<tr>
<td>Jackson/Mann K-8 School</td>
<td>Haynes Early Education Center</td>
<td>Condon K-8</td>
</tr>
<tr>
<td>Lee K-8 School</td>
<td>Lee Academy</td>
<td>Henderson K-12</td>
</tr>
<tr>
<td>Mattapan Early Elementary School</td>
<td>Margarita Muniz Academy</td>
<td>Higginson Inclusion K-0-2 School</td>
</tr>
<tr>
<td>Mason Elementary</td>
<td>Perry K-8 School</td>
<td>Holmes Elementary</td>
</tr>
<tr>
<td>New Mission High School</td>
<td>Quincy Elementary</td>
<td>Murphy K-8 School</td>
</tr>
<tr>
<td>Sumner Elementary</td>
<td>Taylor Elementary</td>
<td>Roosevelt K-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tynan Elementary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Winship Elementary</td>
</tr>
</tbody>
</table>

(continued, next page)
DISTRICT LEVEL

Extensive professional development was provided to the Behavioral Health Services department, which in the 2017-18 school year included 63 school psychologists and 6 school social workers. Together, these 69 staff are deployed to 100% of BPS schools to provide direct student-facing services and support school teams. As a result, beyond supporting the capacity for MTSS in the 60 designated CBHM schools, this model allows for the dissemination of best practices across all school sites.

Now in the seventh year of implementation, the majority of school psychologists working in Boston Public Schools, work in at least one CBHM school (72%). In order to better understand the utilization of these professionals at a district level, time-sampling is completed by the entire department regardless of whether services are provided within a CBHM or Non-CBHM school.

Measures

STUDENT LEVEL

Behavioral Intervention Monitoring and Assessment System (BIMAS)

The Behavior Intervention Monitoring Assessment System, 2nd Edition (BIMAS-2; McDougal, Bardos, Meier, 2011) is a brief, psychometrically sound measure designed to screen students between the ages of 5 and 18 and identifies both behavioral concerns and adaptive skills. The teacher report version was utilized for the present analysis. It includes 34 items comprising two
adaptive scales (social functioning and academic functioning) and three behavioral concern scales (conduct, negative affect, and cognitive attention).

<table>
<thead>
<tr>
<th>Behavioral Concern Scales</th>
<th>Conduct</th>
<th>Measures risk for difficulty with <strong>externalizing</strong> concerns such as physical or verbal aggression.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative Affect</td>
<td>Measures risk for <strong>internalizing</strong> concerns such as anxiety or depression</td>
</tr>
<tr>
<td></td>
<td>Cognitive Attention</td>
<td>Measures risk for difficulties with <strong>attention</strong> and/or <strong>executive functioning</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adaptive Scales</th>
<th>Social</th>
<th>Measures ability to make &amp; maintain relationships with peers &amp; adults</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Academic Functioning</td>
<td>Measures behaviors related with <strong>academic success</strong>, such as attendance &amp; coming to class prepared</td>
</tr>
</tbody>
</table>

For each student in their class, teachers report the frequency of behaviors within each subscale on a 5-point Likert scale in the web-based BIMAS system. The BIMAS yields T scores (mean = 50, sd = 10) for each scale which compare the student’s results to his or her same aged peers based on a nationally-representative normative sample. Higher scores on the behavioral concern scales indicate greater risk, whereas higher scores on the adaptive scales indicate a stronger skills. During the 2017-18 school year, teacher ratings were completed twice, once in the fall of 2017 and once in the spring of 2018.

At the elementary grade levels, students generally have one primary classroom teacher who is responsible for completing ratings. In some cases, a co-teaching model was being used, so co-teachers split the classroom roster in half and each provided ratings for half of the class list. In middle and high school grade levels, schools identify either a student’s advisor, homeroom teacher, or a particular class period teacher to complete the ratings so that each student is rated consistently by one teacher.

SCHOOL LEVEL

**Tiered Fidelity Inventory (TFI)**

The Tiered Fidelity Inventory (TFI; Algozzine et al., 2014) is a valid and reliable measure used to assess the extent to which schools are applying the core features of school-wide positive behavioral interventions and supports (SWPBIS). The TFI is divided into three sections to assess Tier 1 Universal Interventions and Supports, Tier 2 Targeted Interventions and Supports, and Tier 3 Intensive Interventions and Supports. For the purposes of the present analyses, CBHM
schools completed the Tier 1 section only, given the initial focus of CBHM coaching on building Tier 1 Universal Intervention and Supports. The Tier 1 section of the TFI includes 15 items rated on a 3-point Likert Scale.

The TFI yields a score in the form of the overall percentage of implementation. In general, a score of 70% is indicative of adequate implementation fidelity, while a score of 100% suggests near-perfect implementation. Literature also suggests that implementing SWPBIS constitutes a systemic change that can take between three to five years to fully implement and realize student level change.

TFI data for the 2017-18 school year was available for 56 BPS schools implementing CBHM. Of the schools that completed the TFI during the 2017-18 school year, 40% of schools (n=22) completed the TFI once throughout the year, 41% of schools (n=23) completed the TFI at two points throughout the year, and 20% of schools (n=11) completed the TFI more than twice throughout the year.

DISTRICT LEVEL

Time Sampling

Tier 1 supports are provided to all students through school-wide systems and programming. Tier 2 support some students through small groups. Tier 3 supports, which are more intensive by nature, are therefore provided to fewer students. Time sampling data is collected to better understand how BHS staff spend their time delivering services within a school.

Twice a year (Fall and Spring), BHS staff are asked to identify which “tier” best captures the focus of their work for every 30 minute interval throughout the day. For example, administering assessments or counseling for students for special education purposes is coded as a “Tier 3” activity, while facilitating a school-wide climate team meeting constitutes “Tier 1”. Together, this data provides information regarding the utilization of these services across the district. During the 2017-18 school year, 52 (75%) BHS staff members completed time sampling data in Fall 2017, and 40 (58%) completed time sampling data in Spring 2018.

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4 McIntosh et al 2017
RESULTS

STUDENT OUTCOMES

Did students attending CBHM schools demonstrate improvement in academic and social competence?

Students attending CBHM schools demonstrated meaningful improvements in academic and social competence over the course of the 2017-18 school year, as measured by the BIMAS.

The majority of students demonstrated “low risk” on each BIMAS concern scale (e.g., conduct, negative affect, cognitive attention) at both the fall and spring timepoints. The largest gains were observed for students who demonstrated the highest level of risk in the fall. In the case of both conduct (e.g., externalizing behaviors) and cognitive attention (e.g., executive functioning concerns), students in the “high risk” range at the fall had moved into the “some risk” range. In the case of negative affect (e.g., internalizing behaviors), the group of students identified with “high risk” at the fall screening had on average changed levels, moving into the “some risk” range. This constitutes a meaningful change in some of our most vulnerable students’ behavior over the course of one school year, as reported by their classroom teacher.

Likewise, students who scored in the “some risk” range in the fall demonstrated improvement on all three BIMAS concern scales. While their scores did not quite cross into the “Low Risk” range over the course of the single school year, the change was in the right direction (e.g., scores decreased) and indicated an improvement in student functioning, as reported by their classroom teacher.

The following graphs show BIMAS student outcomes during the 2017-18 school year.

<table>
<thead>
<tr>
<th>LEGEND</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ = Fall 2017</td>
</tr>
<tr>
<td>□ = Spring 2018</td>
</tr>
<tr>
<td>(#) = n, Fall 2017</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>T-SCORES</th>
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</thead>
<tbody>
<tr>
<td>The bars represent the average T-score for each respective group of students. BIMAS T-scores have a mean of 50 and a standard deviation of 10. They are used to compare students’ results on the BIMAS with a nationally-representative normative sample based on the students’ age.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DESCRIPTIVE RANGES</th>
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</thead>
<tbody>
<tr>
<td>For the Behavioral Concern Scales (Conduct, Negative Affect &amp; Cognitive Attention), higher scores are indicative of greater risk.</td>
</tr>
</tbody>
</table>

| T ≥ 70 | High Risk |
| T = 60 - 69 | Some Risk |
| T < 60 | Low Risk |
CONDUCT

NEGATIVE AFFECT

COGNITIVE ATTENTION
In addition to decreasing students’ risk for social, emotional and behavioral problems down the road, data from the 2017-18 school year demonstrate positive skill development that students in CBHM schools experienced. Once again, students identified in the fall through BIMAS screening with “concern” in social skills or academic functioning showed improvement, nearly crossing into the typical range. Students who were not identified with risk in these areas in the fall continued to show low or no risk in the spring.

The following graphs show BIMAS student outcomes during the 2017-18 school year.

### LEGEND
- **= Fall 2017**
- **= Spring 2018**
- 
  = n, Fall 2017

### T-SCORES
The bars represent the average T-score for each respective group of students. BIMAS T-scores have a mean of 50 and a standard deviation of 10. They are used to compare students’ results on the BIMAS with a nationally-representative normative sample based on the students’ age.

### DESCRIPTIVE RANGES
For Adaptive Scales (Social & Academic Functioning), higher T-scores are indicative of greater skills.

- T ≥ 60  
  Strength
- T = 41 - 59  
  Typical
- T ≤ 40  
  Concern

### SOCIAL

![Graph showing BIMAS student outcomes for Social during the 2017-18 school year.](image)

- **= Fall 2017**
- **= Spring 2018**
- 
  = n, Fall 2017

- T ≥ 60  
  Strength
- T = 41 - 59  
  Typical
- T ≤ 40  
  Concern
ACADEMIC FUNCTIONING

Did schools implementing CBHM demonstrate increases in capacity to provide safe and supportive learning environments?

CBHM Schools demonstrated increases in capacity to provide safe and supportive learning environments during the 2017-18 school year. Increases in implementation fidelity speak to the increased capacity of school-wide preventative structures and systems for building safe and supportive learning communities. Additionally, increased access to social emotional learning curricula and universal screening tools ensure that CBHM schools and teachers have the tools needed to support BPS students along a continuum of need.

Implementation Fidelity

School Wide Positive Behavioral Interventions and Supports (SWPBIS) is a framework for organizing school environments to prevent problem behaviors and reinforce positive behaviors. Characteristics of high Implementation fidelity include (1) a designated team, (2) core values, (3) explicit instruction designed to teach students about behavioral expectations, (4) a system for reinforcing positive behaviors, and (5) a system for responding consistently when problem behaviors arise.

At the Universal (Tier 1) level, the most recent TFI data for BPS schools implementing CBHM indicates that 18 schools (32%) have achieved a high level of Tier 1 implementation overall. Each
of the 18 schools who have reached this level are schools that have been implementing CBHM for at least 2 years. However, it is important to note that an additional 19 schools (34%) are currently demonstrating Tier 1 implementation ratios between 50 and 70%, indicative of increasing fidelity to SWPBIS structures. Among these 19 schools are many schools that are currently in their first year of implementation, or schools in which a high degree of staff turnover has occurred within the last year.

![Tier 1 Fidelity of Implementation in CBHM Schools](image)

**Social Emotional Learning Curricula**

In addition to increasing school capacity for implementing SWPBIS systems and structures, CBHAM has significantly increased CBHM schools capacity to provide safe and supportive school environments through the use of universal (e.g. Tier 1, classroom based for *all* students) **Social Emotional Learning Curricula**.

Through CBHM, students in elementary and middle school grades have access to Second Step curriculum. Second Step is an evidence based⁶, skills based Social Emotional Learning curriculum. Using Second Step, classroom teachers provide direct instruction to *all* students (grade Pre-K through 8th) on empathy, conflict resolution, coping strategies, and managing emotions.

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⁶ Low, Cook, Smolkowski and Buntain, 2015

13
At the High School level, SEL curricula have tended to be more topical in nature, requiring schools to incorporate various programming to provide a comprehensive set of social, emotional and behavioral health skills universally (e.g. Tier 1, classroom based for all students). This year, CBHM incorporated training in **DBT in Schools** to supplement existing topical curriculum and programming such as Break Free From Depression and Signs of Suicide. DBT in Schools is an innovative and evidence based social-emotional learning curriculum that is designed for grades 6 through 12. It provides 30 lesson plans with explicit instructions outlined for teaching skills within four key areas: mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness. It is based on dialectical behavior therapy (DBT) skills which have been demonstrated to be effective in helping adolescents build skills to effectively manage difficult emotional and interpersonal situations, cope with stress, and make decisions.

Each year, schools joining CBHM benefit from access to either Second Step or DBT in schools. Because CBHM is implemented in cohorts, each year 10 additional BPS schools join the model. The number BPS schools with access to SEL curricula has grown significantly throughout the implementation of CBHM. During the 2017-18 school year, access expanded to 10 additional schools, meaning that nearly half (sixty out of 125) of all BPS schools have SEL curricula available through their partnership with CBHM.

![Graph](image)

In addition to purchasing SEL curricula for schools to use, CBHM provides ongoing coaching and technical assistance to support school teams in implementing and evaluating their SEL programming. Throughout the 2017-18 school year, coaches met with school teams to develop implementation plans for all aspects of the CBHM model, including direct SEL instruction.

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7 Mazza et al., 2016
Universal Screening for Social, Emotional and Behavioral Health Needs

In addition to SEL curricula, CBHM schools have increased capacity to provide safe and supportive school environments through the use of universal screening for students’ social, emotional and behavioral health needs. Universal screening allows for the early identification of risk, so that schools can provide supports and interventions to prevent problems and respond to student needs. There is strong evidence that behavioral and emotional problems are risk factors for later problems, both within school and in the community. Universal screening for such problems has been recommended as a systematic process for determining overall levels of need, and ensuring that the social and emotional needs of all students are being addressed\(^8\).

The 2017-18 school year provided increased access to tools designed for universal screening and progress monitoring for BPS schools.

Number of BPS schools with Access to Behavior Intervention Monitoring and Assessment System (BIMAS-2) through CBHM

In addition to providing a measure of individual student level outcomes, this instrument provides schools access to progress monitoring - important information that can be used to inform instruction and support services. In cases where students are identified early as struggling with a social, emotional and/or behavioral difficulty, the BIMAS system allows school teams to monitor students’ progress toward improvements in functioning.

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In addition to purchasing the tool itself, CBHM provides **ongoing coaching** and **technical assistance** in both the **completion** of the BIMAS-2, as well as how to interpret and **use** the data in a meaningful way to build safe and supportive school environments.

**DISTRICT OUTCOMES**

Did BPS as a **district** demonstrate increases in capacity to provide high quality, equitable behavioral health services?

Despite the fact that CBHM is currently being implemented in a subset of the BPS schools, the initiative as a whole prioritizes increases in capacity at a district level that benefit all BPS students and schools. At its core, CBHM embraces the **expanded role** that licensed behavioral health professionals can play in building safe and supportive school environments. Moreover, CBHM leverages important **partnerships** throughout the city and state in a mission to provide a cohesive support system of high-quality behavioral health services that are equitably accessible to all BPS students and schools.

**Expanded Role**

School psychologists and school social workers are often an untapped resource. In addition to playing a vital role in providing intensive clinical services to students (e.g. one-on-one counseling and trauma response), school psychologists and social workers are trained to work with groups and entire systems to foster safe and supportive learning environments. In 2010, the National Association of School Psychologists adopted a Practice Model which embraces 10 different domains across which school psychologists deliver vital services to students, schools and communities. CBHM embraces each of these domains and seeks to utilize the capacity that these trained and licensed mental health professionals can provide within Boston.

Historically, school psychologists role within Boston Public Schools included primarily assessment and counseling to comply with state and federal laws related to special education. The implementation of the CBHM framework has allowed for school psychologists to take a leadership role in school team meetings, prepare professional development trainings for teachers and families, and promote universal positive behavior in their schools. School psychologists are now able to practice across the full scope of NASP Practice Model.

Through CBHM implementation, BPS has benefited from a shift in service delivery across all Behavioral Health Staff. For example, in the 2017-18 school year, school psychologists and social workers spent 20% of their time supporting **universal** or “Tier 1” programming which impacts every student within a school. This includes supporting the use of universal social

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emotional learning curricula, positive behavioral interventions and supports, and universal screening for social emotional and behavioral health.

The amount of time spent on Tier 1 services was very similar in CBHM and non-CBHM schools. However, schools that are actively implementing CBHM saw a decreased amount of Tier 3 / Intensive services compared to those who had not yet joined the model. This finding speaks to the impact of systemic school-wide supports that are not the sole result of one person delivering services differently, but rather a school wide commitment to safe and supportive learning environments.

Percentage of Time BHS Staff Spent in Service Delivery Across Tiers

<table>
<thead>
<tr>
<th></th>
<th>Fall 2017</th>
<th>Spring 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CBHM</td>
<td>Non-CBHM</td>
</tr>
<tr>
<td>Tier 1</td>
<td>22.9</td>
<td>17.3</td>
</tr>
<tr>
<td>Tier 2</td>
<td>13.3</td>
<td>6.9</td>
</tr>
<tr>
<td>Tier 3</td>
<td>63.2</td>
<td>73.9</td>
</tr>
</tbody>
</table>

At its core, CBHM embraces the expanded role that licensed behavioral health professionals can play in building safe and supportive school environments. School leaders value the expanded role that school-based mental health providers can play. During the 2017-18 school year, 12% of total district capacity (7.6 FTE) were supported through discretionary funds within school budgets. This investment by school leaders speaks to the value they place on school-based staff who are highly effective in supporting MTSS implementation. As a testament to their support for this expanded role, district wide ratios between service providers and students continues to improve. While the current ratio is still beyond what is generally recommended to support best practice in service delivery (1:500-700\textsuperscript{10}), the trend over time is evidence to the value of this expanded role.

**Partnerships**

Boston benefits from a rich tapestry of community partners supporting our youth and school communities. CBHM leverages key partnerships in order to ensure that all students have a safe and supportive school where they can be successful. Utilizing an approach grounded in communities of practice\textsuperscript{11}, CBHM implementation has consisted of convening various key stakeholders to coalesce around issues and collaboratively solve problems.

\textsuperscript{10} National Association of School Psychologists, 2010
\textsuperscript{11} http://www.ideapartnership.org/documents/CoPGuide.pdf
CBHM Executive Workgroup
The CBHM initiative is overseen by an Executive Workgroup with representatives from the three primary partners: Boston Public Schools, Boston Children’s Hospital, and the University of Massachusetts, Boston. In 2010, key stakeholders from these three important institutions coalesced around mutual problems of practice and committed to collaboratively pursuing a systemic approach to providing high quality, equitable behavioral health services across BPS.

Boston Children’s Hospital has a long history of collaboration with Boston Public Schools. For 16 years, the Boston Children’s Hospital Neighborhood Partnerships (BCHNP) program has aimed to promote the social, emotional, and behavioral health of diverse youth and families through high quality, innovative, and culturally relevant clinical care, education, and advocacy in Boston’s schools and community health centers where children and adolescents live and learn. Given this mission and BCHNP’s long standing partnerships with BPS, Boston Children’s Hospital (BCH) was in a unique position to partner with CBHM at multiple levels since its start. Funding from the Office of Community Health at BCH has supported CBHM’s efforts in obtaining resources and building capacity for both social emotional learning and universal screening. In the 2017/2018 school year, 8 of BCHNP’s 17 partnering schools were CBHM schools.

Since 2002, BCHNP’s School-Based Program has brought comprehensive youth- and family-centered behavioral health services consistent with a multi-tiered system of support framework to youth in BPS. In the 2017/2018 school year alone, BCHNP implemented clinical (e.g., individual therapy, crisis intervention), early intervention (e.g., group therapy, case management), and prevention/promotion (e.g., classroom and school-wide social emotional learning) services with over 1,000 students in seven elementary, K-8, middle, and high schools. BCHNP has facilitated numerous social emotional learning initiatives in its partner schools, including Break Free from Depression, a depression awareness curricula utilized by many CBHM schools for high school students.

Since 2015, TAP has extended the School-Based Program’s efforts by bringing professional development workshops and individualized consultation to BPS school staff. In the 2017/2018 school year, an additional five Boston K-5/K-8 schools started their two year partnership with TAP, extending TAP’s reach to a total of 15 schools since 2015. This year, TAP facilitated ten professional development workshops and provided over 700 hours of consultation to identified behavioral health teams in ten partnering K-5/K-8 schools enrolling nearly 3,000 students. Through participation in these services, school-based teams acquire the capacity to bring professional learning back to the entire school community in numerous ways, including through workshops for all staff in the partnering school. TAP co-facilitated 17 such workshops this year on topics consistent with CBHM’s tenets of addressing student behavioral health needs early and systemically. In the past year, all TAP participants indicated that they were making
changes in their work to help meet the pressing behavioral health needs of students in their schools.

Through partnership, consultation, service delivery, and professional development, BCHNP has helped promote, expand, and align CBHM in the district while meeting one of its program goals of promoting systemic change in behavioral health service delivery.

The University of Massachusetts, Boston has a mission and vision that is grounded in urban and global engagement. Many BPS students go on to become UMB students, and many UMB students intersect with BPS as educators and/or parents. The School Psychology training program provides graduate level trainings to specialist (Ed.S.) and doctoral (Ph.D.) level school psychologists.

Through the partnership with CBHM, UMB faculty and students have contributed greatly to the capacity and expertise within the Boston Public Schools. Faculty have provided in-kind trainings on evidence based practices in school-based mental health. Students in both programs have completed practica and internship experiences in BPS where they benefit from exposure to the entirety of the expanded role of practice in action.

During the 2017-18 School year, the UMB school psychology program continued its partnership for training and research, with supports provided by graduate students and faculty. At least 17 graduate students engaged in training and research opportunities throughout BPS, including more than 8,000 hours of support for building- and district-based interventions. In addition, five faculty members in the school psychology program supported the training activities and research and evaluation. To build on the existing research and evaluation findings and better understand this model, there are currently three school psychology doctoral students who are conducting dissertation research on the model.

Boston Area School Based Mental Health Collaborative

Working in partnership with the Boston Public Schools, the Boston Area School Based Mental Health Collaborative is a collective of state, city, and community based organizations committed to promoting the behavioral health, wellbeing, and academic success of students. This is accomplished through best practices in therapeutic service delivery, prevention programming, advocacy, training, systems integration, family engagement, and collaboration. The collaborative is dedicated to ensuring equitable access to high quality, culturally competent school-based behavioral health services and resources for all students in the Boston Public Schools.

- Shared Vision. This collaborative of 25+ agencies providing services in 120+ Boston Public Schools has been proactive in establishing and maintaining common standards
of practice which provide a shared vision for high-quality and equitable behavioral health service delivery.

- **Shared Professional Development.** Through this collaborative, behavioral health providers from a variety of agencies (e.g. schools, hospitals and community health partner agencies) participate in shared professional development and training in evidence based practices to support youth and school communities.

- **Shared Data Collection and Management.** Together with the Boston Public Schools, the various agencies represented on this collaborative collect and integrate data to better understand the complex tapestry of behavioral health capacity and services within the Boston Public Schools.
ACKNOWLEDGEMENTS

The Comprehensive Behavioral Health Model (CBHM) was developed in collaboration between Boston Public Schools’ Behavioral Health Services Department, the Boston Children’s Hospital (BCH) and the University of Massachusetts, Boston School Psychology Department. CBHM is overseen by an Executive Workgroup. This evaluation was overseen by the CBHM Research Committee.

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