Strategies in Addressing Program Evaluation Challenges for a District-Wide Comprehensive Behavioral Health Model

Amy Kaye, Ph.D. & Jill Snyder, Ph.D.
Agenda

• Introduction to Boston’s Comprehensive Behavioral Health Model (CBHM)
• Background and Need for Evaluation Focus
• Development of CBHM’s Evaluation Plan
  – Research Team & Tasks
  – Logic Model
  – Data Sources
  – Indicators
  – Evaluation vs. Research Questions
• District Level Data-based Decision Making
• Conclusions
• Discussion
INTRODUCTION TO CBHM IMPLEMENTATION
Boston Public Schools (BPS) Context

• First public school system in the US (1647)
• >120 schools
  – 80 Elementary
  – 9 Middle
  – 31 Secondary
Boston Public Schools Context

- Diverse neighborhoods
- 54,312 students
  - 30% English Language Learners
  - >100 languages spoken

<table>
<thead>
<tr>
<th>Race</th>
<th>% of District</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>33.6</td>
</tr>
<tr>
<td>Asian</td>
<td>8.5</td>
</tr>
<tr>
<td>Hispanic</td>
<td>40.9</td>
</tr>
<tr>
<td>Native American</td>
<td>0.3</td>
</tr>
<tr>
<td>White</td>
<td>13.8</td>
</tr>
<tr>
<td>Native Hawaiian, Pacific Islander</td>
<td>0.2</td>
</tr>
<tr>
<td>Multi-Race, Non-Hispanic</td>
<td>2.7</td>
</tr>
</tbody>
</table>

(MDESE, 2015)
Boston Public Schools Context

• Need for services
  – 1 in 5 students with disabilities (MDESE, 2015)
  – 1 in 4 Boston children have experienced at least 1 adverse childhood event (BPHC, 2013)

• Limited resources
  – 57 school psychologists for >120 schools
  – 35% of schools have limited or no behavioral health partners (<.5 FTE)
CBHM Implementation

• **Launch:** 2012-2013 school year

• 10 schools per year

• **Current:** 40 schools

• Executive Work Group Formation
School-Based Behavioral Health Evaluation

- Historically, limited evaluation efforts
- Consistently identified as an area in need of critical attention
School-Based Behavioral Health Evaluation Challenges

- Access to data
- Low measure completion and return rates
- Combining and managing large data sources
- Selection of key indicators
- Multiple distinct stakeholders

(Nabors, 2003)
School-Based Behavioral Health
Evaluation Challenges: District Models

- Access to data
- Low measure completion and return rates
- Multiple distinct stakeholders
- Combining and managing large data sources
- Selection of key indicators
- Increasingly larger data sets
- Controlling complex differences across schools
- Establishing one comprehensive plan
Evaluation Goals

- Accountability
- Quality assurance and improvement
- Data-based decision making
MTSS

OUTCOMES

Systems

Data

Practices
Systems

Practices

Data

Partnerships

OUTCOMES

CBHM
Getting Ready
If we organize for success

Results
...Then we will see increased student learning and improved student achievement

Inquiry
...And ask the right questions

Information
...And collect and analyze data to help us answer those questions

Knowledge
...And use current research and shared experience to make meaning of those data

Action
...And apply that meaning to improve systems, programs, and classroom instruction

Cycle of Inquiry

More info: Geier, Smith, & Tornow (2012)
CBHM
Executive Work Group

Implementation
Communications
Research
Family Engagement
Partners
WHO?

The CBHM Research Committee consists of representatives from multiple agencies and various disciplines.
WHAT?

Data
- Access
- Storage
- Organization

Evaluation
- Indicators
- Timeline
- Reporting

Research
- IRB
- Publications
- Grant Opportunities
CBHM Research Committee: Organization

**WHEN?**

**Data**
- **Lead**: BPS & UMass Practicum Student Team
- **Weekly**

**Evaluation**
- **Lead**: BPS & BCH Evaluation Team
- **Every other month**

**Research**
- **All Partners**
- **Every other month**
Logic Models

Cycle of Inquiry

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© 2009 Public Consulting Group
Logic Models

• Provide a map for a program or initiative

• Clarify:
  – A program’s destination
  – The pathways to that destination
  – Markers along the pathways

• Explicitly present:
  – Assumed theories of change/action
  – Assumptions about resources at a program’s disposal

(Shakman & Rodriguez, 2015)
Logic Models

• Benefits:
  – Accountability for what matters
  – Common language

• Integrate:
  – Planning
  – Implementation
  – Evaluation
  – Reporting
Logic Models

**INPUTS**
- Program
- Investments

**OUTPUTS**
- Activities
- Participants

**OUTCOMES**
- Short
- Medium
- Long

What we invest → What we do → Who we reach → What are the results

(University of Wisconsin - Extension, 2008)
Logic Models
CBHM Logic Model: Theory

**BPS Comprehensive Behavioral Health Model**

**Mission:** Ensuring that all students have a safe and supportive school where they can be successful

**Outputs**

- **Students**
  - Universal screening and positive skill instruction
  - Access to targeted supports and services
  - Integrated academic and socio-emotional learning
  - Professional development on evidence-based interventions
  - Data management and accountability
  - Partnerships with families and community agencies

- **Schools**
  - Improved academic performance
  - Increased positive behaviors
  - Improved school climate and student engagement
  - Increased skills to address students’ needs
  - Increased capacity to provide services
  - Improved access to and coordination of services

- **District**
  - Academic and social competence
  - Safe and supportive learning environments
  - High-quality, equitable behavioral health services

**Essential Components**

- Collaboration with and support for families
- Aligned district initiatives and policies
- Data-based decision making
- Appreciation for diversity
- Consultation and collaboration
- School and district leadership
- Student-centered
- Differentiated instruction

**Guided by Massachusetts Department of Elementary and Secondary Education’s Behavioral Health Framework**

**Theory of Change:** Integrating behavioral health services into schools will create safe and supportive learning environments that optimize academic outcomes for all students.
BHS implementation began by building capacity and expertise among BHS Staff. BHS Staff with expertise in MTSS and Behavioral Health supported the adoption and implementation of MTSS frameworks within schools. Students benefit from a broad range of academic and behavioral supports, provided within a MTSS framework.
CBHM: District Evaluation

**Inputs**
- CBHM Coaches
- Boston Children’s Hospital
- BHS Staff
- Partners
- CBHM Committees
- Executive Workgroup

**Outputs**

<table>
<thead>
<tr>
<th>What?</th>
<th>Who?</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD</td>
<td>BHS Staff</td>
</tr>
<tr>
<td>Coaching</td>
<td>BHS Staff</td>
</tr>
<tr>
<td>Coordination of MH Partnerships</td>
<td>Partners</td>
</tr>
<tr>
<td>Workshops for Parents on MTSS</td>
<td>BPS Families and Communities</td>
</tr>
<tr>
<td>Developing Resources &amp; Guidelines for CBHM Implementation</td>
<td>CBHM School Staff</td>
</tr>
<tr>
<td>Coordination of BPS Practicum and Intern Students</td>
<td>CBHM School Staff</td>
</tr>
</tbody>
</table>

**Outcomes**

- **Short Term**
  - Change in BHS Staff Knowledge

- **Medium Term**
  - Change in BHS Staff Behavior

- **Long Term**
  - Development of Highly Effective MTSS Leaders
BHS implementation began by building capacity and expertise among BHS Staff.

Schools
BHS Staff with expertise in MTSS and Behavioral Health supported the adoption and implementation of MTSS frameworks within schools.

Students
BPS Students, Families and Communities benefit from a broad range of academic and behavioral supports, provided within a MTSS framework.
## CBHM: School Evaluation

### INPUTS
- School Staff
- Support Staff
- Partners
- Families and Communities
- District Support
- BHS Staff
- CBHM Coaches

### OUTPUTS
<table>
<thead>
<tr>
<th>What?</th>
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<tbody>
<tr>
<td>School Based PD</td>
<td>CBHM School Staff</td>
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<tr>
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<tr>
<td>Progress Monitoring</td>
<td>Teachers/Students</td>
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<td>Social Emotional Learning</td>
<td>Teachers</td>
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<tr>
<td>Data Based Problem Solving Teams</td>
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<td>Coaching</td>
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### OUTCOMES

#### SHORT Term
- Change in CBHM School Staff Knowledge

#### MEDIUM Term
- Change in CBHM School Staff Behavior
- Safe & Supportive Learning Environments
- High Quality, Equitable Behavioral Health Services

#### LONG Term
- Academic and Social Competence
Evaluation Questions

**PROCESS QUESTIONS**
How many students, parents, teachers are being reached?

**FIDELITY QUESTIONS**
Are CBHM activities being implemented as outlined in CBHM schools? Which portions of CBHM are being implemented with least & greatest fidelity?

**OUTCOMES QUESTIONS**
Are BPS behavioral health staff demonstrating increased knowledge and changes in their behaviors at their schools?
Are staff in CBHM schools demonstrating increased knowledge and changes in behaviors consistent with CBHM?
Are students in CBHM schools demonstrating improvements in academic and social competence?
Evaluation Plan

Getting Ready
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...And use current research and shared experience to make meaning of those data

Action
...And apply that meaning to improve systems, programs, and classroom instruction

Cycle of Inquiry
Evaluation Plan Considerations

What are our indicators for each of our outputs and outcomes?

What data sources inform each of these outputs and outcomes?
Evaluation Plan: Data Sources

- BPS Databases

- SEIMS
- LIZA
- SNAP
- ATI
- Aspen/SIS
- BIMAS (Meier, McDougal, & Bardos, 2011)
- MCLASS (Dibels & TRC)
Navigating Access to District Databases
Evaluation Plan: Data Sources

• BHS Data Sources

- Professional Development Workshop Evaluations
- Tiered Fidelity Inventory (Algozzine et al., 2014)
- Annual BCH Community Partnership Report
- Time Sampling
- Staff Monthly Activity Reports
Where do we even begin?
Data Source Best Practices

Reliable & Valid
- Standardized protocols
- Trained data gatherers

Actionable & Relevant
- Available across all schools
- Integrated into daily routines

Frequent & Timely
- Collected, analyzed, and reported in a frequent & timely manner

From Ward (2015)
Identifying Indicators

**INPUTS**
- School Staff
- Support Staff
- Partners
- Families and Communities
- District Support
- BHS Staff
- CBHM Coaches

**OUTPUTS**
- What?
  - School Based PD
  - Screening
  - Progress Monitoring
  - Social Emotional Learning
  - Data Based Problem Solving Teams
  - Coaching
  - CBHM School Staff
  - Teachers/Students
  - Teachers
  - CBHM School Staff Partners
  - Families
  - CBHM School Staff

**OUTCOMES**
- SHORT Term
  - Change in CBHM School Staff Knowledge
- MEDIUM Term
  - Change in CBHM School Staff Behavior
- LONG Term
  - Academic and Social Competence
  - Safe & Supportive Learning Environments
  - High Quality, Equitable Behavioral Health Services

**PROCESS Questions**

**FIDELITY Questions**
<table>
<thead>
<tr>
<th>Output</th>
<th>Indicator</th>
<th>Source</th>
<th>Aim for CBHM Fidelity</th>
<th>Timeline for Data Entry Update</th>
<th>Do I Have Access?</th>
<th>Where is Data Located? (File Name &amp; Person w/Access)</th>
<th>Action Steps</th>
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</table>
| Universal Screening    | % of students BIMAS screened                  | BIMAS  | >80% of students        | • UA 1 – 10/1 - 12/15          | Yes               | “BIMAS Data Inventory” in Research folder (All Research Team) | □ Enter data into database (Amy)  
indi access to BIMAS data (Jill)  
□ Update BIMAS Data Inventory document monthly (Amy) |
## Organizing Data Sources into an Evaluation Plan: District Level Outputs

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<tbody>
<tr>
<td>Data Management and Accountability</td>
<td>% of schools using BIMAS universal screening (&gt;80% screened)</td>
<td>BIMAS</td>
<td>100% of CBHM schools</td>
<td>UA 1 – 10/1 - 12/15</td>
<td>Yes</td>
<td>“BIMAS Data Inventory” in Research folder (All Research Team)</td>
<td>□ Enter data into database (Amy) □ Amy access to BIMAS data (Jill) □ Update BIMAS Data Inventory document monthly (Amy)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>UA 2 – 3/1 - 5/15</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Identifying Indicators

#### INPUTS
- School Staff
- Support Staff
- Partners
- Families and Communities
- District Support
- BHS Staff
- CBHM Coaches

#### OUTPUTS
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#### OUTCOMES
- **SHORT Term**
  - Change in CBHM School Staff Knowledge
- **MEDIUM Term**
  - Change in CBHM School Staff Behavior
- **LONG Term**
  - Academic and Social Competence
  - Safe & Supportive Learning Environments
  - High Quality, Equitable Behavioral Health Services

#### OUTCOMES Questions
Identifying Indicators

### OUTCOMES (SCHOOL LEVEL)

<table>
<thead>
<tr>
<th><strong>SHORT TERM</strong></th>
<th><strong>MEDIUM TERM</strong></th>
<th><strong>LONG TERM</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased staff knowledge of social emotional development &amp; behavioral health</td>
<td>Integrated academic and social-emotional learning</td>
<td>Improved student academic performance</td>
</tr>
<tr>
<td>Increased staff knowledge of best practices in addressing student behavioral health needs</td>
<td>Data-based decision-making</td>
<td>Increased positive behaviors</td>
</tr>
<tr>
<td>Increased confidence in addressing student behavioral health needs</td>
<td>Targeted supports and services</td>
<td>Improved school climate</td>
</tr>
<tr>
<td></td>
<td>Community partnerships</td>
<td>Improved student academic engagement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increased school capacity to provide services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improved access to services</td>
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</table>
Identifying Indicators

OUTCOMES

SHORT TERM
- Increased staff knowledge of social emotional development & behavioral health
- Increased staff knowledge of best practices in addressing student behavioral health needs
- Increased confidence in addressing student behavioral health needs

PD Evaluations

MEDIUM TERM
- Integrated academic and social-emotional learning
- Data-based decision-making
- Targeted supports and services
- Community partnerships

Tiered Fidelity Inventory
Monthly Clinician Reports
Partnership Report

LONG TERM
- Improved student academic performance
- Increased positive behaviors
- Improved school climate
- Improved student academic engagement
- Increased school capacity to provide services
- Improved access to services

MCAS
BIMAS
School Climate Survey
Attendance
FTEs; Monthlies
### Organizing Data Sources into an Evaluation Plan: School Level Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Indicator</th>
<th>Source</th>
<th>Aim for CBHM Fidelity</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Increased staff knowledge</td>
<td>% of school staff agreeing with satisfaction survey items</td>
<td>PD Satisfaction Surveys</td>
<td>&gt;80%</td>
<td>After workshops</td>
<td>No</td>
<td>BHS Files (BHS Staff)</td>
<td>□ Obtain data for quarterly reports</td>
</tr>
</tbody>
</table>
If I'd known they wanted me to use all this info— I would never have asked for it!
Getting Ready
If we organize for success

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...And collect and analyze data to help us answer those questions

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Cycle of Inquiry

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Regular Review of Data with Research Committee
## Data Review

<table>
<thead>
<tr>
<th>MONTHLY</th>
<th>QUARTERLY</th>
<th>ANNUALLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Thermometer of clinical activities</td>
<td>• Report of key outputs and outcomes to EWG</td>
<td>• Report of overall outputs and outcomes to EWG &amp; stakeholders</td>
</tr>
</tbody>
</table>
Data Review: Monthly Thermometer

Behavioral Health Services Monthly Report: September 2015

Boston Public Schools
*For this report, data is based on only School Psychologists (FTE=54)

- **Student Support!**
  - Number of Students Served in Tier II Groups: 64
  - Assessments: 206
  - IEP Counseling & Consultations: 388
  - IEP/504 Meetings: 100

- **Consultations!**
  - FBA/BIP: 106
  - Administration: 177
  - Parents: 132
  - Community Partners: 63

- **Crises!**
  - School-Based Crises: 79
  - Suicide Risk Assessments: 7
  - Threat Assessments: 7

- **Prevention!**
  - Number of PD Facilitated: 24

- **School-Wide Teams!**
  - ILT: 4
  - SST: 96
  - Grade-Level: 26
  - Climate/PRI: 47
  - Other: 44
Data Review: Annual Report

- Reporting at 3 levels:

**BPS Comprehensive Behavioral Health Model**

*Mission:* Ensuring that all students have a safe and supportive school where they can be successful

- **Students**
  - Universal screening and positive skill instruction
  - Access to targeted supports and services

- **Schools**
  - Integrated academic and socio-emotional learning
  - Professional development on evidence-based interventions

- **District**
  - Data management and accountability
  - Partnerships with families and community agencies

**Essential Components**

- Collaboration with and support for families
- Aligned district initiatives and policies
- Data-based decision making
- Appreciation for diversity

- Consultation and collaboration
- School and district leadership
- Student-centered
- Differentiated instruction

**Theory of Change:** Integrating behavioral health services into schools will create safe and supportive learning environments that optimize academic outcomes for all students.

*Guided by Massachusetts Department of Elementary and Secondary Education’s Behavioral Health Framework*
CBHM STUDENT Outcomes

Cohort 1:
Decrease in Problem Behaviors

- Conduct
- Negative Affect
- Cognitive/Attention

50th Percentile
Cohort 1: Increase in Positive Behaviors

CBHM STUDENT Outcomes

50th Percentile

BIMAS Average T-Score

- Social
- Academic Functioning
CBHM STUDENT Outcomes

Cohort 1:
Increase in Academic Outcomes

MCAS Average Scaled Score

2012 2013 2014

ELA MATH

PROFICIENT
CBHM **STUDENT** Outcomes

- Compared Fall 2013 with Fall 2014
- All CBHM Students with data available for both screenings (n=738)

**Findings:**

- **Statistically Significant** increase in average BIMAS Social Scale T-Score ($p<.01$)
- **Nearly significant** decrease in average BIMAS Conduct Scale T-Score ($p=.063$)
Cohort I: Attendance Rates at CBHM Schools Compared to District

Source: DESE, SY 13-14
CBHM Implementation Fidelity: SY 2013-14 *(Fidelity For Now)*
SCHOLARLY PURSUITS:
• Book Chapter
• Articles
• Professional Presentations
• Journal Articles
• Grant Submissions
• TV Interviews
Examples: District Level Data-Based Decision Making

• Data Retreats
  – August & October 2014
  – Review of annual report data
  – Lack of clarity surrounding what might be prompting improved outcomes

• Need for more consistent fidelity data
  – **End of 2014-15**: Use of SWPBIS Tiered Fidelity Inventory (Algozzine et al., 2014) introduced
Examples: District Level Data-Based Decision Making

• April 2015 Quarterly Report Review
  – Screening data
  – Remains low despite significant increases in #
  – Pattern of drop off in the spring

• How can we help improve screening completion rates?

• Research question:
  – What is getting in the way of screening completion?

• Further exploration into this question to come
Conclusions: Successful Strategies and Tools

Network, network, network.

Organize and delegate.

Write it down.

Share your data.

Community Partnerships
Data Accountability Office

Data Evaluation Research

Evaluation Plan
Evaluation Timeline
Report Templates
Research Procedures

Frequency of Sharing Data

Sustainability
McIntosh et al. 2014
• CBHM Research Committee
• CBHM Executive Work Group
• UMass Boston Practicum Students
• Boston Children’s Hospital Evaluation Team
• Behavioral Health Services Staff at Boston Public Schools
• CBHM School staff, students, and families
Questions? Comments?
Questions? Comments? Contact...

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  amy.kaye@childrens.harvard.edu

- Jill Snyder
  jsnyder2@bostonpublicschools.org


