



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 LanguageLearners
  - >100 languages spoken

Race	% of District
African American	33.6
Asian	8.5
Hispanic	40.9
Native American	0.3
White	13.8
Native Hawaiian, Pacific Islander	0.2
Multi-Race, Non- Hispanic	2.7

(MDESE, 2015)



### **Boston Public Schools Context**

#### Need for services

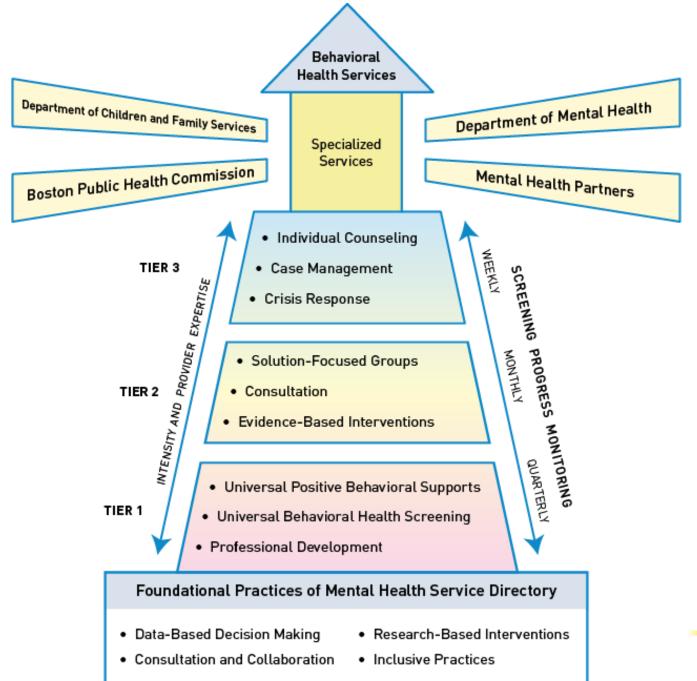
- 1 in 5 students with disabilities (MDESE, 2015)
- 1 in 4 Boston children have experienced at least 1 adverse childhood event (врнс, 2013)

#### Limited resources

- 57 school psychologists for >120 schools
- 35% of schools have limited or no behavioral health partners (<.5 FTE)</li>



# ealth Mode Comprehensive <u>ე</u> **(1)**





## **CBHM Implementation**

Launch: 2012-2013 school year

10 schools per year

• Current: 40 schools

Executive Work Group Formation



### **CBHM EVALUATION**

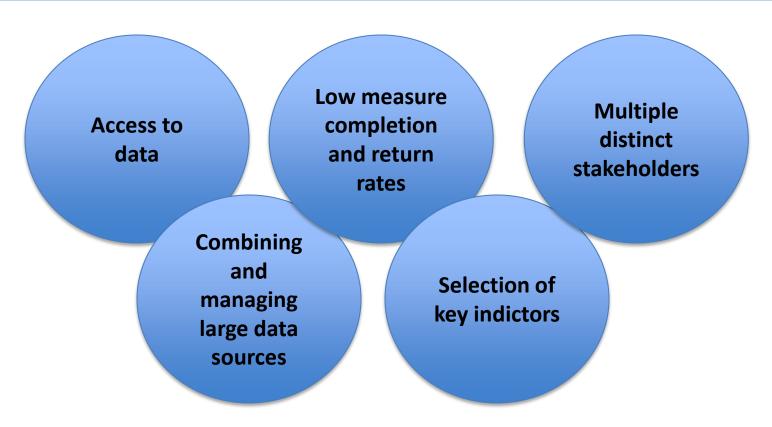


# School-Based Behavioral Health Evaluation

- Historically, limited evaluation efforts
- Consistently identified as an area in need of critical attention



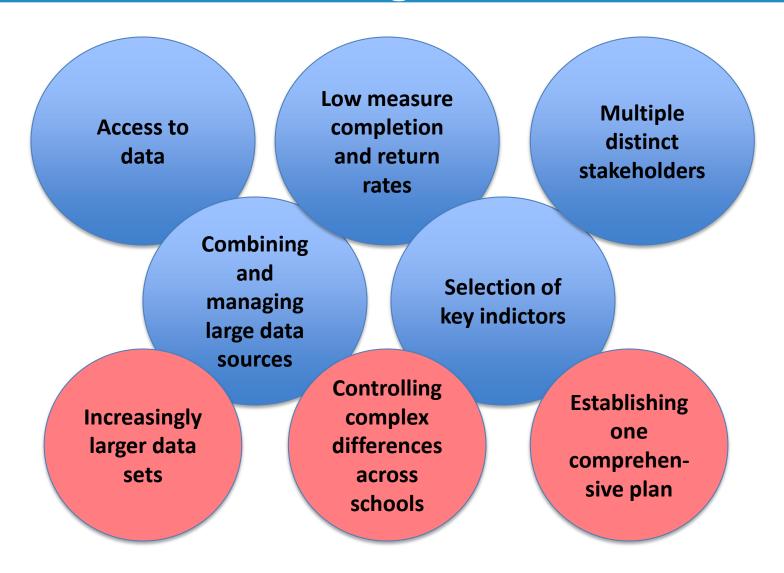
# School-Based Behavioral Health Evaluation Challenges



(Nabors, 2003)



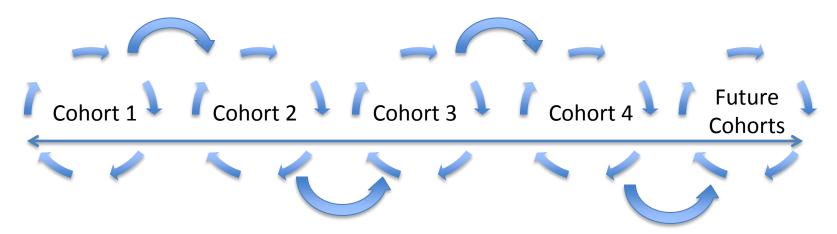
# School-Based Behavioral Health Evaluation Challenges: District Models





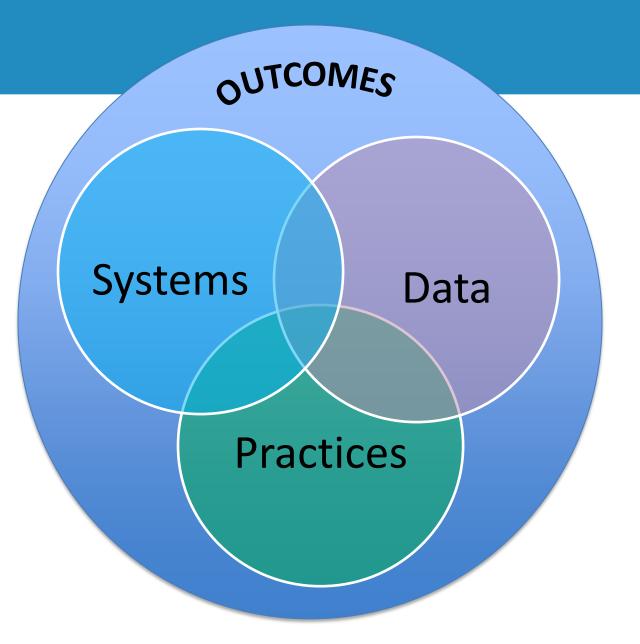
### **Evaluation Goals**

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





# MTSS





# **CBHM** Systems **Practices** Partnerships Data **OUTCOMES**







# **CBHM**

# **Executive Work Group**

Research

Communications

Implementation

Family Engagement

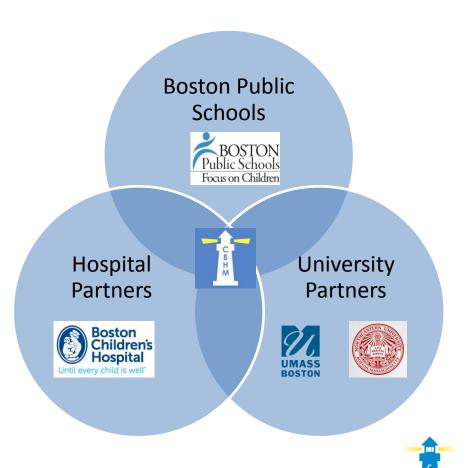
**Partners** 



# CBHM Research Committee: Organization

#### WHO?

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



# CBHM Research Committee: Organization

#### WHAT?





# CBHM Research Committee: Organization

#### WHEN?

Data

• Lead: BPS & UMass Practicum Student Team

Weekly

Evaluation

• Lead: BPS & BCH Evaluation Team

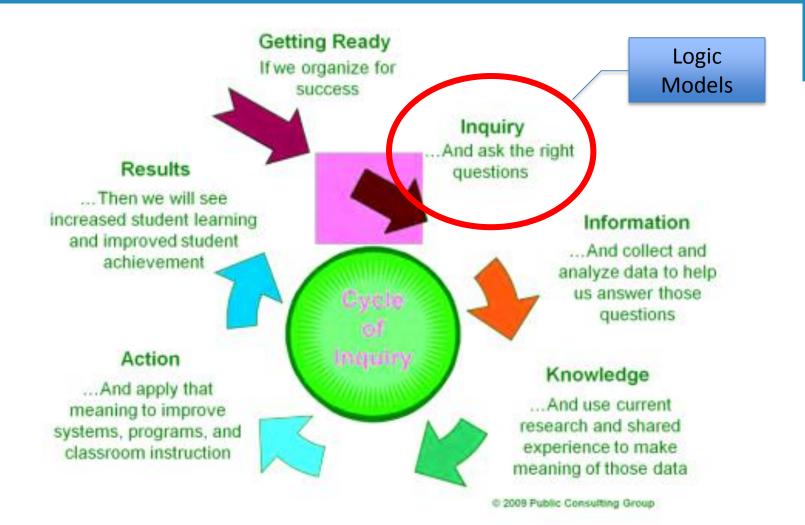
Every other month

Research

All Partners

Every other month







- 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



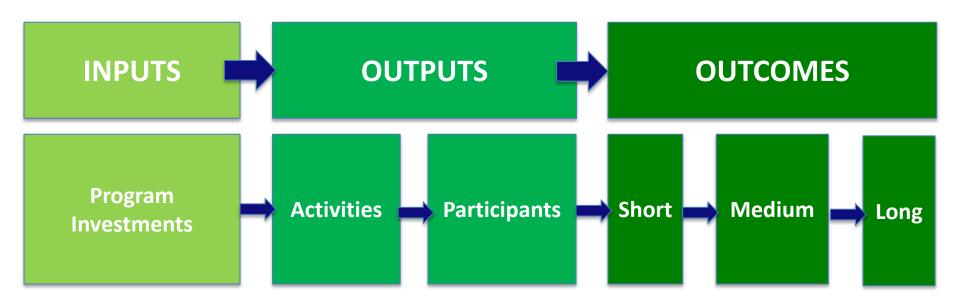


- Benefits:
  - Accountability for what matters
  - Common language
- Integrate:
  - Planning
  - Implementation
  - Evaluation
  - Reporting









What we invest

What we do

Who we reach

What are the results

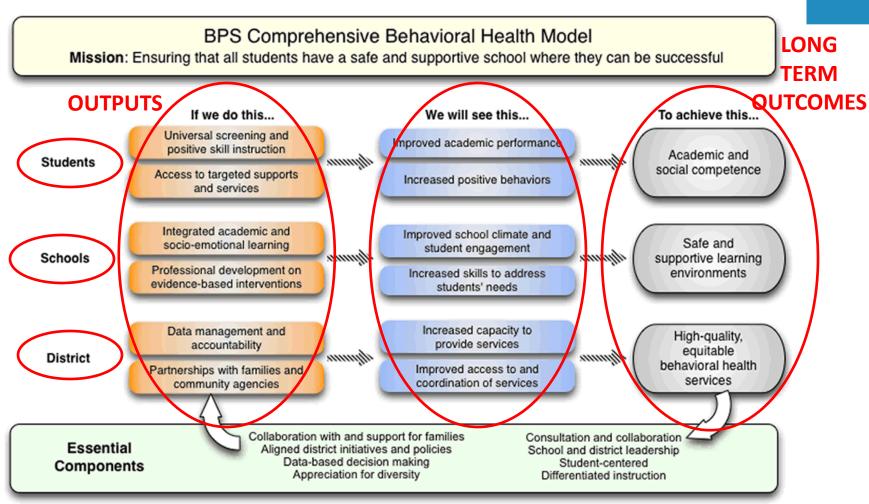


#### Program Action - Logic Model Outputs Outcomes - Impact Inputs Activities Participation Short Term Medium Term Long Term What we do Who we reach What we What the What the What the Priorities medium term invest short term ultimate Participants. Situation Conduct Consider: results are results are impact(s) is workshops. Staff Mission Clients Needs and meetings Learning Action Vision. Conditions Volunteers assets Deliver. Agencies Behavior Values Awareness services Social Time Symptoms Decision-Mandates Develop Knowledge Practice makers Economic versus products. Money. Resources problems Attitudes Decisioncurriculum. Civic Customers **Local dynamics** Research base resources making Stakeholder Skills Collaborators Environmental Train **Materials** Policies. engagement Competitors Opinions Provide Satisfaction Equipment. counseling Social Action Intended Aspirations outcomes Assess Technology Facilitate Motivations Partner Partners. Work with media Assumptions **External Factors**

#### Evaluation

Focus - Collect Data - Analyze and Interpret - Report

## CBHM Logic Model: Theory



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

CBHM
implementation
began by building
capacity and
expertise among
BHS Staff

**INTERVENTION** 

#### **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:** District Evaluation

**INPUTS** 

**OUTPUTS** 

**OUTCOMES** 

CBHM Coaches

Boston Children's Hospital

**BHS Staff** 

**Partners** 

CBHM Committees

Executive Workgroup

What?	Who?
PD	BHS Staff
Coaching	BHS Staff
Coordination of MH Partnerships	Partners
Workshops for Parents on MTSS	BPS Families and Communities
Developing Resources & Guidelines for CBHM Implementation	CBHM School Staff
Coordination of BPS Practicum and Intern Students	CBHM School Staff

SHORT Term MEDIUM Term LONG Term

Change in BHS Staff Knowledge Change in BHS Staff Behavior Development of Highly Effective MTSS Leaders





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framework

**INTERVENTION** 

**INTERVENTION** 



## **CBHM: School Evaluation**

**INPUTS OUTPUTS OUTCOMES SHORT** MEDIUM LONG What? Who? Term Term Term School Staff School Based PD **CBHM School Staff Support Staff** Screening Teachers/Students Academic **Partners** and Social **Progress** Teachers/Students Competence Families and Monitoring Communities Safe & Social Emotional **Teachers** Change in Change in Supportive District Learning **CBHM** Learning CBHM Support Environments **School Staff** School Staff **CBHM School Staff** Data Based Knowledge Behavior **BHS Staff Problem Solving Partners** High Quality, Teams **Families** Equitable **CBHM** Behavioral Coaching **CBHM School Staff** Coaches Health Services



### **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?

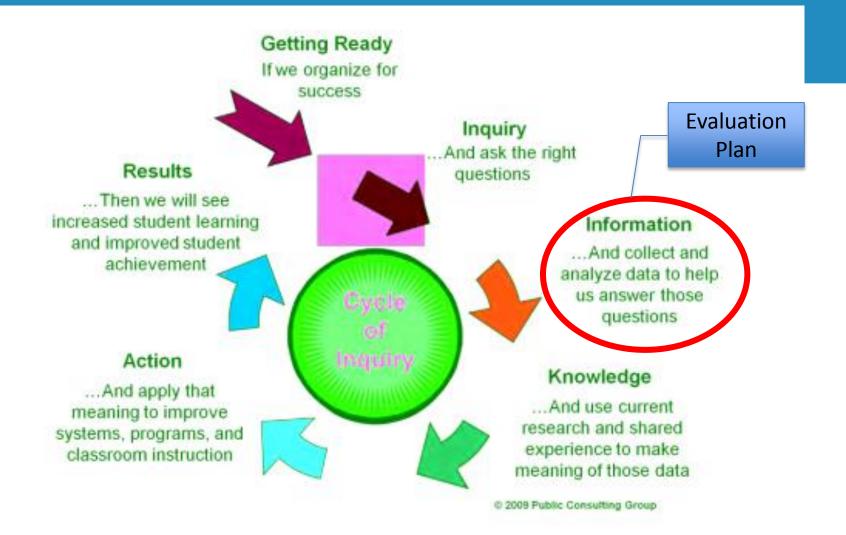
#### **OUTCOMES QUESTIONS**

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?







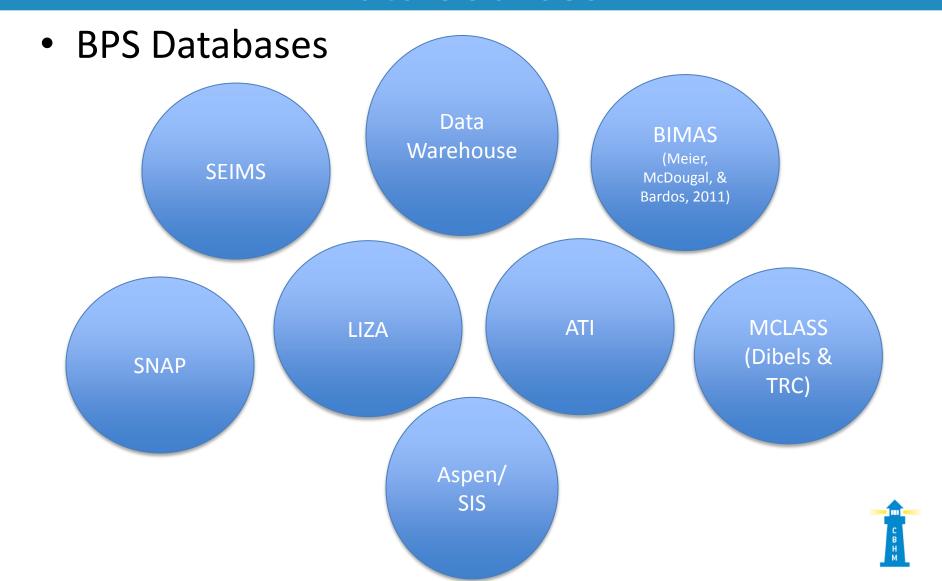
### **Evaluation Plan Considerations**

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



### Navigating Access to District Databases

**BOSTON PUBLIC SCHOOLS** SY2016 Organizational Chart

September 30, 2015

Deputy Supt. Strategy Donna Muncey

Equity

Monica Roberts

Turnaround Liza Veto

Expanded Learning Time/Summer School

**Partnerships** Jonathan Sproul

Library Services

Assistant Supt. Professional Learning Doannie Tran

Subject Matter Specialists: English Language Arts

Oneida Fox-Roye History and Social Studies Kerry Dunne

Mathematics Linda Ruiz Davenport

Science, Technology & Engineering Pamela Pelletier

World Languages Julie Caldarone

Interdisciplinary Writing Annemarie Powers

> Achievement Gap TBD

Early Education Jason Sachs

Myran Parker-Brass

Mayor of the City of Boston

**Boston School Committee** Michael O'Neill, Chair

> Superintendent Tommy Chang

Senior Deputy Superintendent Barbara Deane-Williams

Admin. of Operations Sam DePina Ed Lee Al Taylor Norman Townsend

Facilities

Khadiiah Brown

Transportation

Jonathan Steketee

Enrollment/School

Assignments

Jerry Burrell

Food Services

Deborah Ventricelli

Safety

Eric Weston

Athletics

Avery Esdaile

[Sam DePina]

Technology Mark Racine

Labor Relations

Karen Glasgow

Master Planning

TBD

Assistant Supt. Operations Kim Rice

High School Support

Legal Advisor

Alissa Ocasio

Principal Leaders

Mary Driscoll

Marice Edouard-Vincent

Kelly Huna

Jonathan Landman

Christine Landry

Alexandra Montes McNeil

Anthony Pope

Tommy Welch

**Educational Options** 

Freddie Fuentes

lanice Manfredi Marsha Inniss-Mitchell Catherine Chiu

Career & Technical Education

Adult Education Maria Harris

Chief of Staff Makeeba McCreary

Communications Richard Weir

Ombudsperson Carolyn MacNeil

Project Management & Advancement Danielle Crystal

Special Assistant Barbara Connolly

Deputy Supt. Student Support Services Karla Estrada

Special Education Cindie Neilsen, Interim

**English Learners** Frances Esparza

Social Emotional Learning & Wellness TBD

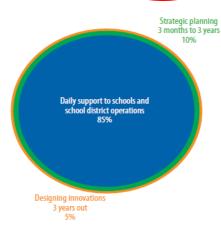
**Executive Director** Finance Eleanor Laurans

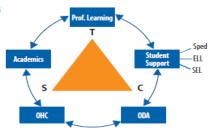
Deputy Exec. Director Finance Nate Kuder

Budget David Bloom

**Business Services** Ed Glora

Grant Management Anu Medappa

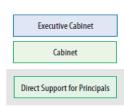




Managing Partner

Innovation

Ross Wilson



Human Capital

Data & Accountability Nicole Wagner

School/Community

Deborah Lang Froggatt

Autonomy TBD

Strategy Marcela Mahecha

# Evaluation Plan: Data Sources

• BHS Data Sources Professional Development Workshop Tiered **Evaluations** Staff **Fidelity** Monthly Inventory Activity (Algozzine et al., Reports 2014) **BCH** Time Community Sampling Partnership Report



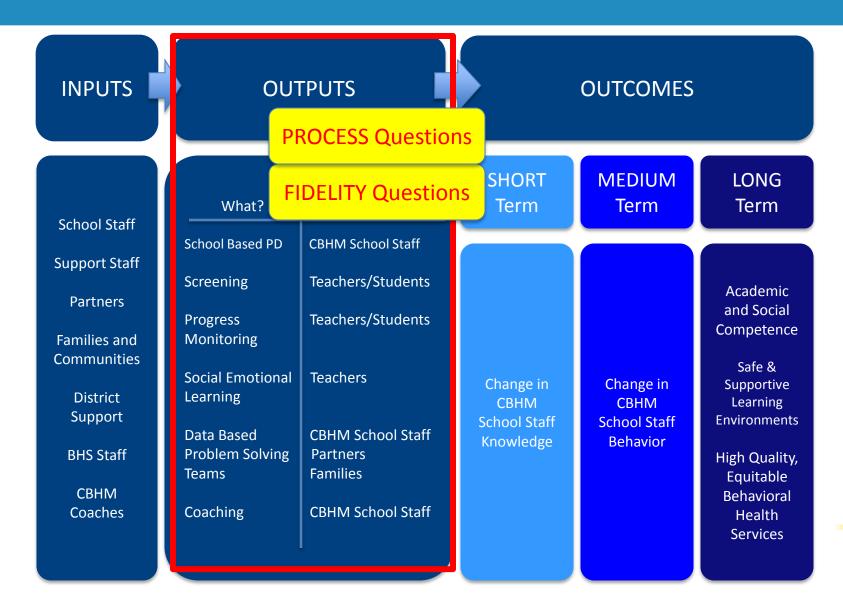
## Where do we even begin?



### Data Source Best Practices

#### Reliable & Valid Actionable & Relevant Standardized Frequent & Timely protocols Available across all schools Collected, analyzed, and reported in a Trained data frequent & timely gatherers Integrated into daily manner routines







# Organizing Data Sources into an Evaluation Plan: School Level Outputs

Output	Indicator	Source	Aim for CBHM Fidelity	Timeline for Data Entry Update	Do I Have Access?	Where is Data Located? (File Name & Person w/Access)	Action Steps
Universal Screening	% of students BIMAS screened	BIMAS	>80% of students	UA 1 – 10/1 - 12/15 UA 2 – 3/1 - 5/15	Yes	"BIMAS Data Inventory" in Research folder (All Research Team)	□ Enter data into database (Amy) □ Amy access to BIMAS data (Jill) □ Update BIMAS Data Inventory document monthly (Amy)



# Organizing Data Sources into an Evaluation Plan: District Level Outputs

Output	Indicator	Source	Aim for CBHM Fidelity	Timeline for Data Entry Update	Do I Have Access?	Where is Data Located? (File Name & Person w/Access)	Action Steps
Data Management and Accountability	% of schools using BIMAS universal screening (>80% screened)	BIMAS	100% of CBHM schools	UA 1 – 10/1 - 12/15 UA 2 – 3/1 - 5/15	Yes	"BIMAS Data Inventory" in Research folder (All Research Team)	□ Enter data into database (Amy) □ Amy access to BIMAS data (Jill) □ Update BIMAS Data Inventory document monthly (Amy)



**INPUTS OUTPUTS OUTCOMES SHORT MEDIUM** LONG What? Who? Term Term Term **School Staff** School Based PD **CBHM School Staff Support Staff** Screening Teachers/Students Academic **Partners** and Social **Progress** Teachers/Students Competence Families and Monitoring Communities Safe & Social Emotional **Teachers** Change in Change in Supportive District Learning **CBHM** Learning CBHM Support **Environments School Staff** School Staff **CBHM School Staff** Data Based Knowledge Behavior **BHS Staff Problem Solving Partners** High Quality, Teams **Families** Equitable **CBHM Behavioral** Coaching **CBHM School Staff** Coaches Health **OUTCOMES Questions** Services



#### **OUTCOMES (SCHOOL LEVEL)**

#### **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

#### **MEDIUM TERM**

Integrated academic and socialemotional learning

Data-based decision-making

Targeted supports and services

Community partnerships

#### **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



#### **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

#### **MEDIUM TERM**

Integrated academic and socialemotional 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

**MCAS** 

*Increased positive behaviors* 

BIMAS

Improved school climate

School Climate Survey

Improved student academic engagement

Attendance

Increased school capacity to provide services

*Improved access to services* 

FTEs; Monthlies



**PD Evaluations** 

# Organizing Data Sources into an Evaluation Plan: School Level Outcomes

Outcome	Indicator	Source	Aim for CBHM Fidelity	Timeline for Data Entry Update	Do I Have Access?	Where is Data Located? (File Name & Person w/Access)	Action Steps
Increased staff knowledge	% of school staff agreeing with satisfaction survey items	PD Satisfaction Surveys	>80%	After workshops	No	BHS Files ( <b>BHS Staff</b> )	□ Obtain data for quarterly reports



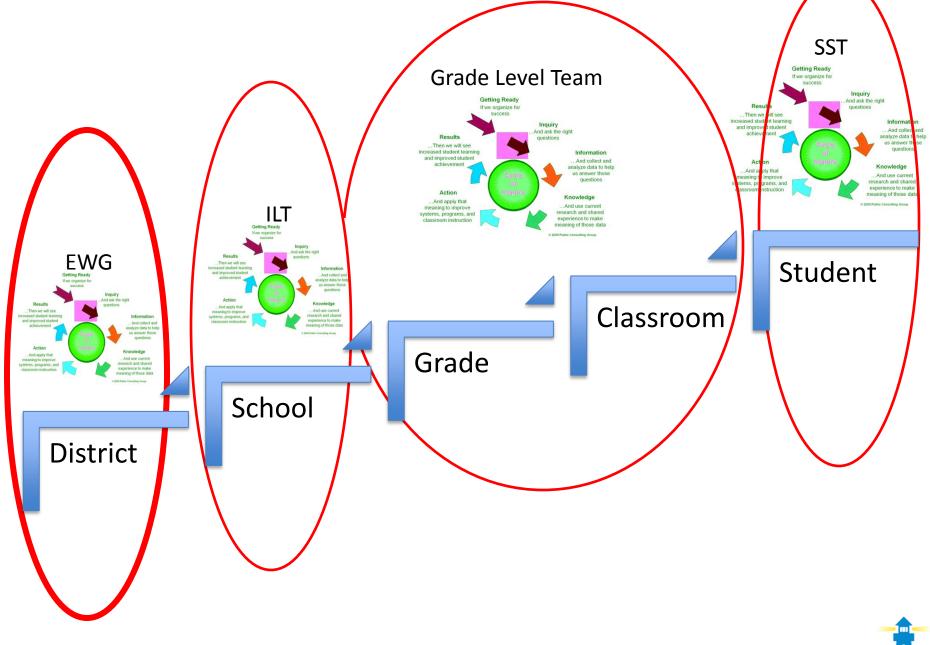






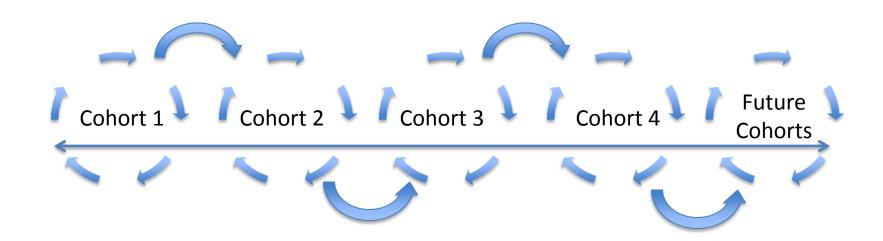
Regular Review of Data with Research Committee

C B H M





# District Level Data-Based Decision Making





## Data Review

MONTHLY	QUARTERLY	ANNUALLY
Thermometer of clinical activities	<ul> <li>Report of key outputs and outcomes to EWG</li> </ul>	<ul> <li>Report of overall outputs and outcomes to EWG &amp; stakeholders</li> </ul>



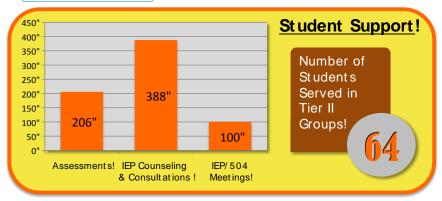
# Data Review: Monthly Thermometer

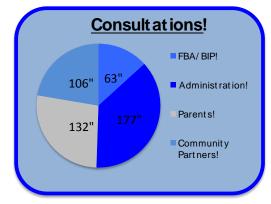


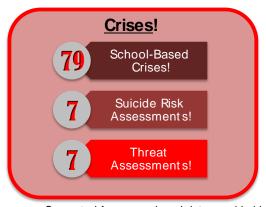
Behavioral Health Services Monthly Report: September 2015

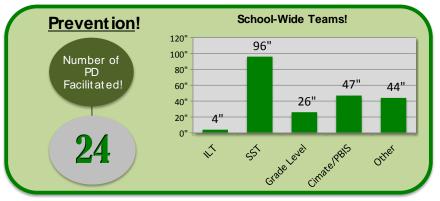
Boston Public Schools

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





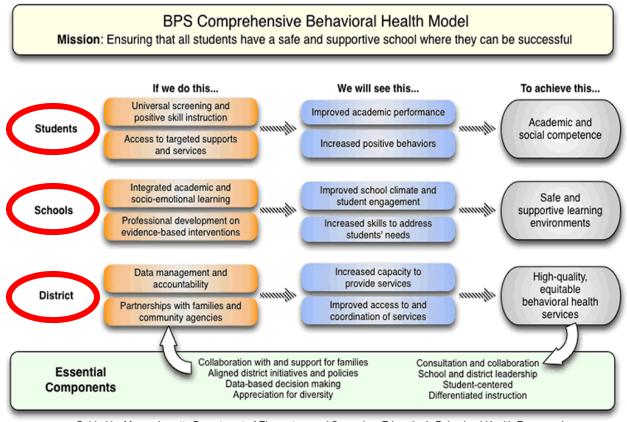






# Data Review: Annual Report

Reporting at 3 levels:

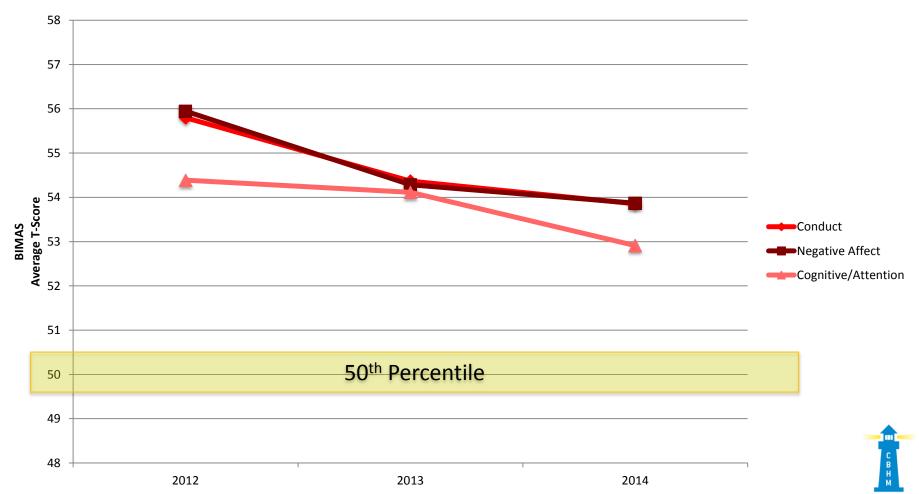


Guided by Massachusetts Department of Elementary and Secondary Education's Behavioral Health Framework

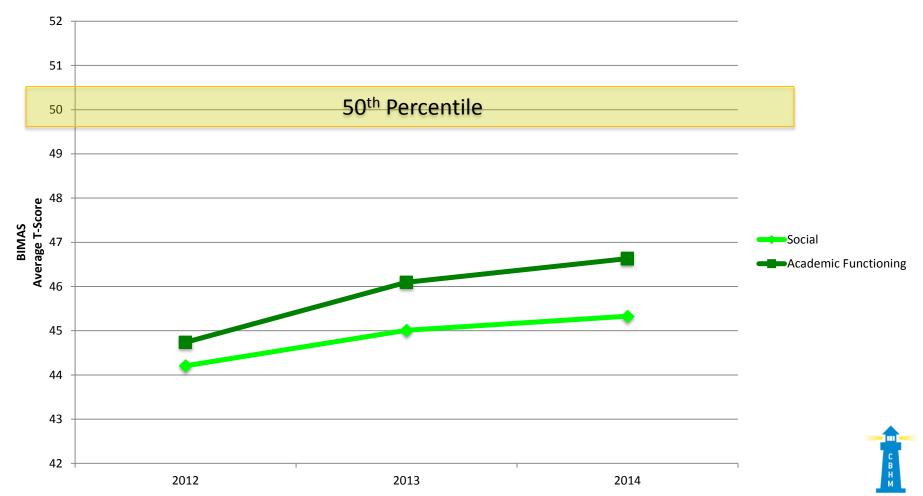
Theory of Change: Integrating behavioral health services into schools will create safe and supportive learning environments that optimize academic outcomes for all students.



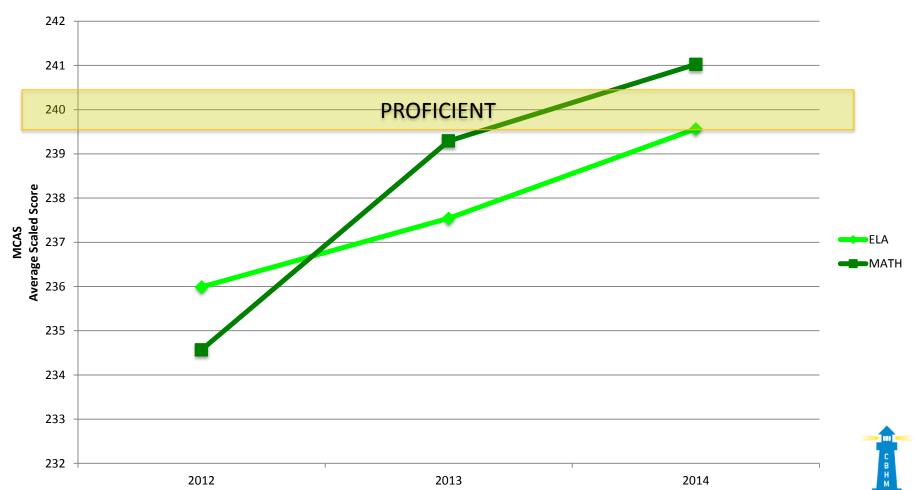
**Cohort 1:** Decrease in Problem Behaviors



**Cohort 1: Increase in Positive Behaviors** 



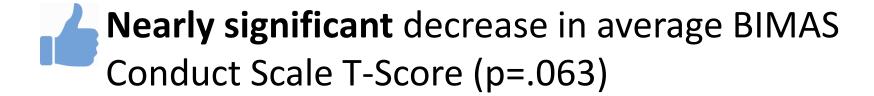
**Cohort 1: Increase in Academic Outcomes** 



- 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)

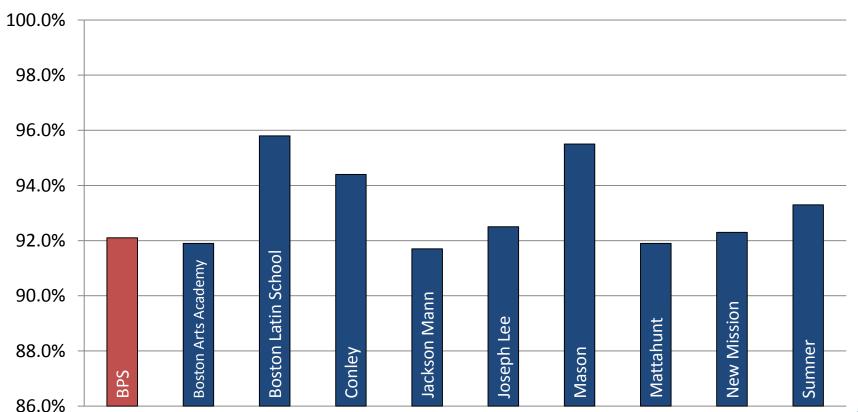




### CBHM SCHOOL Outcomes

**Cohort I: Attendance Rates at CBHM Schools Compared to District** 

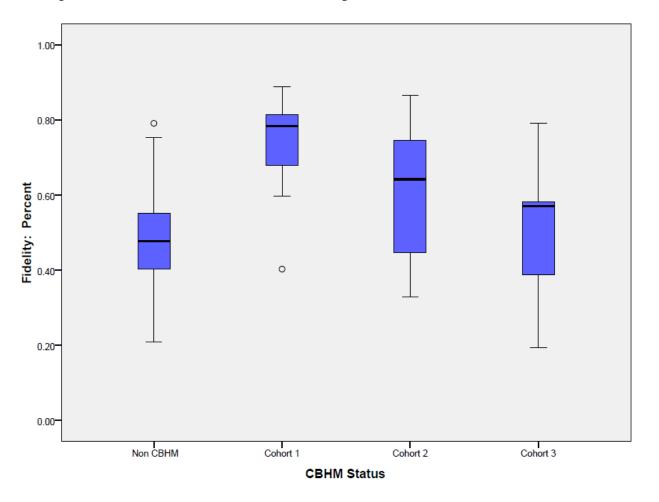
Source: DESE, SY 13-14





### CBHM SCHOOL Outcomes

#### **CBHM Implementation Fidelity: SY 2013-14** (Fidelity For Now)





### CBHM DISTRICT Outcomes

#### **SCHOLARLY PURSUITS:**

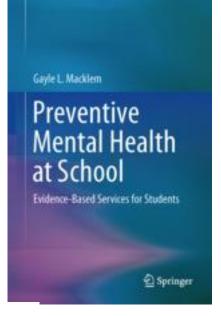
- Book Chapter
- Articles
- Professional Presentations
- Journal Articles
- Grant Submissions
- TV Interviews















# Examples: District Level Data-Based Decision Making

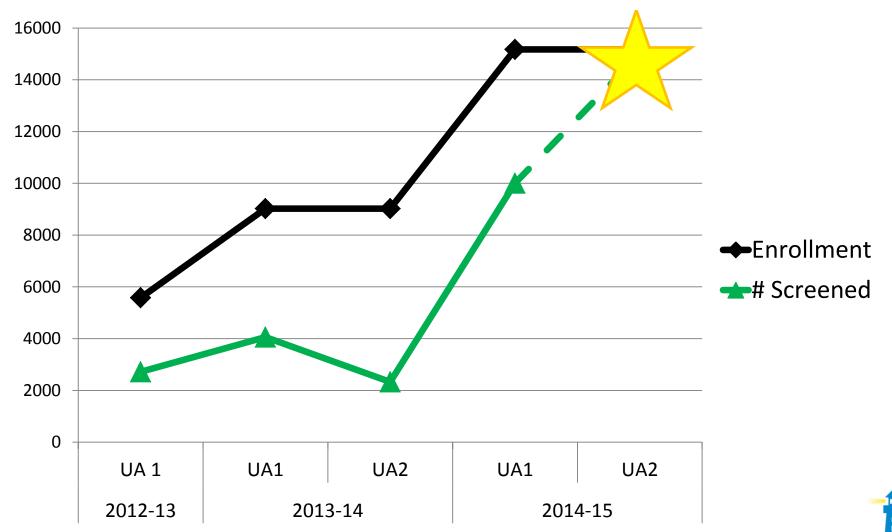
- Data Retreats
  - August & October 2014
  - Review of annual report data
  - Lack of clarity surrounding what might be prompting improved outcomes
- Need for more consistent fidelity data
  - End of 2014-15: Use of SWPBIS Tiered Fidelity
     Inventory (Algozzine et al., 2014) introduced



# 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

## **BIMAS Completion Rates**





# Conclusions: Successful Strategies and Tools









Network, network, network.

Community Partnerships Data Accountability Office Organize and delegate.

Data Evaluation Research Write it down.

Evaluation Plan
Evaluation Timeline
Report Templates
Research Procedures

# Share your data.

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...

www.cbhmboston.com

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Jill Snyder
 jsnyder2@bostonpublicschools.org



### References

- Algozzine, B., Barrett, S., Eber, L., George, H., Horner, R., Lewis, T., Putnam, B., Swain-Bradway, J., McIntosh, K., & Sugai, G. (2014). *School-wide PBIS Tiered Fidelity Inventory*. OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports. <a href="https://www.pbis.org">www.pbis.org</a>.
- Boston Public Health Commission, Research and Evaluation Office (2013). *Health of Boston's Children:* Parent and Caregiver Perspectives. Retrieved from <a href="http://www.bphc.org/healthdata/">http://www.bphc.org/healthdata/</a>
- Geier, R., Smith, S., & Tornow, M. (2012, January). *District data teams: A leadership structure for improving student achievement* [White Paper]. Retreived from <a href="http://www.publicconsultinggroup.com/education2/library/white\_papers/">http://www.publicconsultinggroup.com/education2/library/white\_papers/</a>.
- Massachusetts Department of Elementary and Secondary Education (2015). Boston Public Schools District Profile. Retrieved from <a href="http://profiles.doe.mass.edu/profiles">http://profiles.doe.mass.edu/profiles</a>
- McIntosh, K., Kim, J., Mercer, S.H., Stickland-Cohen, M.K., & Horner, R.H. (2015). Variables associated with enhanced sustainability of school-wide positive behavioral interventions and supports. *Assessment for Effective Intervention, 40*(3), 184-191.
- Shakman, K., & Rodriguez, S.M. (2015, April). Logic models for program design, implementation, and evaluation: Workshop toolkit. Institute of Education Sciences.
- University of Wisconsin -Extension (2008). Developing a logic model: Teaching and training guide
  [PowerPoint slides]. Retrieved from
  <a href="http://www.uwex.edu/ces/pdande/evaluation/evallogicmodel.html">http://www.uwex.edu/ces/pdande/evaluation/evallogicmodel.html</a>.
- Ward, C.S. (2014, August). Conduction Implementation Informed Evaluations: Practical Applications and Lessons from Implementation Science [Power Point slides]. Retrieved from:

   www.relmidatlantic.org/pulic\_event/conducting-implementation-informed-evaluations-practical-applications-and-lessons.



