

# Using principles of implementation science and user-centered design in the development of a promising school-based mental health intervention

Kathryn Sabella, PhD



NARRTC Conference

April 2023

# Acknowledgements

The Learning & Working Center at Transitions to Adulthood Center for Research is a national effort that aims to improve the supports for youth and young adults, ages 14-30, with serious mental health conditions to successfully complete their schooling and training and move into rewarding work lives. We are located at the University of Massachusetts Medical School, Worcester, MA, Department of Psychiatry, Implementation Science and Practice Advances Research Center.

The contents of this video were developed under a grant with funding from the National Institute on Disability, Independent Living, and Rehabilitation Research, grant #90IFDV0014. NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this presentation do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government.



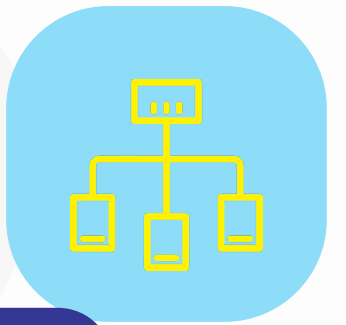
# What is bryt?



# Context

- Rates of adolescent inpatient psychiatric hospitalization are rising
- Mental health challenges, with or w/o hospitalization, are associated with high rates of
  - school absenteeism (i.e., number of absences),
  - school refusal
  - unexcused absences/truancy
  - high school dropout
- Failure to complete high school has long-term negative implications on career trajectory and lifetime earnings

# What is bryt?



Short-term (8-12 week) intensive school-based transition program

Staff:  
Academic Coordinator and Clinical Coordinator

## Care Coordination

Helping students and families navigate mental health, health care, school systems by connecting them with supports. This is not limited to within school and includes problem-solving challenges, and managing a student's exit from the program.

## Academic Support

Supporting students who've fallen behind in meeting standards and learning objectives. Oftentimes this involves negotiated deadlines, modifications to workloads, and adjusted grading options, etc.

## Clinical Support

Setting goals for each student and supporting them with regular check-ins, individual and group counseling, diagnostic evaluations, consultation to staff and teachers, crisis intervention, and therapeutic practices.

## Family Support

Maintaining consistent communication with parents/caregivers and supporting families in accessing services and supports as needed, including bryt's own parent peer-to-peer support network.

**185+**

**Massachusetts  
Programs**

**40**

**Elementary  
Schools**

**140,000+**

**Total Students  
In Districts**

**165+**

**High Schools**

**5,000+**

**Families Served  
Annually**

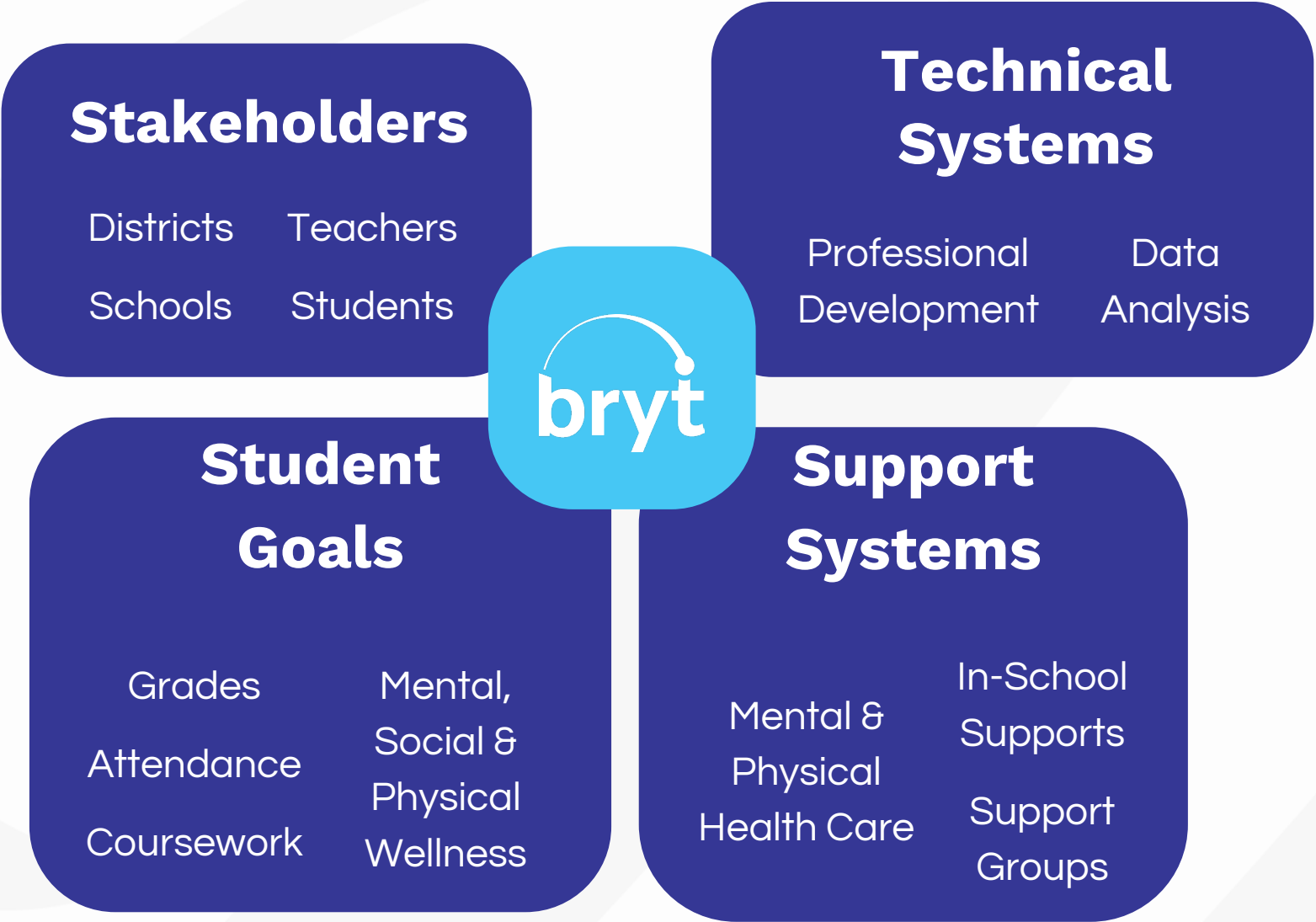
**45**

**Middle  
Schools**

**Expanding  
Nationally**



# Systems Integration

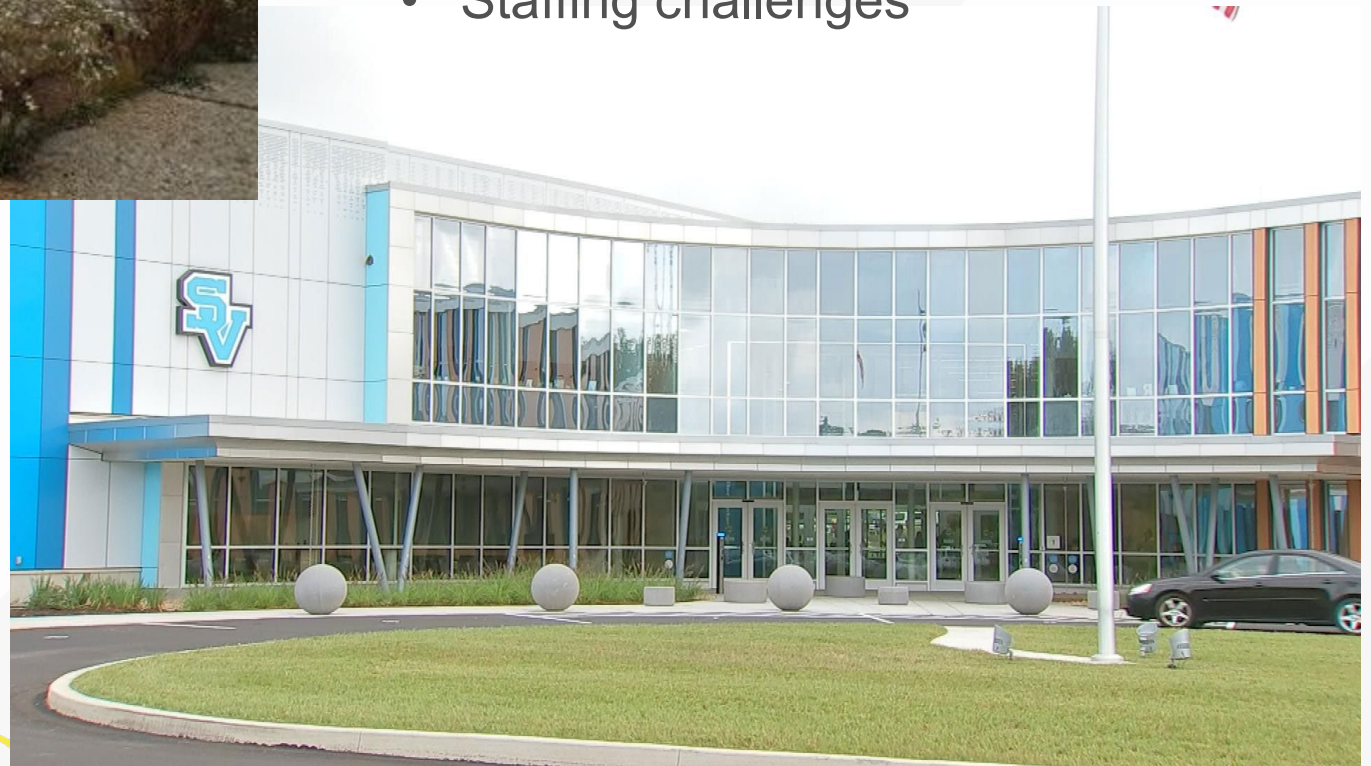




## Public Schools are uniquely contextualized

- Funding disparities
- Communities are highly contextualized
- Racial inequality
- Achievement gaps
- Staffing challenges

bryt currently lacks the specific and standardized tools required to a) implement bryt more broadly and b) evaluate bryt in a future fully powered randomized control trial





# How to further develop and test the bryt program?

1. Partnership between research institution and community-based purveyors of the model
2. User-centered design
3. Principles of Implementation Science

2018: a  
research and  
community-  
based provider  
partnership is  
formed



UMass Chan  
MEDICAL SCHOOL



Transition ARC



# I. Blending of expertise

**Transitions to Adulthood Center for Research (Transitions ACR) at UMass Chan Medical School brings researcher focus:**

- Nationally recognized research, training, and dissemination activities to improve outcomes of young adults (ages 14-30) with mental health conditions
- Experience developing, adapting, and testing developmentally appropriate interventions in a wide variety of settings
- Expertise in implementation science and community based participatory research

**bryt implementation team at Brookline Center for Community Mental Health (MA) brings practitioner focus:**

- Core emphasis on relationships and trust as the heart of effective partnership with schools
- Deep experience and understanding of schools and youth mental health
- Protocols, processes, and skills for program development and staff coaching in schools
- Expertise in professional development for educators and clinicians

# shared understandings and values. . .

- **Urgency of need** for school-based mental health supports for kids
- Research helps **grow and strengthen** an important intervention, rather than dictating what practitioners should do
- Pushing ourselves and each other around **equity and social justice**

# . . . and productive differences

- **Fidelity:** Transitions ACR represents the importance of standardizing; bryt tends toward customizing
- **Implementation vs. Implementation Science:** bryt wants to find and apply solutions quickly; Transitions ACR wants to understand why specific solutions work (and whether they work at scale)

## II. Implementation science

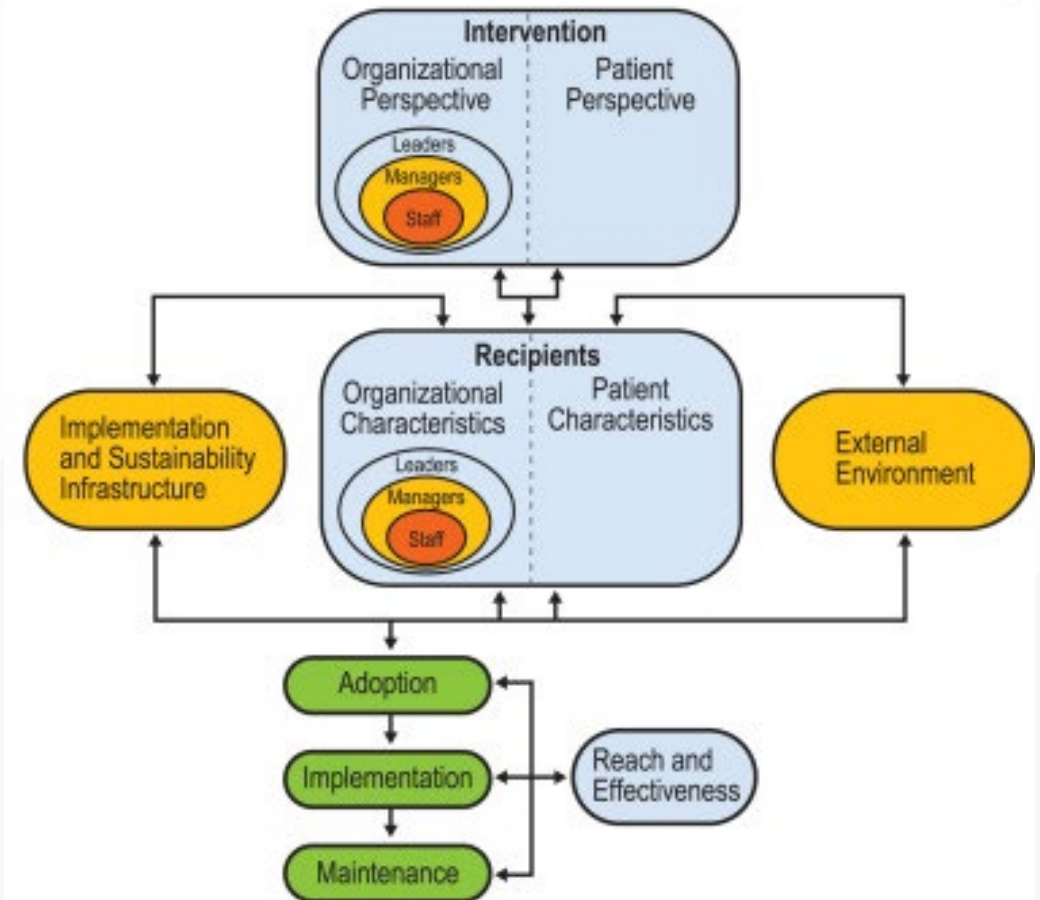
- Developed to help implement and sustain **evidence-based practices (EBPs)** in community settings (e.g. hospitals, clinics, mental health organizations)
- Targets research-to-practice gaps in order for EBPs to achieve similar outcomes in community settings as in research trials
- Increasing use of implementation frameworks and methodologies in **research trials** to
  - help identify practices that aid in achieving superior outcomes
  - to design knowledge translation materials (e.g. manuals and toolkits) that are useful to implement EBPs in real-world settings.



# Implementation Science Framework: PRISM

- External environment, intervention design, implementation and sustainability infrastructure, and the recipients of an intervention influence implementation success.
- Successful intervention implementation depends on the combination and alignment of all of these implementation factors.

## The Practical, Robust Implementation and Sustainability Model (PRISM)



# III. User-centered designs

- User-centered design (UCD) is an iterative design process in which designers focus on the users and their needs in each phase of the design process.
- Participatory approaches ensure end-users are involved throughout development and testing processes
- End-users of bryt =
  - the purveyors of bryt (The Brookline Center)
  - the deliverers of bryt (academic and clinical coordinators)
  - the receivers of bryt (students and families)

# Developing Implementation and Fidelity Monitoring Tools for the bryt Program

NIDILRR Field-Initiated Development Grant (#90IFDV0014, 2020-2023)

C  
O  
V  
I  
D



\*Implementation package to include:  
a bryt intervention logic model  
a bryt implementation package including:  
• a bryt manual  
• bryt training & technical assistance plans  
• quality assurance measures and protocols

Our bryt Manual is currently in end-user review



# Next steps of our partnership

- Research: Funding for a hybrid implementation/effectiveness randomized control trial
- Program: Continue to broaden implementation within and beyond Massachusetts, with a particular emphasis on low-income communities and schools with higher proportions of BIPOC students
- Program and Research: Obtain a better understanding of the implementation of bryt through a diversity, equity, and inclusion lens
- Program and Research: Collaborative manuscripts and dissemination activities

# Conclusion

Meaningful partnership between a research institution like UMass Chan and the community-based bryt implementation team  
plus  
and the grounding of our development and research activities in implementation science  
plus  
user-centered design

=

Ability to broaden implementation of bryt in more diverse settings  
plus  
Ready bryt for rigorous testing needed to potentially establish it as an evidence-based practice

# Implementation Science Resources

- Nilsen, P. (2020). Making sense of implementation theories, models, and frameworks. *Implementation Science* 3.0, 53-79.
- National Implementation Research Network: <https://nirn.fpg.unc.edu/>

# Thank you!

[Kathryn.Sabella@umassmed.edu](mailto:Kathryn.Sabella@umassmed.edu)

[Paul\\_hyry-dermith@brooklinecenter.org](mailto:Paul_hyry-dermith@brooklinecenter.org)