TRAILS

Transforming Research into Action to Improve the Lives of Students

The TRAILS Dashboard: A Web Application to Measure Outcomes and Monitor Fidelity of Evidence-Based Mental Health Practices

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The American Psychological Foundation

Agenda

- School mental health overview
- TRAILS program overview
- Development of the TRAILS Dashboard
- Piloting for an NIMH R01
- Future Directions

Prevalence of Mental Illness in Adolescents

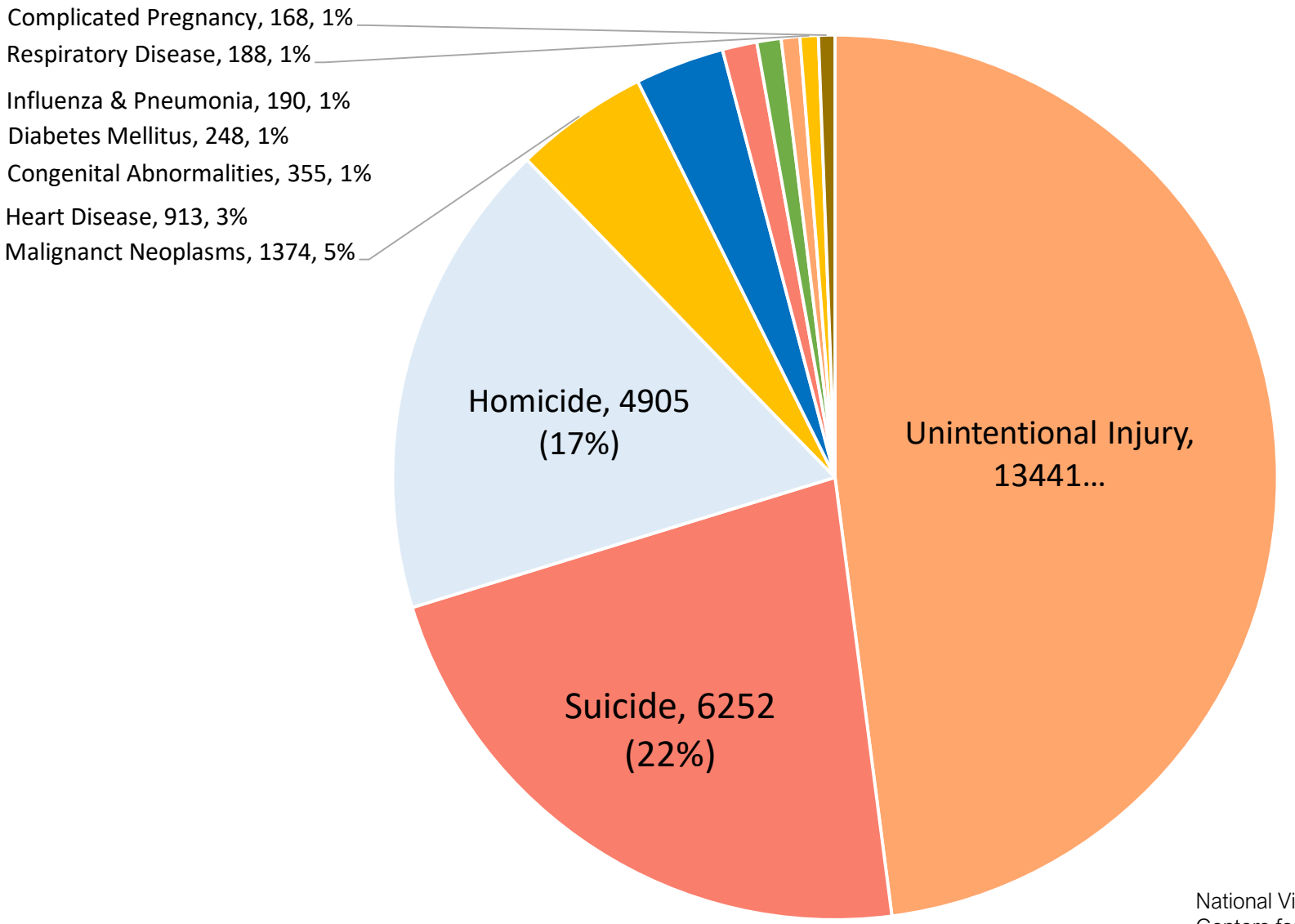
Exposure to trauma:	57%
Any mental illness:	49.5%
• Anxiety Disorders:	31.9%
• Depressive Disorders:	14.3%
• Substance Use Disorders:	11.4%
Comorbid disorders:	20%
Severe Impairment:	22.2%

Finkelhor, 2015; Merikangas et al., 2010

80% of youth lack access to care

- Few trained clinicians
- Scarce appointments
- Long waitlists
- Inadequate insurance coverage
- Lack of transportation
- Limited information among families
- Insufficient time for appointments
- Social stigma
- Low comfort in clinical settings
- Low availability of EBPs

Leading causes of death, ages 15-24



Non-fatal self-harm injuries, ages 15-24:

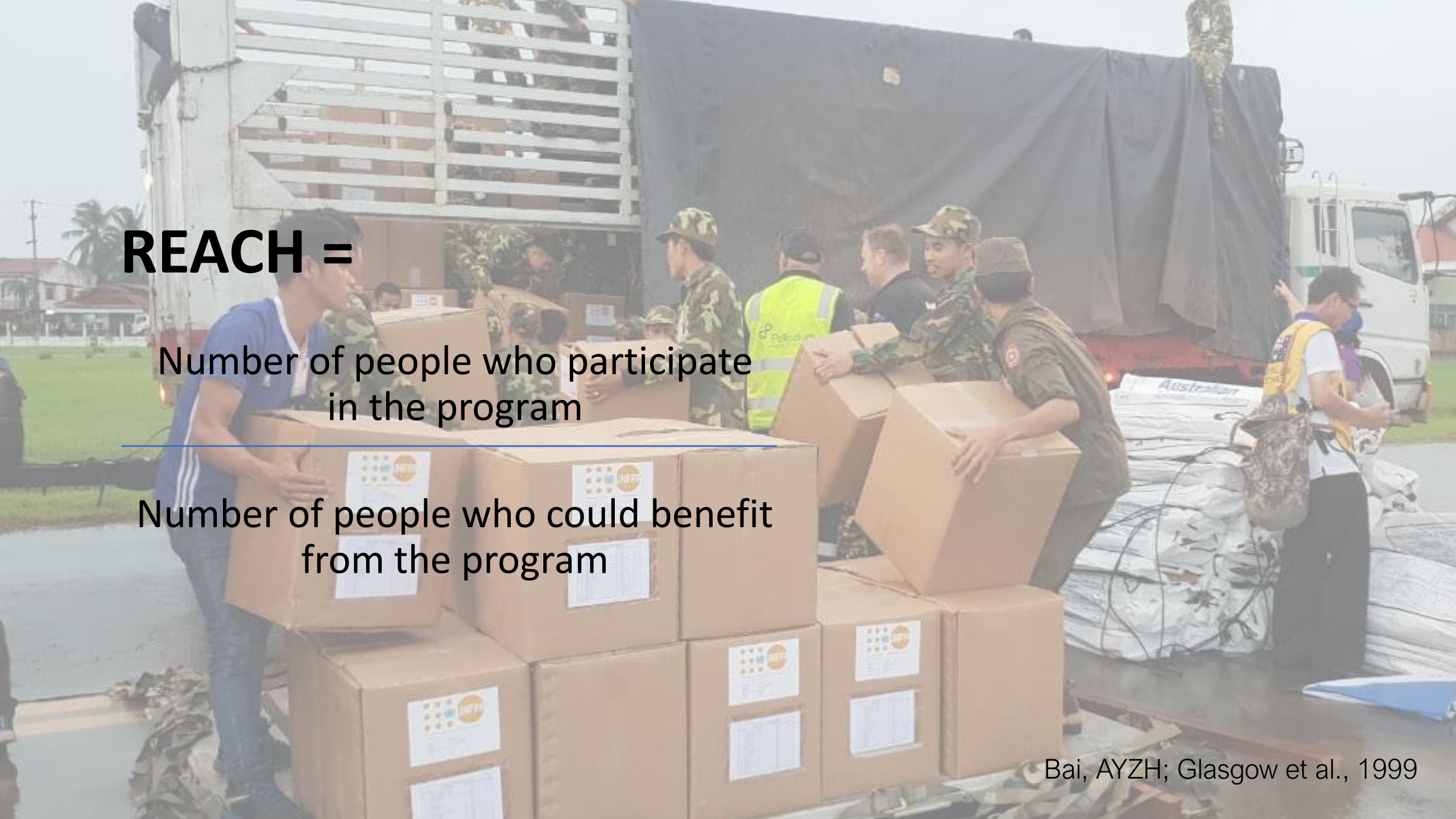
158,762 people

National Vital Statistics System, National Center for Health Statistics, CDC 2017
Centers for Disease Control, WISQARS, 2017

Impact on educational outcomes

- Poor attendance
- Low engagement
- Poor academic performance
- Increased disciplinary involvement
- Increased utilization of staff time / resources
- High drop out
- Disruption due to higher levels of care
- Disruption due to out of school placement

Evidenced-Based Practice



REACH =

Number of people who participate in the program

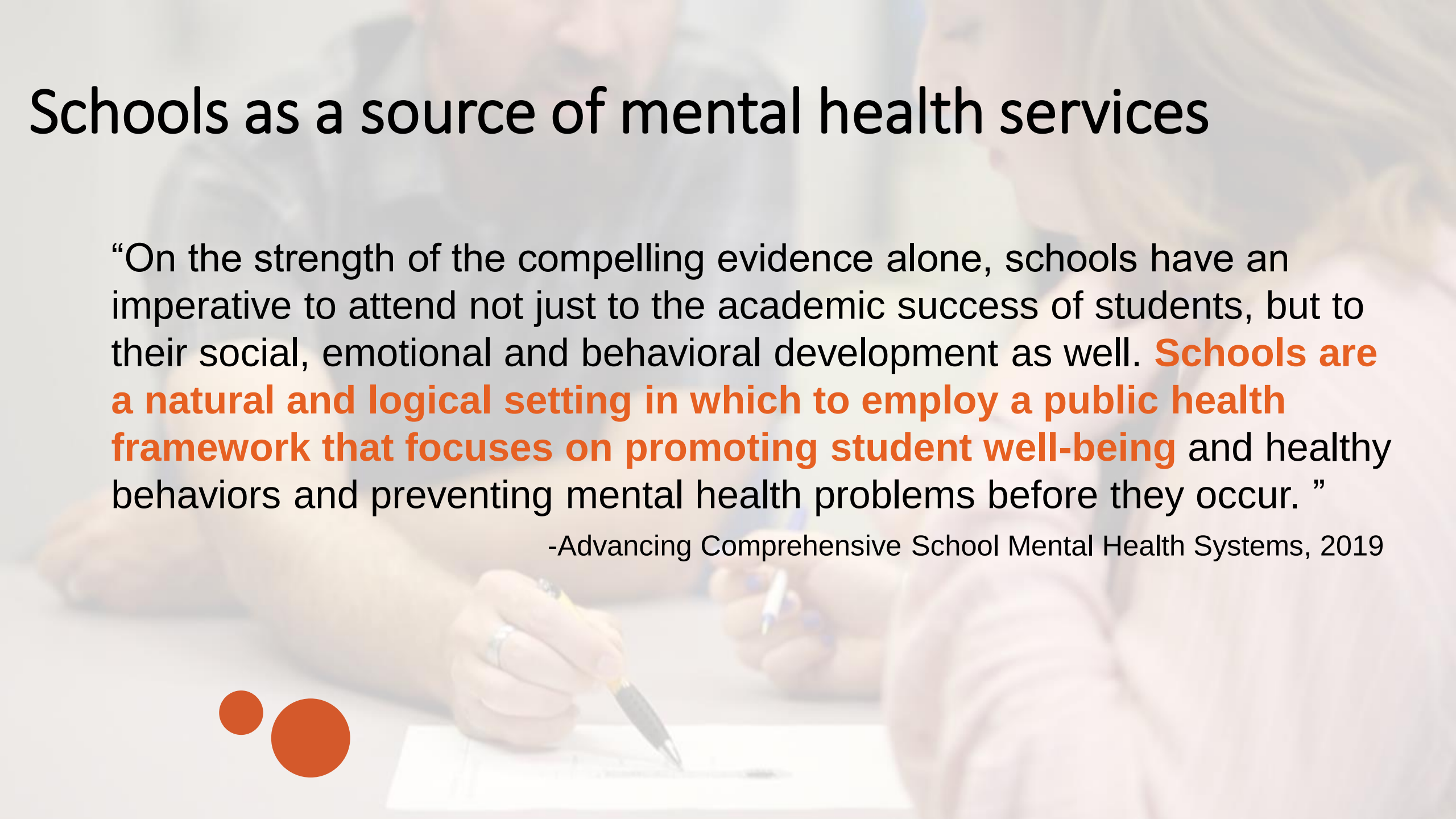
Number of people who could benefit from the program

Bai, AYZH; Glasgow et al., 1999

Schools as a source of mental health services

"On the strength of the compelling evidence alone, schools have an imperative to attend not just to the academic success of students, but to their social, emotional and behavioral development as well. **Schools are a natural and logical setting in which to employ a public health framework that focuses on promoting student well-being** and healthy behaviors and preventing mental health problems before they occur. "

-Advancing Comprehensive School Mental Health Systems, 2019



Aggression

Depression

Domestic violence

Abuse/assault

Anxiety

Homelessness

Suicidality

Gender Identity

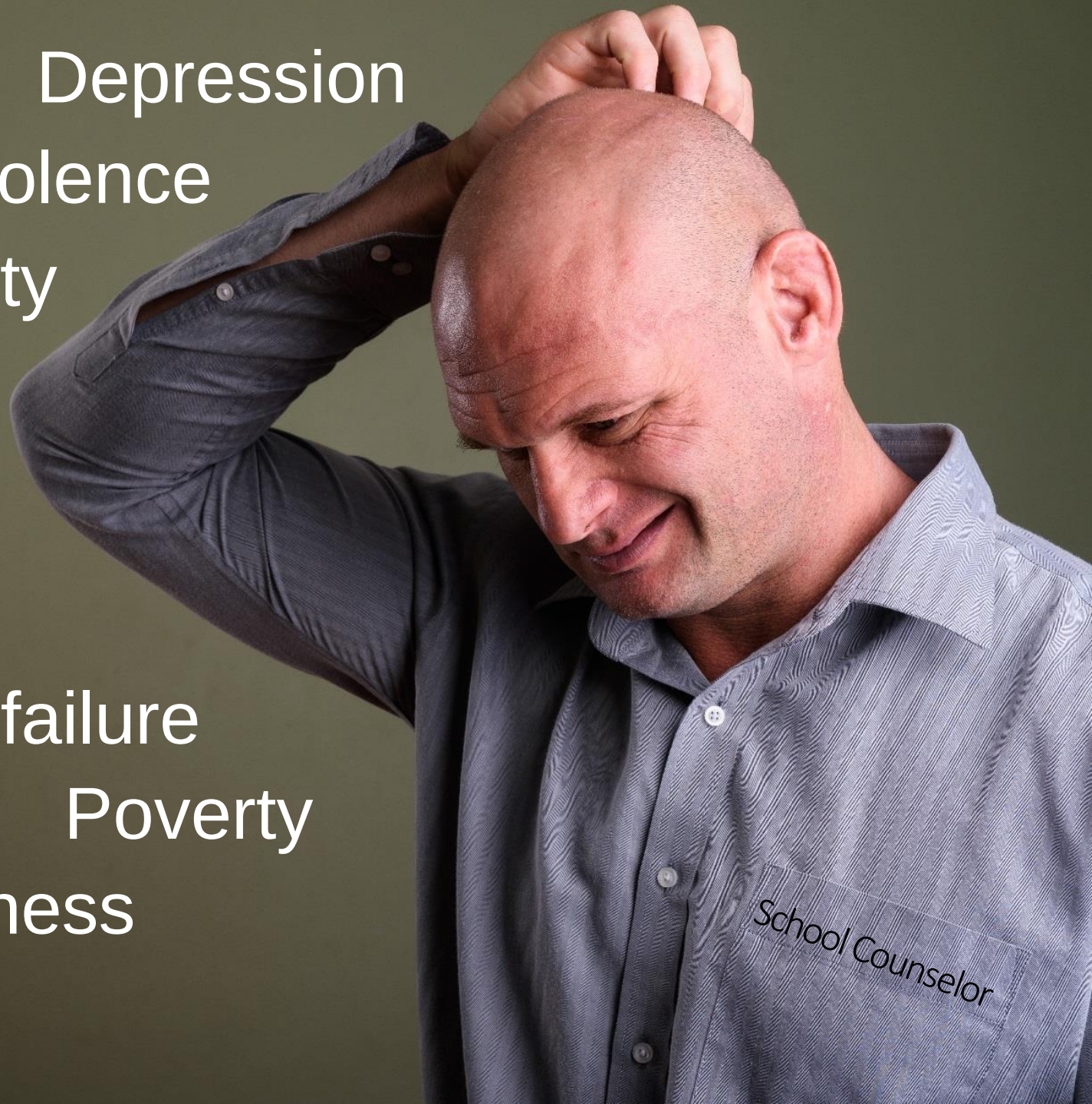
Academic failure

Self-injury

Poverty

Hopelessness

Sexuality



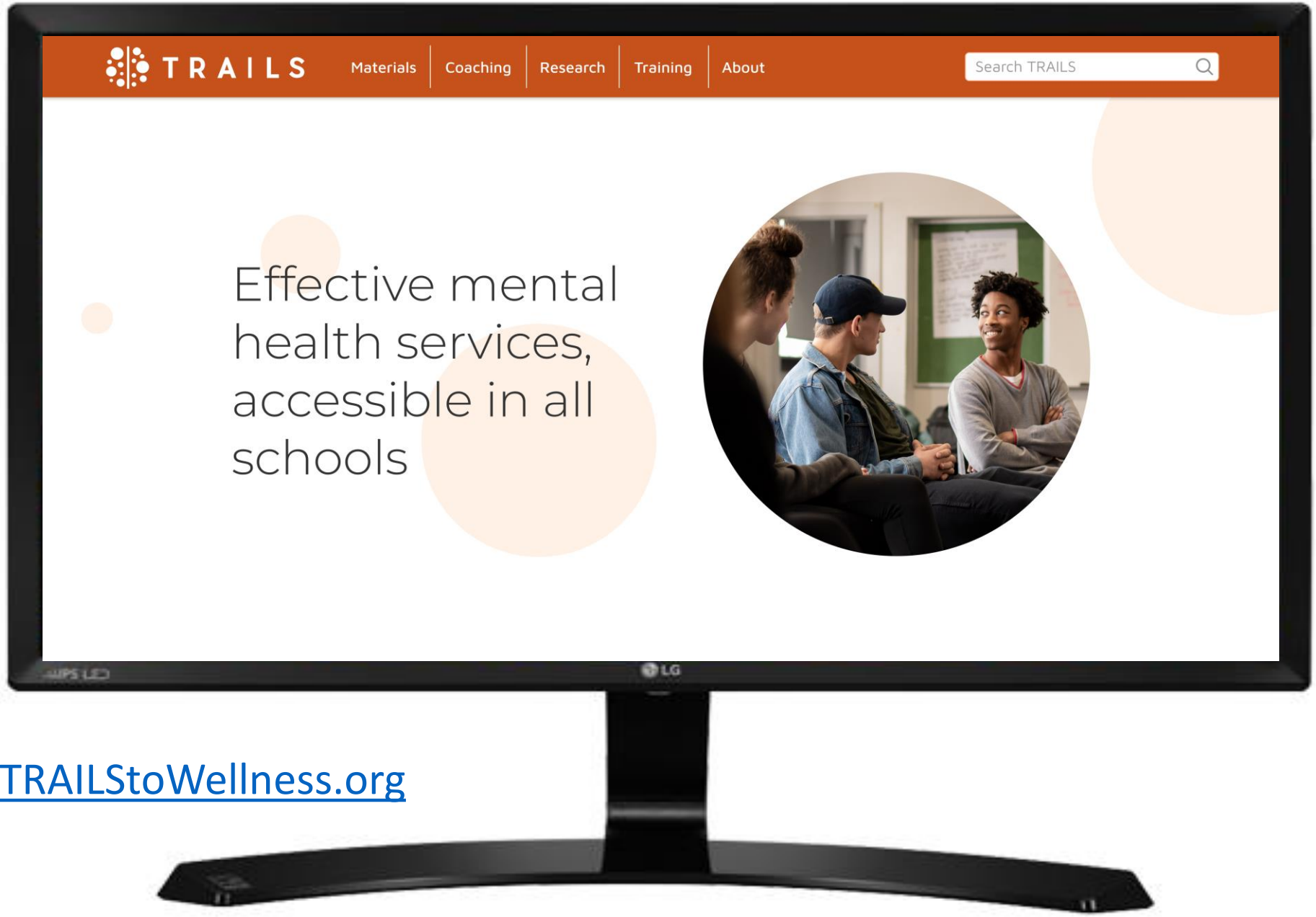
Traditional model of school staff training

Best practice models of school staff training

Aarons et al., 2017; Durlak & DuPre, 2008; Fixsen, et al., 2005, Joyce & Showers 2002; Powell et al., 2015; Proctor et al., 2013

TRAILS

Effective mental health care, accessible in all schools.

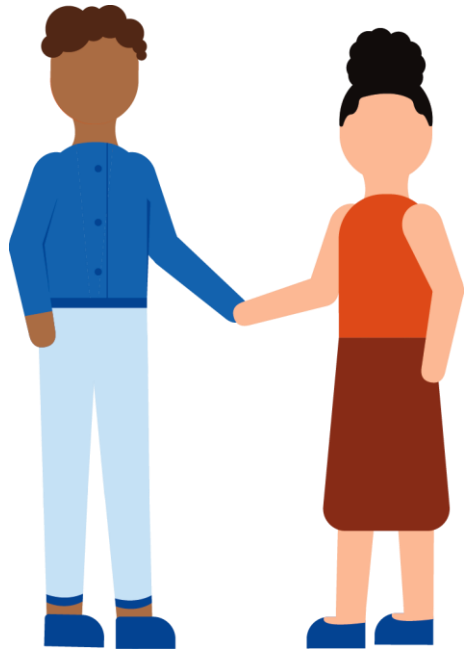


www.TRAILStoWellness.org

TRAILS Coaching

- TRAILS Coaches paired with school professionals
- Collaboratively plan 10-session student skills groups
- Weekly pre-session support
- Co-facilitation of student groups
- Post-session feedback

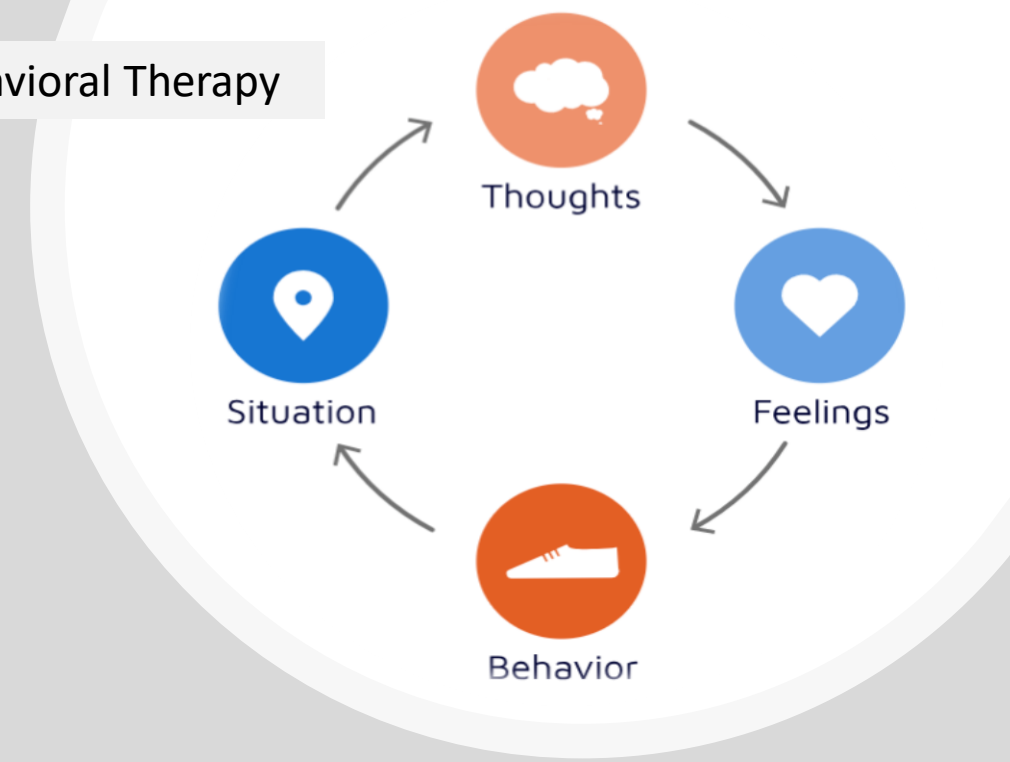
Coaches are expert clinicians and former school professionals – they get it!



Evidence-based Mental Health Practices

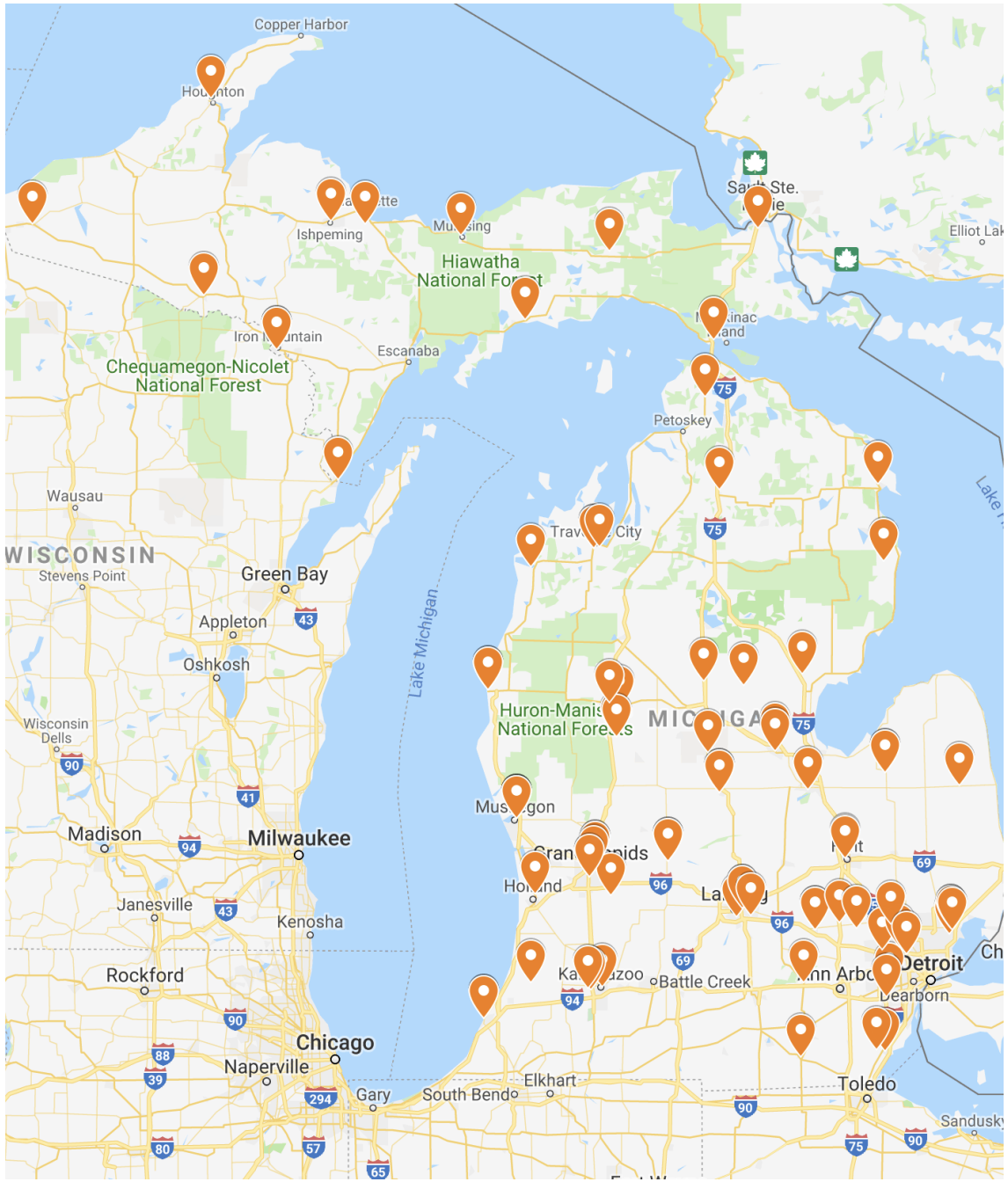
- Strong empirical support
- Skills-based
- Strength and solution focused
- Impact on meaningful outcomes
  - Health
  - Social
  - Academic
  - Personal
  - Functional

Cognitive Behavioral Therapy

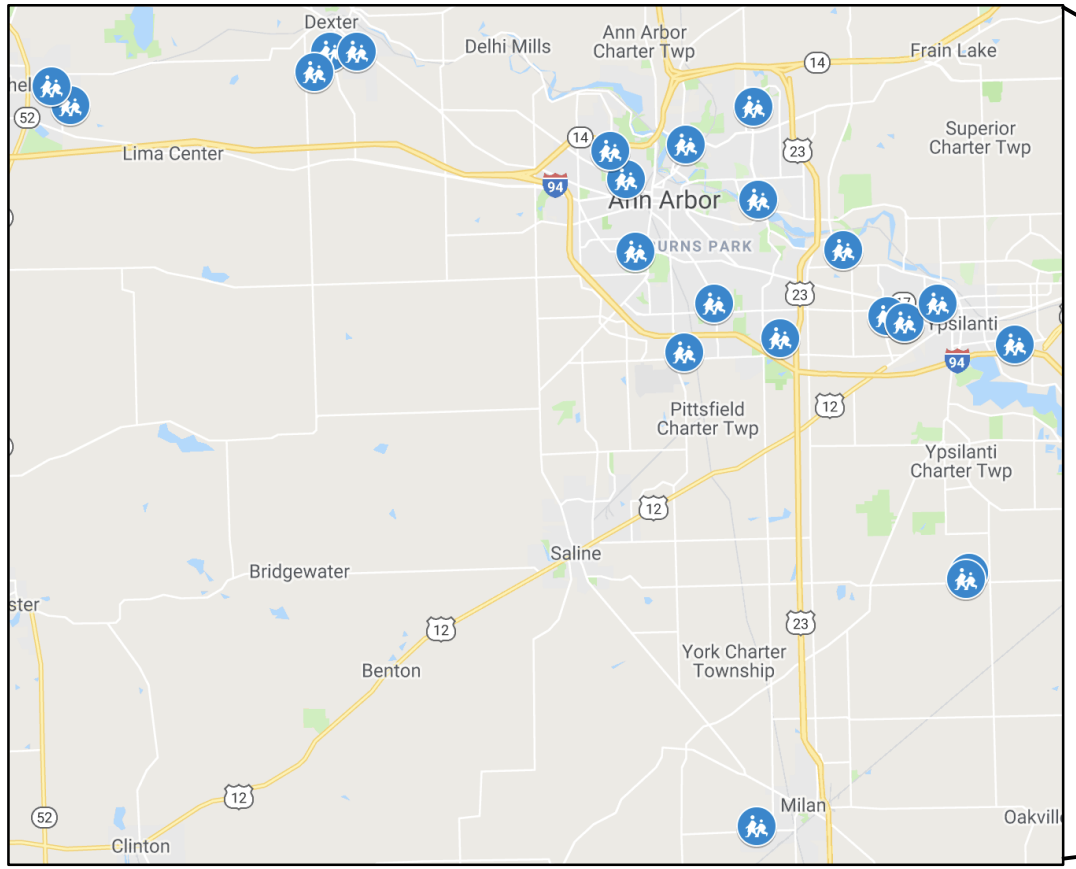


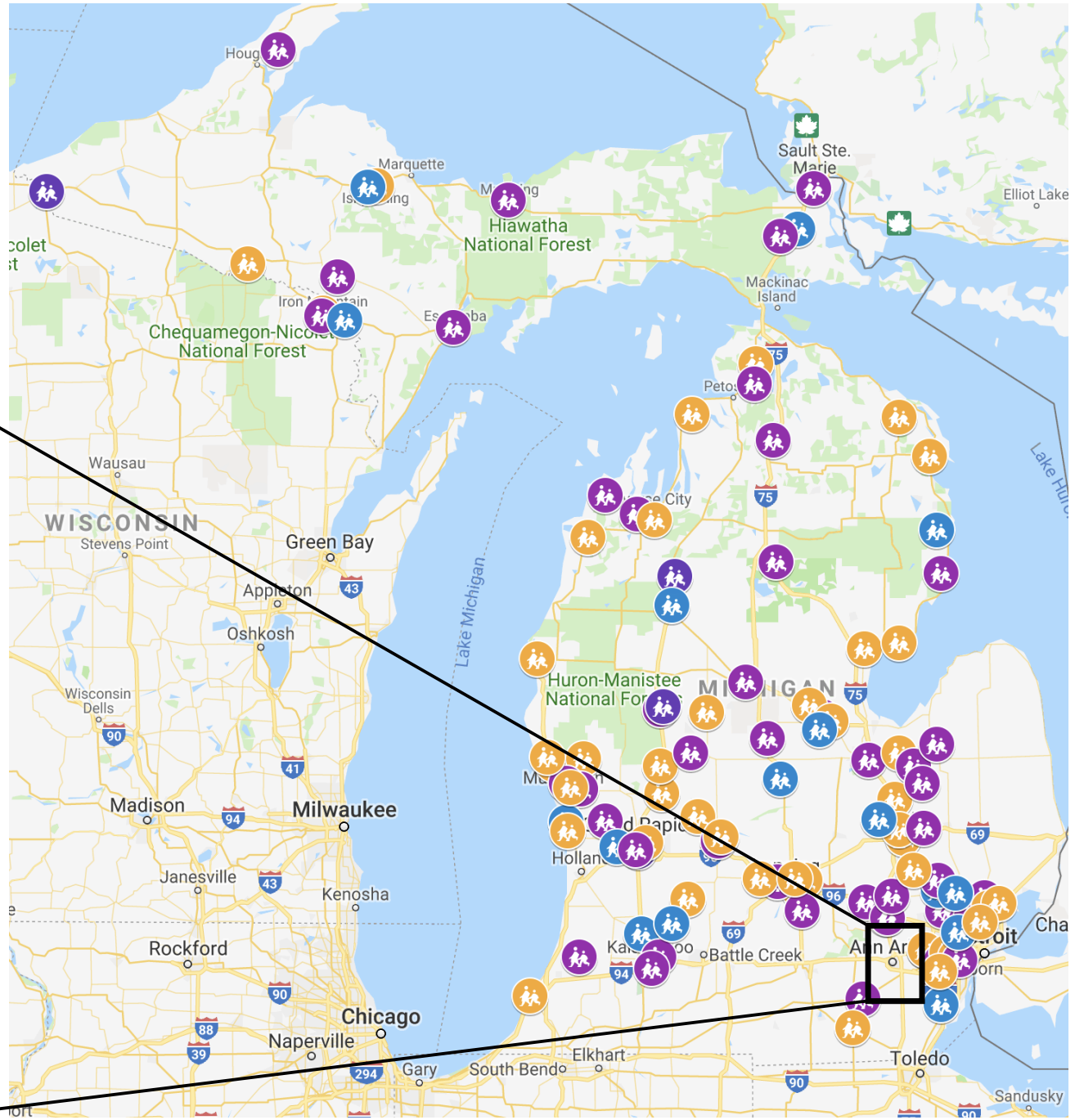
Mindfulness

TRAILS Coach Network 2018-2019



TRAILS Schools 2019





The TRAILS Dashboard:
Tracking implementation outcomes

Recommended aspects of implementation evaluation that the TRAILS Dashboard facilitates:

- Acceptability ✓
- Adoption ✓
- Appropriateness
- Cost
- Feasibility ✓
- Fidelity ✓
- Penetration ✓
- Sustainability ✓

Proctor et al., 2011; Lewis et al., 2015; 2018

Implementation Models Require Data Collection

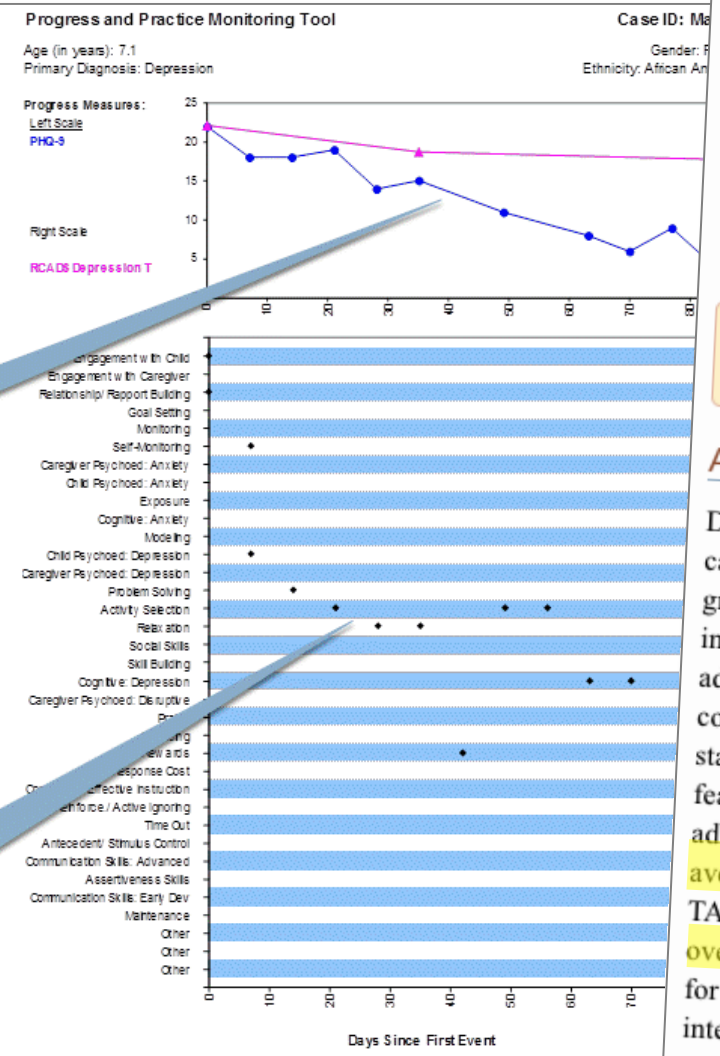
- What implementation model components are being delivered?
  - Component frequency
  - Component intensity
  - Component fidelity
- What impact are they having:
  - On school staff? (treatment deliverers)
  - On students? (treatment recipients)
- What modifications to the implementation model are needed?

TRAILS outcomes of interest:

- TRAILS Coaches
  - Delivery of coaching components
- School Professionals:
  - CBT Utilization
  - CBT Fidelity
    - Content
    - Quality
  - Perceptions of CBT acceptability & utility
  - TRAILS Program satisfaction
- Students
  - Treatment access / Exposure to CBT
  - Clinical health outcomes
  - Academic outcomes

Established Platforms

Sample Clinical Dashboard



Progress Ratings

Practice History

Adm Policy Ment Health. Author manuscript; available in PMC 2016 Feb 23.
Published in final edited form as:
Adm Policy Ment Health. 2015 Mar; 42(2): 229–243.
doi: 10.1007/s10488-014-0548-2

PMCID: PMC4763603
NIHMSID: NIHMS759218
PMID: 24711046

Validity of Therapist Self-Report Ratings of Fidelity to Evidence-Based Practices for Adolescent Behavior Problems: Correspondence between Therapists and Observers

Aaron Hogue, Sarah Dauber, Emily Lichvar, Molly Bobek, and Craig E. Henderson

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See other articles in PMC that cite the published article.

Abstract

Go to:

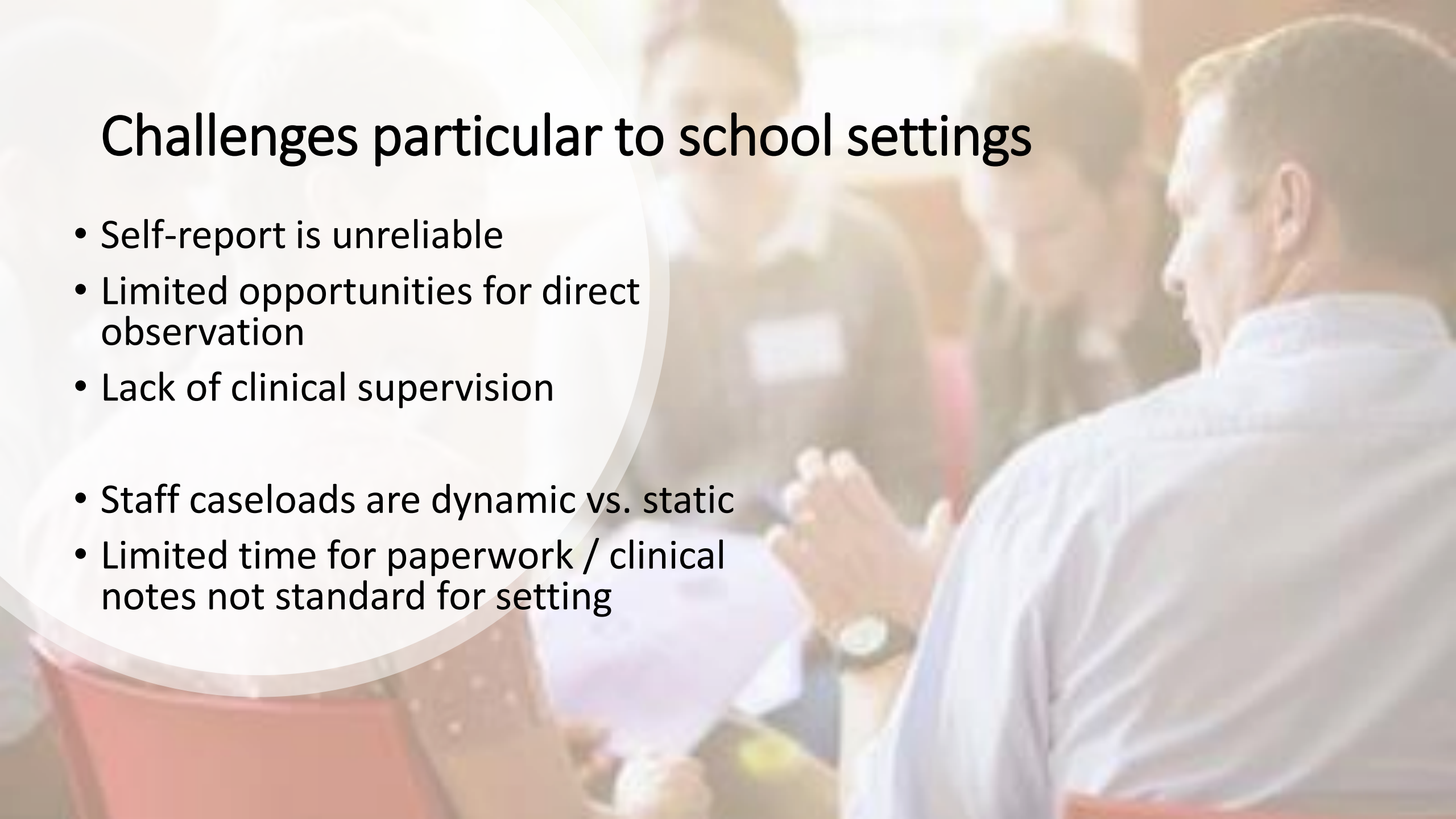
Developing therapist-report fidelity tools to support quality delivery of evidence-based practices in usual care is a top priority for implementation science. This study tested the reliability and accuracy of two groups of community therapists who reported on their use of family therapy (FT) and motivational interviewing/cognitive-behavioral therapy (MI/CBT) interventions during routine treatment of inner-city adolescents with conduct and substance use problems. Study cases ($n = 45$) were randomized into two conditions: (a) Routine Family Therapy (RFT), consisting of a single site that featured family therapy as its standard of care for behavioral treatment; or (b) Treatment As Usual (TAU), consisting of five sites that featured non-family approaches. Therapists and trained observational raters provided FT and MI/CBT adherence ratings on 157 sessions (104 RFT, 53 TAU). Overall therapist reliability was adequate for averaged FT ratings (ICC = .66) but almost non-existent for MI/CBT (ICC = .06); moreover, both RFT and TAU therapists were more reliable in reporting on FT than on MI/CBT. Both groups of therapists overestimated the extent to which they implemented FT and MI/CBT interventions. Results offer support for the feasibility of using existing therapist-report methods to anchor quality assurance procedures for FT interventions in real-world settings, though not for MI/CBT.

Keywords: Therapist-report fidelity, Observational fidelity ratings, Adolescent behavior problems, Usual care, Family therapy, Cognitive-behavioral therapy, Motivational interviewing

Challenges particular to school settings

- Self-report is unreliable
- Limited opportunities for direct observation
- Lack of clinical supervision

- Staff caseloads are dynamic vs. static
- Limited time for paperwork / clinical notes not standard for setting

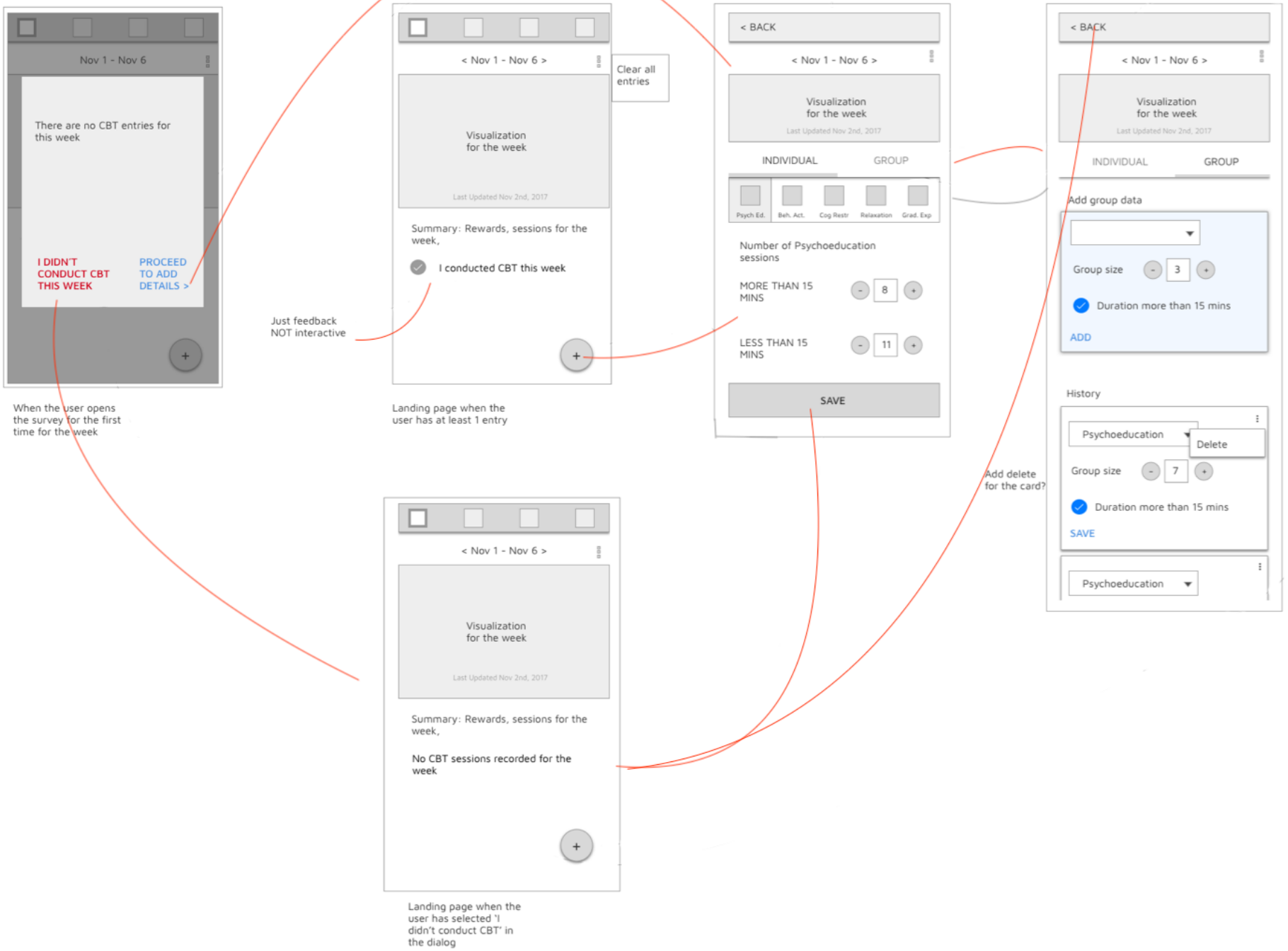


Intro to TRAILS Dashboard

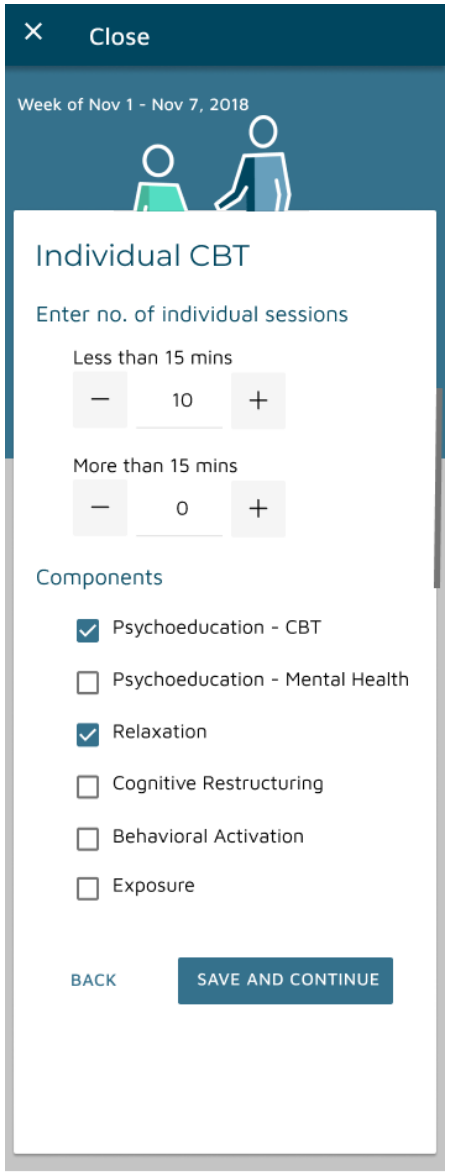
- Primary goals:
  - Capture quality data relevant to SPs, Students, and Program
  - Ensure relevance for school partners
  - Ensure high user-friendliness, attractiveness
  - Protect student privacy, adhere to HIPPA, FERPA

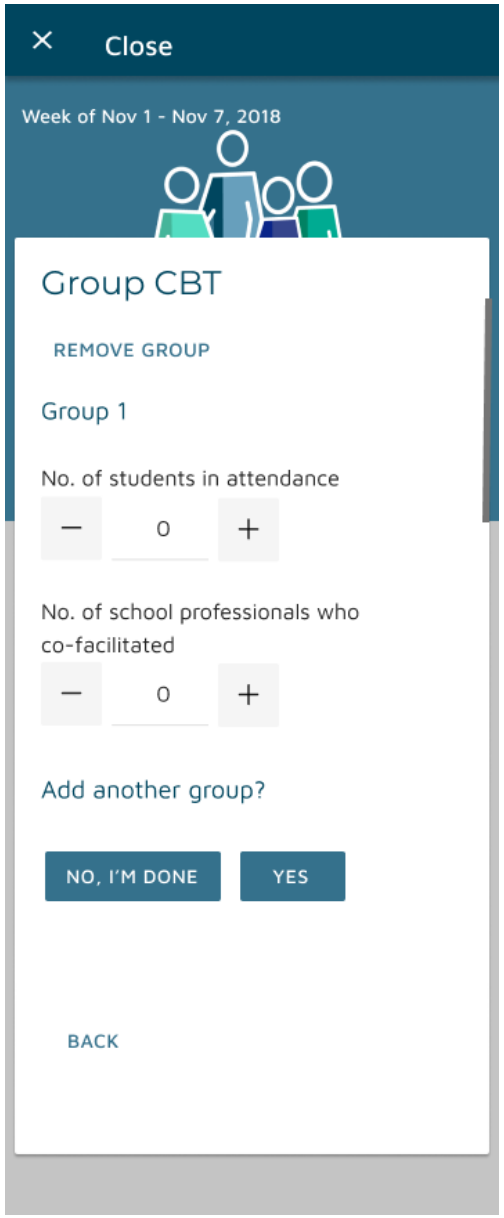
TRAILS

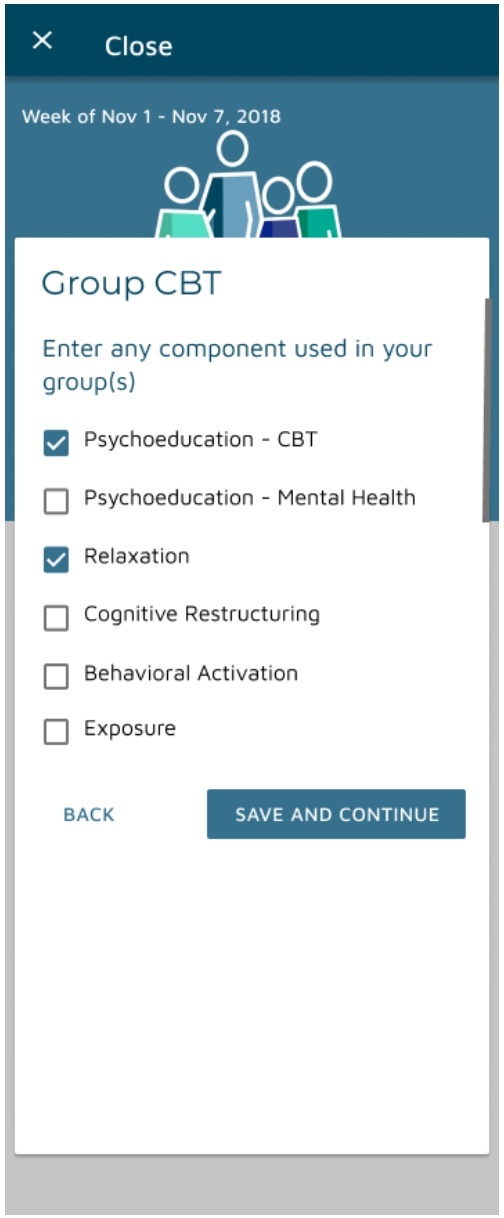
Design Phase

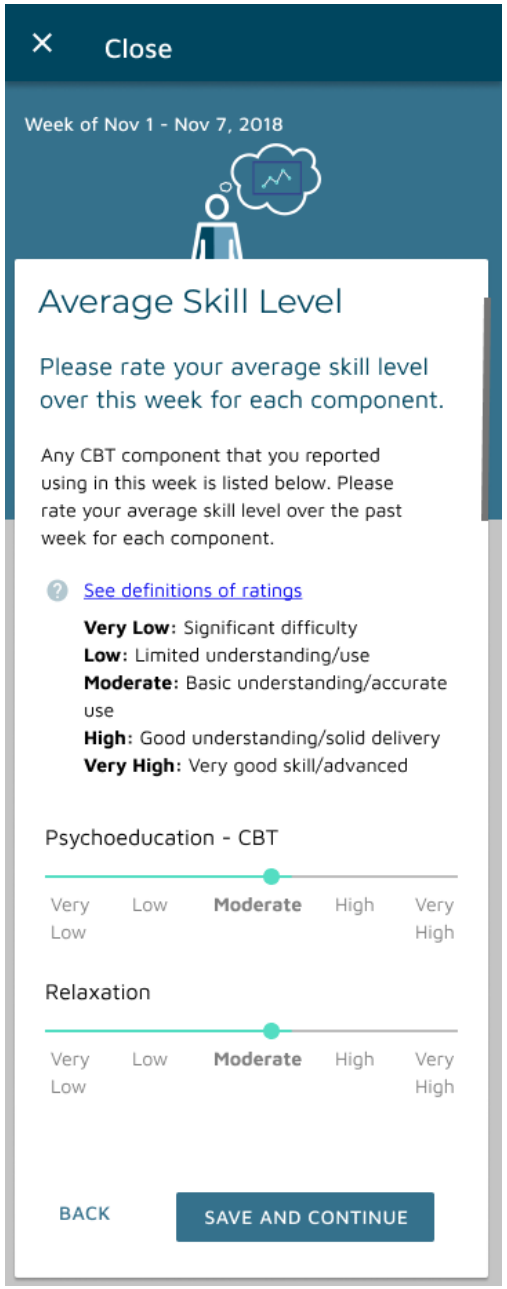


Development Phase









Research and User Testing

Feedback on the ASIC Dashboard

Participants had a couple of technical issues with the ASIC Dashboard, but all were able to successfully reach someone for support and had the issues resolved. This study revealed mostly positive feedback from those using the ASIC Dashboard. Some elements of the ASIC Dashboard the school professionals found particularly helpful include:

- Seeing rewards and payments on the home screen
- The FAQ section
- CBT summary
- Indicators that students have completed their surveys
- Showing how much time is required for a task/survey
- The ability to backfill some data
- Regular email reminders to log data or complete other actions within the Dashboard
- An "easy button" to enter data

When asked to rank their logging experience from very easy to very hard, most users said "easy" or "very easy." Only one user ranked ease of use somewhere in the middle, saying, "On a scale of 1 to 10, 1 being easy, 10 being very hard, it's a 4."

Participants commented on a few gaps within the ASIC Dashboard including the following:

Being unable to seamlessly navigate between the ASIC Dashboard and the TRAILS site
The school professionals involved in the ASIC study expressed a need to go back and forth between the ASIC Dashboard and the trailstowellness.org website to look up resources, prepare for groups, and look at various things for reference. They would have liked a quick-access button or link to the website from within the Dashboard, the Dashboard integrated into the TRAILS website, or another easy way to have all the information together.

Inability to change information after specific timeframes
Some users needed to add students after the timeframe to do so had passed. They would have preferred more flexibility over when and how they entered student information.

Unable to edit information in immediately locking fields
Users also noted that fields which immediately locked after input caused some frustration if they realized they'd made a typo or some other small error. The flexibility to make small changes would've been preferred.

Lack of a way to export data for reports
It was mentioned that it would have been helpful to be able to export the entered data for reporting purposes.

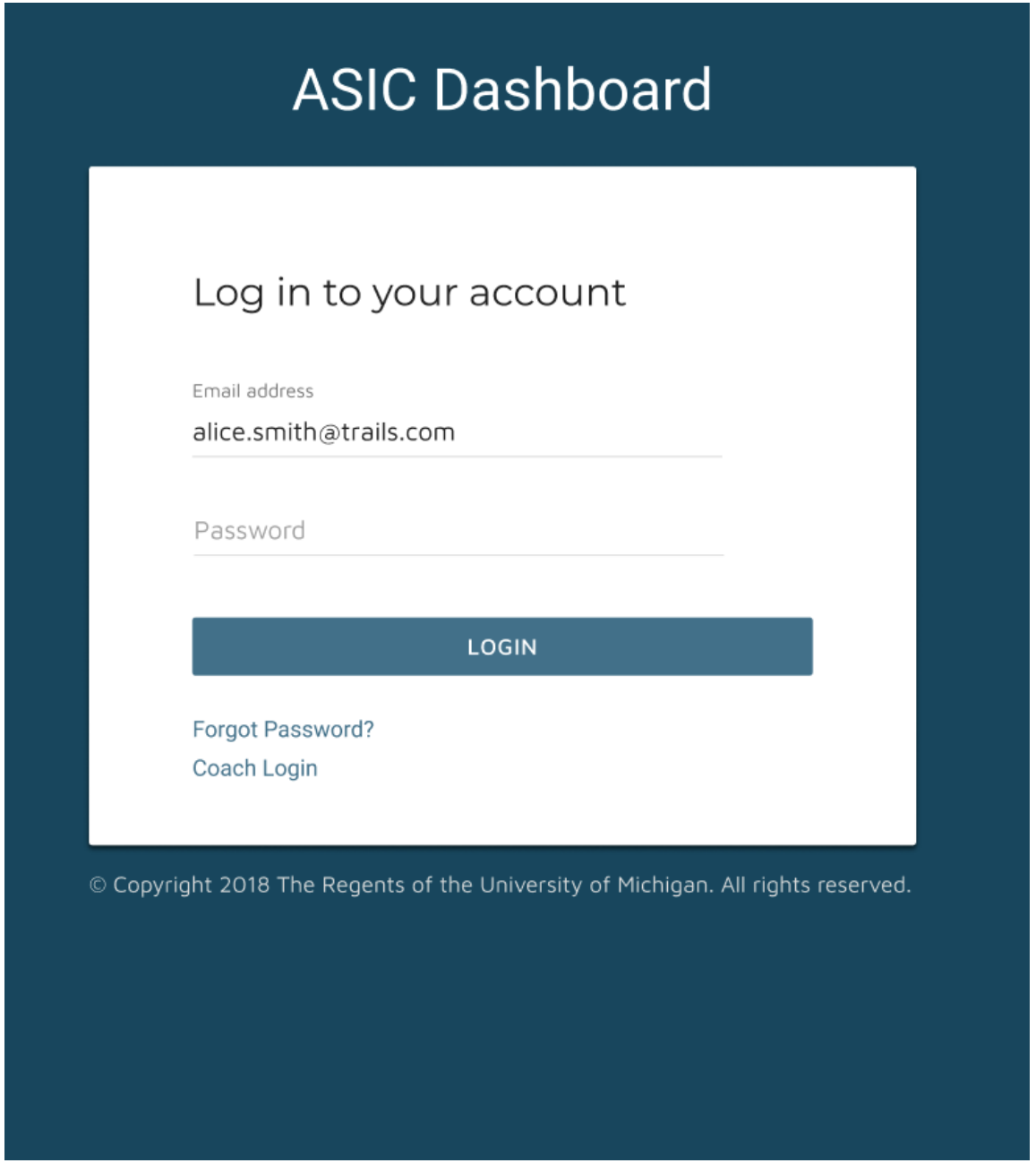
Adaptive School-based Implementation of CBT
(ASIC, PI: Kilbourne, R01MH114203)

Primary Aims

1. Compare the effectiveness of two adaptive implementation strategies on CBT delivery among schools: one that provides schools with REP + Coaching from the start and subsequently augments with Facilitation for schools needing additional assistance, and another that provides REP alone (control) to all schools. The primary outcome is number of CBT sessions delivered to students by SPs, with secondary examination of impact on student mental health symptoms at 18 months.
2. Lay the groundwork for more tailored adaptive implementation strategies by determining whether (a) school-level factors (size, percent free and reduced lunch eligible, and school administrator support for adoption of innovation) or (b) SP factors (employment years, perceptions of CBT) moderate the effects of augmenting REP with Coaching and/or Facilitation.
3. Estimate the costs of different embedded adaptive interventions and determine the incremental cost-effectiveness of added Coaching or Facilitation.
4. Determine whether Coaching and Facilitation improve CBT knowledge, perceptions/comfort, skills, or leadership among SPs, and which of these explain any detected increases in frequency of CBT delivery and improvement in student clinical symptoms.

PILOT: Customizing for an NIMH R01

Data collected will inform:
- SP use of CBT with students
- SP completion of study surveys
- Student completion of study surveys
- Incentive money participants earn

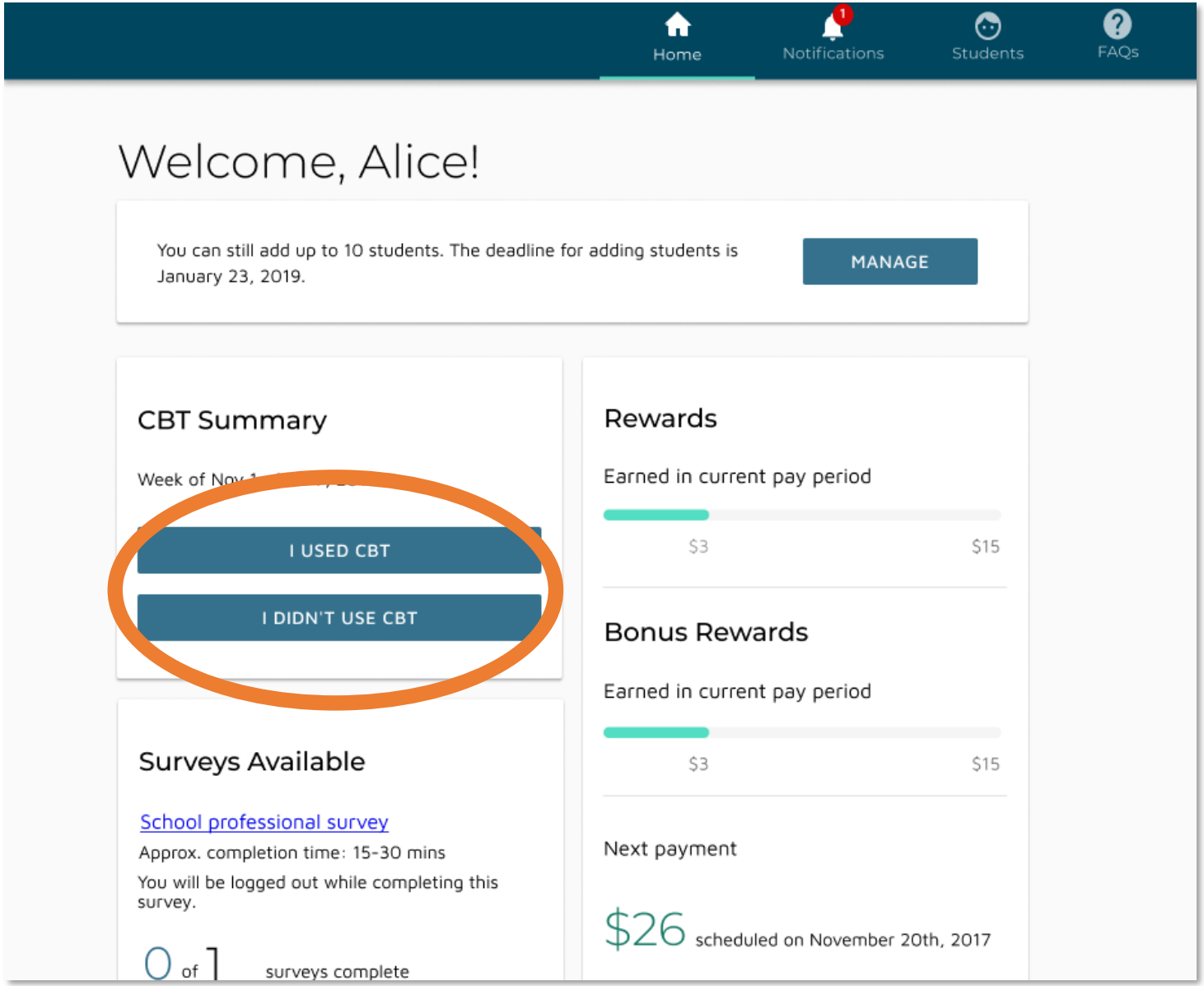


Dashboard data collection:

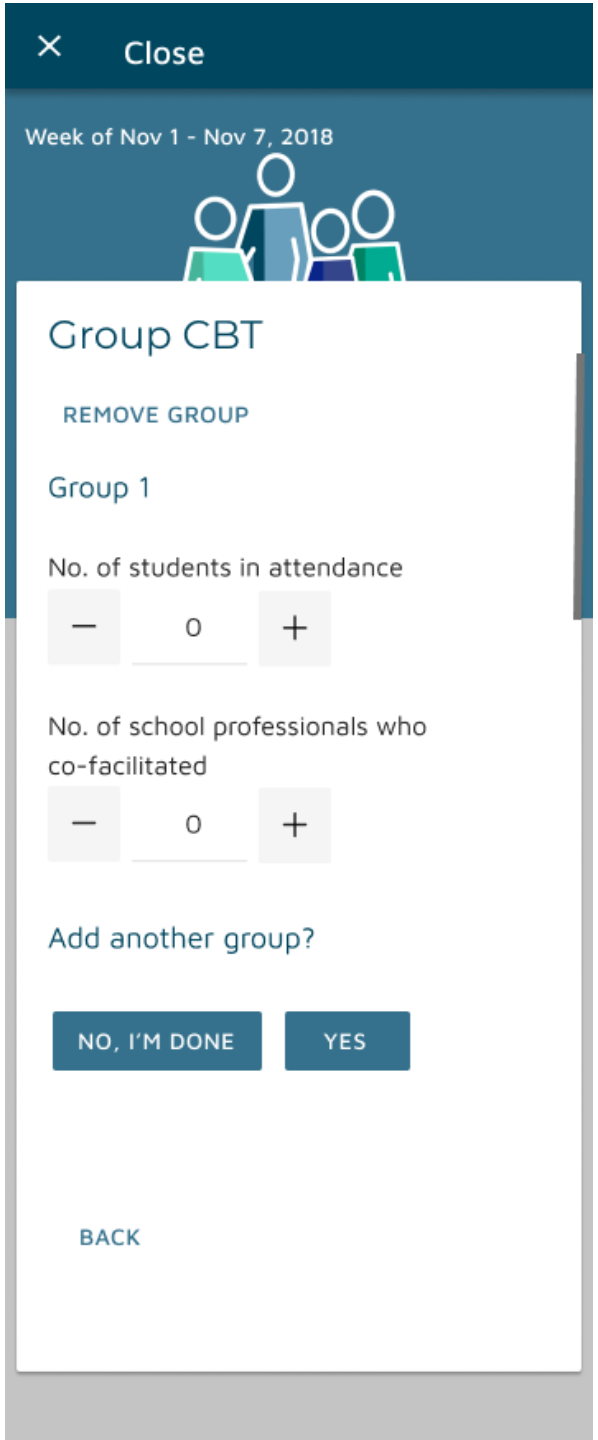
- # of SPs registered / using CBT
  - CBT delivery
    - Frequency overall - group vs. individual
    - Frequency by component
    - Fidelity
      - Self - report
      - Coach rating
  - Program satisfaction
- # of students identified for study data collection
  - Clinical outcomes
  - CBT knowledge or familiarity
  - Academic outcomes
- Qualitative feedback from school partner users in ASIC
- Coaching protocol adherence / fidelity

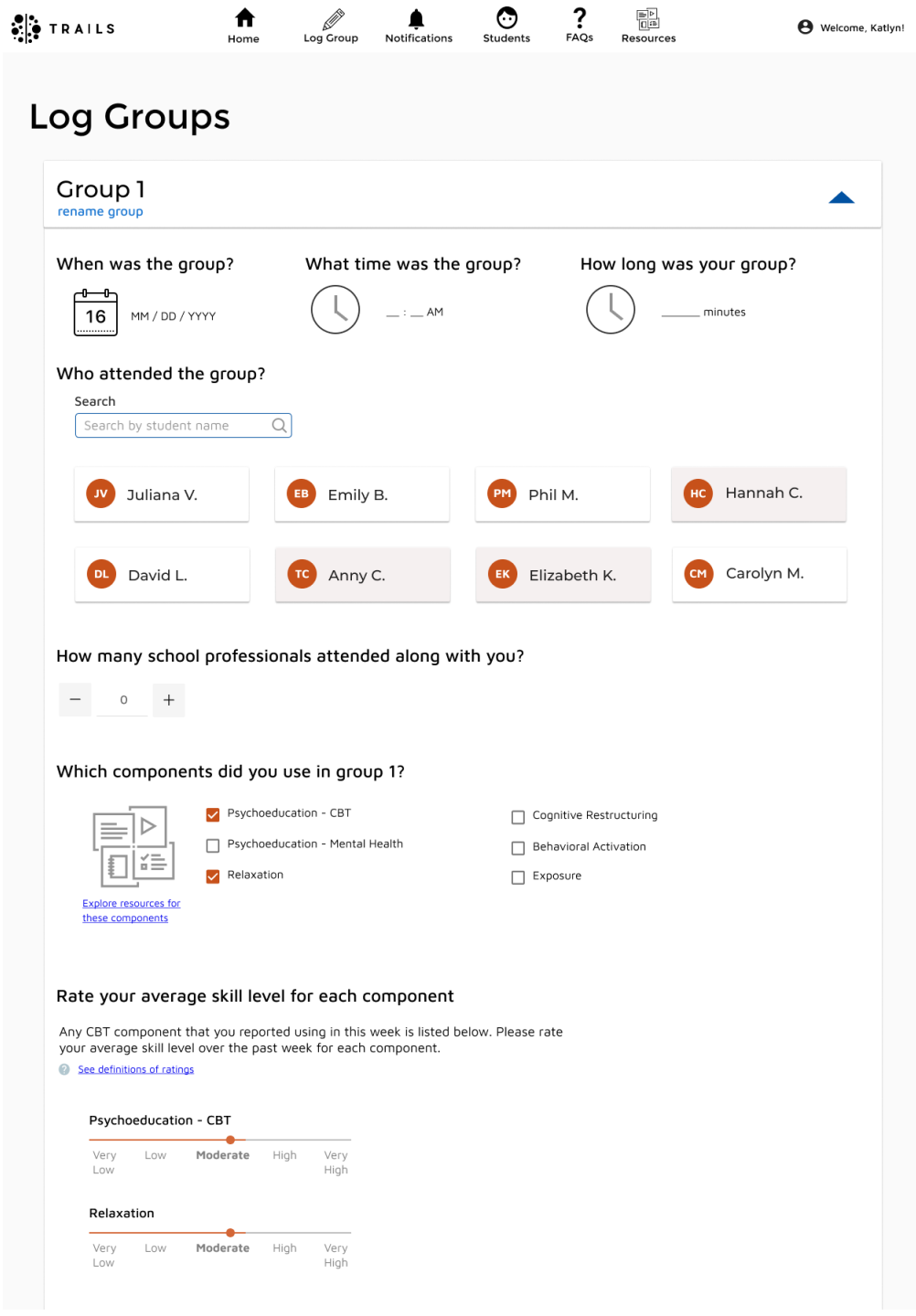
From the dashboard, school professionals are able to:

- log their CBT use and fidelity
- access study-related questionnaires
- view student cards
- manage their incentives

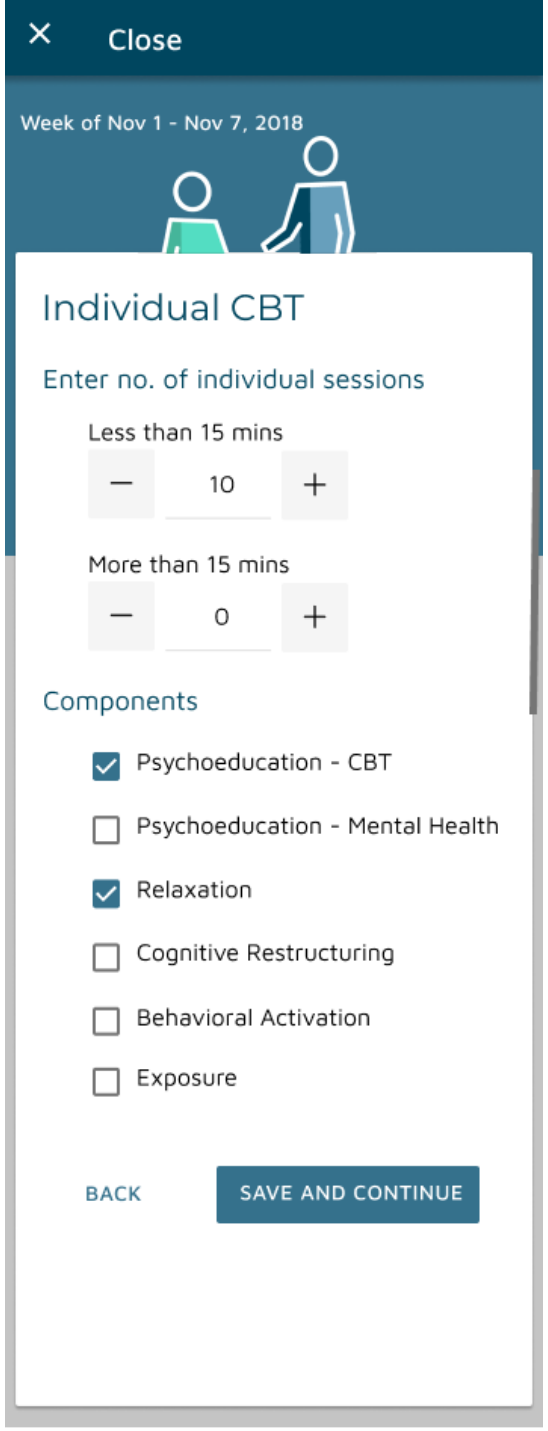


CBT Groups

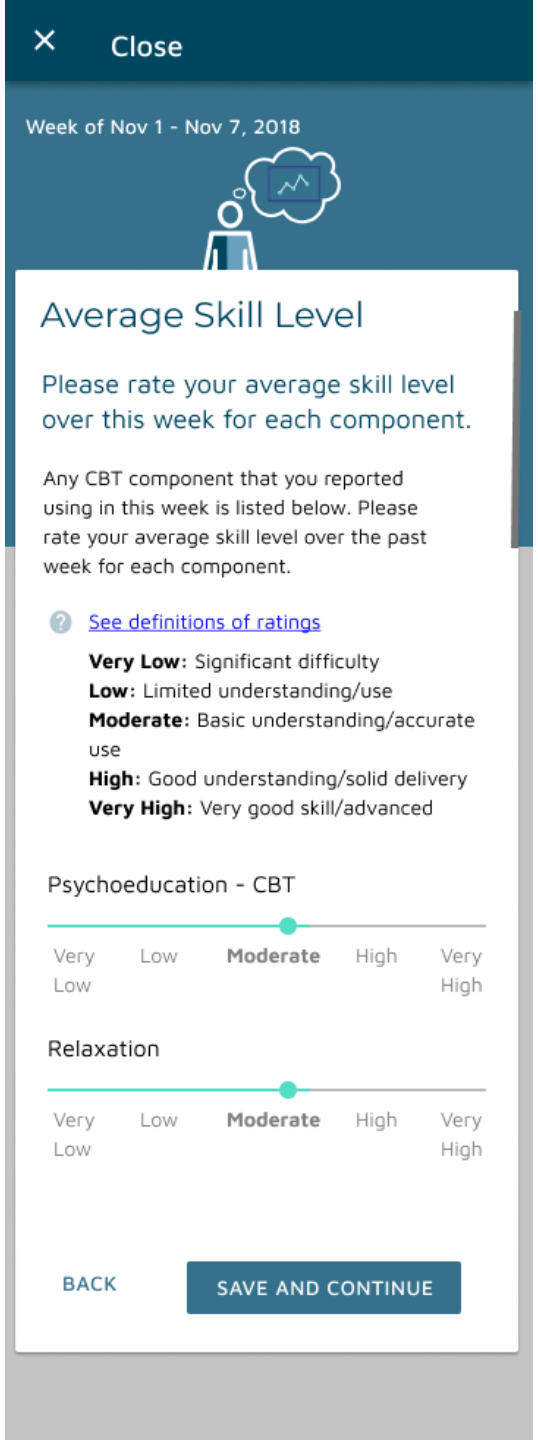

Close
Week of Nov 1 - Nov 7, 2018
Group CBT
REMOVE GROUP
Group 1
No. of students in attendance
0
No. of school professionals who co-facilitated
0
Add another group?
NO, I'M DONE
YES
BACK


TRAILS
Home
Log Group
Notifications
Students
FAQs
Resources
Welcome, Katlyn!
Log Groups
Group 1
rename group
When was the group?
16
MM / DD / YYYY
What time was the group?
__ : __ AM
How long was your group?
_____ minutes
Who attended the group?
Search
Search by student name
JV Juliana V.
EB Emily B.
PM Phil M.
HC Hannah C.
DL David L.
TC Anny C.
EK Elizabeth K.
CM Carolyn M.
How many school professionals attended along with you?
0
Which components did you use in group 1?
Psychoeducation - CBT
Psychoeducation - Mental Health
Relaxation
Cognitive Restructuring
Behavioral Activation
Exposure
Explore resources for these components
Rate your average skill level for each component
Any CBT component that you reported using in this week is listed below. Please rate your average skill level over the past week for each component.
See definitions of ratings
Psychoeducation - CBT
Very Low
Low
Moderate
High
Very High
Relaxation
Very Low
Low
Moderate
High
Very High

Individual CBT Sessions



Self-reported CBT fidelity



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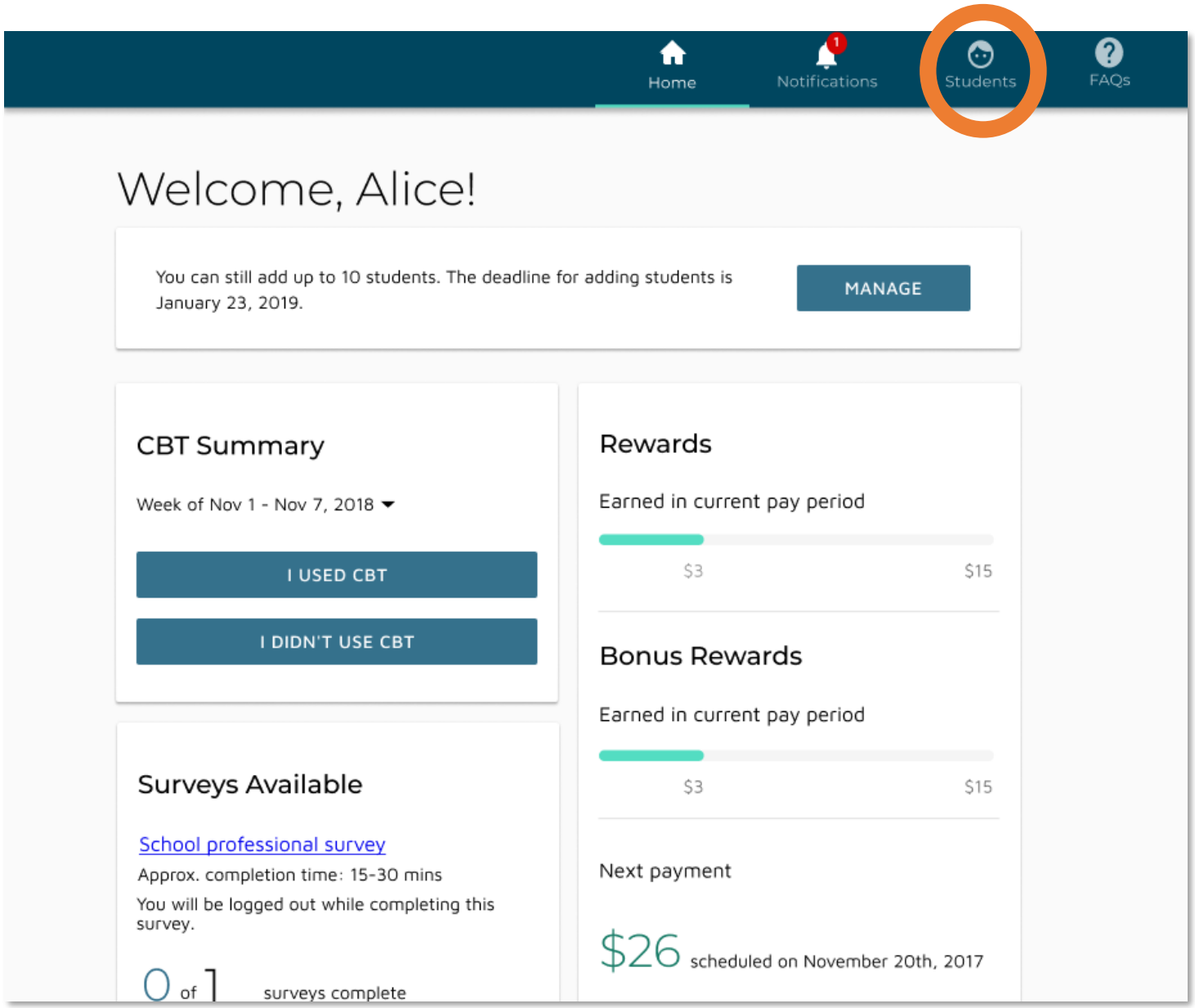
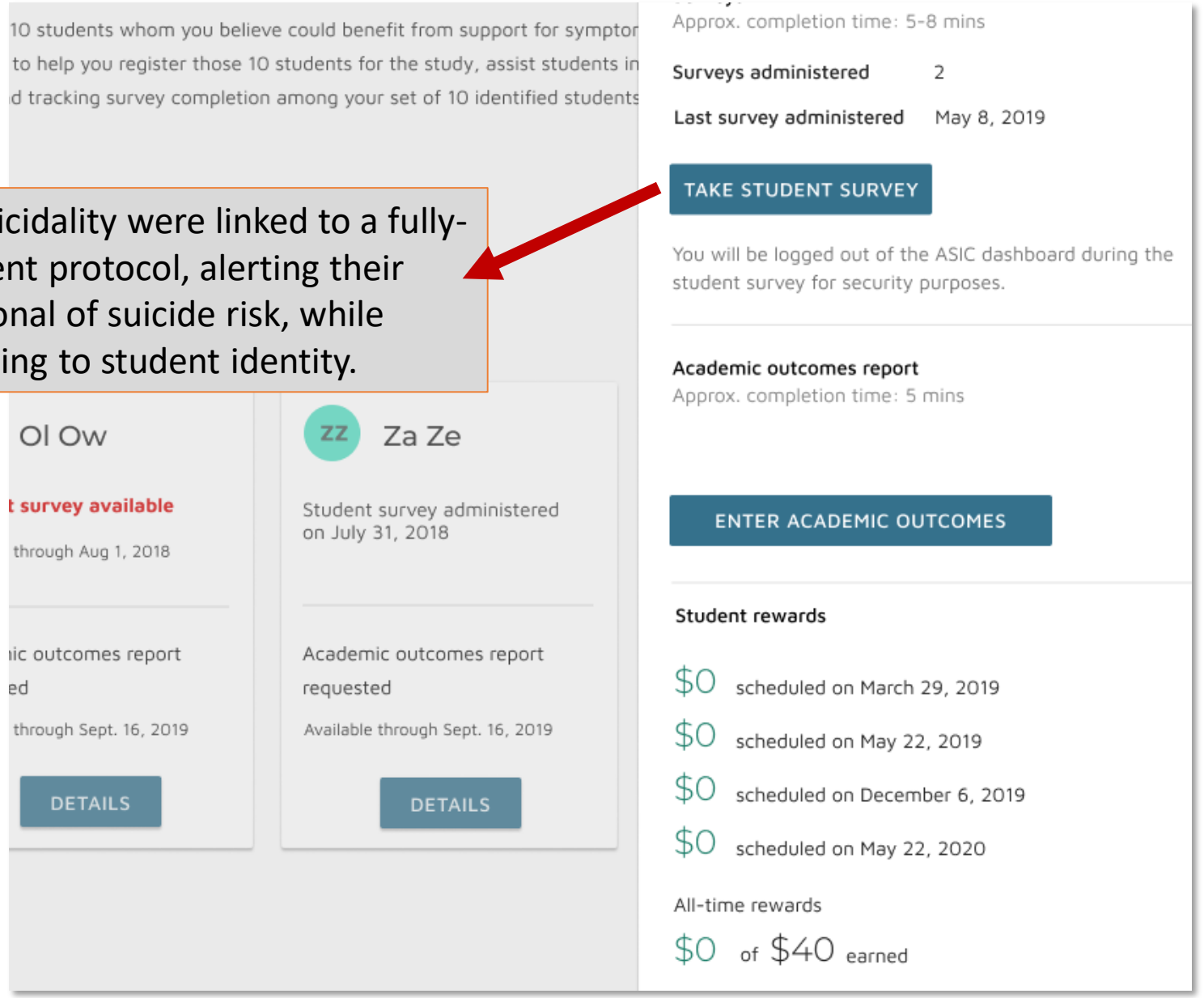
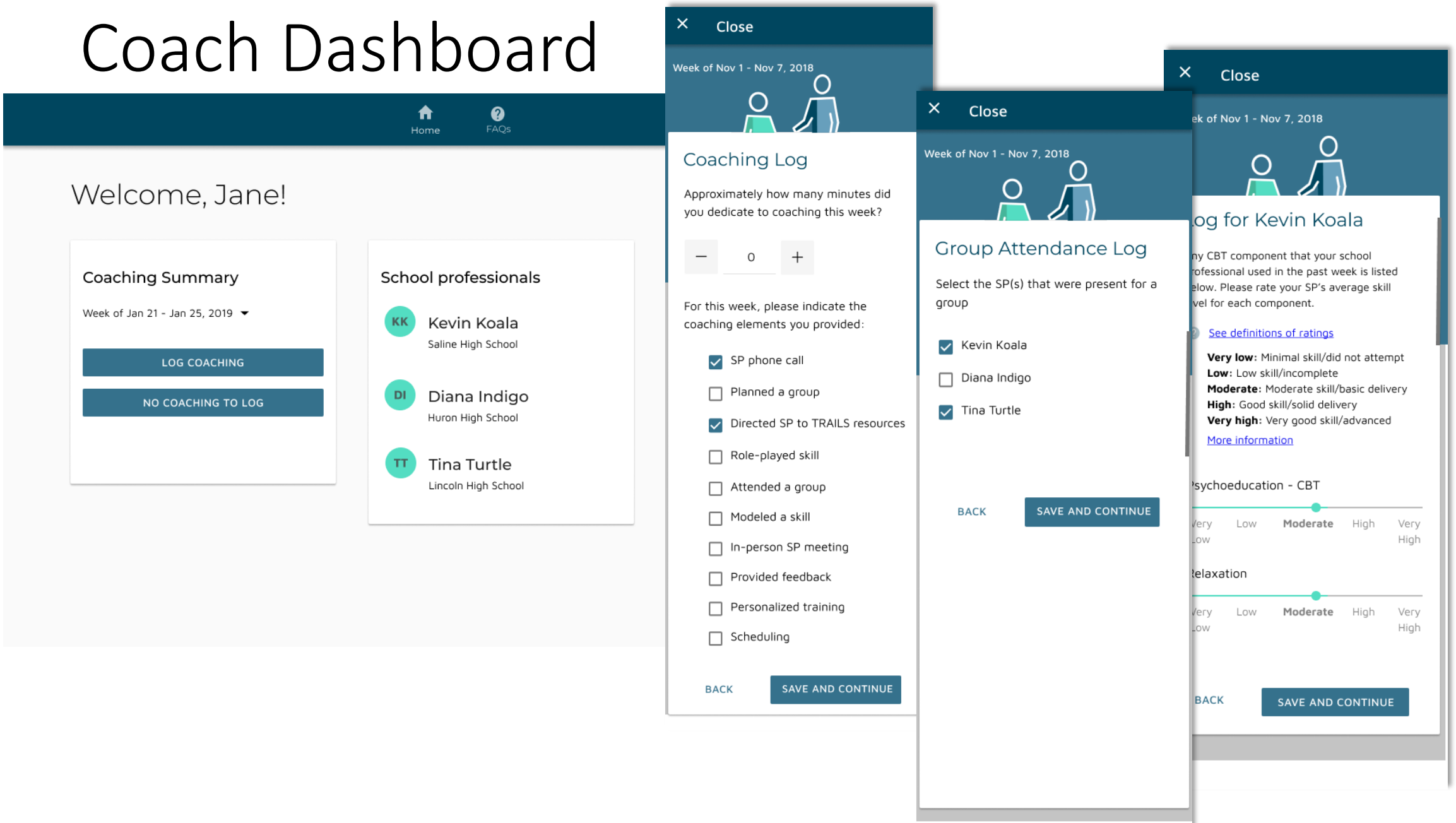


Student questionnaires and incentive tracking can be accessed on the student page.

Students who indicated suicidality were linked to a fully-automated risk-management protocol, alerting their associated school professional of suicide risk, while retaining investigator blinding to student identity.

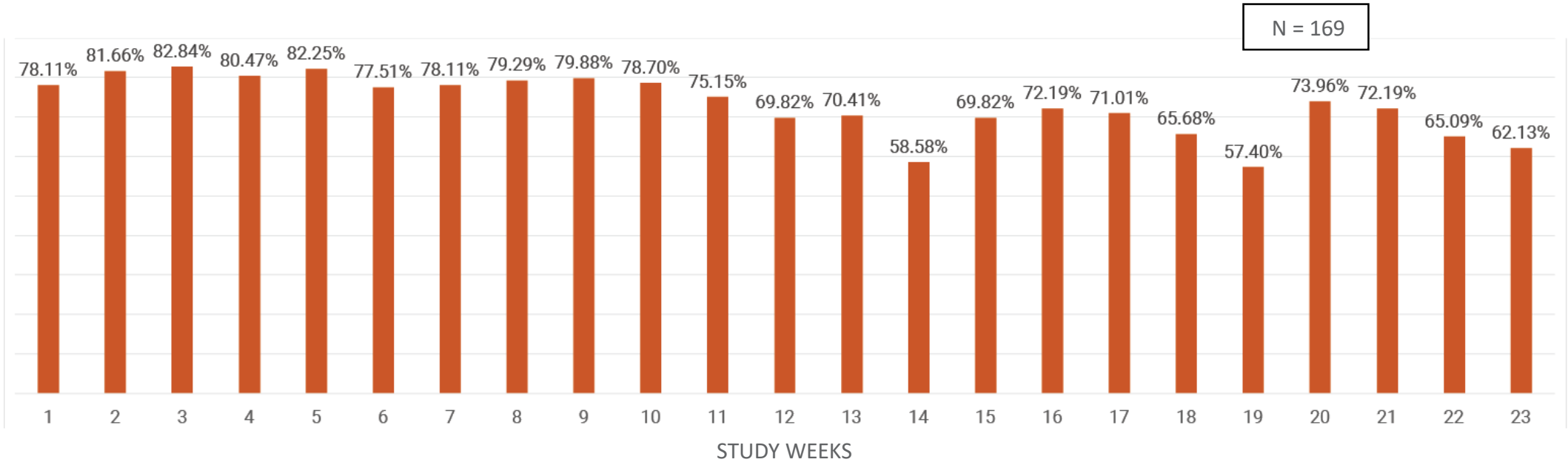


Coach Dashboard



Results / Primary Findings

School Professional CBT Report Response Rate



Study Participants

Total number of school professionals consented: 227

Total number of students identified: 1,347

Study Questionnaires Managed with the TRAILS Dashboard

Student questionnaire completion:
M3: 66.74% (899 of 1347 students)
M6: 63.46% (818 of 1289 students)

SP questionnaire completion:
M3: 79.29% (134 of 169 SPs)
M6: 72.78% (123 of 169 SPs)

Current Dashboard Integration

- DPSCD
- US Dept of Ed Grant (Washtenaw)
- Wayne Co (DWMHA)

Future Dashboard Integration

- Customization
- User feedback
- Multiple settings (e.g., healthcare, corporate, etc.)

- Clinical “nudges” to increase treatment frequency or fidelity
- Prompts recommending specific treatment components for individual students based on acquired clinical data
- Personalized dynamic assessment and training targeting user skill deficiencies

Questions?

Thank you!

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