

Applying Community-Partnered Implementation Science to Improve Community Mental Health Services for Autistic Children

Lauren Brookman-Frazee, PhD

Professor, UC San Diego Dept. of Psychiatry



Overview

- Introduction to research and community services contexts
- Community-identified needs related to Autism in children's mental health services
- Overview of iterative development of "AIM HI" and testing process through hybrid effectiveness-implementation trials
- Next steps

Translational Research Context




Implementation Science

“... the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness of health services.”

-Eccles/Mittman (2006)




Research Context: Community Service Systems



California Department of
HealthCare Services

Mental Health

- Outpatient and school-based clinics
- High rates of co-occurring psychiatric conditions (>70%)



DEPARTMENT OF EDUCATION
STATE OF CALIFORNIA

**Education,
Early
Intervention &
Special
Education
(IDEA)**



**Autism/ID
Specialty**



MEDI-CAL
Serving California
Since 1966

**Primary Care
and Medical
Spec.**



DEPARTMENT
OF REHABILITATION
Most Independence

**Transition
Services &
Vocational
Services**

Community-Identified Needs Related to Autism in Children's Mental Health Services

"How much my child actually benefits is questionable... I see that some [therapists] are really just trying to figure out information and **really just don't know what to do to help.**"

-Caregiver



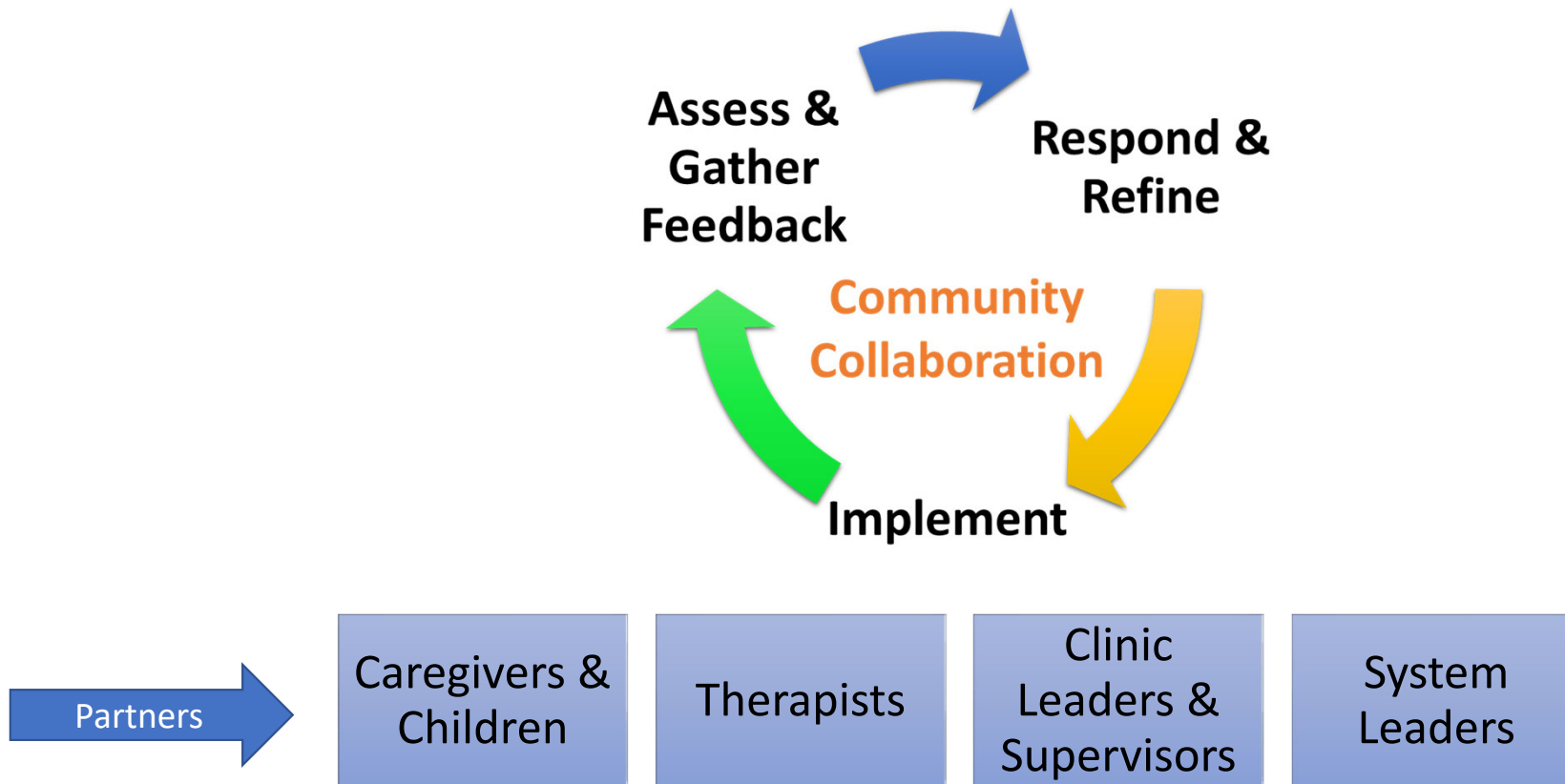
"We're probably somewhat all out of the scope of practice when we're dealing with these kids ...**we don't really have a whole lot of training.** We're getting it as we go."

-Community Therapist

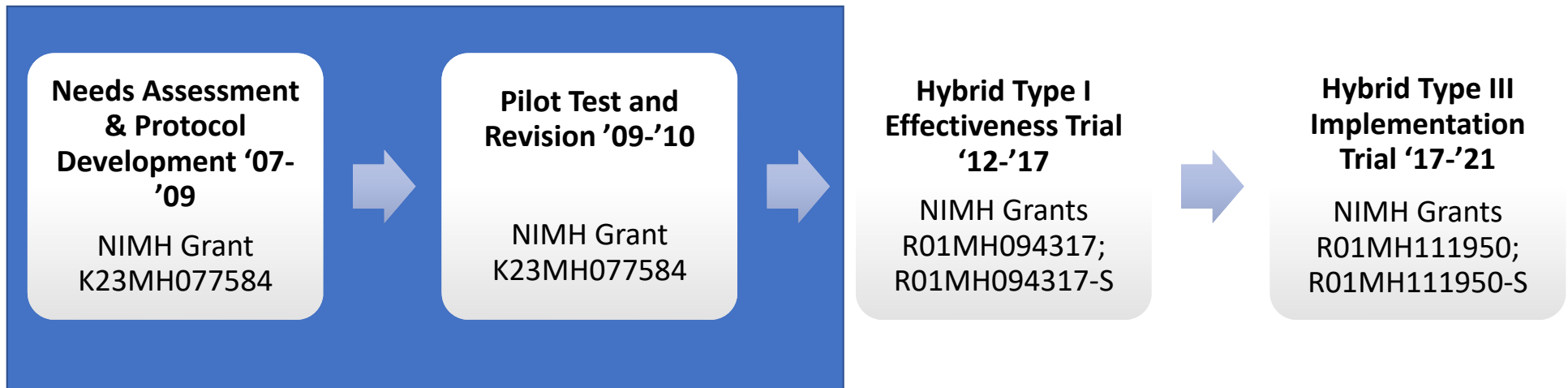
Brookman-Fraze, Baker-Ericzen, Stadnick, Taylor (2011)

Brookman-Fraze, Drahot, Stadnick, Palinkas (2011)

Responding to Community-Identified Needs: Developing & Testing a Clinical Intervention & Therapist Training Model



Phase 1: Needs Assessment and Initial Development/Testing



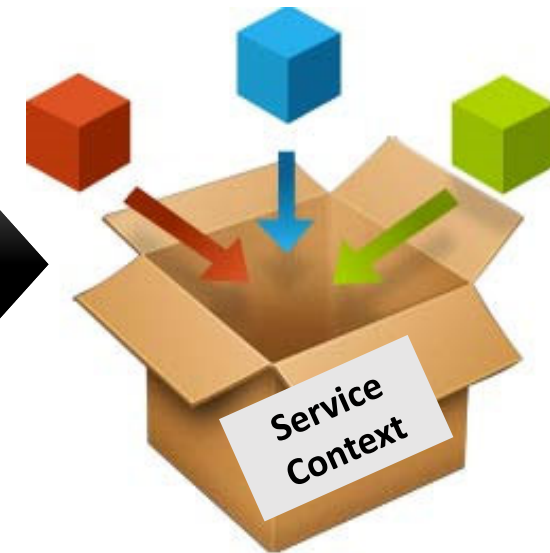
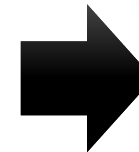
Mental health therapists *
Caregivers (and children) *
Mental health program leaders

Development Process



Needs Assessment

- Quantitative & qualitative data to assess clinical needs of children and training needs of therapists
- Therapist & caregiver perspectives
- Observational data of usual care psychotherapy from Garland R01 "PRAC" study



Decisions Based on Needs Assessment

Clinical intervention Protocol

- Design for population served and structure of publicly-funded mental health programs
 - Including caregiver materials in Spanish
- Framework for addressing broad range of behaviors that interfere with a child's functioning in their environments
- Emphasis on caregiver & child skill-building

Therapist Training Model

- Tailor for limited Autism and behavioral training
 - Autism "Lens" for understanding behaviors
- Emphasize process for understanding behaviors, identifying and teaching skills
- Focus on adapting psychotherapy structure
- Include training videos in Spanish

An Individualized Mental Health Intervention for Children with Autism (AIM HI)



Clinical intervention Protocol

- Package of evidence-based strategies to develop individualized caregiver and child skills to address interfering behaviors in children with Autism ages 5 to 13 receiving mental health services
 - No set number of sessions, but typically takes 5-6 months to complete

Therapist Training Model (6 months)

- Applied Introductory Workshop
- Structured Consultation Series (12 sessions)
 - 10 Group, 2 Individual
- Deliver AIM HI to Case with Guidance & Performance Feedback from Trainer
 - Feedback based on videos of sessions and review of materials

AIM HI Framework

Understand

Teach parents to identify **patterns in child's environment that elicit behaviors and purpose of behaviors**

Based on multiple observations, focus on the most common purpose and situations.

Identify Skills

Child skills to address common behavior patterns (e.g., emotion regulation/coping, daily living skills)

Complementary caregivers strategies to modify environment and help facilitate child skill building.

Teach

Use **Active Teaching strategies** to teach child and caregiver skills

Use additional intervention strategies to target specific skills as appropriate

Adapting Psychotherapy Process (Structuring Sessions for Engagement & Skill Building)



AIM HI Framework

Understand

Teach parents to identify **patterns in child's environment that elicit behaviors and purpose of behaviors**

Based on multiple...
focus on the most common...
purpose and situations.

Child

AIM HI intervention
content will be different
for each child/ family
(i.e. there is no set
curriculum)

Active Teaching strategies

to teach child and parent skills

...tion
get specific
appropriate

Adapting Psychology

Engage (Skill Building)

HAVE
TISM
WHAT'S YOUR
SUPER POWER?

AIM HI Protocol

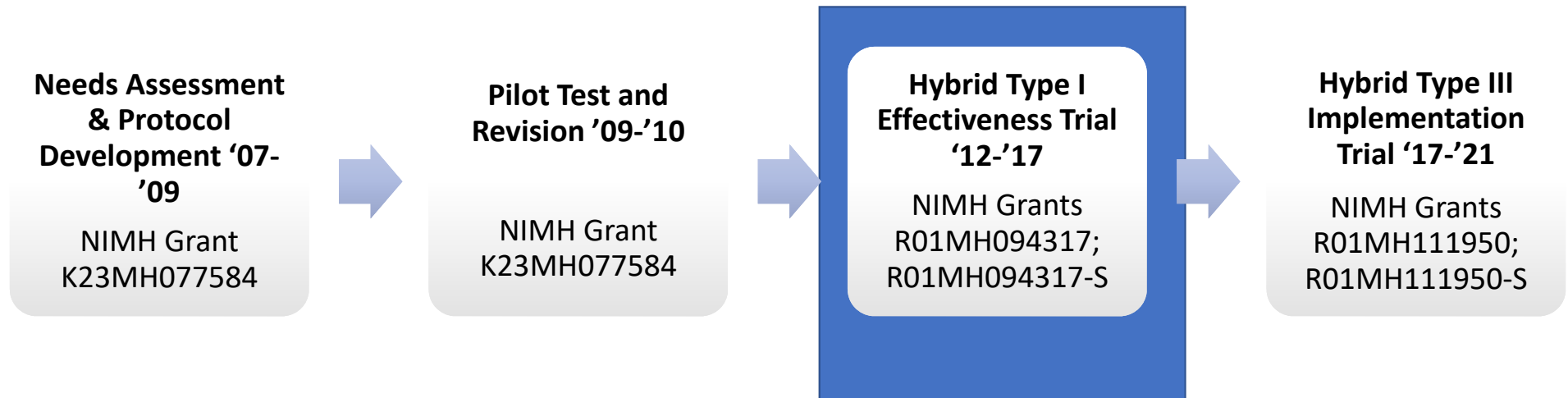
Phase	AIM HI Protocol Steps	Within-Session Elements
Treatment Planning	Integrate Assessment Information	<p>Structuring sessions for skill-building and engagement</p> <ul style="list-style-type: none"> Schedules, visual/written materials <p>Engaging parents and children</p> <ul style="list-style-type: none"> Collaboration/active involvement (parents) Motivational strategies (children) Preparing to teach new skills <p>Active teaching with parents and children</p> <ul style="list-style-type: none"> Modeling, practice-with-feedback, reinforcement, between-session practice
	<i>Collaborative Autism Psychoeducation</i>	
	Complete Behavior Tracking with Parents	
	Develop Behavior Plan	
	Develop Active Teaching Plan	
Active Teaching	Teach Parent Strategies to Promote Child Skill-Building	
	Teach Alternative Skills to Child	
	Promote Generalization of Alternative Skill	
	Teach Additional Alternative Skills to Child (as indicated)	
Evaluating Progress	Review Treatment Progress	
	Develop Plan for Next Steps	

AIM HI Protocol

Phase	AIM HI Protocol Steps	Within-Session Elements
Treatment Planning	Integrate Assessment Information	<p>Structuring sessions for skill-building and engagement</p> <ul style="list-style-type: none"> Schedules, visual/written materials <p>Engaging parents and children</p> <ul style="list-style-type: none"> Collaboration/active involvement (parents) Motivational strategies (children) Preparing to teach new skills
	<i>Collaborative Autism Psychoeducation</i>	
	Complete Behavior Tracking with Parents	
	Develop Behavior Plan	
	Develop Active Teaching Plan	
Active Teaching	Teach Parent Strategies to Support Child Skill-Building	<p>Active teaching with parents and children</p> <ul style="list-style-type: none"> Modeling, practice-with-feedback, reinforcement, between-session practice
	Teach Parent Strategies to Child	
	Parent Utilization of Alternative Skill	
	Teach Additional Alternative Skills to Child (as indicated)	
Evaluating Progress	Review Treatment Progress	
	Develop Plan for Next Steps	

Simple Strategies to Adapt Psychotherapy

Phase 2: Effectiveness Trial



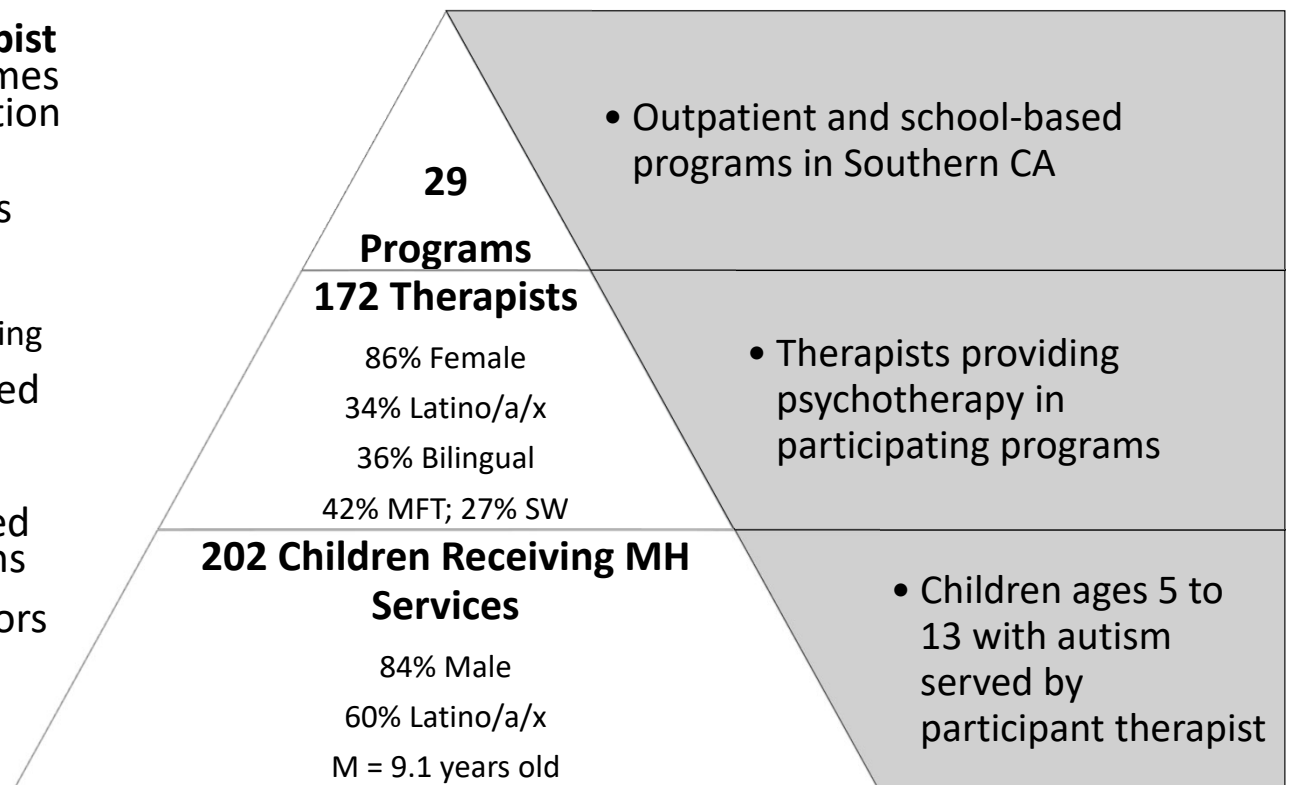
System leaders*
Mental health program leaders*
Mental health therapists
Caregivers (and children)

AIM HI Adaptation -
Culturally Enhanced version

Phase 2: Hybrid Type I Trial



- An Individualized Mental Health Intervention for Autism (AIM HI)
- Test the **effects of AIM HI therapist training** on family clinical outcomes and collect data on implementation process and outcomes
- Enrolled mental health programs randomized to:
 - Wave 1 AIM HI training
 - Usual Care/ Wave 2 AIM HI Training
- Therapist/family “dyads” recruited from participating programs
- Therapists received initial and ongoing training as they delivered AIM HI or usual care for 6 months
- Primary outcomes: Child Behaviors
 - Collected every 6 months for 18 months



Results: Clinical Effectiveness



Significantly larger declines in ECBI Intensity & Problem scores in the AIM HI group compared to the Usual Care group

- Autism characteristics and Primary Service Setting included as control variable in models

Child characteristics did not moderate the effectiveness of AIM HI training

Observer-rated therapist delivery of evidence-based interventions strategies (Treatment Continuity and Session Structure) mediated training effects on child outcomes over 6 months

Results: Clinical Effectiveness (Cont.)



Caregivers reported significant decreases in caregiver strain at 6 months.

- No significant difference between training groups

AIM HI caregivers reported greater increases in parenting sense of competence (self-efficacy) at 6 months compared to Usual Care caregivers.

Increase self-efficacy mediated training effects on child outcomes over 18 months.

Observer-rated therapist delivery of evidence-based interventions strategies (Treatment Continuity, Therapist Pursuit of Caregiver Skills) also mediated training effects on child outcomes

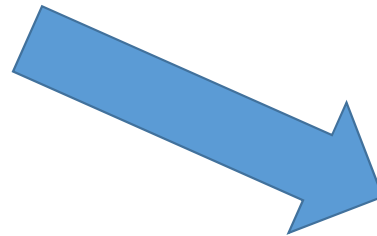
Results: Key Influences on Implementation Outcomes

Leadership support and engagement

- Organizational leaders

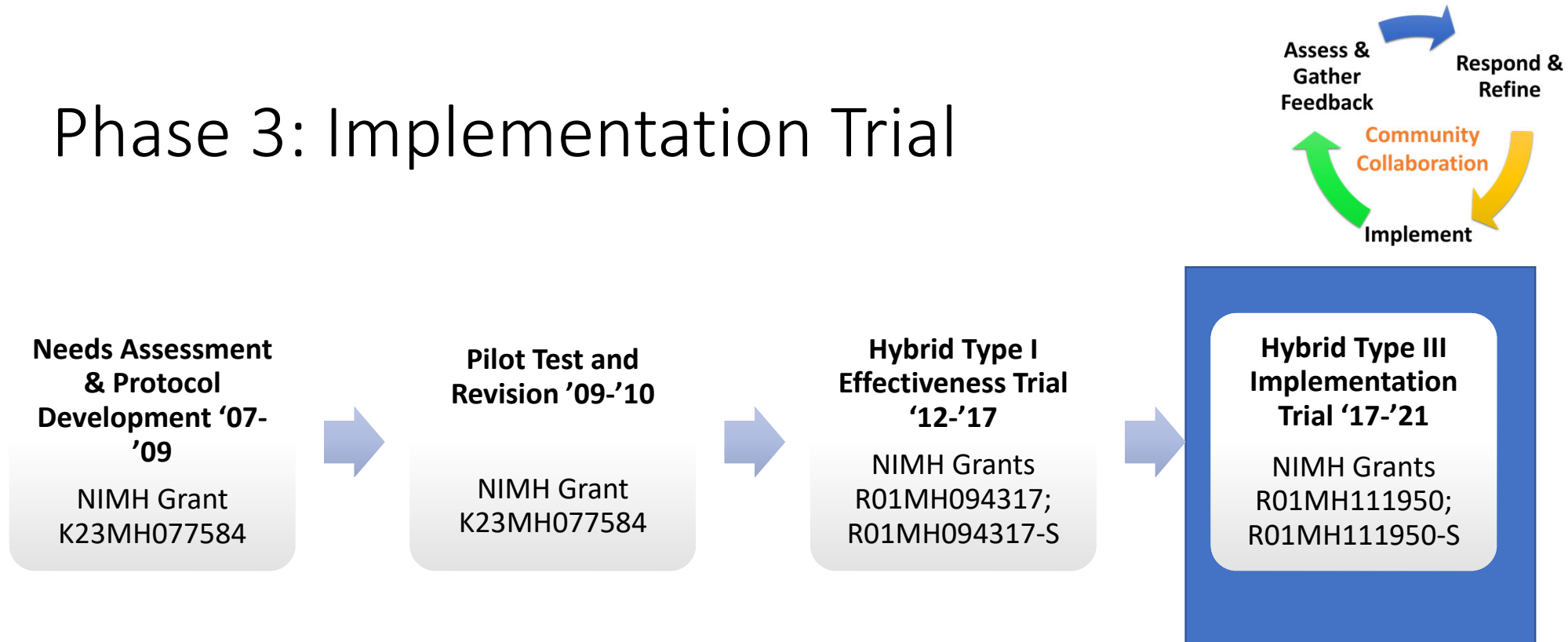
Provider attitudes & motivation

- Motivation for training
- Attitudes towards the training experience
- Perceptions of ability to respond and adapt to challenges faced during training and intervention delivery



Development of implementation strategies to improve provider fidelity and training engagement

Phase 3: Implementation Trial



System leaders*
Mental health program leaders*
Mental health therapists
Caregivers (and children)

AIM HI Adaptation -
Culturally Enhanced version

TEAMS Implementation Trials

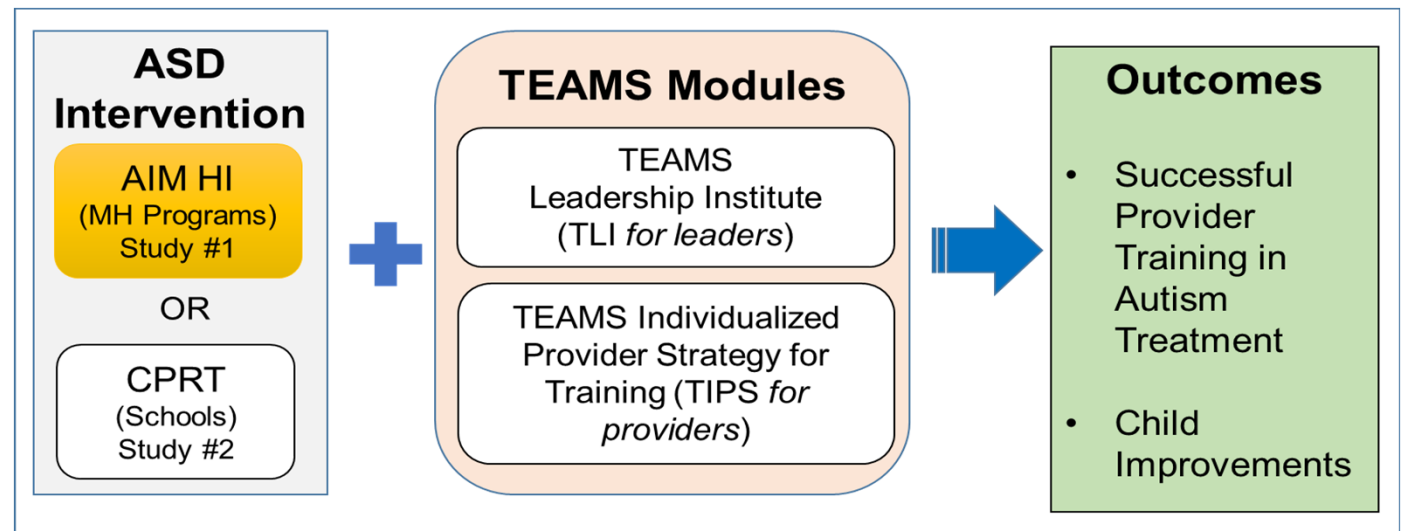
STUDY PROTOCOL

Open Access



Effectiveness of a multi-level implementation strategy for ASD interventions: study protocol for two linked cluster randomized trials

Lauren Brookman-Fraze^{1,2*} and Aubyn C. Stahmer^{2,3}



What is the impact of a pairing AIM HI and CPRT training with an organizational/leader intervention or provider engagement intervention in delivery of AIM HI and child outcomes?

TEAMS Leadership Institute (TLI)



Leadership intervention adapted from Leadership and Organizational Change for Implementation (LOCI; Aarons et al., 2015)

- Assessment
 - Climate, leadership, implementation support strategies
- Initial Training
 - 3 hour workshop
- Consultation and Coaching
 - 2x/month
- Assessment #2
- Booster/Sustainment Workshop
- Graduation

TEAMS Individualized Provider Strategy for Training (TIPS)

Motivational Interviewing Strategies:

- Pre-training Call
- Proactive Planning & Feedback
- Motivational Reminders
- Rescue strategies

TEAMS Individualized Provider Strategy (TIPS) for Training


TIPS uses an *innovative partnership approach* to improve the effectiveness of training in evidence-based practices (EBP). TIPS includes a set of strategies to *individualize provider training and facilitate learning and engagement.*

The Process.

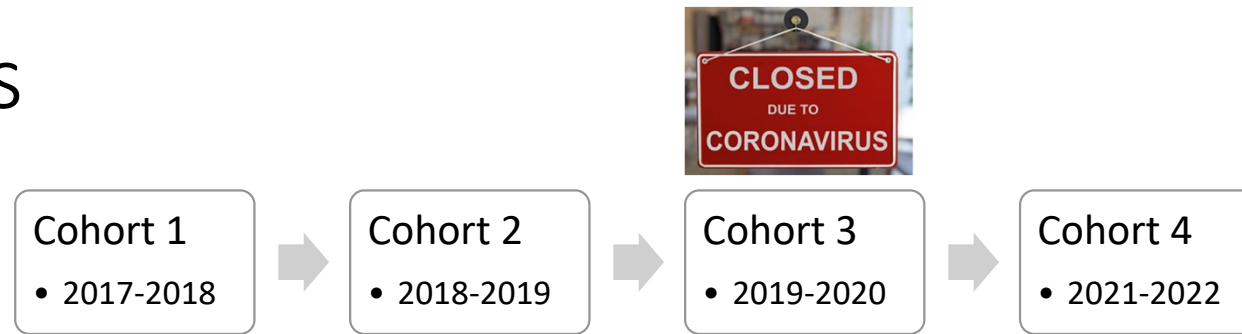
Pre-Training Call
Prior to initial workshops, providers will receive information about what to expect from the training process and proactively identify potential challenges to learning and delivering the EBP.

Proactive Planning and Feedback
Coaches will use planning worksheets at each coaching/consultation session to anticipate and troubleshoot challenges with EBP delivery and training participation.

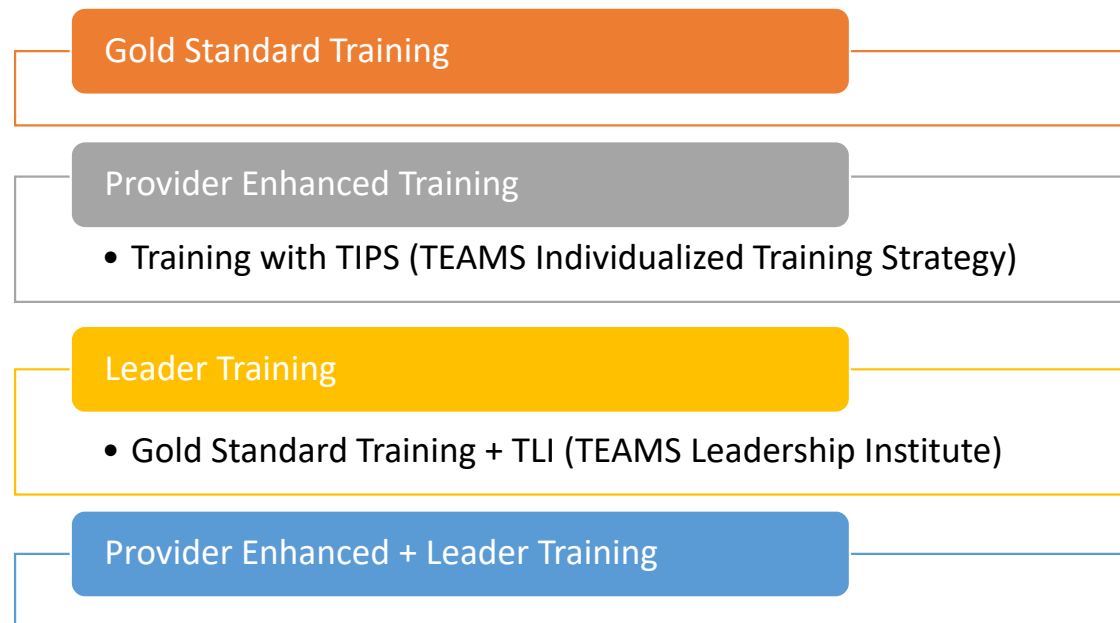
Motivational Reminders
Providers will receive a weekly motivational text or email from coaches to encourage ongoing engagement in training and EBP delivery.



Methods



- Programs/districts enrolled and randomized over 4 cohorts
- Leaders and provider/family “dyads” recruited from participating programs/ districts
- TLI provided in a subset of programs
- EBI training provided in all programs/districts for approximately 6 months



TEAMS Implementation Trials

Table 1. TEAMS Trial Participants by Study and Type

AIM HI Study (34 MH Programs & School Districts)	CPRT Study (31 School Districts)	Total (65 Programs/ Districts)
188 Therapists	197 Teachers	385 Providers
188 Families	197 Caregivers	385 Caregivers
<u>376 TOTAL AIM HI</u>	<u>394 TOTAL CPRT</u>	<u>770 TOTAL COMBINED</u>

Primary outcomes:

- Provider certification
- Provider fidelity

Secondary outcomes:

- Changes in child behaviors/Autism Characteristics

TEAMS Trial Findings

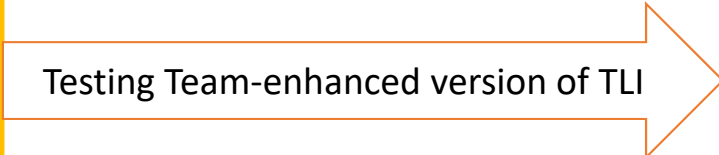
TEAMS Leadership Institute (TLI) associated with high provider fidelity and better child outcomes!

Potential mechanisms

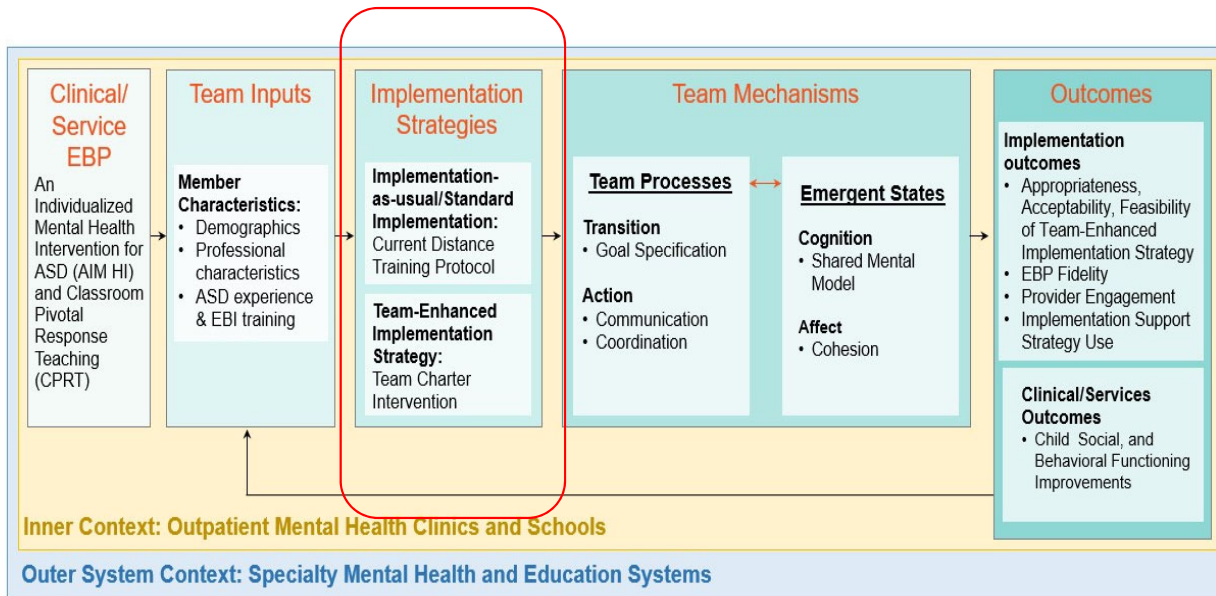
- TLI associated with greater improvements in implementation climate
- TLI associated with greater use of strategies to support implementation

Role of additional team members in TLI, especially for distance training sites

Testing Team-enhanced version of TLI



Current “Scale Out” Study of Team-Enhanced TLI (TLI-2)



- Test the effectiveness of the TEAMS Leadership Institute for Effective Implementation (TLI-2) to improve the delivery of autism EBIs and quality of care for autistic children.
 - *TLI-2 intentionally includes teams at each site to support implementation*

Implementation Science and Team Effectiveness in Practice (IN STEP)
Children’s Mental Health Research Center, UCSD ALACRITY Center

Summary



- Using an implementation science approach, AIM HI was designed in response to community needs and services context to improve mental health services
- Iterative process with frequent stakeholder feedback and co-development → feasible and effective intervention and training model
- Better implementation associated with better child outcomes
- Implementation is hard, even with interventions designed for the service context
 - Proactively engaging leaders maximizes implementation efforts
 - Next research focused on maximizing implementation team functioning

Summary

ANY
QUESTIONS?

