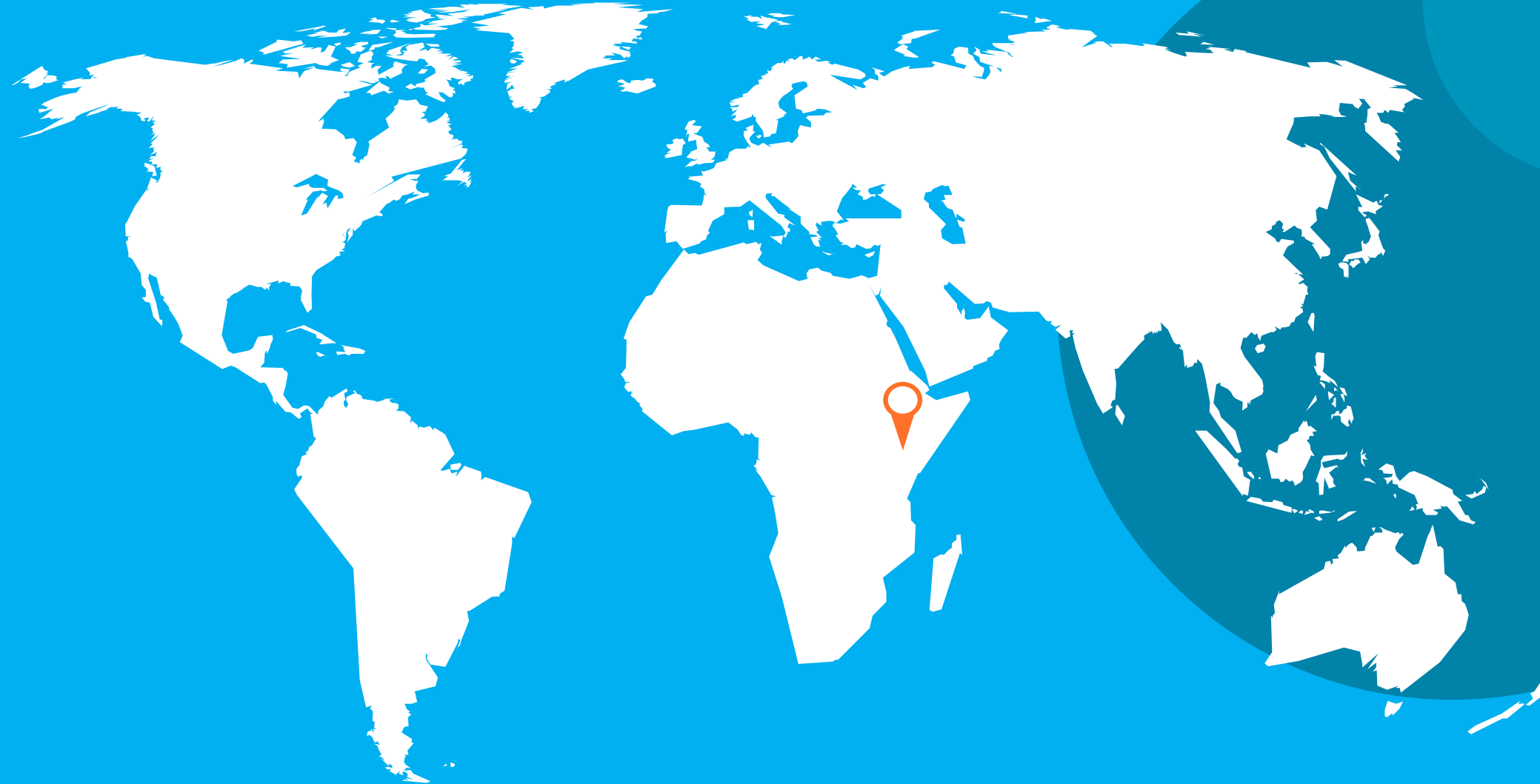


# CO-DESIGNING IMPLEMENTATION GUIDELINES TO MAXIMIZE ACCEPTABILITY, FEASIBILITY, AND USABILITY OF MOBILE PHONE SUPERVISION IN KENYA

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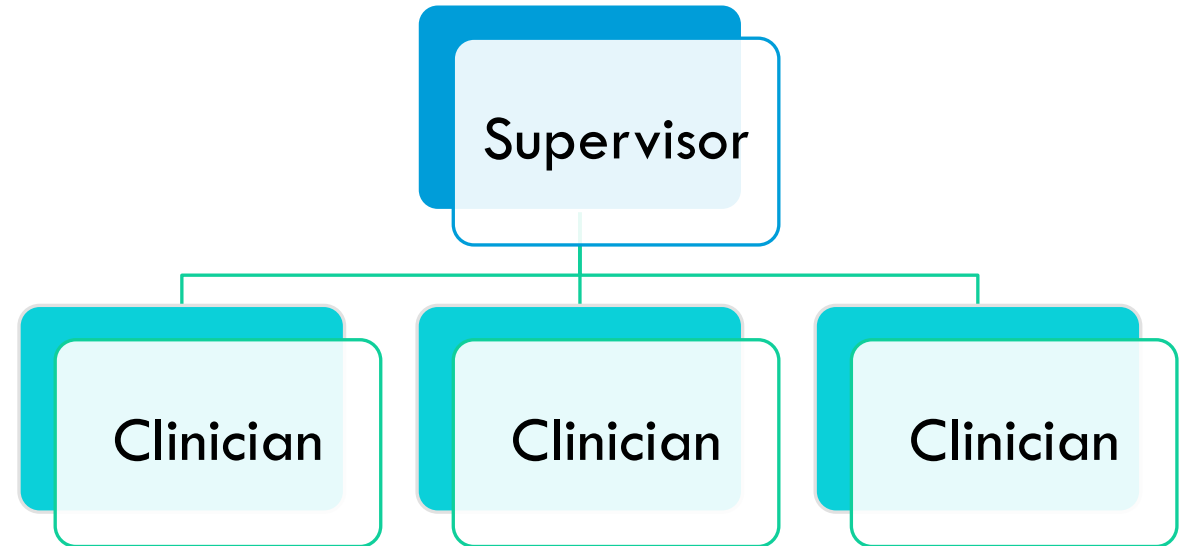
**Noah S. Triplett**, Bernard Nabalía, Daisy Okoth,  
Omariba Nyaboke, Lucy Liu, Jacinto Silva-Alvarez,  
Sharon Kiche, Anne Mbwayo, Cyrilla Amanyá,  
Shannon Dorsey

# Children's Mental Health Treatment Gap



# TASK SHIFTING MAY ADDRESS HUMAN RESOURCE SHORTAGES

- **Lay providers** are trained to **implement psychological interventions under supervision.**
  - Effective
  - Acceptable
  - Sustainable.



# TASK SHIFTING IS LIMITED BY AVAILABLE RESOURCES

- **Post-training supervision is important for fidelity**
  - Prevent fatigue and burnout.
- **Limitations of in-person supervision:**
  - Costly
  - Supervisors are limited in number
  - Transportation



# OPPORTUNITIES FOR MOBILE PHONES & TASK-SHIFTING

- Support providers from afar?
- Reduce costs and travel time?
- Augment task-shifting and improve access to care?



# CAN MOBILE PHONES REPLACE OR SUPPLEMENT IN-PERSON SUPERVISION?

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Network Connectivity?

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Availability of Phones?

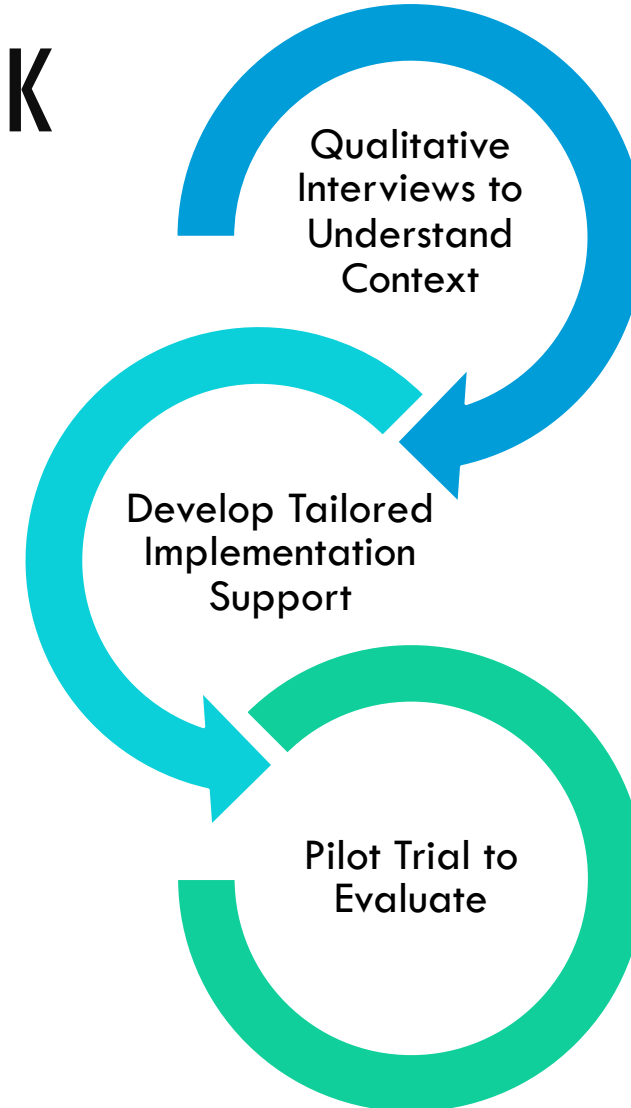
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Supervisor and Lay  
Counselor Preferences?



# DESIGN OVERVIEW & FRAMEWORK

- Iterative and mixed methods approach
- Human-Centered Design (HCD)
- **“accessible and effective by grounding their development in the needs and preferences of those who will ultimately use them.”**



# Parent Trial:

## Building and Sustaining Interventions for Children (BASIC)

*Dorsey & Whetten, MPIs; Wasonga, Kenya PI; NIMH R01 MH112633*

### Education Sector/Schools:

Teachers



### Health Sector/Communities:

Community Health Volunteers





# Intervention: Trauma-focused Cognitive Behavioral Therapy (TF-CBT)



## ***“Pamoja Tunaweza”*** **Together We Can**

- **Group-based TF-CBT**

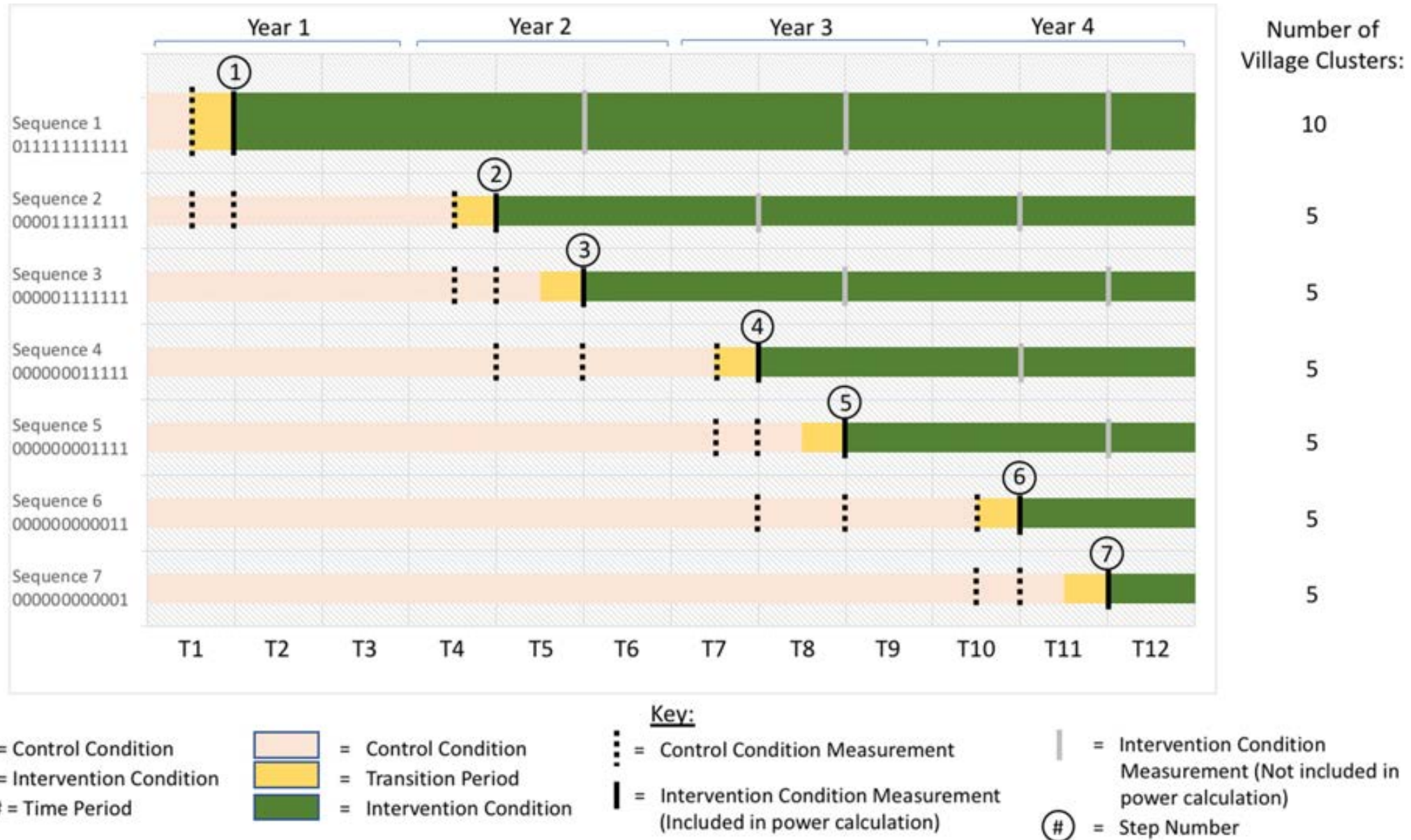
- Posttraumatic stress and grief among children ages 11-14
- Parental death
- 8 concurrent group sessions, 2-3 individual sessions



- **Building capacity using task-shifting**

- Lay counselors lead treatment groups (N=240)
- Kenyan trainers and supervisors (N=5)
- Supervision includes face-to-face meetings with lay counselor groups and ad hoc mobile phone communications.

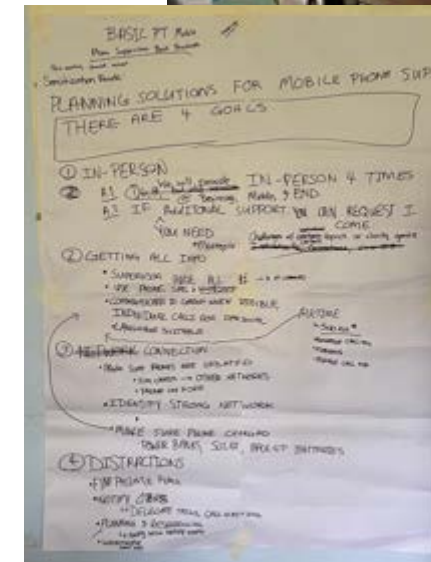
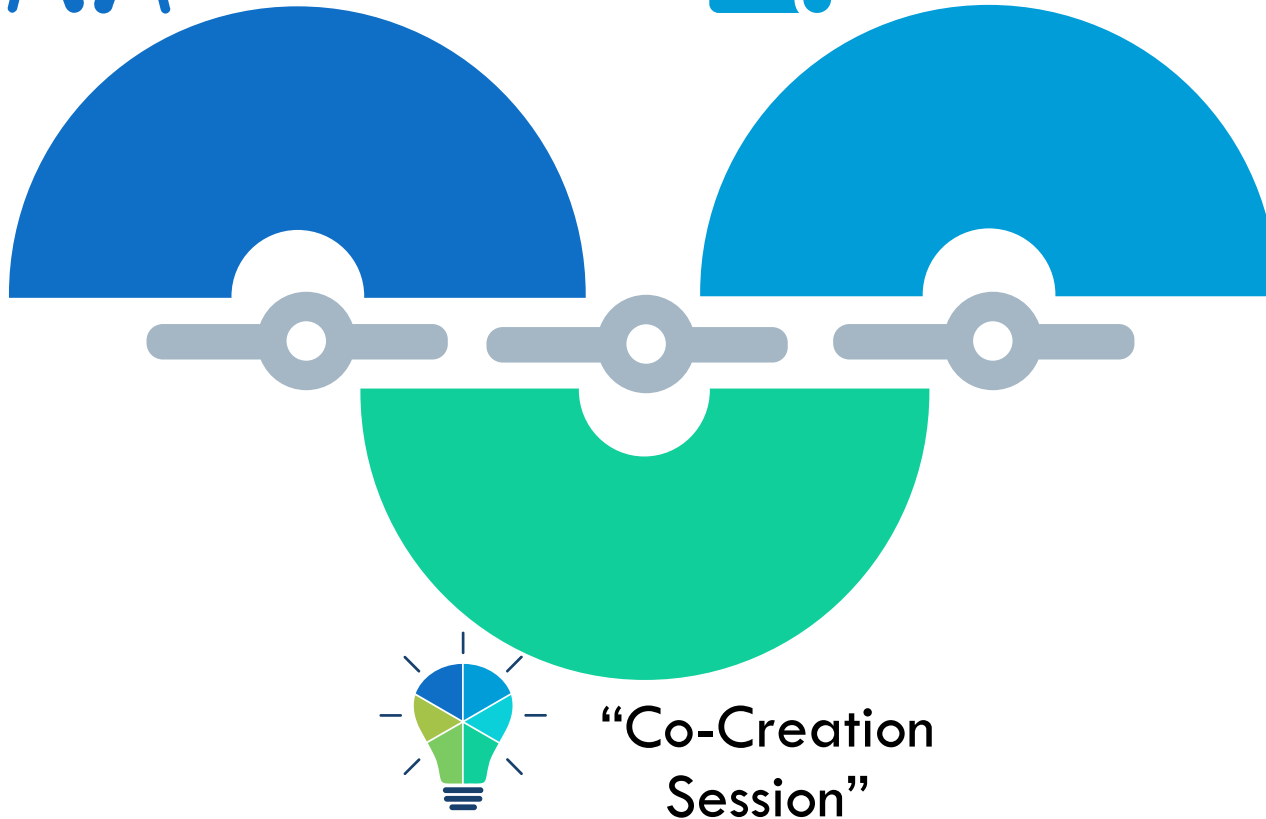
# BASIC (PARENT TRIAL) DESIGN



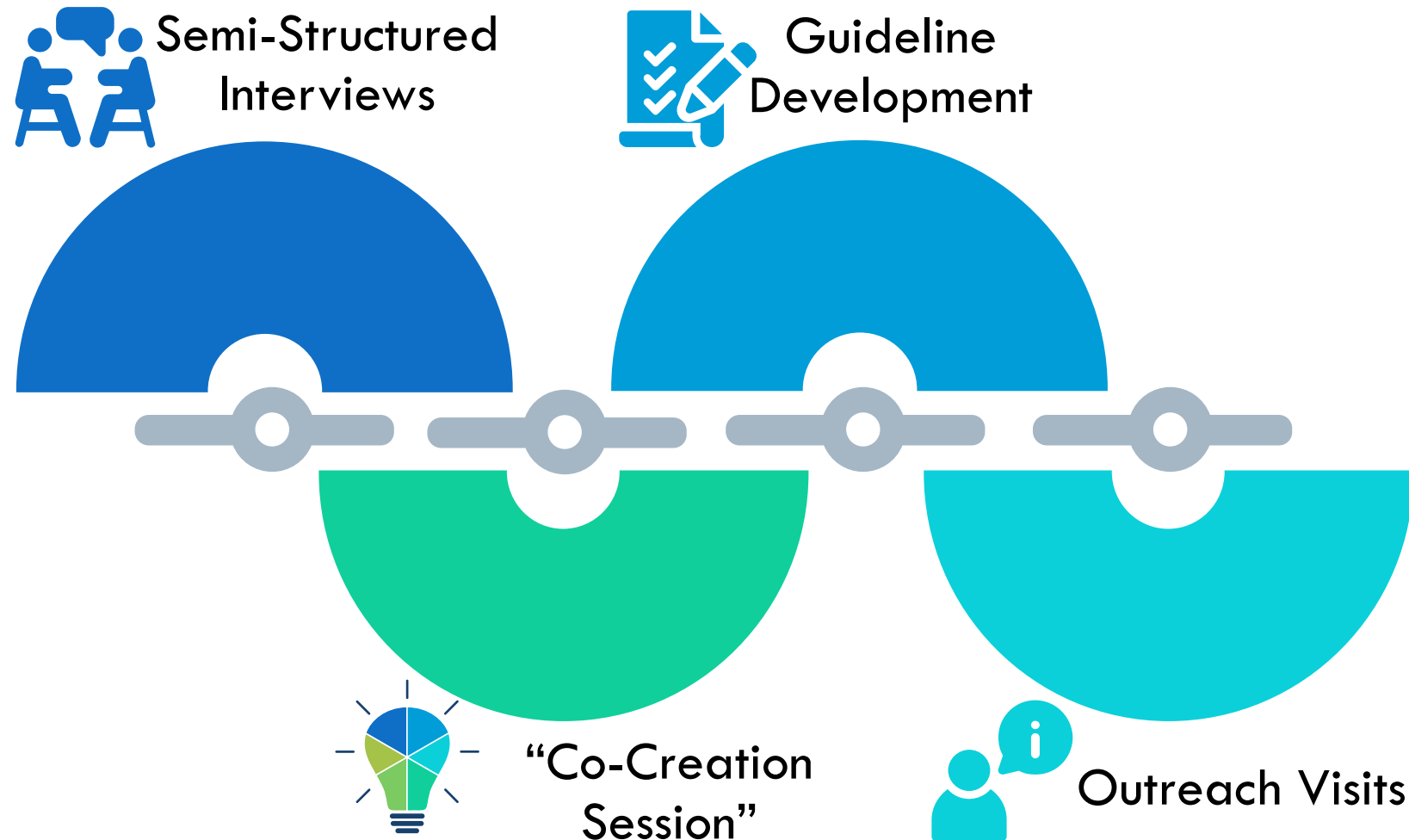
# IMPLEMENTATION SUPPORT DEVELOPMENT



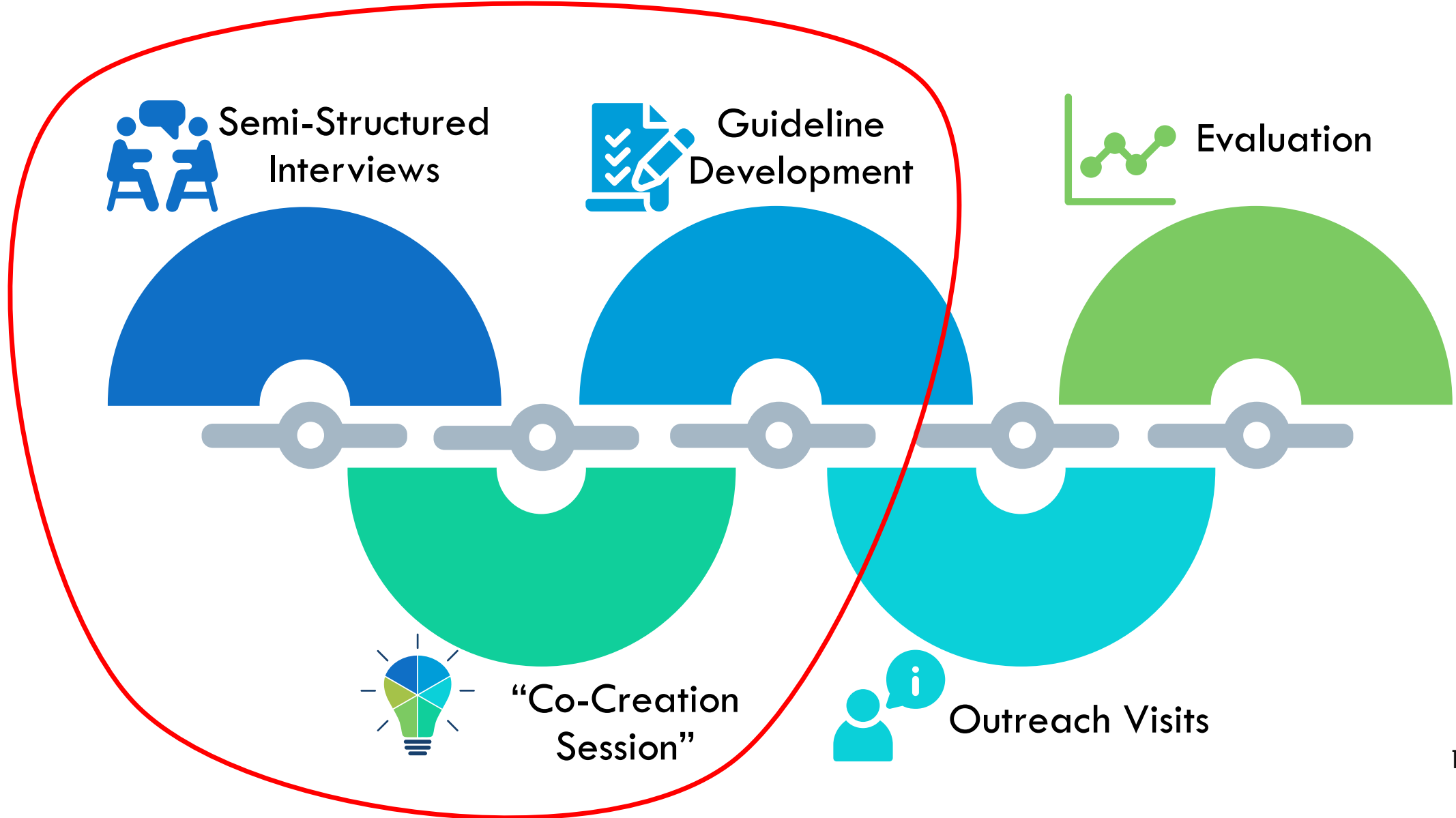
# IMPLEMENTATION SUPPORT DEVELOPMENT



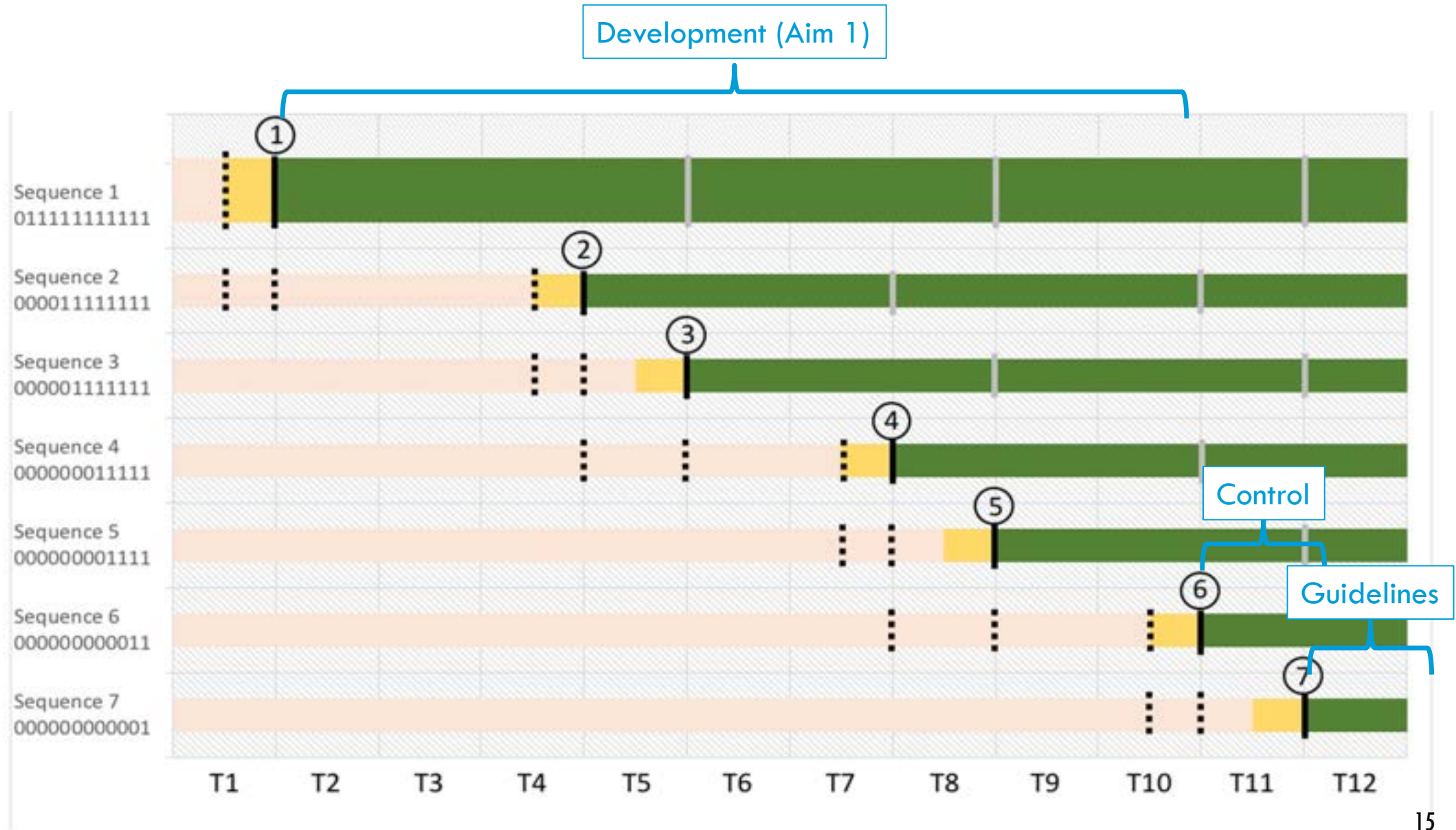
# IMPLEMENTATION SUPPORT DEVELOPMENT



# IMPLEMENTATION SUPPORT EVALUATION



# STEPPED WEDGE CLUSTER RANDOMIZED DESIGN



# METHODS

## Approach

- QUAN → qual mixed-methods data explanation

## QUAN (N=59):

- Measures of Acceptability, Feasibility, and Usability

## qual (n=15):

- Perceptions of educational outreach visit and guidelines

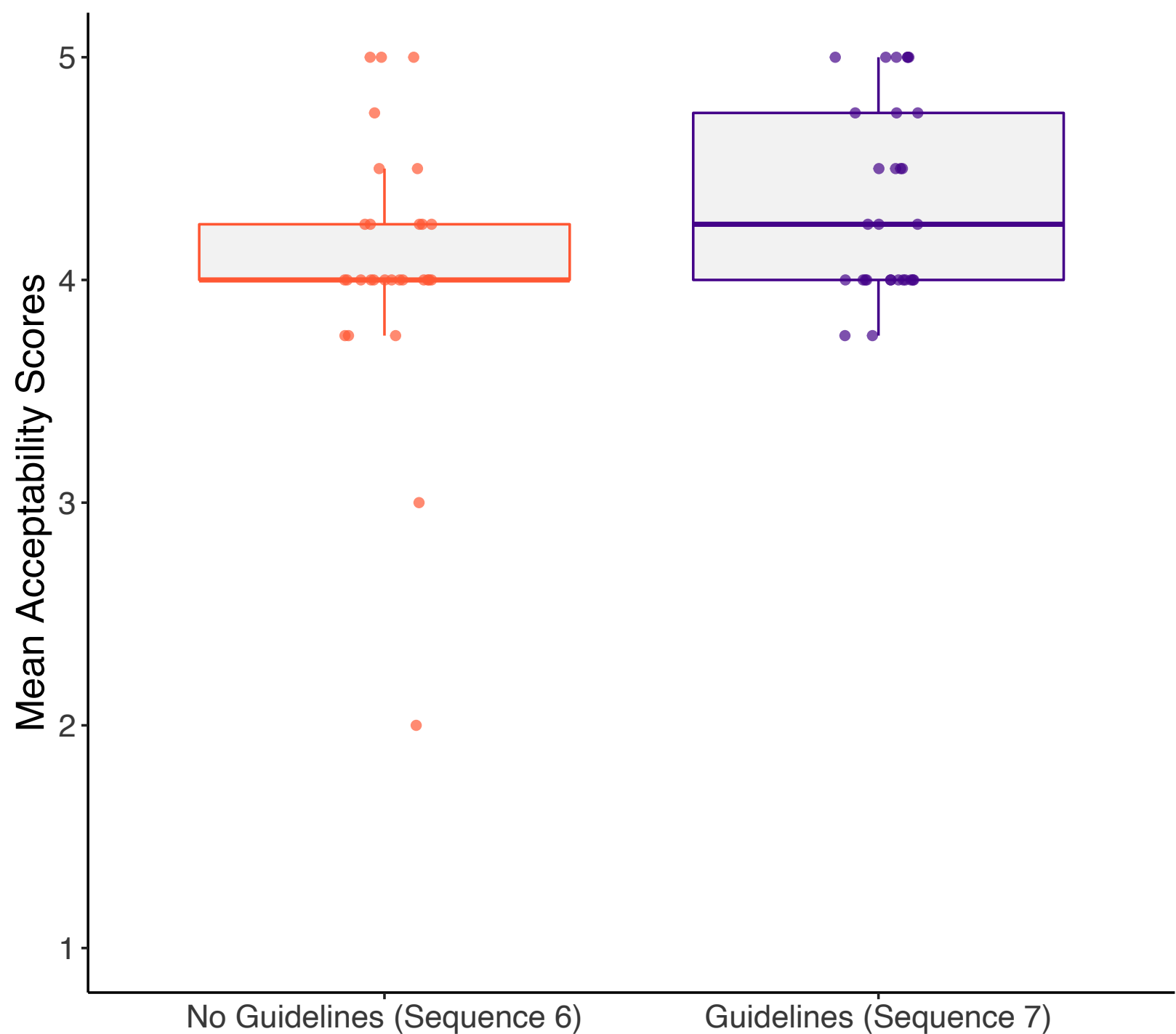
Measure	Example Item
<b>Acceptability</b> of Intervention Measure	“I like mobile phone supervision.”
<b>Feasibility</b> of Intervention Measure	“Mobile phone supervision seems possible in this school.”
Intervention <b>Usability</b> Scale	“I found mobile phone supervision too challenging.”



# GUIDELINES & OUTREACH IMPROVED ACCEPTABILITY

$t(57) = -2.05, p = .04$

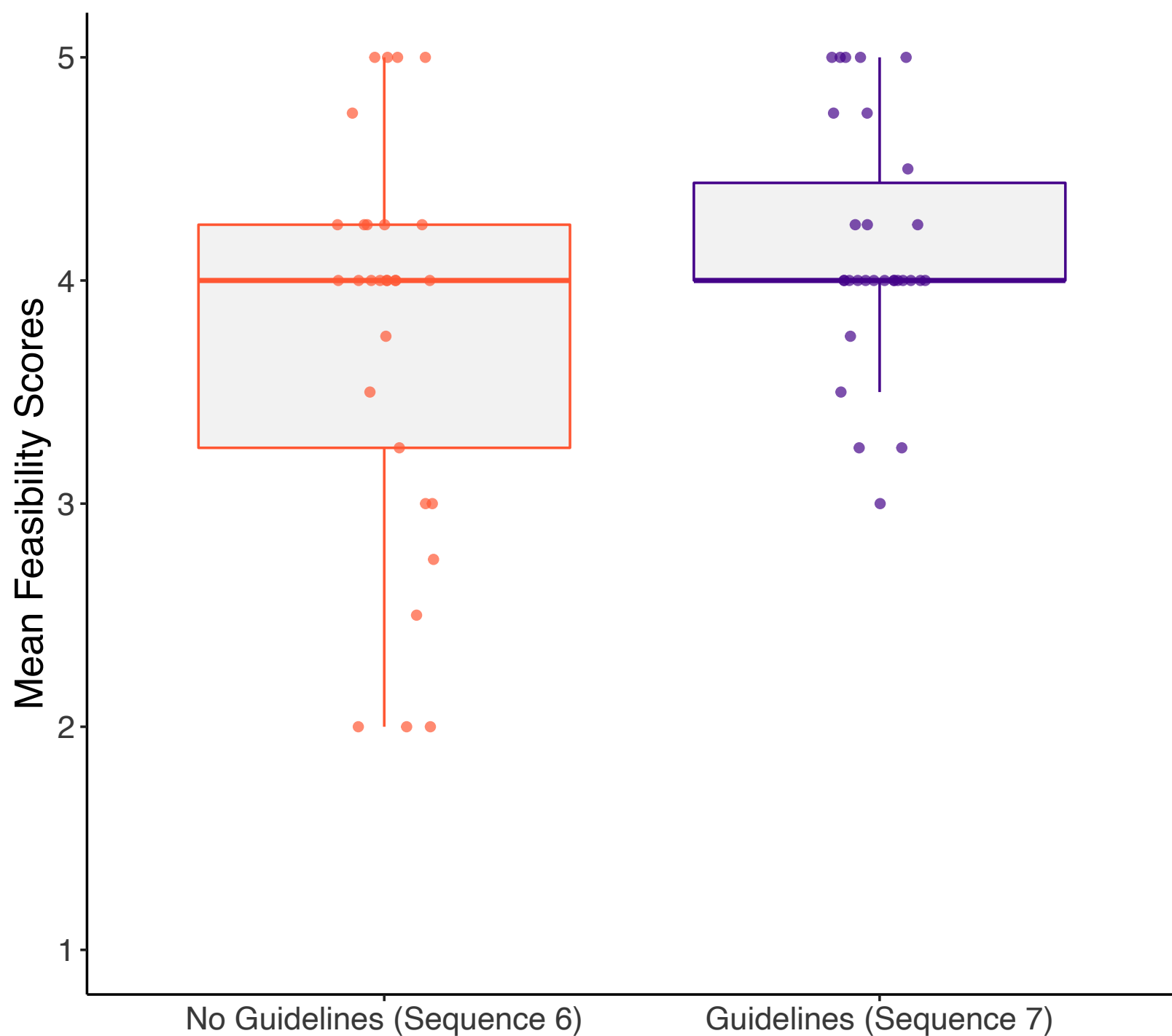
Hedges  $g = 0.53,$   
95% CI: 0.01 - 1.05



# THERE WAS NO EVIDENCE OF DIFFERENCE IN FEASIBILITY

$t(57) = -1.92, p = .06$

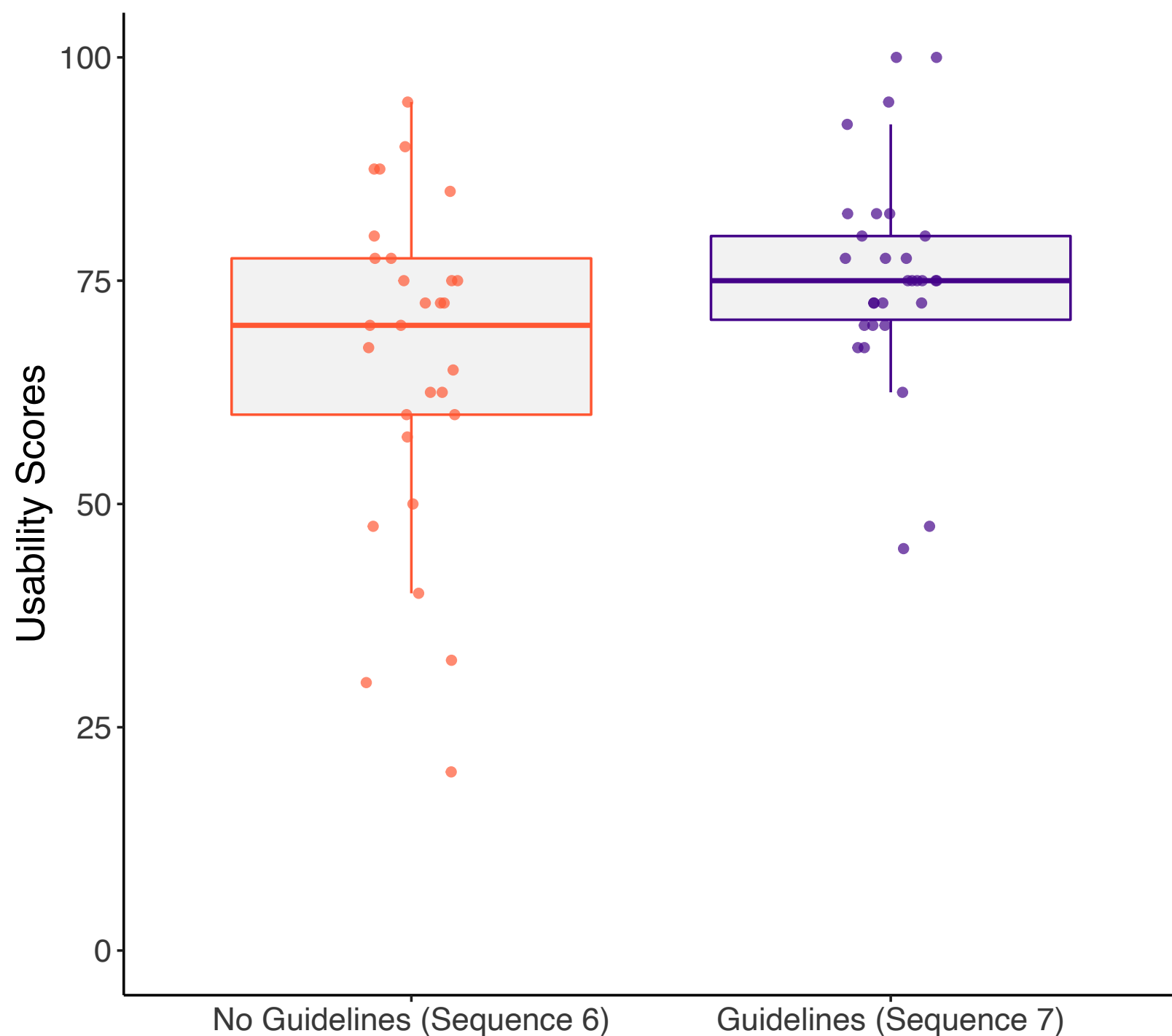
Hedges  $g = 0.49,$   
95% CI: -0.03 - 1.02



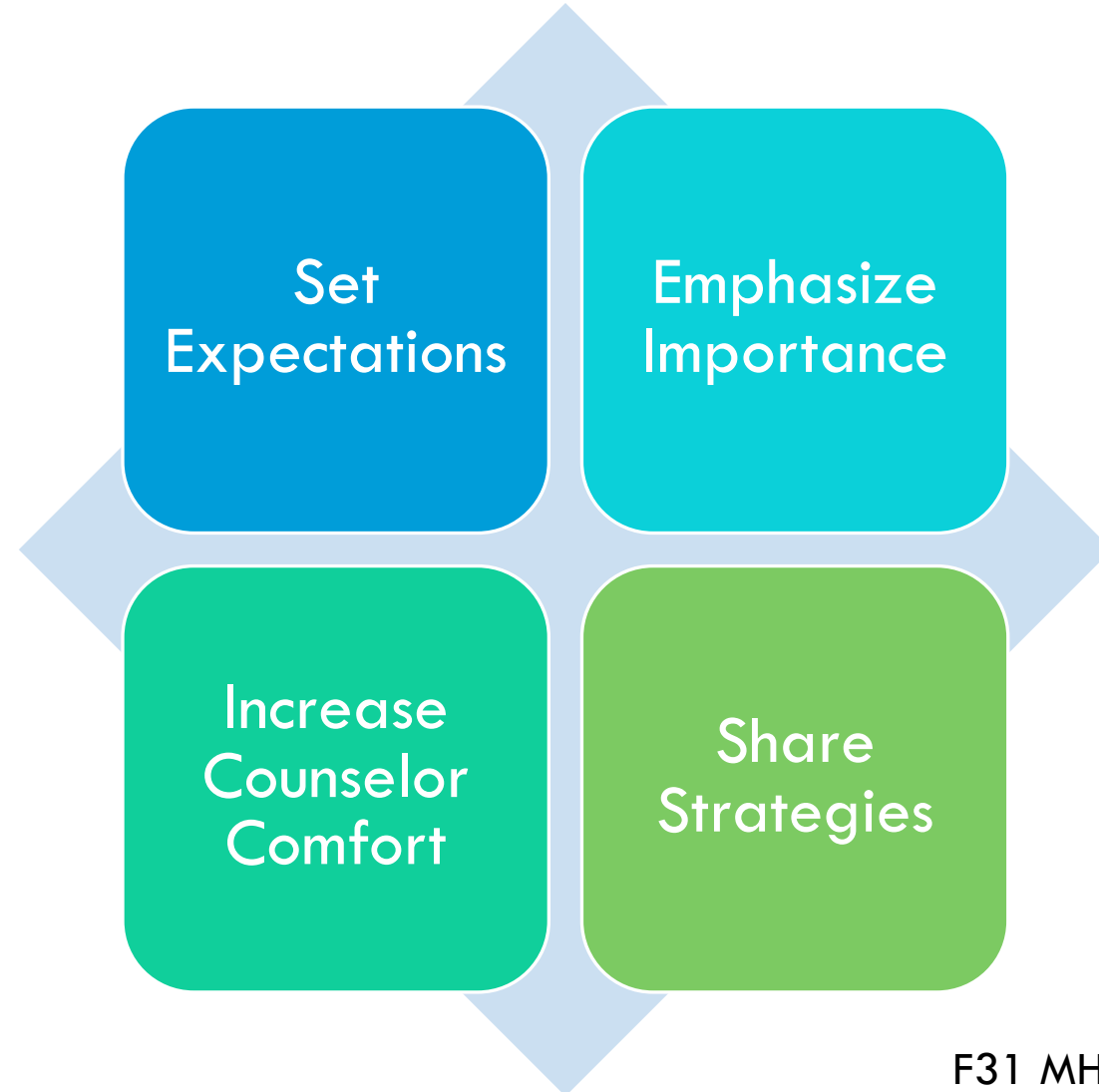
# GUIDELINES & OUTREACH IMPROVED USABILITY

$t(57) = -2.34, p = .02$

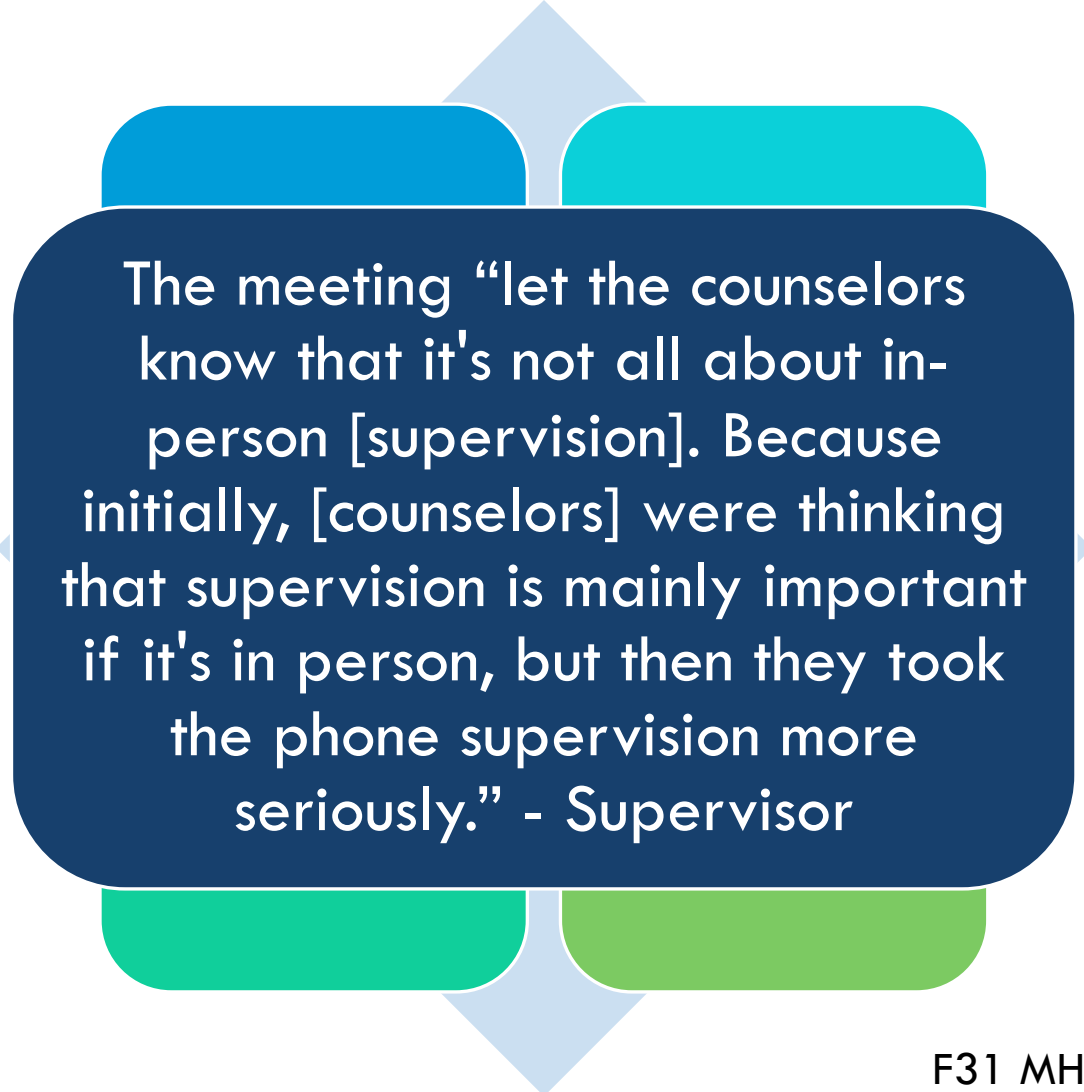
Hedges  $g = 0.60,$   
95% CI: 0.08 - 1.13



# QUALITATIVE RESULTS: IMPACT OF PROGRAM

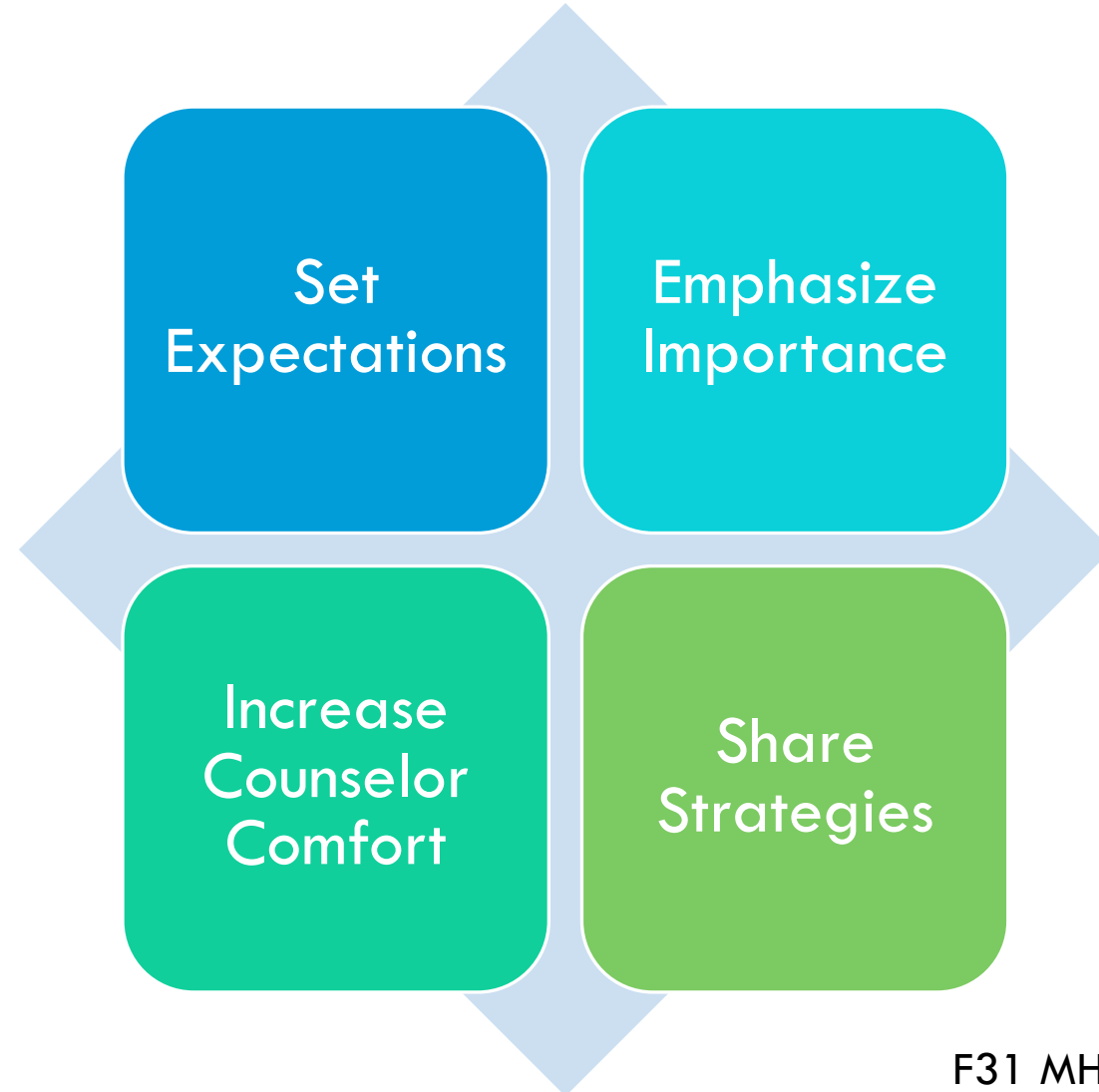


# QUALITATIVE RESULTS: IMPACT OF PROGRAM



The meeting “let the counselors know that it's not all about in-person [supervision]. Because initially, [counselors] were thinking that supervision is mainly important if it's in person, but then they took the phone supervision more seriously.” - Supervisor

# QUALITATIVE RESULTS: IMPACT OF PROGRAM



# QUALITATIVE RESULTS: IMPACT OF PROGRAM



# DISCUSSION & CONCLUSION

**Co-developed implementation guidelines and educational outreach visits were associated with improved acceptability and usability of mobile phone supervision.**

- Pragmatic and flexible implementation supports are needed.
- Models that empower partners to co-create, lead, and adapt strategies are important for health and research equity.

## **Limitations**

- Use of HCD in a culturally distinct setting with no in-country experts



- Shannon Dorsey, PhD
- Pamela Collins, MD MPH;  
Sean Munson, PhD;  
Bryan Weiner, PhD;
- RISE-MH Lab
- BASIC Study Team

- 
- NIMH Pre-Doctoral Fellowship (NIMH F31 MH1 24328; Triplett, PI)
  - BASIC Trial (NIMH R01 MH1 12633; Whetten & Dorsey, MPI)
  - Robert Wood Johnson Foundation Health Policy Research Scholars Fellowship & Dissertation Grant

