

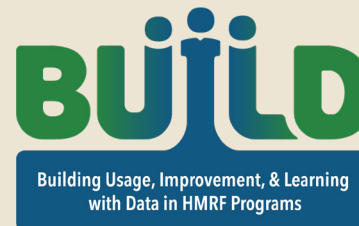
# Using rapid cycle evaluation methods for CQI

Continuous quality improvement (CQI) office hours

December 3, 2024 | 2:00 – 3:00pm ET



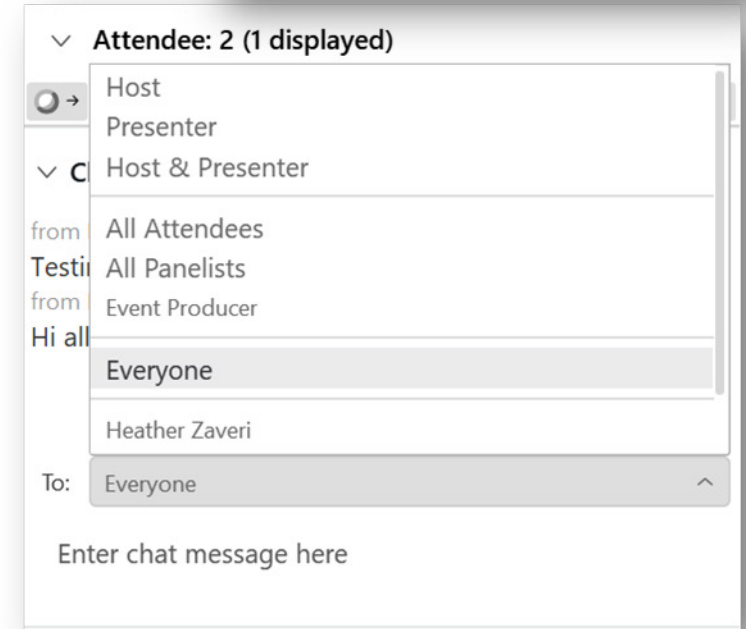
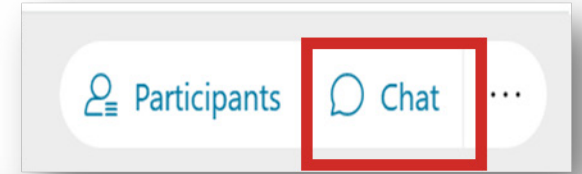
**OFFICE OF FAMILY ASSISTANCE**  
An Office of the Administration for Children & Families





# How you can participate

- / You may use the chat or share verbally using the hand raise feature
- / **REMINDER: Never text or email client personally identifiable information (PII), including during office hours or when contacting the TA teams**





# Maintaining and strengthening CQI practices

- / For many CQI efforts, evidence just needs to be good enough to inform next steps**
- / Rapid cycle evaluation (RCE) methods help teams gather more rigorous evidence when needed in CQI efforts**
- / Today, we will share the how-to of using RCE methods for CQI**





# Agenda

- / Review: When do rapid cycle evaluation (RCE) methods make sense to use in CQI?**
- / Planning to use RCE methods in CQI**
- / Preparing your data and conducting your test**
- / Demo: The e2i Coach**
- / Announcements**



When do RCE methods make sense to use in CQI?



# When to use RCE methods in CQI

## / **Road tests focus on implementation and early promise**

- They are intended to help calibrate a strategy to fit the program and determine whether a strategy shows early promise
- You still want to work out implementation issues before examining outcomes, because those issues could affect the outcomes

## / **RCE focuses on outcomes – does the strategy work?**

- RCE is a more rigorous alternative to long-term outcome monitoring in CQI
- Sometimes, teams need to monitor a strategy for several months after the road test to understand whether positive outcomes are sustained
- Using RCE instead of long-term outcome monitoring requires extra planning, but could produce more rigorous evidence, sooner



# When is it important to establish causation?

- / **Generally, establishing a correlation between implementation of a strategy and an improved outcome is good enough for CQI**
  - Correlation  $\neq$  Causation
- / **But if the strategy is resource intensive, in terms of staffing, funding, or time, you may want stronger evidence**
  - Establishing causation can be resource intensive
- / **Example: You learn about a new motivation-based case management approach that will require investing in tools and staff training**



# What is RCE and how can RCE methods support CQI?

- / **Can help establish that a CQI strategy *caused* the outcome**
- / **Draw on impact evaluation methods, using random assignment or matched comparison groups**
- / **Control or comparison groups are drawn from existing program participants rather than outside the program**
- / **Can use existing program administrative data for analysis, which helps manage costs and timeline**





# RCE decision tree

Need rigorous evidence that your improvement strategy works?

No

Traditional CQI methods will suffice

Yes

Is randomization feasible?

Other feasibility questions:  
Are data available?  
How soon do I need to know results?  
How much time is needed to observe an impact?

No

Is it possible to create matched comparison groups?

Yes

Are you participating in a local evaluation?

No

RCE methods are not a viable option for CQI

Yes

No

Try a tool like e2i Coach

Yes

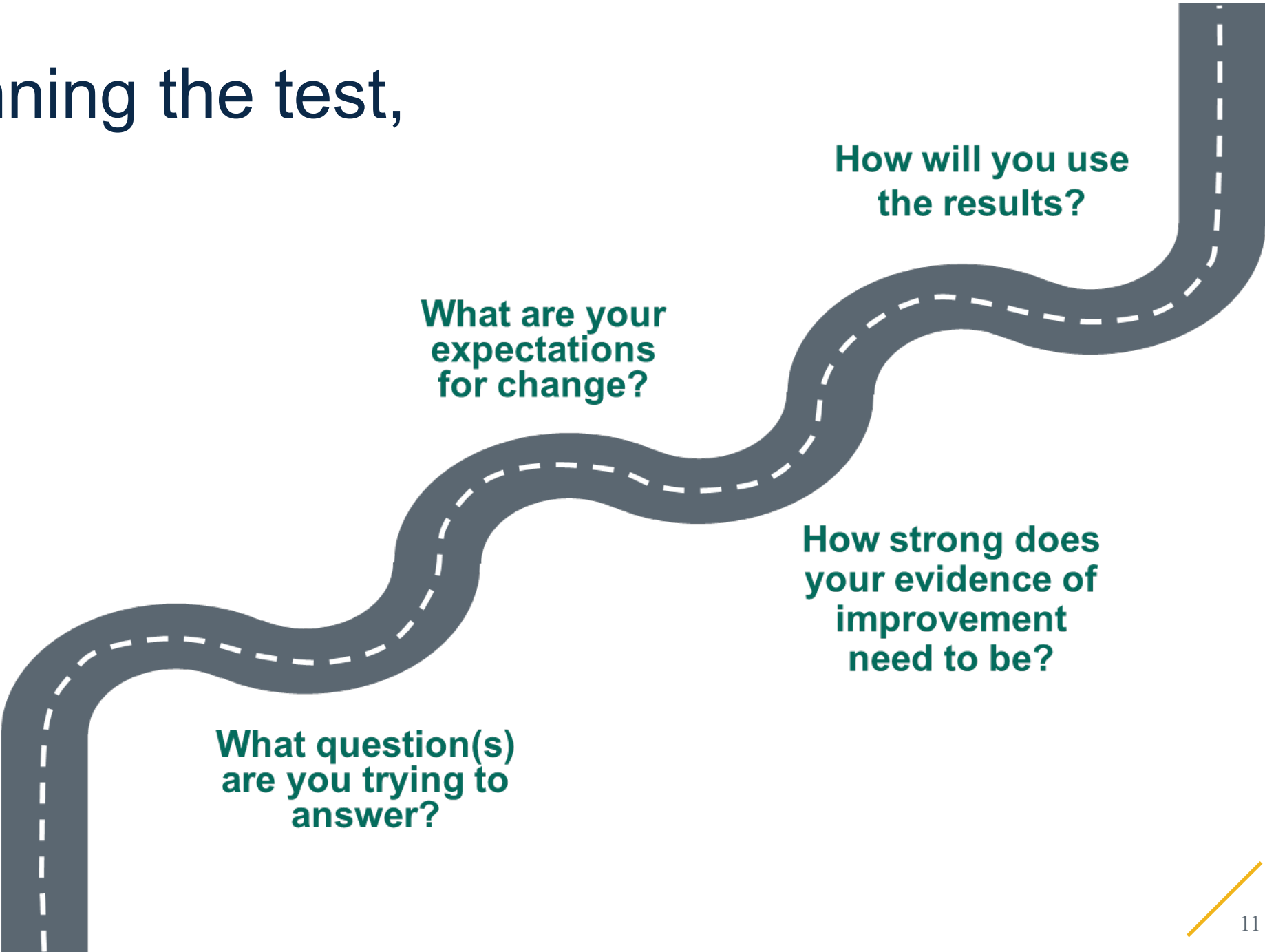
Consult with your evaluator, ETAP, and FPS about feasibility and enlist their help



# Planning to use RCE methods in CQI



# When planning the test, consider...



**Start**

**What design will you use?**

**What population will you study?**

**What question(s) are you trying to answer?**

**What are your expectations for change?**

**How strong does your evidence of improvement need to be?**

**How will you use the results?**



# What design will you use?

## / **Consider whether you are testing a new strategy or a current practice**

- Pilots of new strategies are the best fit for RCE, because your team can randomize before either group has experience implementing the strategy

## / **What comparison are you making?**

- New strategy compared to business-as-usual?
- Alternate versions of the strategy?

## / **Depending on the situation, you may use a randomized control trial or a matched comparison design**

- Consult with a research partner when planning to use RCE methods in CQI
- If you are conducting a local evaluation, also consult with your FPS and ETAP



# Defining your population

- / **Before forming treatment and control groups, determine who will be considered a 'participant' for the test**
- / **Will you include your whole program? One site? A specific subgroup of participants or sites?**
- / **When considering sample size**
  - Larger samples enable you to be more confident in the results even when the effect is small, but require more implementation effort

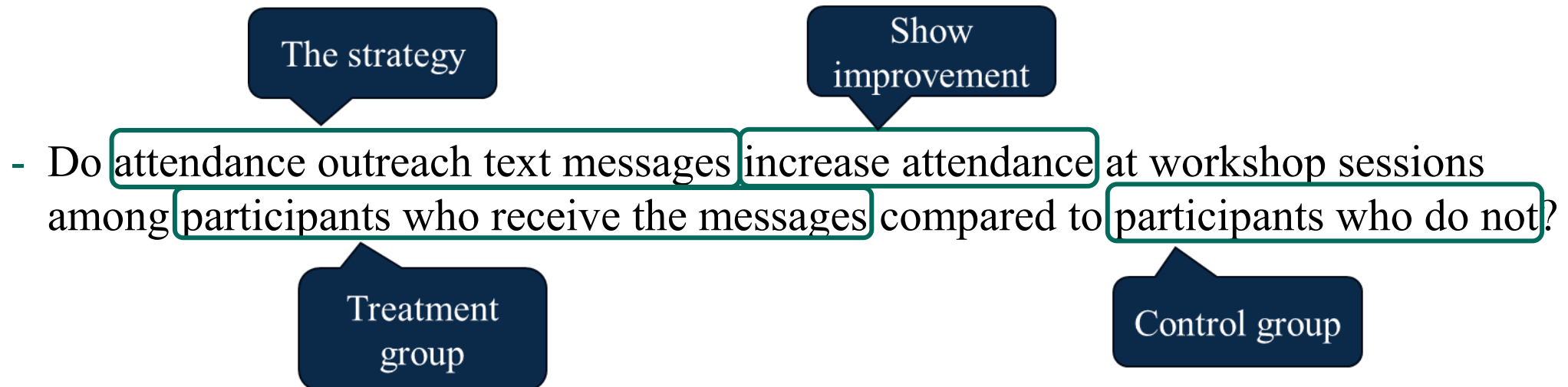


# What question(s) are you trying to answer?

## / Grounds the test in your goals

- Helps teams articulate what they are trying to learn
- Similar to learning questions created for a road test but focused on the strategy's outcomes, rather than its implementation
- Consider how the strategy corresponds to your program's SMART goal

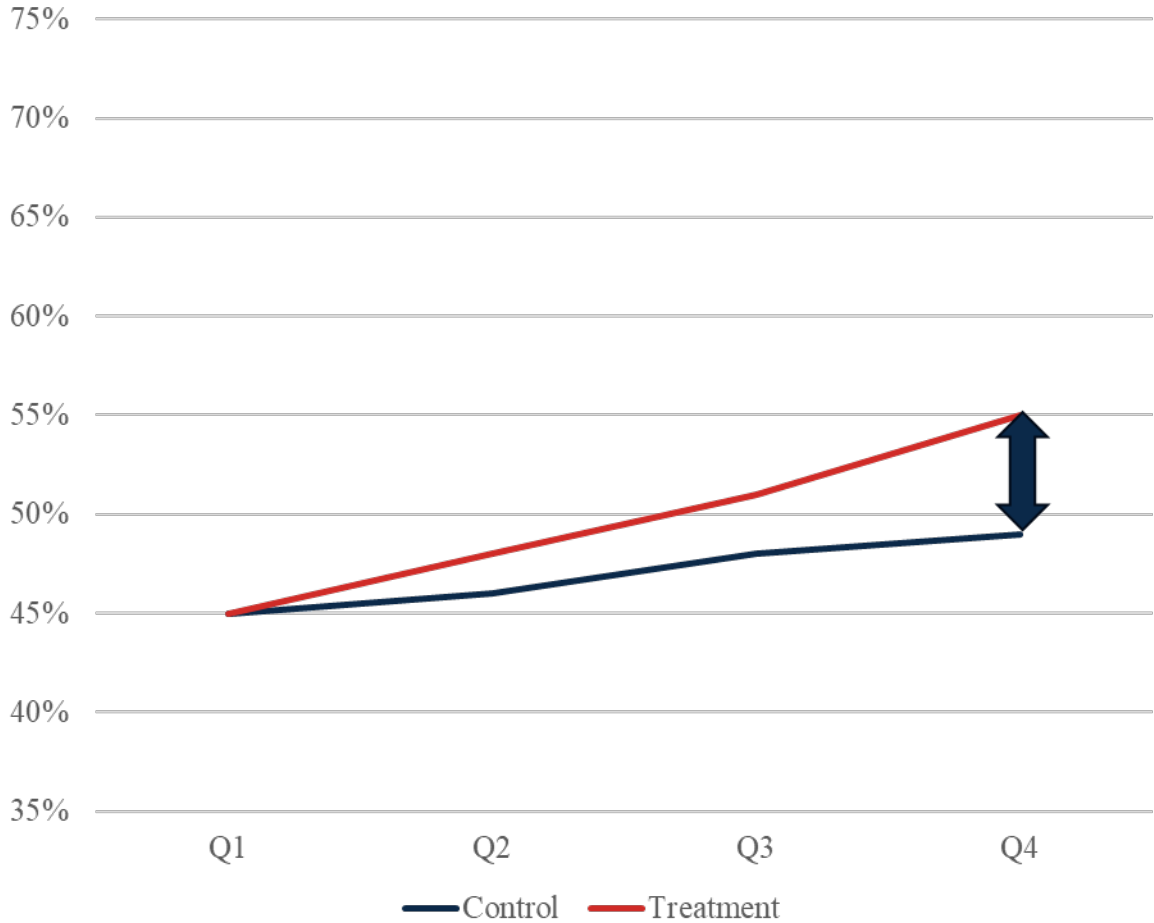
## / Does A [the strategy] do B [show improvement] among C [treatment group] compared to D [control group]?





# What are your expectations for change?

- / **What is the smallest change you need to see between the control and treatment groups to assess whether the strategy is making a difference?**
- / **Work with a research partner to identify the minimum level of change**
  - In statistical terms, this is known as the minimum meaningful effect (MME)





# Factors to consider when setting an MME

## 1. Baseline data

- Review the data you have. What is the range of satisfaction scores or attendance rates?

## 2. Context

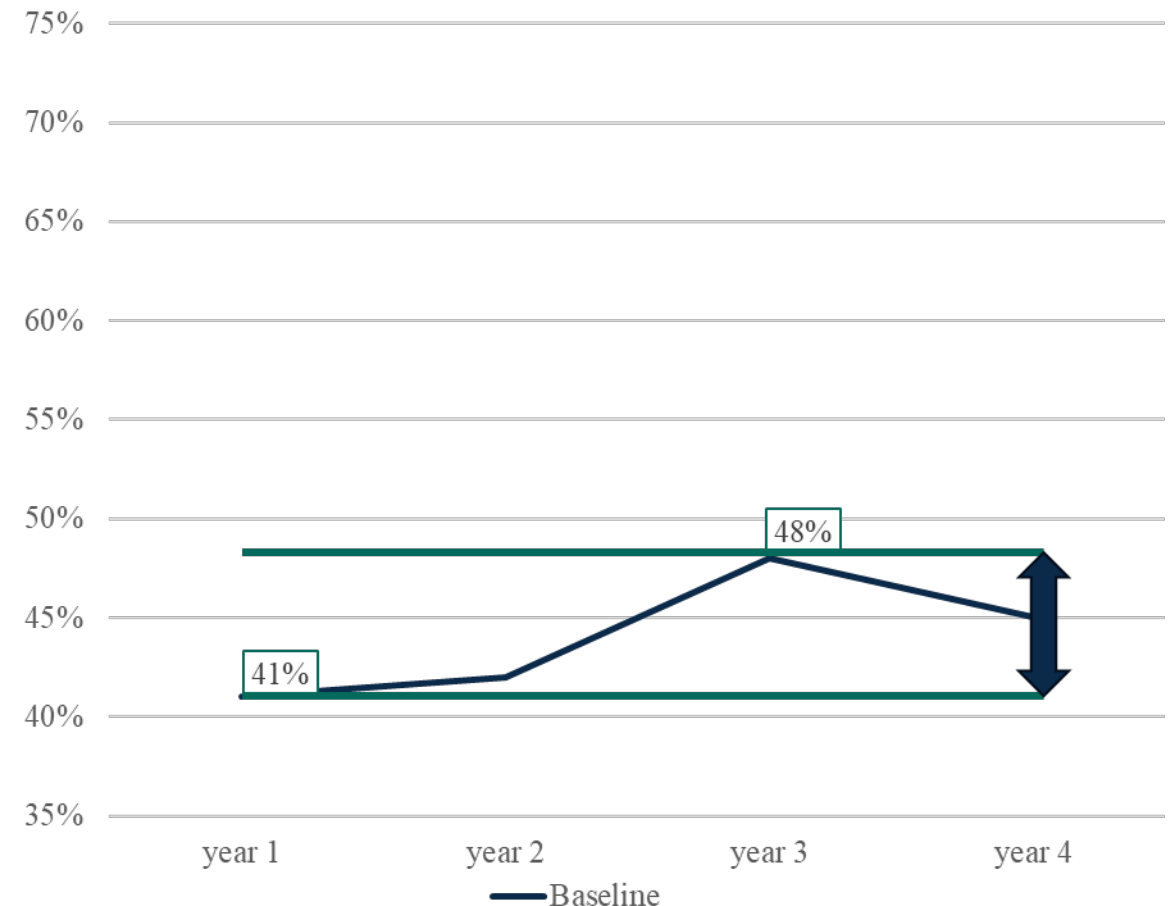
- What return on investment is needed? If your strategy will require hiring new staff, you may need to see a bigger change.

## 3. Research

- Is there any applicable research about effect sizes?

## 4. Contrast

- What is the comparison group receiving?

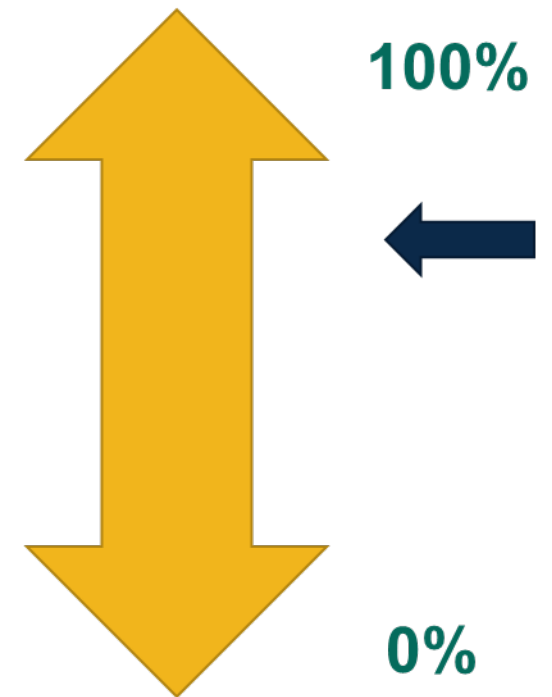






# How strong does your evidence of improvement need to be?

- / **Also identify a “certainty threshold” based on quality of evidence and risk of being wrong about findings**
- / **Is your sample size large enough? Do you have sufficient data to detect meaningful changes?**
- / **What are the trade-offs to being more or less certain about the findings?**
  - Are high stakes attached to the outcome, so you want to be certain the strategy caused the outcome? Will it be expensive to scale?
- / **The higher your certainty threshold, the more likely your findings will be inconclusive**
  - Example: The treatment group’s attendance exceeded the MME, but we did not have enough treatment group members to meet our certainty threshold of 90%. We are not sufficiently confident that the strategy was the reason for the improvement.





# What will you do, depending on results?

/ **Before undertaking the test decide what you will do if...**

The treatment group does better than the control	The treatment group does worse than the control	The two groups are equivalent	The results are inconclusive (did not meet certainty threshold)
<ul style="list-style-type: none"><li>• Continue using the strategy</li><li>• Implement with more participants</li></ul>	<ul style="list-style-type: none"><li>• Stop using the strategy</li><li>• Investigate implementation</li></ul>	<ul style="list-style-type: none"><li>• Investigate implementation</li><li>• Collect more data (i.e., test for longer)</li><li>• Continue or stop using the strategy</li></ul>	<ul style="list-style-type: none"><li>• Investigate implementation</li><li>• Collect more data</li><li>• Continue or stop using the strategy</li></ul>



# Preparing your data and conducting your test



# What data to include in your dataset

## / **A unique participant identifier, such as nFORM Client ID**

- To match data you collect after the test with the same participant
- NOTE: Do not include PII

## / **A baseline measure of your outcome of interest**

- Example: Average attendance for the cohort before the strategy is tested

## / **Other characteristics that may influence outcomes**

- Example: Whether participants are employed

## / **An indicator of whether someone will receive the strategy**



# Conduct the test

- / **Tests may be a few days or a few months, depending on the strategy, complexity of implementation, and outcome you are trying to influence**
- / **Document implementation for all program recipients**
  - To ensure the strategy was delivered as intended for all treatment group participants, and to know what control group participants receive
  - To help with interpreting outcomes--could an inconclusive result be because the strategy was not implemented as intended?
  - To help with scaling
  - Example: To achieve success, we sent text messages once a week, starting two weeks before the session. Our facilitators were responsible for sending the messages. And messages were short and simple: “This is a reminder that your Healthy Families workshop is coming up on Tuesday, 12/17 @ 7 pm. We hope to see you there!”



# Analyze your results

## / **Update your dataset with results of the test**

- Example: Add a column to the dataset with average attendance at workshop sessions from the time we implemented the new strategy to the end of the cohort

## / **Examine change in the outcome for the treatment and control groups**

## / **Additional analyses could include examining specific subgroups, if you have a large enough sample**

- Example: With employment variable (y/n), you can compare the outcome for those employed to those unemployed

## / **To help with analysis, consult a research partner and consider trying a tool that supports RCE**



# Demo: Planning a test with the e2i Coach



# E2i Coach walk-through

/e2iCoach/ Annie Buor

EVALUATION OVERVIEW

## attendance reminders2

EVALUATION STEPS

- 1. GETTING STARTED**
- 2. PLANNING YOUR RESEARCH
- 3. PREPARING YOUR DATA
- 4. ANALYZING YOUR DATA
- 5. SUMMARIZING YOUR FINDINGS

EVALUATION NAVIGATION

- GETTING STARTED

Dashboard

My Evaluations

attendance reminders2

attendance reminders

Love Bites

Magnify Reading

Magnify Reading

View All

Teams

Resources

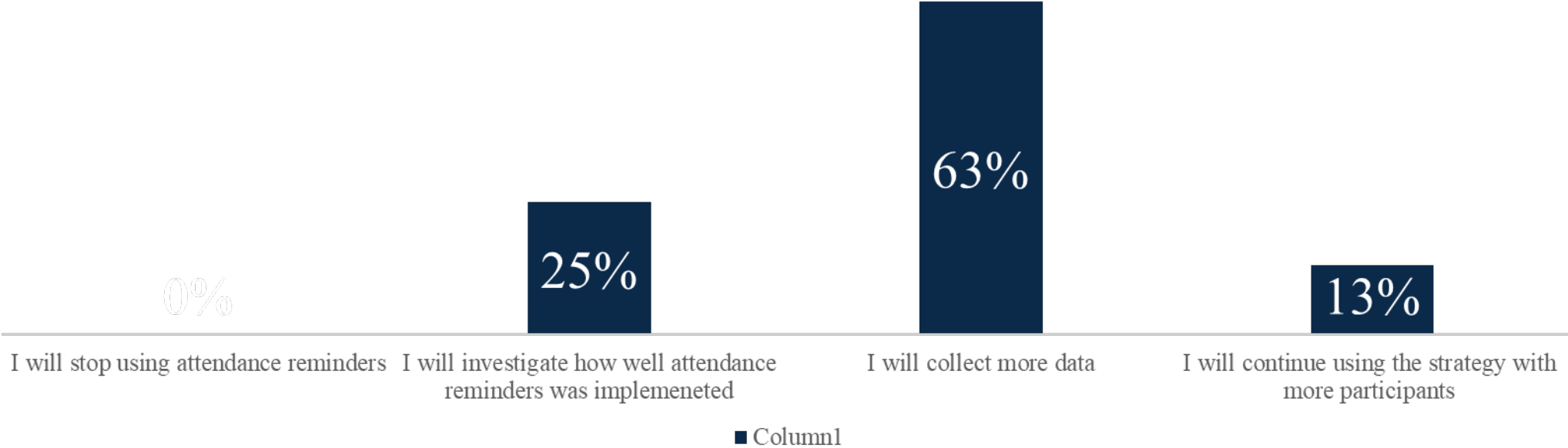




# Slido discussion

## / You see that the treatment group improved but not by your MME

- The treatment goes up by 7 percentage points, but the control group also goes up by 5 points due to changing circumstances, so we can only attribute 2 points of the improvement to the strategy – the rest might have happened anyway. What would you do?





# Slido discussion

/ Based on what you know, what factors do you think affect attendance (the outcome of interest)?

Unexpected emergency

Other afterschool programming

Transportation

Employment status

Necessity to attend

Access to transportation

Lack of knowledge of the importance of services

Child care

Child care issue

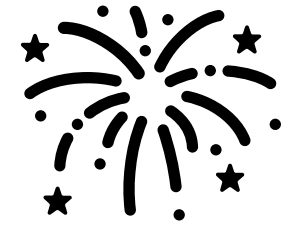


# Open Q&A





# Announcements



Happy New Year!

## / Join us for the next CQI office hours!

- The next office hours will be on January 28, 2025
- Our 2025 sessions will focus on reflecting on lessons learned, sharing insights, and looking forward!

## / The next nFORM office hours will be on December 10, 2024

- Learn about upcoming enhancements to the nFORM query tool!

## / Check out ...

- [HMRF Grant Resource Site](#) for HMRF CQI resources
- [OPRE Resource Library](#) for resources related to HMRF and other grant programs

## / For CQI-related questions, reach out to the CQI helpdesk

- [HMRFCQI@mathematica-mpr.com](mailto:HMRFCQI@mathematica-mpr.com)



Thank you!