Establishing Continuous Quality Improvements Systems with Fidelity and Quality Monitoring

June 28, 2023

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Acknowledgements and Disclaimer

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Was the information presented in the last session applicable to the current stage of implementation in your agency?
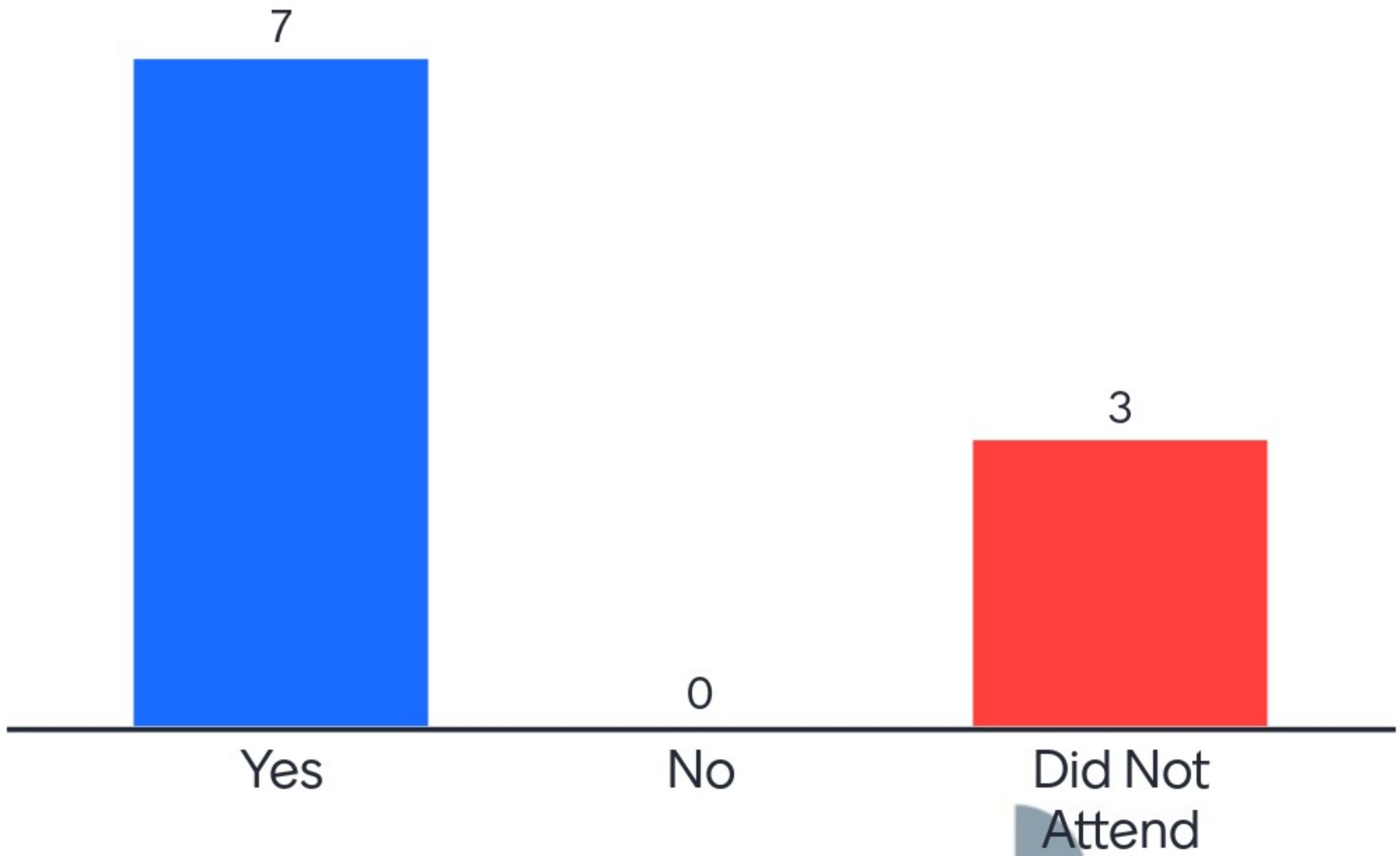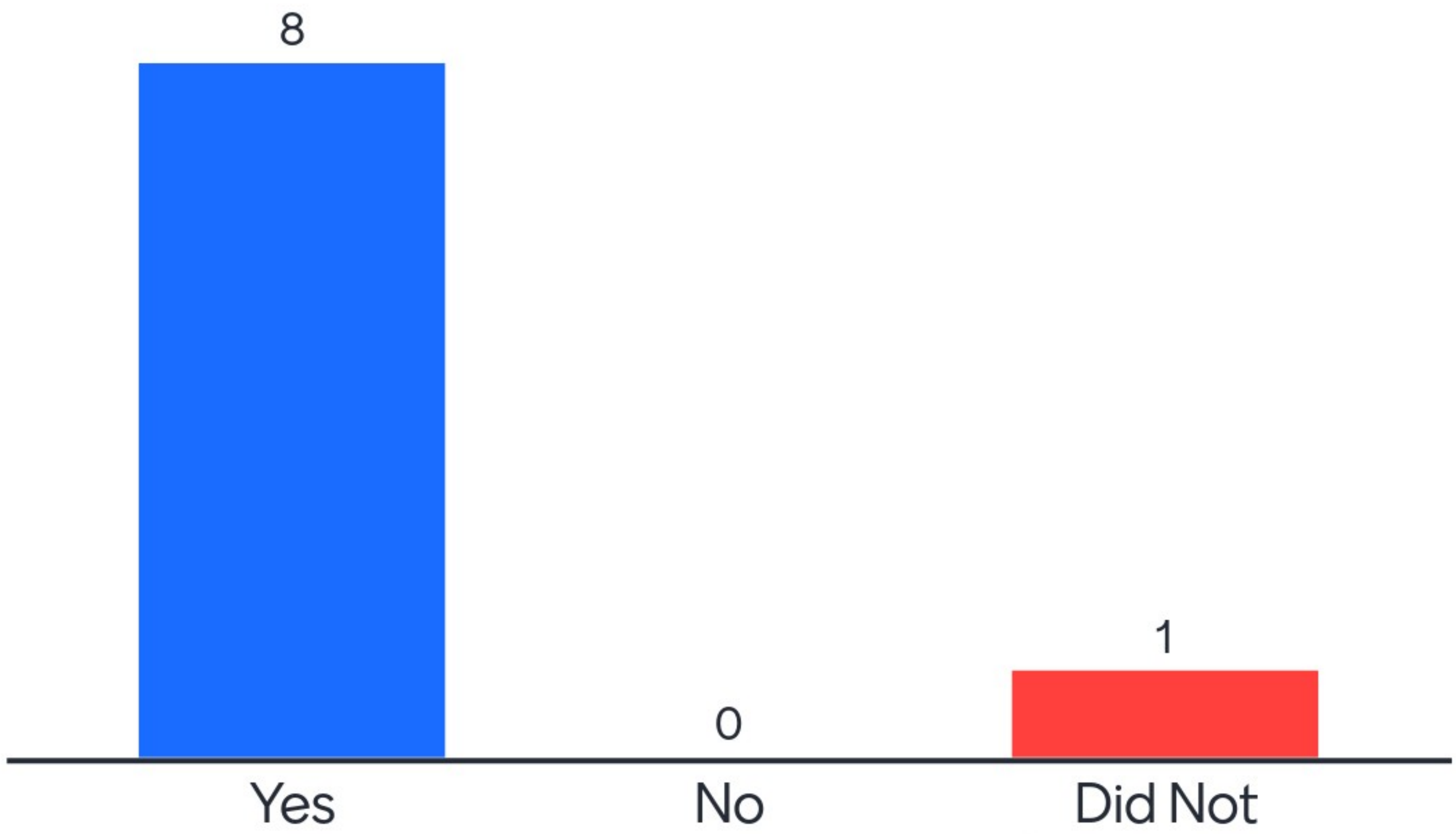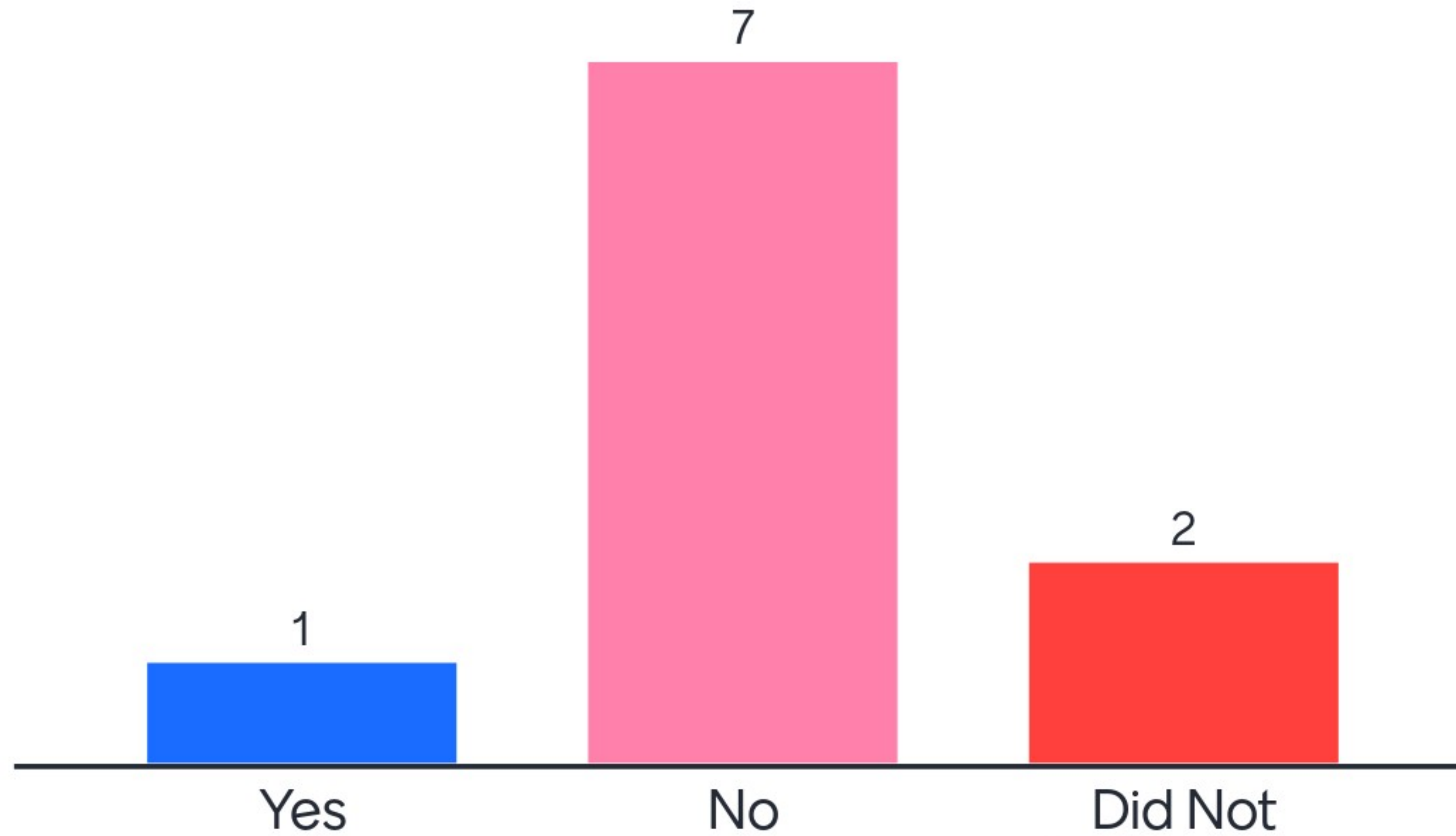
Where are you currently in your implementation science pilot development?

1	0	1	5	2	2	0	0
Have not gotten started	Are working on our project template	Have submitted our project template, haven't engaged with a researcher	Have submitted our project template, are talking to one or more researchers	Have submitted our project template, have selected a research partner	Are currently designing our research project with a research partner	Are exploring funding options and/ or developing a research proposal with a research partner	Have submitted a proposal for research funding

CCBHC-E NTTAC/SAMHSA Updates

- **CCBHC-E NTTAC Updates**
  - Discussion: August and September Learning Community Sessions
  - Website for learning community participants: https://www.thenationalcouncil.org/implementation-science-pilot-learning-community/

- **SAMHSA Updates**
  - Upcoming webinar for partnered organizations

0 = Not at all, 5 = Somewhat , 10 = Completely

Not at All — Completely

I am knowledgeable of research and evaluation methods associated with implementing EBPs within my agency. — 5.8

I am able to gather the appropriate data and information to identify gaps and needs at my organization. — 5.6

I am able use information gathered to shape research questions associated with implementation of EBPs at my agency. — 6.6

I feel prepared to partner with a researcher to develop and conduct an implementation science project. — 5.8

I feel motivated to engage with research partners to develop an implementation science research project. — 7.8

Learning Objectives

Participants will:

- Explore key concepts of continuous quality improvement systems and how research partnerships can support the process

- Understand how implementation teams that include researcher partners can support CQI system development

- Understand how to prioritize data elements for CQI systems in partnership with researchers

- Understand the types of data included in CQI systems and how they can benefit your team and researchers

- Understand how implementation teams use data to advance equitable outcomes

Presenters

Jill Farrell, PhD
Research Assistant Professor
Deputy Director, Division of Research &
Evaluation
The Institute for Innovation and
Implementation
University of Maryland, School of Social
Work

Jaymie Lorthridge, PhD, MSW – Senior
Research Associate
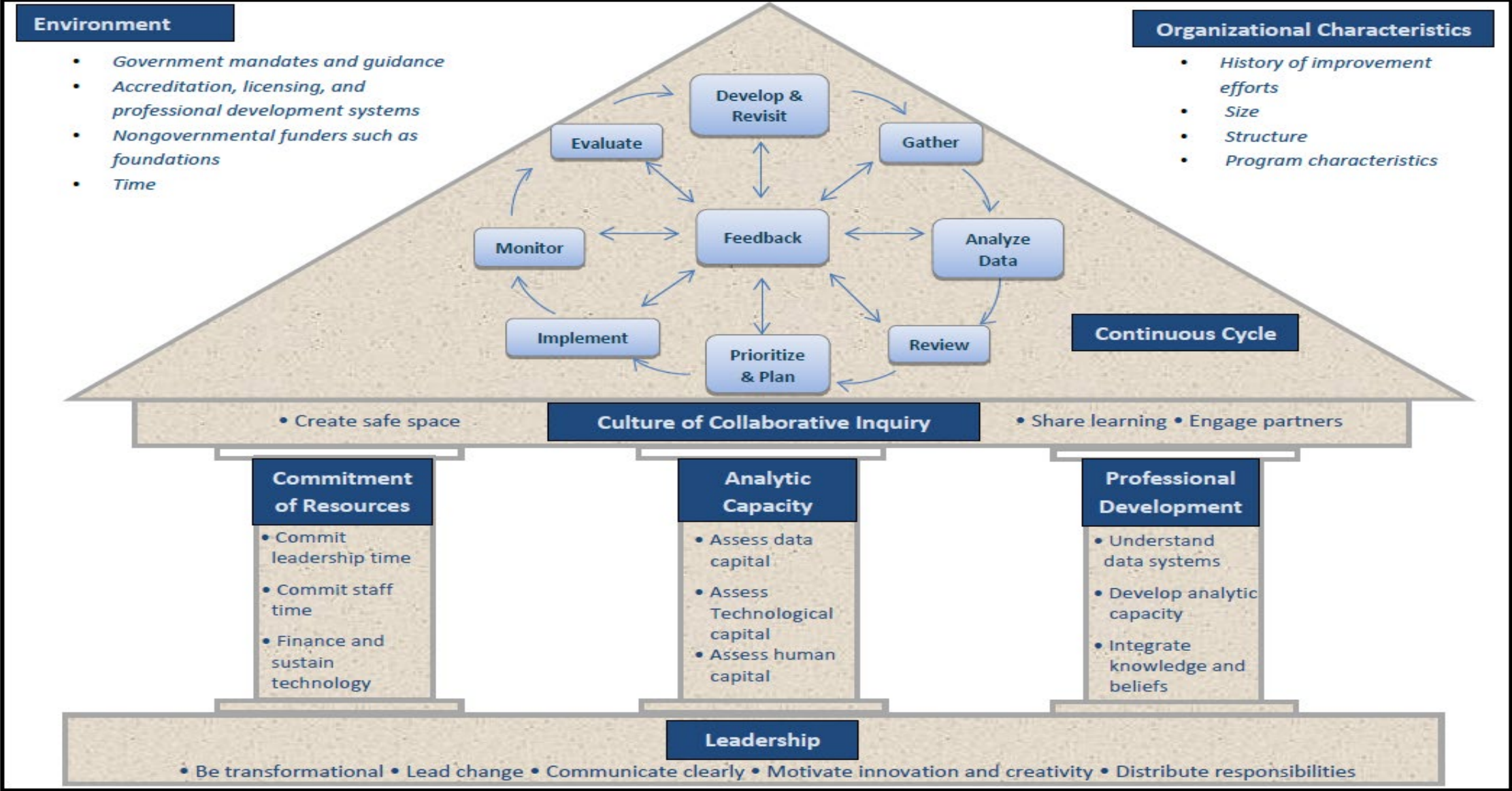Kaye Implementation & Evaluation, LLC

Leah Bartley, PhD, MSW – Research
Associate
Kaye Implementation & Evaluation, LLC

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Continuous Quality Improvement

- CQI is an ongoing effort to achieve measurable improvements in the efficiency, effectiveness, performance, accountability, outcomes, and other indicators of quality for programs/systems

- Use of teams and data

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CQI Conceptual Framework

Environment
- Government mandates and guidance
- Accreditation, licensing, and professional development systems
- Nongovernmental funders such as foundations
- Time

Organizational Characteristics
- History of improvement efforts
- Size
- Structure
- Program characteristics

Develop & Revisit — Gather — Analyze Data — Review — Prioritize & Plan — Implement — Monitor — Evaluate — Feedback

Continuous Cycle

• Create safe space   **Culture of Collaborative Inquiry**   • Share learning • Engage partners

Commitment of Resources
- Commit leadership time
- Commit staff time
- Finance and sustain technology

Analytic Capacity
- Assess data capital
- Assess Technological capital
- Assess human capital

Professional Development
- Understand data systems
- Develop analytic capacity
- Integrate knowledge and beliefs

Leadership

• Be transformational • Lead change • Communicate clearly • Motivate innovation and creativity • Distribute responsibilities

Source: Derrick-Mills et al., 2014

Implementation Frameworks and CQI

- Implementation frameworks can guide your EBP implementation/CQI and research

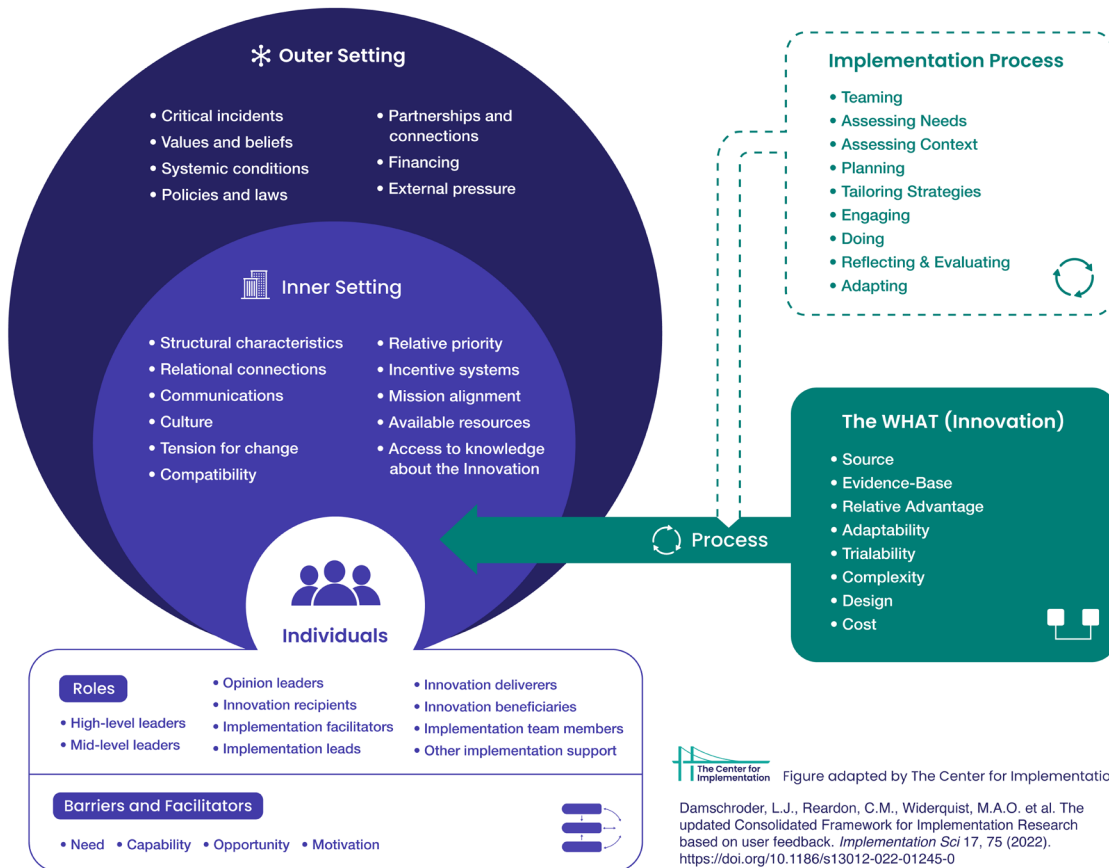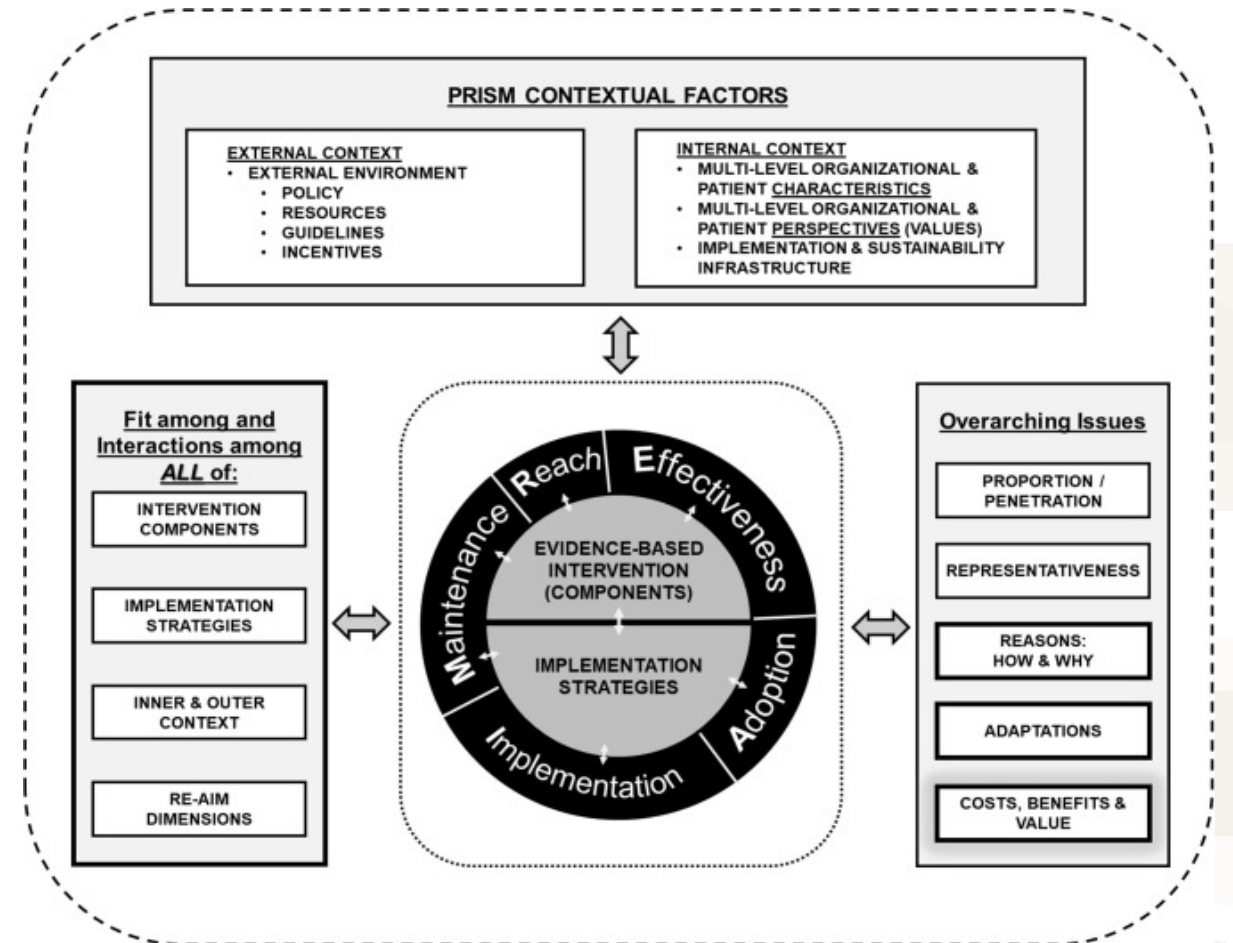**Consolidated Framework for Implementation Research (CFIR) 2.0**

Damschroder, L.J., Reardon, C.M., Widerquist, M.A.O. et al. The updated Consolidated Framework for Implementation Research based on user feedback. *Implementation Sci* 17, 75 (2022). https://doi.org/10.1186/s13012-022-01245-0

Figure adapted by The Center for Implementation

PRISM = Pragmatic Robust Implementation and Sustainability Model.
Feldstein & Glasgow (2008). *Joint Commission Journal on Quality & Patient Safety*, 34: 228-243.

Effectiveness of CQI Efforts on Health Care Outcomes (Hill et al., 2020)

28 randomized control trials tested effectiveness of different approaches to CQI compared to non-CQI efforts

- Plan-Do-Study-Act and Model of Improvement were the most common methodologies used for improvement

- Clinical processes measures improved

- Leadership involvement increased impact on outcomes

- Meeting frequency (i.e., weekly) increased impact on outcomes

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CQI Can Promote Equitable Outcomes

1.

EQUALITY imagines an equal world.

"I care about all students equally"

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5.

In contrast, EQUITY redirects resources to the pathways with greatest need to fix barriers and intentionally provide support.

Regular data disaggregation & analysis

Goal setting and action planning

Faculty & staff training to be equity agents

Inquiry to understand how practices impede equity

Copyright 2016. University of Southern California, Center for Urban Education, Rossier School of Education. *Protocol for assessing equity-mindedness In state policy*

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Implementation Team Responsibilities in CQI

- Develop, support, and oversee an implementation plan that evolves through the CQI process

- Champion the improvement effort and secure resources based on data emerging from CQI process

- Address implementation barriers and identify opportunities for improvement

- Plan for sustainability

- Use CQI data to monitor progress

- Seek to include and incorporate youth/family perspective on barriers and opportunities for improvement

- Make informed decisions (potentially involving research partner) that support improved outcomes

Implementation Team Responsibilities in Equity-Focused CQI

- Develop, support, and oversee an implementation plan that evolves through the CQI process and responds to changes in equity objectives

- Champion the improvement effort and secure resources based on data emerging from CQI process, including resources to promote the continual involvement of persons with lived experiences

- Address implementation barriers and identify opportunities for improvement using an equity lens

- Plan for sustainability and sustainable power sharing

- Use CQI data disaggregated by client characteristics to monitor progress

- Commit to meaningfully partnering with youth/family perspective to gain perspective on barriers and opportunities for improvement

- Make informed decisions (potentially involving research partner) that support improved and equitable outcomes

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Implementation Stages

- What are the needs and assets of the individuals and families we serve?
- How do the behavioral health programs fit with the needs and goals?
- Is there buy-in among key partners?

Feasibility, Acceptability, Appropriateness

- Are we experiencing sustained use of the behavioral health programs with most practitioners delivering the models with fidelity and ease?
- Are programs reaching the intended populations?

Reach, Fidelity, Sustainability, Cost
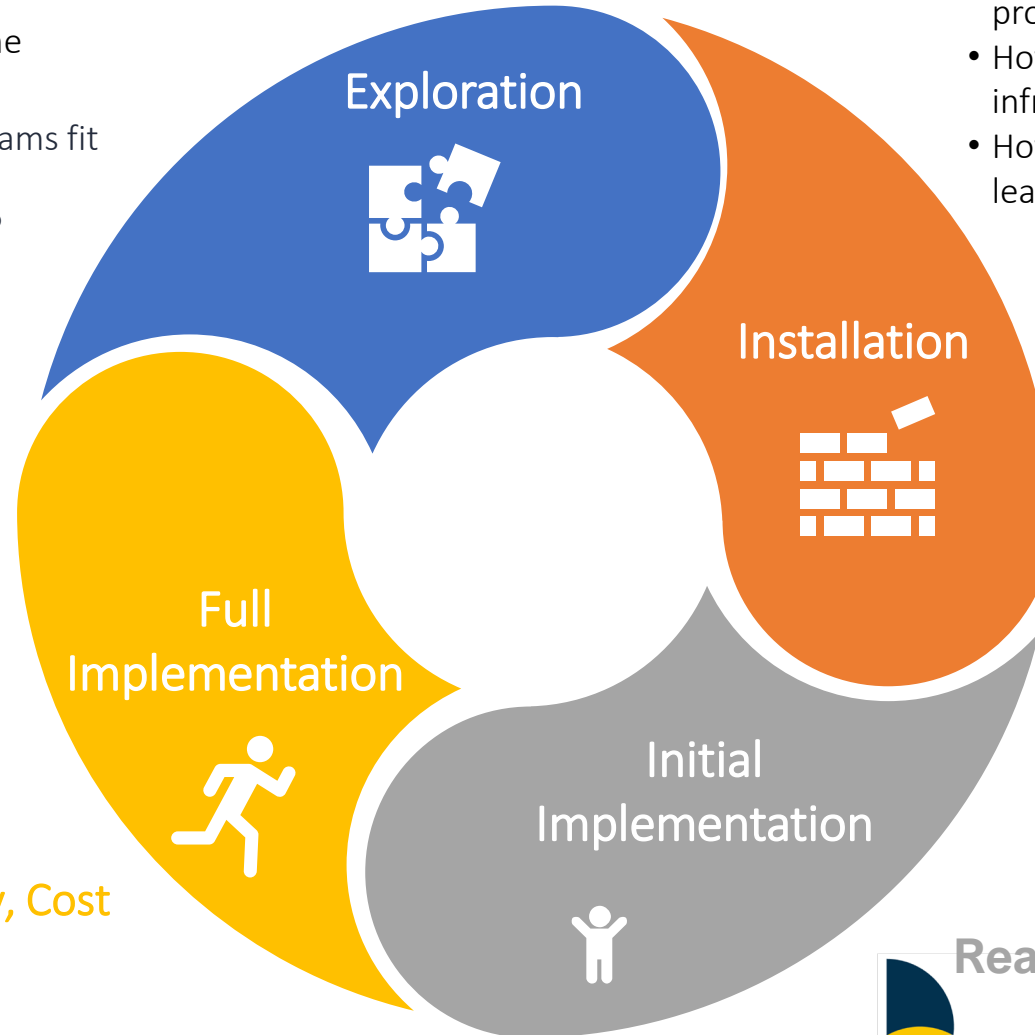
- How can we assess, secure, and develop resources needed to put behavioral health programs into place?
- How can we leverage implementation infrastructure to support implementation?
- How can research partnerships strengthen our learning and improvement processes?

Adoption, Readiness ($R=MC^2$)

- How can we support practitioners learning a new behavioral health program or using a familiar program in a new context?
- What data can help us improve supports of behavioral health programs?

Reach, Fidelity, Cost

Exploration

Installation

Full Implementation

Initial Implementation

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Overview of Necessary Data Elements

Fidelity

- "Fidelity assessment is defined as indicators of doing what is intended. This definition requires a) knowing what is intended, and b) having some way of knowing the extent to which a person did what was intended." (NIRN)

- Fidelity is an important measure of effective implementation

- It requires both adherence to the model as well as competence in program delivery

- Fidelity standards and monitoring reduce the potential for "model drift."

Adherence + Competence = Fidelity

Methods for Assessing Fidelity

Method	Description
Site visit	Intervention experts conduct structured interviews/observations
Structured observation	Intervention experts code practitioners during live observation, or trained coders rate audio/video recordings
Multi-informant methods	Feedback collected from multiple stakeholders, including youth, families, providers, case files, supervisory review
Self-report checklists	Practitioners complete checklists to describe whether key intervention activities were completed
Secondary data analysis	Researchers analyze existing administrative data
Supervisory review	Supervisors rate practitioners on adherence or competence
Case file review	Intervention experts or trained researchers code case files/progress notes
Key informant survey	An agency representative reports for a unit or organization or a client/family reports on their experience with the program

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Fidelity Measurement as an Implementation Strategy

- Measuring progress toward fidelity concentrates attention on specific professional behavior(s) and quality practice

- Structures feedback for practitioners

- Positive feedback makes practitioners feel good, is reinforcing

- Critical feedback indicates where practitioners need to focus

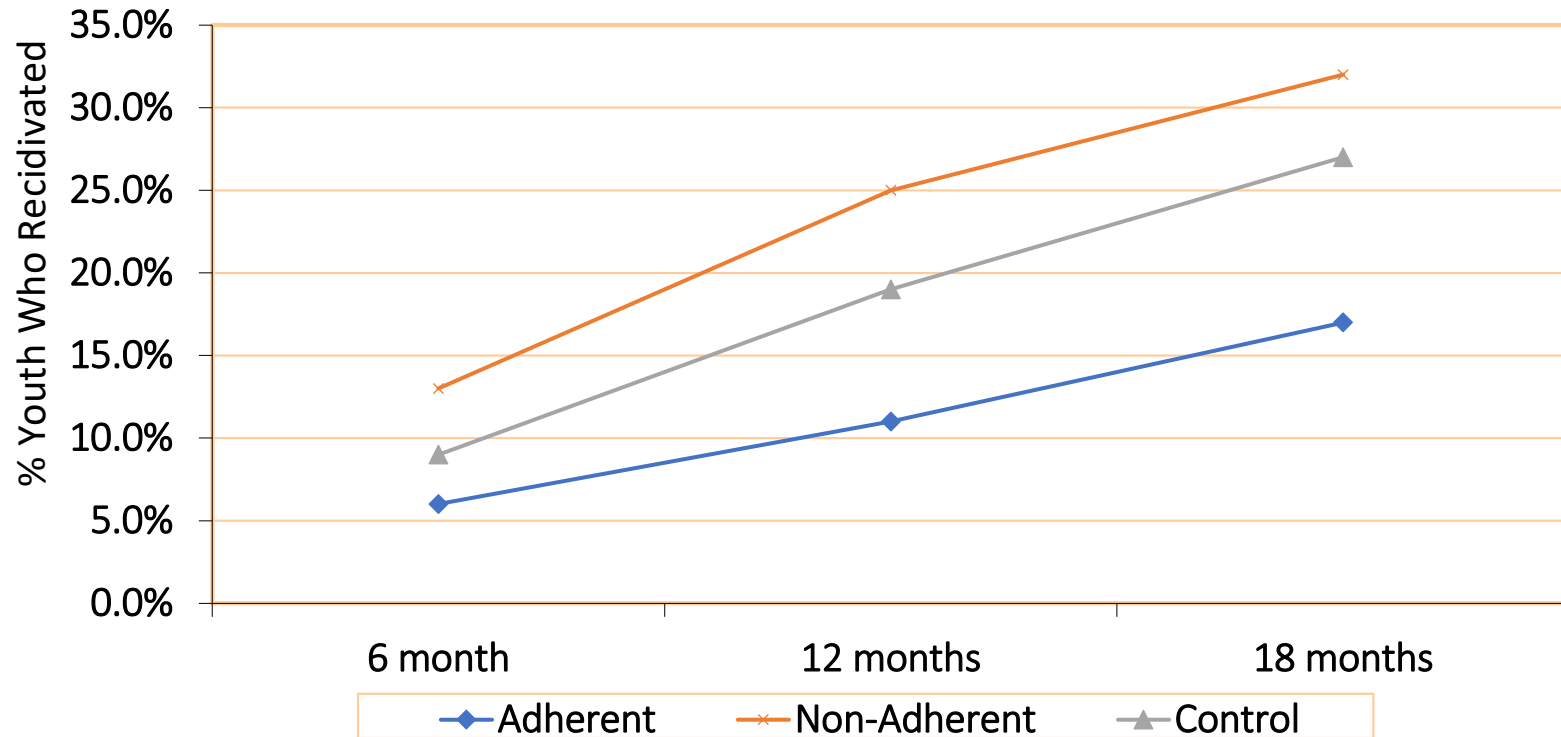- Informs implementation activities (e.g., training, coaching, decision support tools)

(Kaye & Holder, 2011, Bond et al, 2000; Hohmann & Shear, 2002; Orwin, 2000; Proctor et al., 2011)

Fidelity Measurement as a Research/Evaluation Strategy

- Manipulation check for the independent variables in intervention research

- Accounts for negative or non-significant findings in experimental group

- Ensures no "leakage" or contamination in control group (Note: We call this "spillover" now)

- Identifies which programmatic components are most effective

- Outcome of interest (dependent variable) in implementation research

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EBP Fidelity is Important for Client Outcomes

Functional Family Therapy Model Adherence & Clinical Outcomes

Y-axis: % Youth Who Recidivated (0.0% to 35.0%)

X-axis: 6 month, 12 months, 18 months

Legend: Adherent, Non-Adherent, Control

With high adherence, significant positive outcomes:

**38% reduction in felony crime
50% reduction in violent crime**

Low adherence led to worse outcomes than control condition

Source: Washington State/ Juvenile Rehab Admin Study of Functional Family Therapy (2004)

Steps to Setting Up Your CQI Data System

1. Develop program's logic model

2. Create data dictionary
   - Reviewed by all stakeholders, consensus on definitions

3. Establish data sharing MOUs and consent forms, if needed

4. Establish data collection/extraction process

5. Establish reporting template(s)

Logic Model

- Logic models provide a visual snapshot of a program
  - Communicates the intended relationships between program goals and outcomes and a theory of change
  - Consider inputs, outputs, and outcomes
  - Can intentionally center equity

- The practical goal is to get everyone on the same page regarding the program, the approach, and what it will take to produce the intended outcomes
  - Key data maps onto program logic model components

Logic Model for CQI

Logic Model for [Program X] CQI

Program Description:

Primary Program Goal(s):

INPUTS	OUTPUTS		OUTCOMES		
What we invest	**What we do** (activities)	**Who we reach** (participation)	**Why we did it: short-term** (immediate, weeks-months)	**Why we did it: intermediate** (months-years)	**Why we did it: long-term** (impact, years-decades)
-	-	-	-	-	-
Data/Measures					
-	-	-	-	-	-

Assumptions	External Factors
-	-

Options for Data Collection

Electronic health records

Excel: worksheet(s)

Access: linked worksheets with data entry forms

Regardless of the platform, in order to have actionable data you must think carefully about:

➢ What you track

➢ How you track it

➢ Who is included and who is excluded in the data, and why

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CQI Data Reporting

- Goal: Summarize data on program capacity/utilization, implementation/fidelity, and outcomes
  - *Are we having the intended reach, program implementation, and impact?*
  - Data should drive the use of strategies to improve implementation (e.g., PDSA process)

- Report design
  - Establish report content and frequency (e.g., weekly, monthly, quarterly)
  - Shows trends over time and important comparisons
  - Include benchmarks determined by the EBP model and/or team
  - **Dashboards are a key tool!**

- Ad hoc analyses to answer implementation team's questions

Tell a Complete Story

- What other data and information provide context for the numbers?

- How do persons with lived experience interpret the data?

- How do the numbers align with other sources of information documenting client's service experiences?

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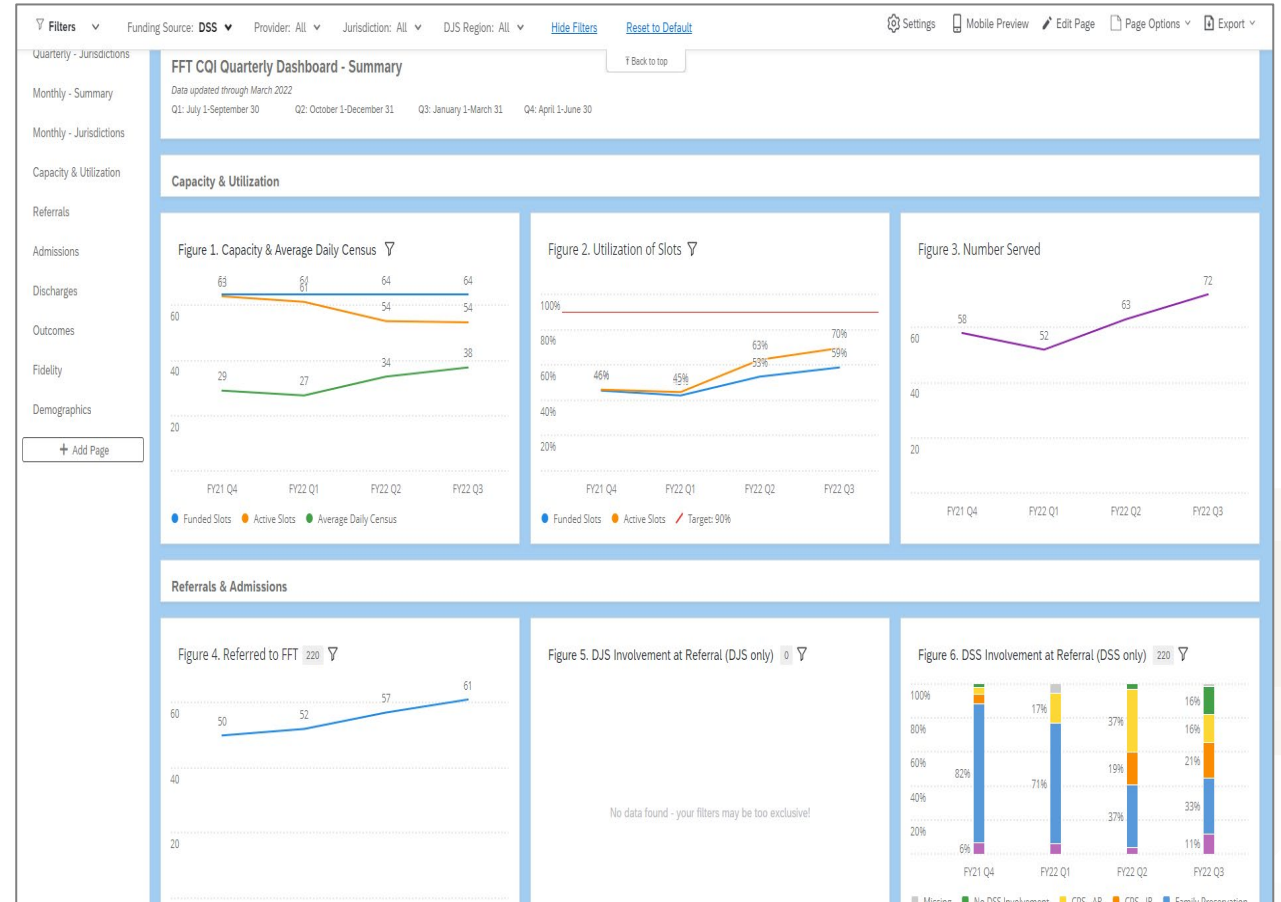
Equity Considerations in Prioritizing Data

Figure 22. Resiliency factors by race/ethnicity

Data should be...

- collected in a culturally competent and humble manner
- describing the breadth of experience amongst the service population
- supporting disaggregated views of outputs and outcomes*
- measuring equity objectives
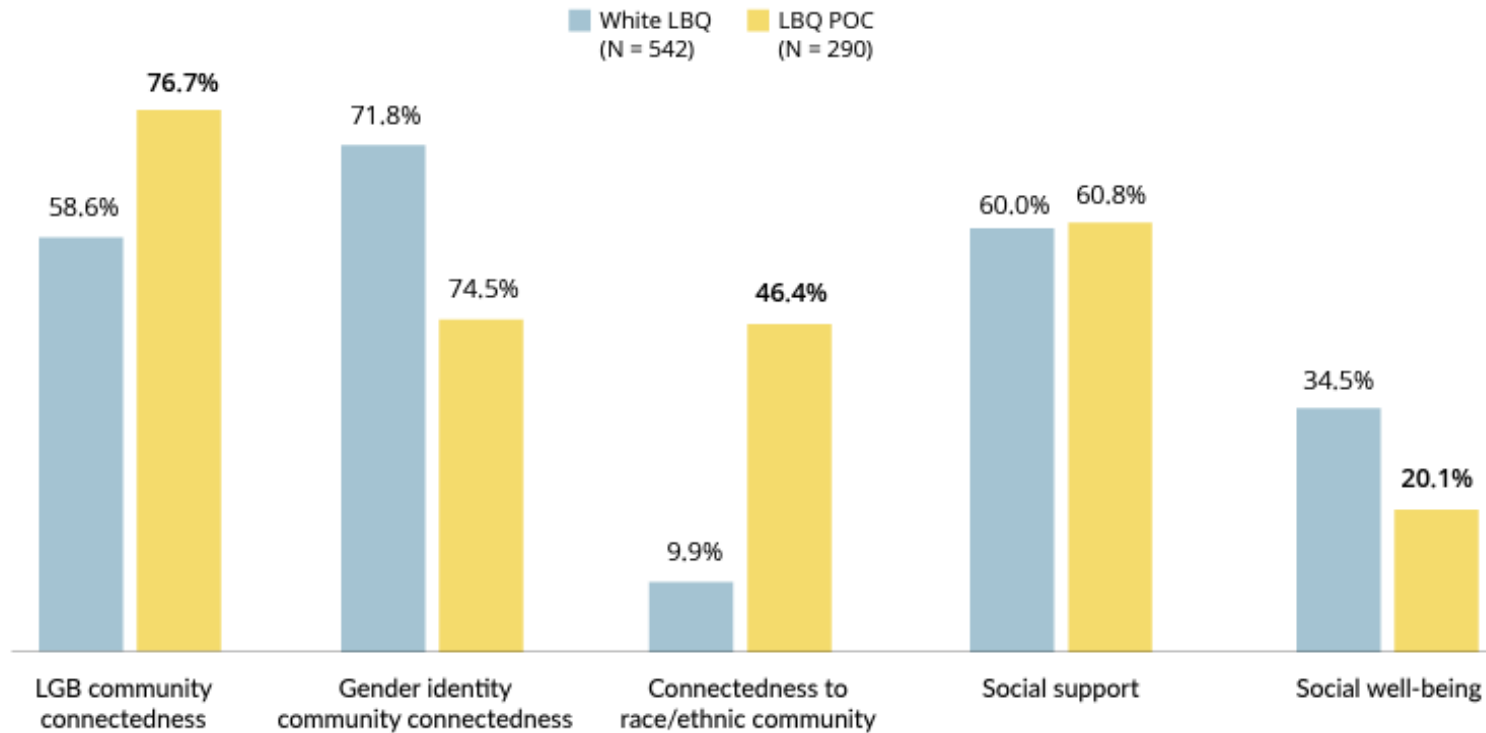
Data collection must support disaggregation.

Figure from - Health And Socioeconomic Well-being Of LBQ Women In The US. Wilson et al., 2021. Data Source: Generations Study and TransPop Study data Note: Bold numbers indicate statistically significant differences between that comparison group and White LBQ women.
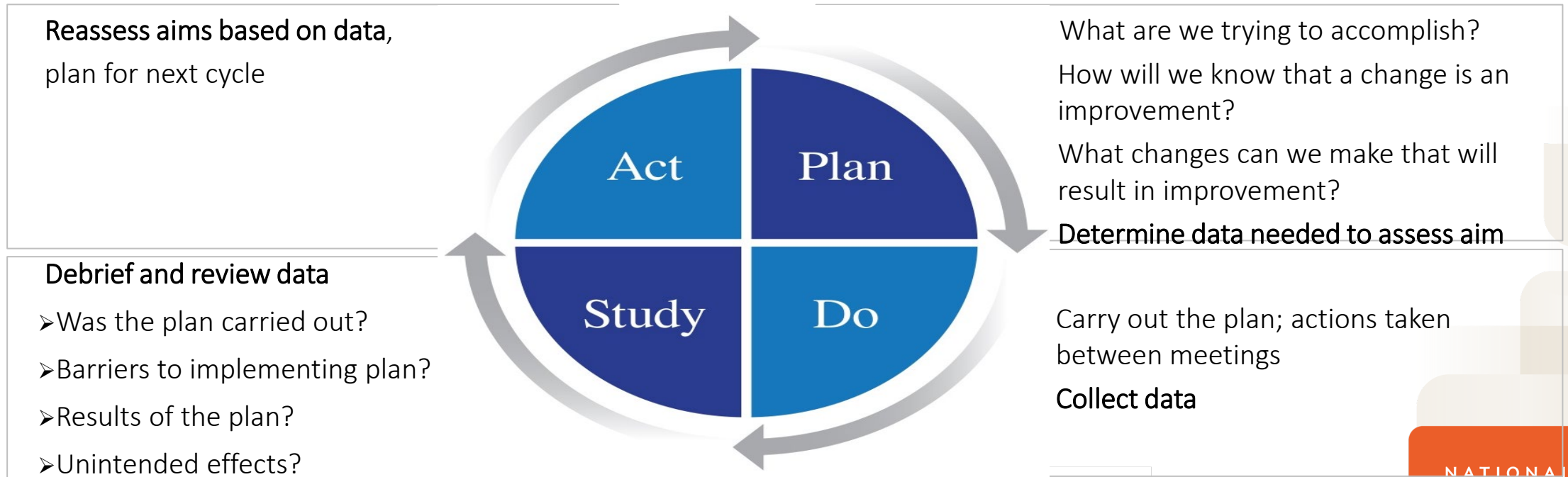
Using Data in Your CQI Process

➢ Data should be regularly used by your Implementation Team as part of the CQI process, guiding the development of improvement plans and celebrating achievements.

Reassess aims based on data, plan for next cycle

What are we trying to accomplish?

How will we know that a change is an improvement?

What changes can we make that will result in improvement?

Determine data needed to assess aim

Debrief and review data

➢Was the plan carried out?

➢Barriers to implementing plan?

➢Results of the plan?

➢Unintended effects?

Carry out the plan; actions taken between meetings

Collect data

(PDSA cycle diagram: Act, Plan, Study, Do)

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Review: Collaborating with Your Research Partner for Program CQI

- Work with a research partner to identify research questions that will inform/improve your EBP implementation

- Review Implementation Frameworks and agree on using one that aligns with each other's goals

- Engage your research partner as a member of the EBP Implementation Team

- Collaborate with your research partner to develop a program logic model

- Engage research partner to assist with measuring fidelity

- Define the data elements together, ensure common understanding of program language

- Determine how data can/will be collected together
  - If using your EHR, ensure all data can be extracted for the researcher to use for analysis

- Work together to develop a data dashboard/report template

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