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Sexual Risk Avoidance Education National Evaluation

# Designing High Quality Evaluations for Program Improvement Efforts

Roseana Bess, Susan Zief, and Russell Cole

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# Overall objectives

Participants will identify how data routinely collected can be used to support program improvement efforts

Participants will consider a range of evaluation considerations and the feasibility of executing them

Participants will be exposed to and practice new evaluation considerations, such as program components research, that they can incorporate into their program improvement efforts

# Agenda and Introductions

Continuous Quality Improvement (CQI)

**Roseana Bess**

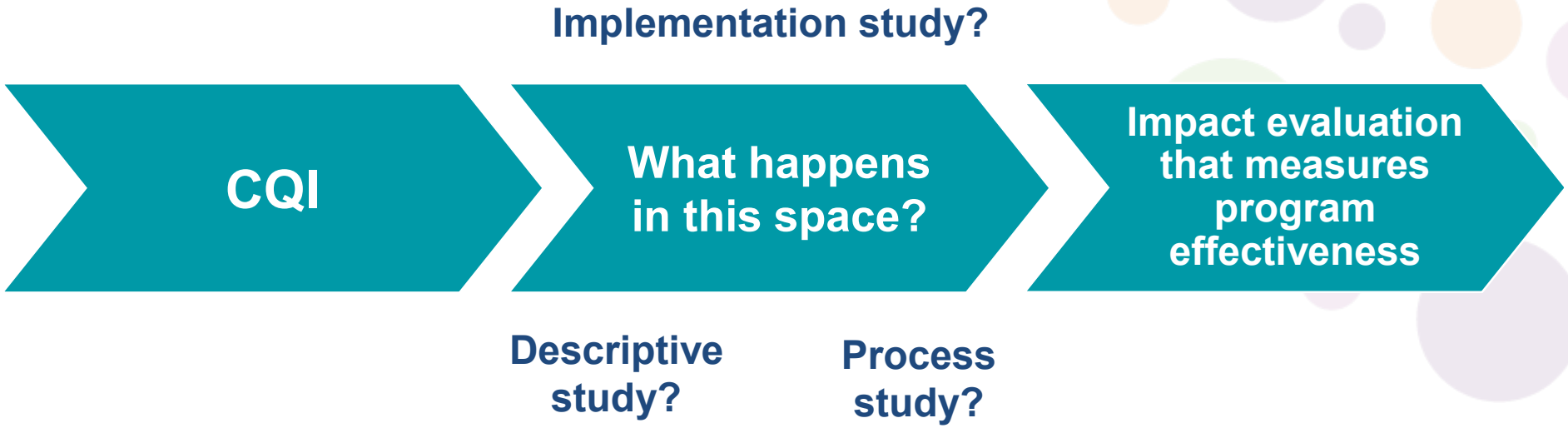
Changing evaluation gears to address additional questions that inform program improvement efforts

**Susan Zief**

Program components: Definitions, measurement, and linkages to participant outcomes

**Russ Cole**

# Learning opportunities across a continuum



# CQI

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# Objectives

- Define continuous quality improvement
- Demonstrate a CQI framework to assess at least one program quality improvement strategy

# CQI Defined

**Continuous Quality Improvement (CQI) is a process by which grantees may:**

- Identify and analyze strengths and problems
- Implement, test, and revise solutions
- Always be moving toward program excellence

# Other names or CQI tools

- Data-driven decision making
- Rapid cycle evaluation
- Plan-Do-Study-Act (PDSA)
- Learn, Innovate, Improve ($LI^2$)

# CQI vs Program Monitoring

- Program monitoring *documents what is happening*
- CQI is a way to *use that information for improvement*

**CQI is**

**Data-driven**
Requires high quality data

**Ongoing**
Involves regular meetings

**Iterative**
Uses what is learned to improve

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# CQI: a Combination of Processes

**CQI brings together different processes:**

- Program monitoring
- Case reviews
- Quality control
- Strategic planning
- Performance measurement

# Getting Started

- CQI requires planning

  **whether you are just getting started or have been doing it for awhile**

- Everyone has a role

  **CQI depends on the participation of all staff**

- It requires commitment and persistence

  **it requires a culture of learning**

# Developing a CQI Plan

Draft CQI Action Plan Template (handout)

Template offers instructions, tips, and links to other resources

Grantees can use the template to help develop their plans

# Identifying Team Members

| Role | Responsibilities |
|---|---|
| Team leader | Organizes and oversees the CQI process |
| Key program staff | Identifies targets, develops improvement strategies, and monitors their implementation and testing |
| Data manager | Oversees data collection and analyzes data to measure progress toward goals |
| Training/technical assistance supervisor | Supports staff in implementing new strategies |

# You have your team, now what?

**A CQI process should be tailored to your program context and culture**

**The template helps you map the CQI steps**

**Your team will have to prioritize**

- It is not possible to change everything at once


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# Identify Areas for Improvement

**What can we do better?**

- Work together to identify areas in need of improvement
- Discuss what success in those areas would look like and how your program can get there
- Set SMART goals

# Developing Strategies for Improvement

## How can we do better?

- **Explore what might be causing performance issues**

  Use data, listen to each other, bring in expertise from outside your program team, if necessary

- **Understanding the cause of performance issues will help you develop targeted solutions**

# Example Strategy: Improving Participation

| Low participation | |
|---|---|
| Area for improvement | FY 2018 participation in APP sessions was 75%. |
| Goal | Increase participation rate by 5 percentage points each quarter throughout 2019, with goal of 90% by the end of FY 2019. |
| Strategy for improvement | Schedule sessions during the lunch hour (rather than after school) to more effectively engage interested participants. |
| Rationale for strategy | Sessions are scheduled to happen immediately after school, which means some students who would otherwise participate don't because they would miss the bus (their only transportation home). |

# Road Test the Strategies

**Is this a good fit for our program?**

- A road test assesses how well a strategy fits in your program
- Small numbers participate over short period of time (about four to six weeks) and provide feedback about their experiences
- Team analyzes data to identify successes and ways to improve
- Road tests often include at least two rounds

# Example Road Test: Improving Participation

| Low participation | |
|---|---|
| Area for improvement | FY 2018 participation in APP sessions was 75%. |
| Goal | Increase participation rate by 5 percentage points each quarter throughout 2019, with goal of 90% by the end of FY 2019. |
| Strategy to road test | Schedule sessions during the lunch hour (rather than after school) to more effectively engage interested participants. |
| What do we hope to learn in the road test? | • Does moving the time the sessions are delivered from after school to during lunch increase participation?<br>• What worked well about the process?<br>• What did not work well about the process? |

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# Analyzing the Road Test Results

**After a program has collected feedback, it is time to analyze and interpret the data**

**Analysis should identify:**

- Strengths and challenges
- Opportunities and concrete suggestions for improvement

# Analyzing the Road Test Results (cont)

**Questions to consider**

- What seems to have worked *consistently* well and not so well?
- What was *inconsistent*?
- How might your team build on and use your strengths?

# Example: Check the Data

| Low participation | |
|---|---|
| Area for improvement | FY 2018 participation in APP sessions was 75% of goal. |
| Goal | Increase participation rate by 5 percentage points each quarter throughout 2019, with goal of 90% by the end of FY 2019. |
| Strategies to road test | Schedule sessions during the lunch hour (rather than after school) to more effectively engage interested participants. |
| Performance metric | Percent who enrolled who attended at least one session |
| Data source | Attendance data |
| Frequency of monitoring | Monthly for three months before testing another strategy |

# Analyzing Improvement

**Did we make progress toward our SMART goal?**

**After you have collected data as planned, the next step is analyzing the results**

- What data source did your team use to assess improvement?
- When did your team collect data?
- How did your team measure improvement or change over time?
- What did your results show?

# Changing gears to address additional questions that inform program improvement efforts

Susan Zief

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# Objectives

**Participants will consider their readiness for addressing questions about program impacts**

**Participants will consider the feasibility of conducting impact evaluations**

**Participants will begin to consider other research questions that will add value to their program improvement efforts**

# Ready to be innovative about your evaluation efforts?

**Do you have resources to expand your evaluation activities?**

**Are you thinking about other ways to use the data you are collecting?**

**Are you looking for a reason to collect and use new data?**

**Are you ready to begin to work with an evaluator external to your organization?**

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# We don’t see a lot of evaluation activities in the middle

**Grantees appear to either be conducting CQI activities or impact evaluations that measure program effectiveness using treatment and control/comparison groups**


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# Are you ready for an impact study?

- ✓ Have you been using data to improve programming?
- ✓ Are your participants achieving proximal and longer term outcome goals?
- ✓ Is the program achieving other goals, like enrollment, fidelity, and quality?
- ✓ What is your capacity to scale up the program and sustain high quality programming with fidelity?
- ✓ *Have you answered all of the questions you can think of that tells you that your program consistently achieves expected outcomes and can be replicated at a larger scale?*

- ➢ If any of these answers are “no”, then you may not be ready.

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# Impact evaluations are hard, and it is rare to demonstrate program effectiveness

**There are a limited number of categories of activities to get right, but a million ways to get the details wrong**

- For example, gathering data from youth over time can be fraught with numerous issues that negatively effect response rates, and therefore the quality of your findings

**It is very hard to find a positive program impact on an outcome that matters to funders and policy makers**

**Even under the most optimal program implementation conditions**

- Resources may not be sufficient to enroll enough sites or students for sufficient statistical power to detect an impact
- Project period may not be long enough to examine outcomes of interest

# So, what could be useful if you are ready for something different?

**Continuous quality improvement addresses one set of evaluation questions that feed directly back into program improvement efforts**

**Impact studies answer a different set of questions about program effectiveness, but it is hard to get the answer you want**

**That leaves programs and their evaluators somewhere in the middle, looking for some guidance on what questions that can ask that will also inform program improvement efforts . . .**

# Program components: Definitions, measurement, and linkages to participant outcomes

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# Objectives

**Understand how to disaggregate a program into its component parts**

**Define features of implementation to measure about program components**

**Develop pathway diagrams that link program components to outcomes**

**Work collaboratively with peers in the audience and develop cross-grantee relationships**

# Introduction

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# Motivation

TPP/SRA programs are often made up of multiple components

- **How should we define the components of a program?**
- **Which aspects of program implementation of components should we measure?**
- **Which components matter the most in terms of influencing participant outcomes? Which components matter the least?**

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# Agenda/Roadmap

Defining program components (~25 mins)

Identifying features of implementation of program components (~25 mins)

Pathway diagrams linking program components to outcomes (~20 mins)

Questions and answers (~15 minutes)

# Defining program components

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# What are program components?

The active ingredients that make up a program

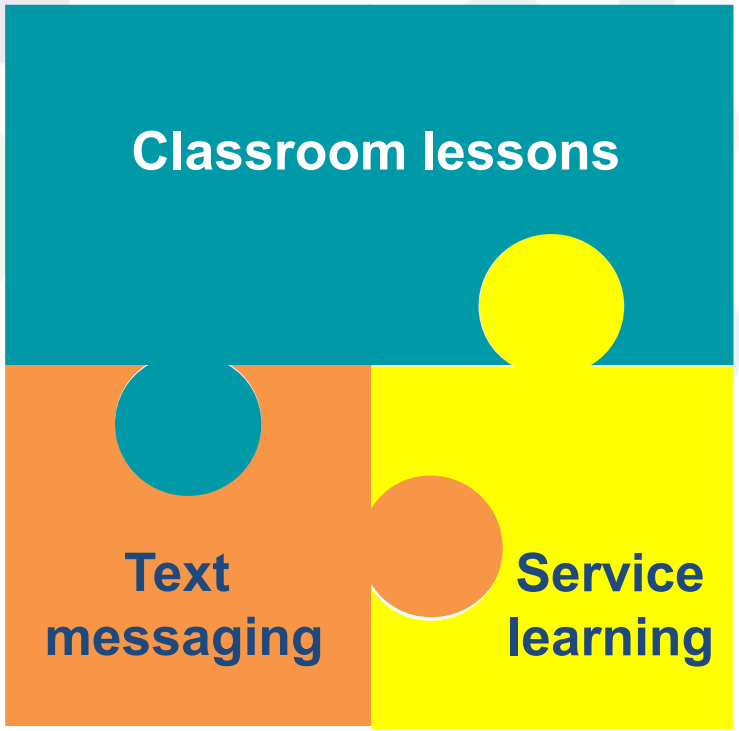
Key activities that you'd highlight in an elevator pitch description of your program

A means to unpack the "black box"

# Program components defined by structure

Program models vary in the type and number of elements/activities – for example:

- **Classroom lessons**
- **Text messages**
- **Service learning projects**
- **Web page or mobile application access**
- **One on one interactions with a health care provider**
- **Communication with parents**



# Program components defined by content

Program models might vary in terms of content offered

- **Sexual risk avoidance (SRA) programming**
- **Comprehensive sex-education (CSE) programming**
- **Positive youth development (PYD) programming**

# Program components defined by legislative requirements

## SRAE required topics

A. Holistic individual and societal benefits of personal responsibility…
B. Advantage of refraining from non-marital sexual activity..
C. Increased likelihood of avoiding poverty…
D. Foundational component of healthy relationship…
E. Other risk behaviors, such as drug or alcohol use, …
F. Resist and avoid, and receive help regarding sexual coercion and dating violence

## APS required topics

Adolescent development

Educational and career success

Financial literacy

Healthy life skills

Healthy relationships

Parent-child communication

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# Program components defined as a combination of structure/content factors

| Structure | Content | Program Component |
|---|---|---|
| Classroom lessons | SRA (lessons 1-3) | SRA lessons |
| | CSE (lessons 4-8) | CSE lessons |
| | PYD (lessons 9-12) | PYD lessons |
| Text messages | SRA (messages 1-8) | SRA texts |
| | PYD (messages 9-20) | PYD texts |
| Service learning | PYD | PYD service learning project |

# Example: different structural elements of program

Classroom lessons: 10 sexual health lessons conducted during health class (2x/week for 5 weeks)

Text messaging: Weekly text messages focusing on safe sex practices (5 messages total)

Service learning: Participate in a 4-hour service learning project on one weekend

# Example: different content areas

Sexual risk avoidance (SRA) classroom lessons: 5 SRA lessons conducted during health class

Comprehensive sex-ed (CSE) classroom lessons: 3 CSE lessons conducted during health class

Positive youth development (PYD) classroom lessons: 1 PYD lesson conducted during health class

# Example: different aspects of online program

Core lessons: 60 minutes of interactive videos

Optional video components: 15 minutes of additional content available for interested users

Games: Interactive games and quizzes

# Your turn: List components of your program

Create a list of all program components available to program participants, as they are intended to be offered

Again, program components can represent structure, content, etc.

- **Choice is up to you on how you want to define components of your program**

Think about the level of detail/granularity

- **Suggestion: Limit to broad categories and include no more than five elements**

# Discuss in small groups

Describe your program and how/why you disaggregated it into the components you selected with your table

Refine the components of your program (if desired/needed) – we'll continue to build on this in future segments…

# Identify features of implementation of the program components

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# Overview

Define the mechanisms by which program participants receive intended components

- **Expose avenues and potential barriers that may facilitate or impede program participants effectively receiving components**

Think carefully about measurement of features of implementation for each component

# Key features of implementation to consider

Dosage/Attendance: The amount of a program component received by youth

Engagement: The degree to which youth are attentive and active participants during a program component

Quality of delivery: The degree to which a program component was delivered or implemented well

Fidelity/adherence: The extent to which a program component was implemented as intended

# Operationalizing program component implementation into a table

Different features of implementation may need to work in combination to achieve effective delivery

- **Likely need high levels of dosage, engagement, quality and fidelity/adherence for program components to strongly influence outcomes**

Approach this systematically – consider each program component and each feature of implementation individually

Approach: Create a table

- **Rows = program components**
- **Columns = features of implementation**
- **Cells = individual program component * feature of implementation combination**

# Example table of program components and features of implementation

| Program component |
| --- |
| |
| Classroom Lessons |
| Text messages |
| Service learning |

# Example table of program components and features of implementation

| Program component | Implementation features | | | |
|---|---|---|---|---|
| | **Dosage** | **Engagement** | **Quality** | **Adherence** |
| **Classroom Lessons** | Number of lessons attended? | Degree of student engagement? | Facilitator effectively communicated material? | Lessons implemented in order?<br><br>Facilitator had appropriate background? |
| **Text messages** | Number of text messages received? | Number of responses to text message queries? | Clarity of the text message? | Text message content aligned with material presented during classroom lessons? |
| **Service learning** | Number of hours attended? | Level of youth engagement? | Facilitators of service learning coordinated activity well? | Alignment of the service learning project with youth interest? |

# Your turn: Create table of program components and implementation features

1. Put list of components of your program on left hand side of table
2. Start filling in the cells
   - **What are the kinds of things you'd like to see for each combination of a component and a feature of implementation?**
   - **What sources of data are you collecting that can offer insight into each cell?**

# Discuss in small groups

Are there certain features of implementation that you think are more important than others?

- **Were there any cells that were tricky to operationalize?**
- **Were there any that you felt weren't important, or captured information shown in other areas of the table?**

Are you collecting the necessary data to paint a reasonably complete picture of you're collecting for all key components?

Are there important features of implementation that you might plan to collect data on in the future?

# Create a pathway diagram between program components and outcomes of interest

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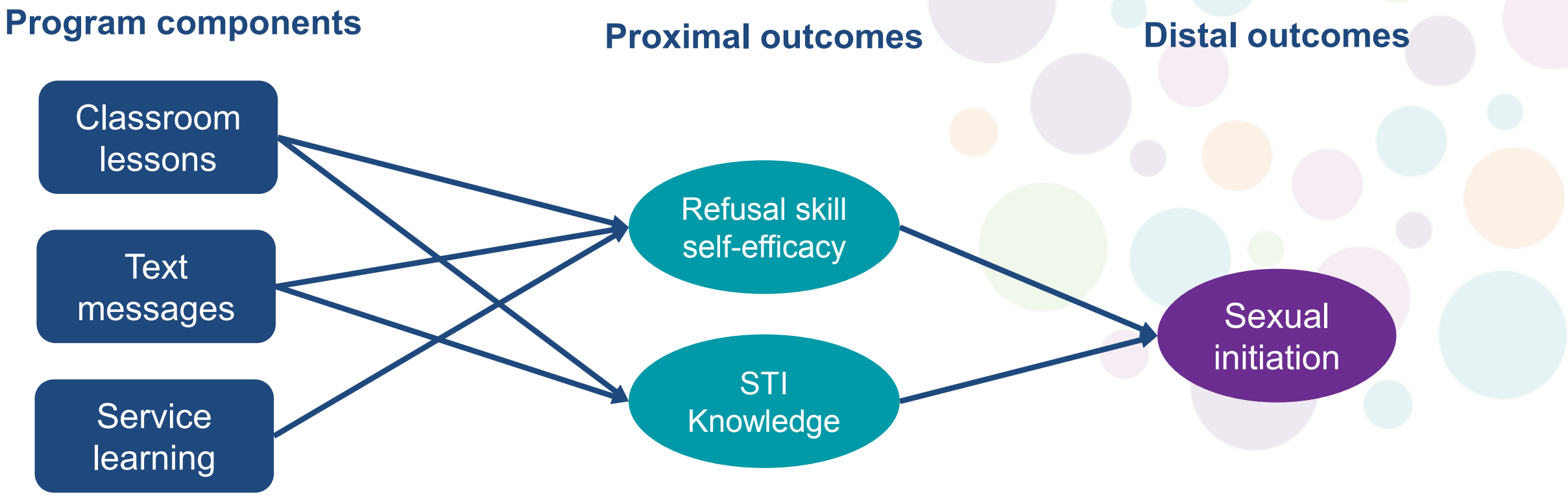
# Pathway diagram

**A pathway diagram is a visual representation of the link between program components and outcomes of interest**

**Proximal outcomes influence distal (behavioral) outcomes**

**Connect the program components to the proximal outcomes, which ultimately connect to the distal outcome**

# Example pathway diagram



# Your turn: Create pathway diagram
## (5 minutes of independent work)

1. List key outcomes of your program (measured on your participant survey) and prioritize them into proximal/distal categories
2. Fill in the bubbles with your program components, proximal and distal outcomes, and link them together

# Discuss in small groups and then report out

**Do you expect different components to affect certain outcomes more than others?**

**Did you have any sexual behaviors as distal outcomes?**

**Did you label precursors to sexual behavior (e.g. knowledge, attitudes, intentions) as proximal, and expect that they would influence subsequent behaviors?**

**Do your program components directly affect any distal outcomes, or are they expected to only influence proximal outcomes?**

# Conclusions

Careful documentation of program components of programs and collection of data on how program components were delivered and received can:

- **Provide insight into how programs work and how they can be adapted**
- **Help practitioners/developer recognize which program components of a program to emphasize/enhance or reduce/eliminate, given their role in influencing outcomes**

These are often useful as supplements to a main impact study that tests effect of full program (i.e. all program components)

- **Need to acknowledge limitations (quality of implementation and outcome data, sample size, omitted variable bias threat)**
- **But can set the stage for more rigorous evaluation of individual components**

# Contact information

**Susan Zief**

**szief@mathematica-mpr.com**

**Roseana Bess**

**rbess@mathematica-mpr.com**

**Russell Cole**

**rcole@mathematica-mpr.com**

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# Additional Slides If Time Permits

# Data collection, research questions, and analysis

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# Data collection

***Implementation data:*** Collect participant-level data for each cell in the table (Handout #2) to the extent possible

***Outcome data:*** Collect participant-level data for each outcome in the pathway diagram (Handout #3)

**Note: Collecting baseline measures of outcomes allows for additional analyses to improve credibility of findings**

Goal: Collect implementation and outcome data for each individual receiving services, and link all data sources across individuals

# Data linking example: Classroom lesson program component

## Implementation data sources:

- Dosage: School attendance log – indicates which students were in class each day
- Engagement: Observation from research team – scale on student engagement in class
- Quality: no data available
- Adherence: Facilitator log – indicates adaptations to implementation on each day, content delivered

## Outcome data source:

- Student surveys at baseline & follow-up

## Can they be linked together?

# Illustrative data

| Child_ID | Class_ID | Dosage (% classes attended) | Engagement scale (ranging from 1-5)[a] | Adherence rating (from 1-5) | Knowledge assessment score |
|---|---|---|---|---|---|

# Illustrative data

| Child_ID | Class_ID | Dosage (% classes attended) | Engagement scale (ranging from 1-5)[a] | Adherence rating (from 1-5) | Knowledge assessment score |
|---|---|---|---|---|---|
| 001 | 01 | 90% | 4 | 4.7 | 70% |
| 002 | 01 | 50% | 4 | 3.1 | 60% |
| 003 | 02 | 70% | 2 | 4.2 | 100% |
| 004 | 02 | 80% | 2 | 4.3 | 80% |

[a] all students within the same classroom (Class_ID) will have the same score for this variable

# Research questions and analytic approaches

| Broad Research Question | Example Research Question | Suggested Analytic Approach |
| --- | --- | --- |
| What is the impact of receiving a sufficient dose of a component? | What is the effect of receiving the intended dose of classroom lessons on participant knowledge? | Quasi-Experimental Approach |
| How do program components influence a single outcome? | Which program component plays the biggest role in influencing participant attitudes? | Correlational Approach |
| How do program components influence multiple, potentially sequenced outcomes? | Which program components play the biggest roles in influencing proximal and distal outcomes? | Structural Equation Modeling Approach |

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# Making the linkages

Merge student surveys (outcomes) to attendance (dosage) records?

- Yes, provided that there is a **common student identifier** across both data sources

Merge classroom observation forms (engagement) to previously linked student records?

- Yes, provided that there is a **common classroom identifier** across both data sources

Merge facilitator log data (adherence) to previously linked student records?

- Coarse approach: Assume all students in a classroom experienced the same overall levels of adherence, and merge facilitator records to student records using a **common classroom identifier**
- More detailed approach: Calculate student-specific adherence experiences by first merging daily attendance records with daily fidelity logs, and merge that student-specific adherence metric to the student records using a **common student identifier**