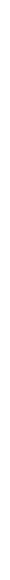# Data Strategy and Evaluation Seminar Series
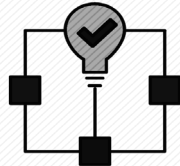
EVALUATION | Mia Bird

HOUSEKEEPING/ZOOM

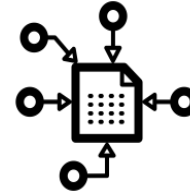# STRATEGIC FRAMEWORK FOR DATA-DRIVEN AND EVIDENCE BASED PRACTICE

Program Inventory & Literature Review

Logic Models & Process Maps

Contracting Practices

Data Strategy & Dashboards

Program Evaluation & Cost Benefit Analysis

Seminar Series 1: Programming

Seminar Series 2: Data Strategy and Evaluation

Data Strategy, Part 1
- Accessing County Data (Nov 2020)

Data Strategy, Part 2
- Accessing State Data (Jan 2021)

Data Strategy, Part 3
- Integrating County and State Data (Mar 2021)

Data Dashboards
- Visualizing Data (May 2021)

Outcomes Evaluation
- Evaluating Program Outcomes (July 2021)

DATA & EVALUATION SERIES CORE COMPONENTS

AUDIENCES FOR TODAY'S EVALUATION SEMINAR

Researchers within agencies and departments who will conduct evaluations

Managers who will oversee internal researchers conducting evaluations

Managers/leadership who will oversee external evaluators

OUTLINE OF TOPICS FOR TODAY

Theory of Change

Data Strategy

Program Evaluation

Policy Evaluation

WHAT IS THE THEORY OF CHANGE?

Before evaluating a program or policy, we need to understand the theory underlies the design

A logic model is a tool to articulate the theory of change:

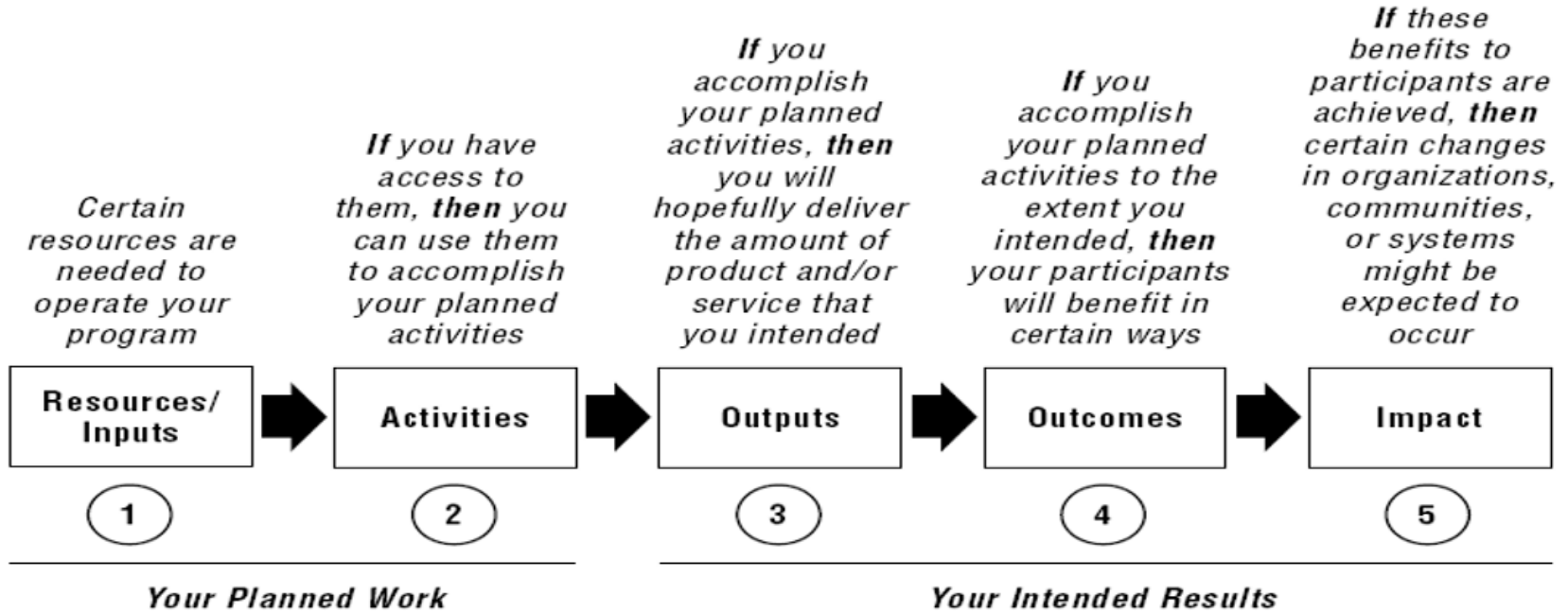| Shows the key design components of the program or policy	Reveals the key assumptions that are made (and could be tested)	Represents relationship between intervention & intended outcomes	Identifies key data points required to evaluate outcomes

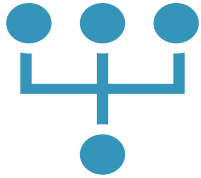# CORE COMPONENTS OF A LOGIC MODEL

Logic models include 5 core components:

1) **Resources/Inputs** needed
2) **Activities** that comprise the program
3) Planned **outputs**
4) Intended (shorter-term) **outcomes**
5) Aspired (longer-term) **impact**

COMPONENTS & ASSUMPTIONS

Certain resources are needed to operate your program

If you have access to them, **then** you can use them to accomplish your planned activities

If you accomplish your planned activities, **then** you will hopefully deliver the amount of product and/or service that you intended

If you accomplish your planned activities to the extent you intended, **then** your participants will benefit in certain ways

If these benefits to participants are achieved, **then** certain changes in organizations, communities, or systems might be expected to occur

| Resources/ Inputs | Activities | Outputs | Outcomes | Impact |

① ② ③ ④ ⑤

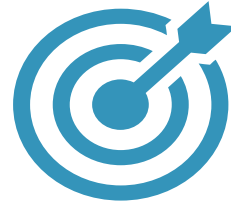**Your Planned Work**   **Your Intended Results**

Process Evaluation

Were the expected **resources** available?

Did those resources produce the planned **activities**?

Outcomes Evaluation

Did those resources and activities produce the anticipated **outputs**?

Did those outputs lead to the intended **outcomes**?

LOGIC MODELS HELP STRUCTURE EVALUATIONS

IMPORTANCE OF DATA STRATEGY

Data strategy makes evaluation feasible

- Identifies key data elements needs to understand the population characteristics, program or policy intervention, and outcomes
- Brings these data together in one place to allow for integration
- Allows for analyses over time and across place

METHODOLOGICAL DESIGN: COMPARING OUTCOMES BEFORE AND AFTER A PROGRAM

Motivation
- Did outcomes improve for participants?

Methodological Challenges
- Participants may be at a low point prior to starting the program

Before-and-after comparisons are a good starting place, but we often want to more rigorously test a seemingly effective program

METHODOLOGICAL DESIGN: COMPARING OUTCOMES BETWEEN PARTICIPANTS AND NON-PARTICIPANTS

Motivation
- Did participants have better outcomes than non-participants?

Methodological Challenges
- Participants may be positively-selected (more motivated)
- Participants may also be negatively-selected (higher need)

We can often use statistical methods to adjust for observed differences between participants and non-participants

PROGRAM EVALUATION: METHODOLOGICAL STRATEGIES TO ADDRESS SELECTION

How do we overcome these selection problems?

Experimental Strategies

Observational Strategies

EXPERIMENTAL STRATEGIES

Randomized Control Trials (RCTs):

- Control selection mechanism into treatment
- Create treated group and control (comparison) group

If randomization is successful:

- Observed characteristics should be similar in treated and control groups
- Importantly, unobserved characteristics should also be similar

FEASIBILITY OF RANDOMIZED CONTROL TRIALS

Randomized Control Trials (RCTs) may not be feasible
- Coordination challenges
- Legal or ethical issues

RCTs may be more difficult to implement on the front end, but require simple methods to determine program effects on the back end
- When randomization is successful, we simply compare participant and non-participant outcomes to determine program effects

PSEUDO-EXPERIMENTAL STRATEGIES

Regression Discontinuity

- Cutoff point for entry into program
- Theoretical randomness around that cutoff point
- Compare outcomes of small groups on either side of that cut off point (treatment and control groups)
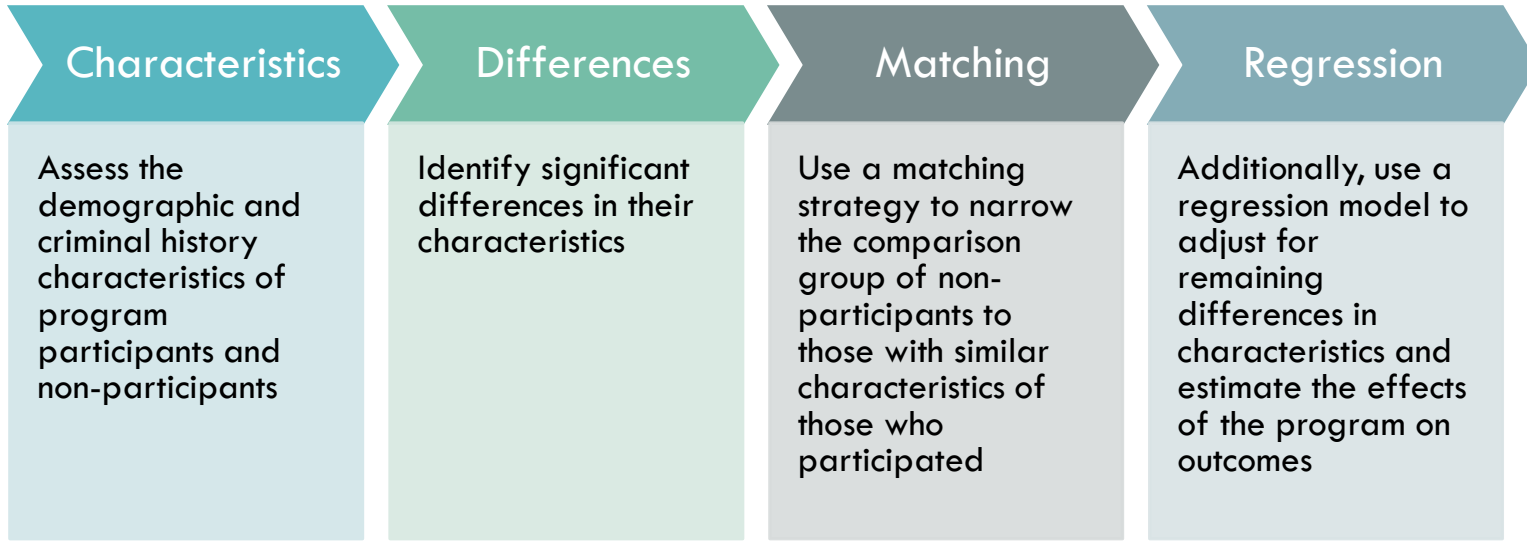
Concerns about external validity

INTERNAL & EXTERNAL VALIDITY

Internal Validity: How accurately your evaluation estimates the true effects of the program for those who participated in it

External Validity: How well your evaluation estimates generalize beyond the treated group in the study environment

OBSERVATIONAL STRATEGIES:
ADJUST FOR DIFFERENCES IN OBSERVED CHARACTERISTICS BETWEEN PROGRAM PARTICIPANTS AND NON-PARTICIPANTS

Characteristics	Differences	Matching	Regression
Assess the demographic and criminal history characteristics of program participants and non-participants	Identify significant differences in their characteristics	Use a matching strategy to narrow the comparison group of non-participants to those with similar characteristics of those who participated	Additionally, use a regression model to adjust for remaining differences in characteristics and estimate the effects of the program on outcomes

OBSERVATIONAL STRATEGIES: LEVERAGE VARIATION IN PROGRAM EXPOSURE

Variation in program implementation helps us to address individual self-selection into treatment

Program implementation dynamics that may be helpful:

- Program available at point in time
- Program available in certain places
- Program available to certain participants

Leverage these sources of variation to construct treatment and comparison groups

APPLYING PROGRAM EVALUATION FINDINGS TO DECISION-MAKING

If found to be effective:

- Should the program be expanded? To whom?

If not found to be effective:

- Was the program implemented as intended?
- Should the program be better targeted?
- Should the model be changed or replaced?

QUESTIONS AND DISCUSSION

POLICY EVALUATION

Policy evaluation is distinguished from program evaluation:
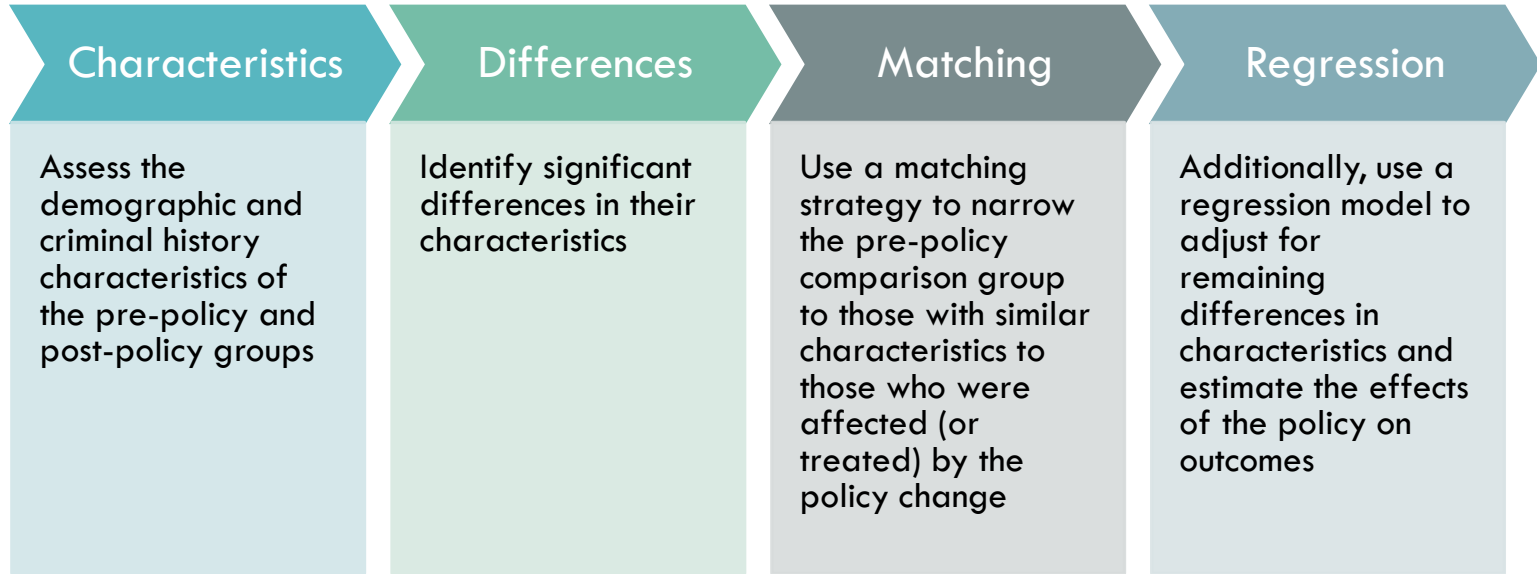
- Evaluates high-level change in state or county policy
- There are "pre" and "post" periods of policy implementation
- This variation over time creates opportunities to conduce a "natural policy experiment"

METHODOLOGICAL DESIGN: COMPARING OUTCOMES BEFORE AND AFTER A CHANGE IN POLICY

Comparing outcomes before an after a policy change is an effective methodological strategy because:

- Treated and control (comparison) groups are likely to have similar observed and unobserved characteristics
- In a narrow time window of policy change, it is unlikely that other factors (which may affect outcomes) have changed

METHODOLOGICAL DESIGN: COMPARING OUTCOMES BEFORE AND AFTER A CHANGE IN POLICY

Characteristics

Assess the demographic and criminal history characteristics of the pre-policy and post-policy groups

Differences

Identify significant differences in their characteristics

Matching

Use a matching strategy to narrow the pre-policy comparison group to those with similar characteristics to those who were affected (or treated) by the policy change

Regression

Additionally, use a regression model to adjust for remaining differences in characteristics and estimate the effects of the policy on outcomes

POLICY EXAMPLE

Public Safety Realignment dramatically changed the policy treatment for different groups of individuals

Individuals who would have been sentenced to prison and released on parole now experienced a range of local sanctions depending on their criminal characteristics

- In this study, we use a pre-post design and leverage the natural policy experiment to estimate the causal effects of realignment for different treated groups

METHODOLOGICAL DESIGN: ADJUSTING FOR BROADER CHANGES OVER TIME

While a pre-post analysis of the effects of a policy change on outcomes is considered a strong design, it is helpful to add an additional adjustment for changes over time

A difference-in-differences model estimates the effects of a policy change on outcomes for a pre-post treated cohort

It then allows us to "difference out" any broader changes over time, as captured by the change in outcomes for a pre-post untreated cohort

This study of the effects of Prop 47 employs a differences-in-differences analysis

APPLYING POLICY EVALUATION FINDINGS TO DECISION-MAKING

State level
- County variation is especially helpful to researchers in designing studies to accurately assess the effects of those statewide policies
- Evaluations of those changes can inform county advocacy and state level decision-making

County level
- Policy evaluations at the county level can better inform advocacy and adaptation among departments and agencies, as well as higher-level county decision making

WORKSHOP: EFFECTS OF ZERO BAIL (UNDER COVID) ON PRETRIAL MISCONDUCT, RECIDIVISM, AND CRIME?

WHAT QUESTIONS WOULD YOU LIKE TO ANSWER IN YOUR COUNTY?

HOW MIGHT YOU DESIGN A POLICY EVALUATION?

QUESTIONS AND DISCUSSION

MATERIALS, GUIDES, AND TEMPLATES

Materials available:

Step-by-Step Guide to Evaluation

Key Items to Get Right When Conducting RCTs

Data & Evaluation Series Info:
https://www.counties.org/framework-seminar-series

Support Hub Website:
https://www.counties.org/csac-support-hub

LOOKING AHEAD

TECHNICAL ASSISTANCE

Contact:

Ryan Souza, Program Director

RSouza@counties.org

(m) 916.628.1404