Improvement Processes and the Critical Role of Evidence

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Overview

- With gratitude
  - Sponsored by WT Grant
  - Support of collaborators
    - Linda Hall, Wisconsin Association for Family & Children's Agencies
    - Susan Dreyfus and Jennifer Jones, Alliance for Strong Families and Communities
    - Lily Alpert, Scott Huhr, Sara Feldman

Goals and Background

- Set the table – challenge your thinking
- Create a framework to use throughout the symposium
- Skate to where the puck will be
  - Place analytics within the science of improvement and research evidence use

Themes

▸ Research *IS* action

▸ Analytics as a means to an end

▸ Improvement starts with a question

▸ Variation is the key

▸ Research evidence use as a process

▸ Human capital as limitation and opportunity

▸ Theories of change and logic models

▸ Methods matter

▸ Data versus evidence

Are there times when . . . ?

. . . when you need evidence on outcomes for the children you serve?

. . . when you need evidence about what might be causing a certain outcome for children in care?

. . . when you need to identify a policy or practice that could improve outcomes for the children you serve?

. . . when you need to make a decision about whether to implement a specific policy or practice?

. . . when you need evidence about the effect of a specific policy or practice on the children you serve?

. . . when you need to make a decision about whether or how to continue implementing a certain policy or practice?

Building the Evidence that Evidence Matters

- ▸ Project on Evidence Use: Phase I
  - ▸ Do private child welfare agencies use research evidence?
  - ▸ Do private agencies who use research evidence achieve better outcomes?

- ▸ Project on Evidence Use: Phase II
  - ▸ Is it possible to improve the use of research evidence

The Basics

- Types of research evidence

- How is research evidence used?

- Research evidence use as process

- Is research evidence being used?

- Tacit but untested assumption:

  - Of all the investments a child welfare agency might make, investment in research evidence is the surest way to improve outcomes

On the Nature of Evidence

- Data

  - Systematically recorded observations

  - Resides in a database

  - Generally devoid of narrative – just bits and bytes

- Research evidence

  - Curated from data according to a set of methods and other best practices

  - Valid, reliable, and free of (sample) bias

  - Is possessed of narrative – the story

Narrower and Broader Views of Evidence

▸ Notions of evidence today are too narrow

  ▸ The clamor for evidence-based interventions has contributed to the problem

▸ Three types of evidence (at least)

  ▸ The evidence that you have a problem worth solving

  ▸ The evidence that the solution you've selected will solve the problem you have

  ▸ The evidence the solution you've implemented is working

"We argue that any special status for RCTs is unwarranted. Which method is most likely to yield a good causal inference depends on what we are trying to discover as well as on what is already known."

Deaton, A., & Cartwright, N. (2018). Understanding and misunderstanding randomized controlled trials. *Social Science & Medicine, 210*, 2–21.

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What is research evidence?

Evidence is diverse and more than evidence-based interventions

Evidence is information that is used to support an observation, claim, hypothesis, or decision. In other words, evidence provides an answer to the question: **How do you know?**

Evidence can be **quantitative** or **qualitative**.

Evidence must be **reliable**, **valid**, and **representative** (free of bias).

Evidence can be **found** in or **derived** from a number of places (e.g., administrative data archives, case record review, stakeholder feedback, social science literature).

Evidence is possessed of narrative; data lacks narrative; changing data to evidence brings meaning

What is Research Evidence Use?

- Core capacity
- Everybody . . . EVERYBODY . . . has to know how to use research evidence
- It is a process
  - Acquire or generate
    - Journals
    - Conferences
    - Request
  - Process
    - To make meaning of the evidence acquired
    - Think of it as taking data and giving it meaning
    - This is a disciplined process

- Apply
  - To use the data to support a decision
    - How to allocate the resources at your disposal
      - Use your time to interact purposefully with a family
      - Support a program with fundings
- Organizations have to support evidence use
  - Structure
  - Processes
  - Resources
  - Leadership
  - Culture of learning – use good questions

How is research evidence used?

▸ Carol Weiss' taxonomy is a nuanced conceptualization (1979)

▸ Knowledge-driven: Evidence finds application

▸ Problem solving: Use evidence to solve a problem

▸ Interactive: actors engaged in policy seek out evidence

▸ Political: Decision is made; research is used to substantiate

▸ Tactical: Research is being done and the decisions have to wait

▸ Enlightenment: Knowledge improves discourse

▸ More economical taxonomy

▸ Instrumental, imposed, conceptual

Why Methods Matter

- Called to testify before the legislature
- Local newspaper has reported that the public child welfare agency is being sued in part because children are being abandoned in out-of-home care under your leadership
- Your staff does the analytics
- If a picture is worth a thousand words . . . The evidence isn't pretty
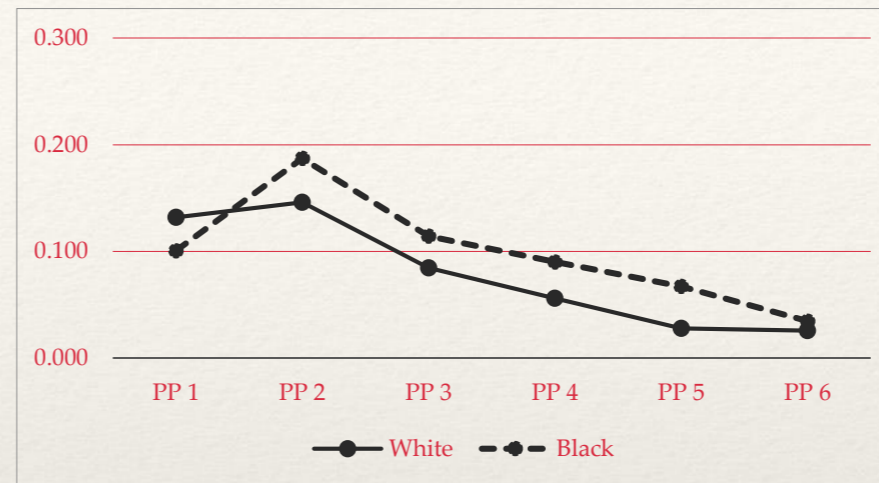- You don't understand – the initiatives, the money, what the #?!@

- But then you remember . . .
- Valid, reliable, and free of bias
- Reboot the analysis
- Same system, identical historical period
- Free of bias

Time in Out-of-Home Care

Your administration

Time in Year

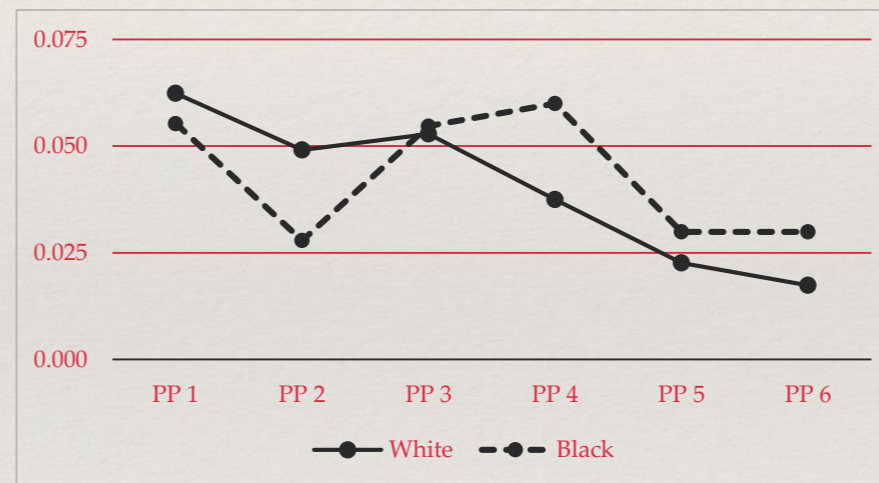Your administration

Time in Years
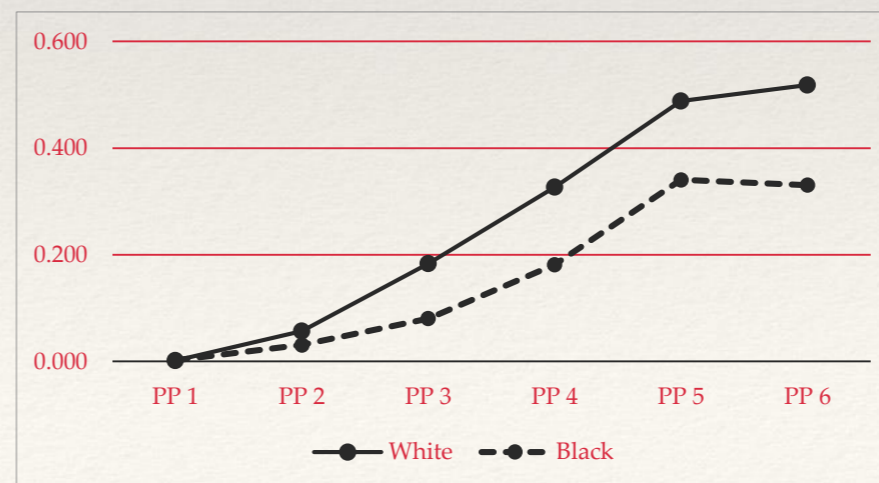
Differential Rates of Exit From Care

- ‣ Probability of leaving care to permanency
    1. No difference between Blacks and whites
    2. BUT . . .
- ‣ Depends on how children leave
    1. Guardianship
    2. Adoption
    3. Reunification
- ‣ Depends on where children live and how old they are
    1. How does this change the strategy?
    2. How does this change the measurement strategy for understanding impact?

Reunification

Guardianship

Adoption

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Research evidence use as process

▸ Acquire / Generate

    ▸ Getting your hands on evidence

    ▸ Evidence is role dependent as is the means by which it is acquired

▸ Process

    ▸ Interpret / give meaning to the evidence

▸ Apply

    ▸ Use evidence in a decision-making context

REU I - What did we find?

▸ Agencies that reported higher levels of evidence use achieved better outcomes measured as permanency

▸ What did the workers report in terms of evidence use and the things that make a difference?

  ▸ I know where to find it

  ▸ I have a positive attitude toward evidence

  ▸ I have more years on the job

Research Evidence Use and the Science of Improvement

- ‣ Improvement starts with a question

- ‣ Improvement is cyclical

- ‣ Motivated by a theory of change

    If I do this something good will happen

    Fancy words for something we do everyday

- ‣ Involves the deliberate use of evidence at each stage of the cycle

- ‣ The most important questions are about variation

- ‣ People ask questions; people use evidence

REU II - What is the project in Wisconsin?

▸ We'd like to know the answer to two questions:

  ▸ Can you increase evidence use?

  ▸ Does the increase in evidence use translate into better outcomes

▸ How are we going to do this?

  ▸ People use evidence, people make decisions

  ▸ If evidence use matters it is because when people make *evidence informed* decisions, there is a chance the decisions will be better - reduce type I and type II errors

  ▸ Classroom work and coaching that targets:

    ▸ Opportunity - access to evidence to support decisions

    ▸ Motivation - a willingness and desire to use evidence

    ▸ Capability - know how the improves the ability to generate/acquire, make meaning of, and apply evidence

    ▸ Booster

  ▸ Full integration with the process of improvement

EDGE - Theory of Change
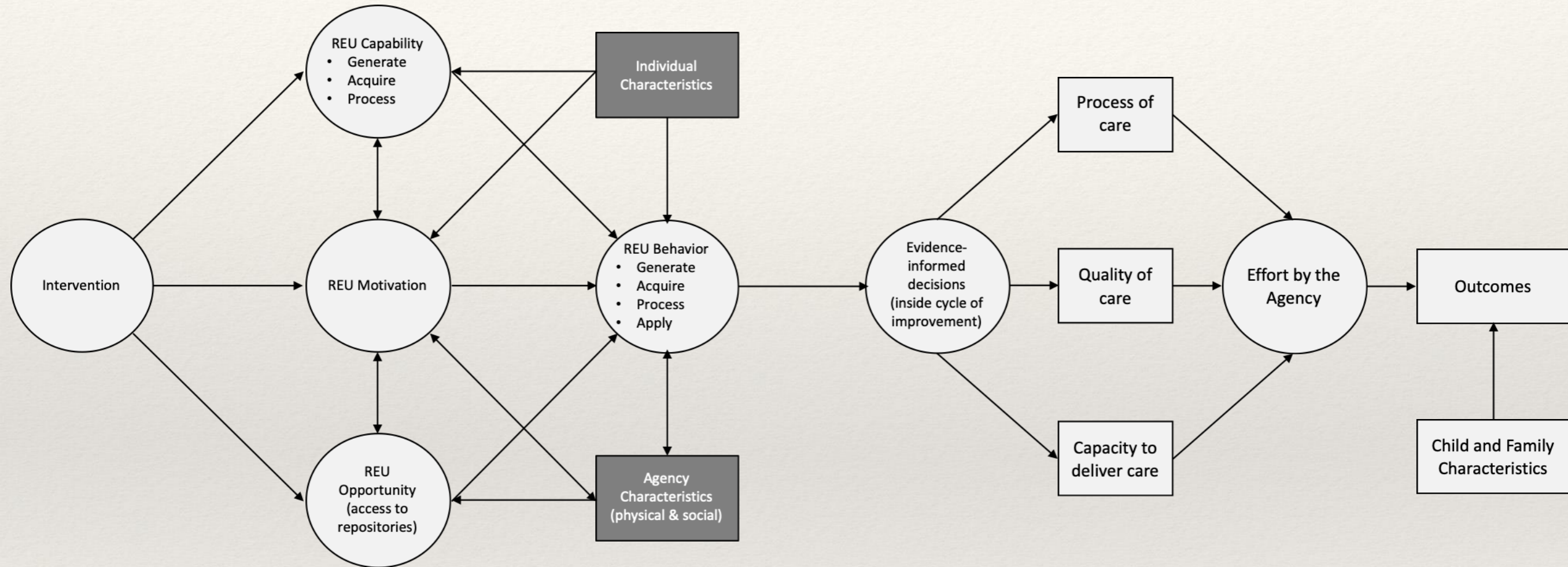
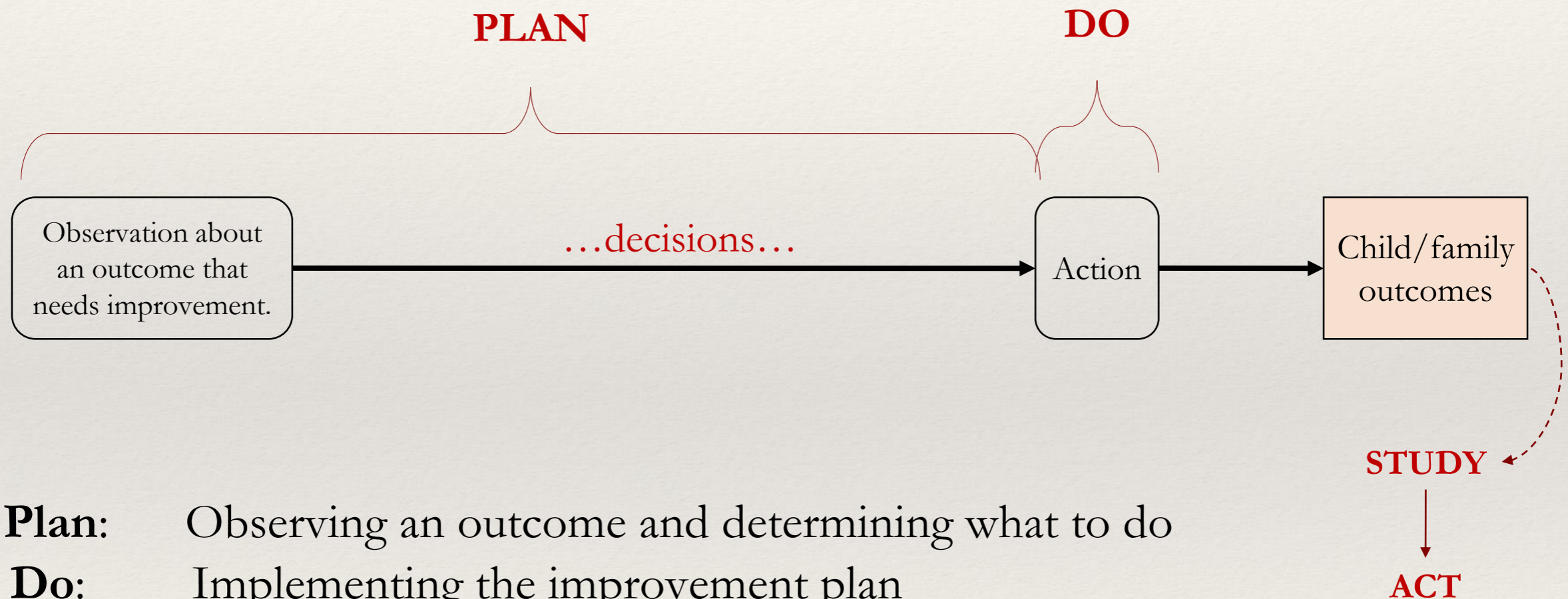# Research evidence use within the process of improvement
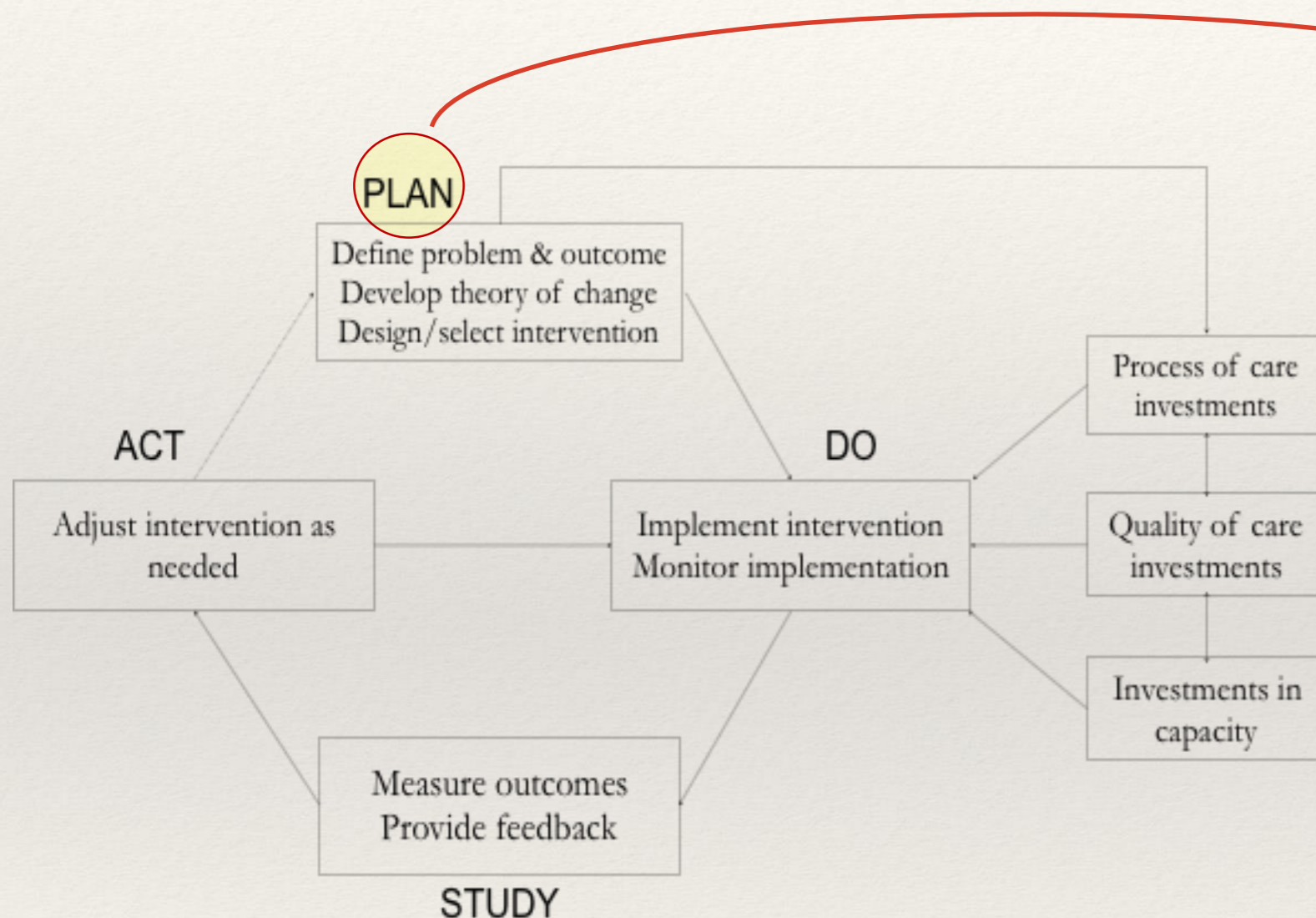
I observe [**some outcome that I want to improve**].

I think it's because [**of this reason**].

So I plan to [**implement this intervention**],

which I think will result in [**an improved outcome**].

The process of improvement

PLAN

DO

Observation about an outcome that needs improvement.

…decisions…

Action

Child/family outcomes

STUDY

ACT

Plan: Observing an outcome and determining what to do
Do: Implementing the improvement plan
Study: Measure the effect on the outcome of interest
Act: Decide what next step to take in light of those effects

Incorporating evidence into working knowledge & decision-making
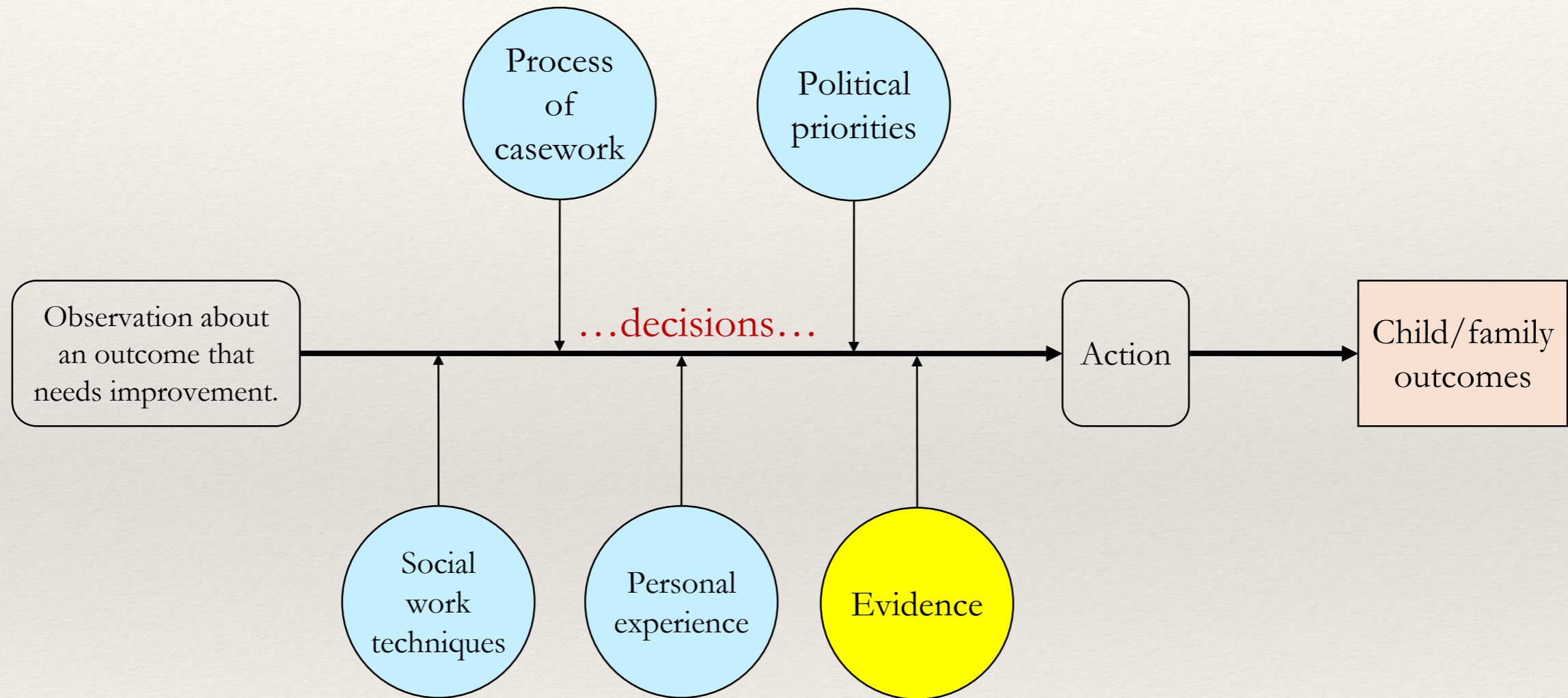
Cycle of Improvement

Evidence supports your PLAN:

- points to the outcomes that need improvement

- supports (or refutes) your hypothesis about what's driving the outcome

- informs the selection of matched interventions

Later on in the cycle, evidence:

- gives you information about whether you're implementing your intervention according to plan

- tells you whether your intervention was effective

- informs your decisions about what to do in light of those results

I observe that…

I think it's because…

So I plan to… which I think will result in…

DO

STUDY

ACT

People Drive Analytics - People Use Evidence

▸ Analytics and evidence use are behaviors

▸ More of both means changing behavior

▸ On the science of using science – behavioral change requires:

  ▸ Opportunity – structure, process, and data

  ▸ Motivation – people have to want to use evidence so incentives are important

    ▸ Capability – this is human capital; do people have the requisite skills?

      ▸ People use evidence if motivated and provided with the opportunity

      ▸ Problems of access, data sharing, etc. are about opportunity

      ▸ What are you doing about skills?

        ▸ The skills to do analytics

        ▸ The skill to use evidence – acquire, process, apply

Summary

▸ Improvement starts with a question

▸ Analytics without a question – a well specified question – creates risk

▸ Questions linked to theories provide the best learning opportunity

▸ People ask questions, drive analytics, and use evidence

▸ The most important limitations are tied to human capital: skills, know-how, attitude and motivation

Organizations provide opportunity

  ▸ Structure

  ▸ Process

  ▸ IT infrastructure