

# Setting the Stage: Building Strong Evidence in Challenging Contexts

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## Evidence matters

- Anyone disagree?
- Many programs are implemented without evidence (and without adding to evidence base)
- Some can do harm
- Many can waste resources
- Optimism is not enough

Evidence is  
lacking  
– for certain  
groups,  
for many  
contexts

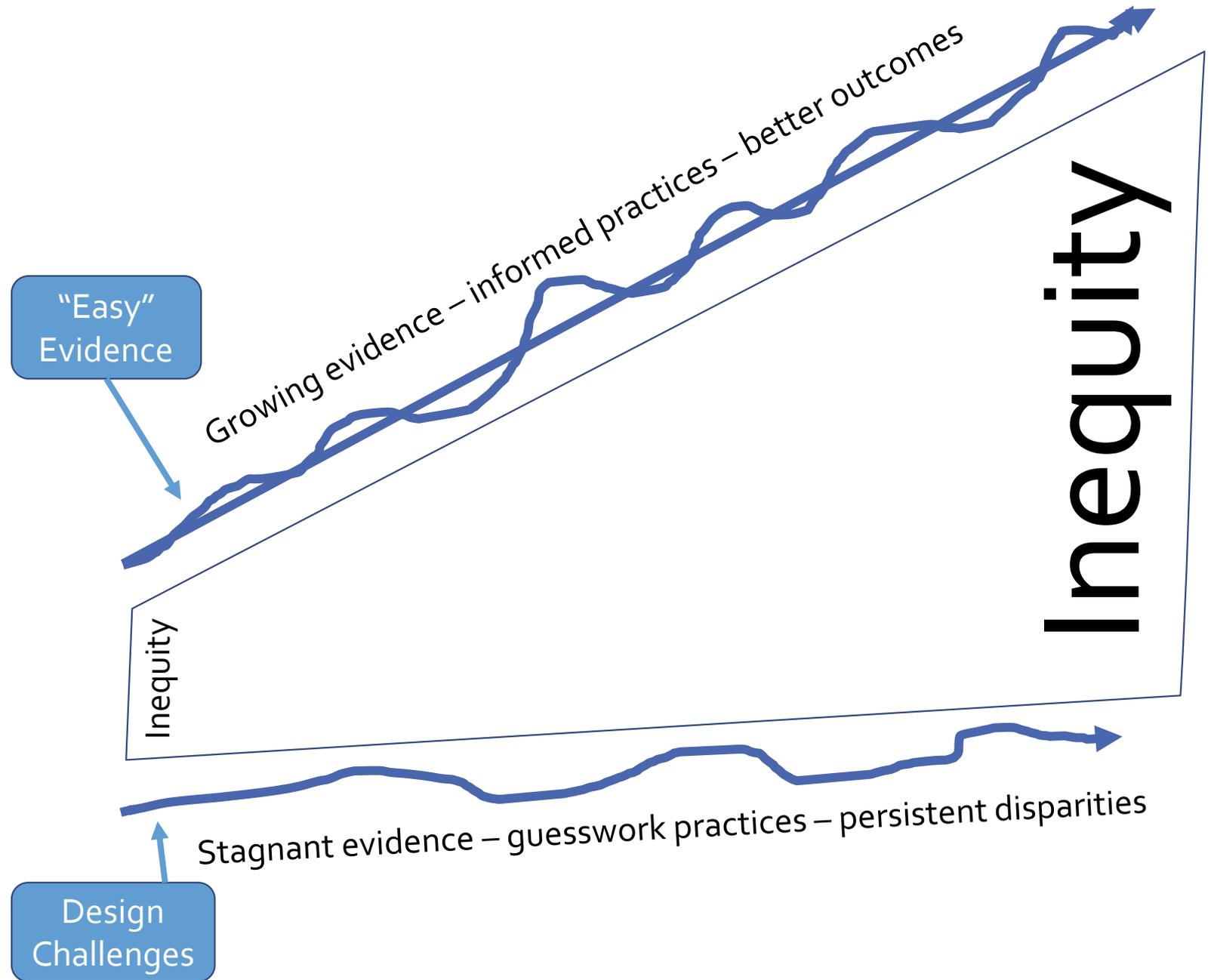
### Case in point – Home Visiting

- Original HomVEE report – **19** EBPs for home visiting
- Original Tribal HomeVEE report – **0** EBPs for tribal home visiting; 2014 updated Tribal HomeVEE – **1** EBP

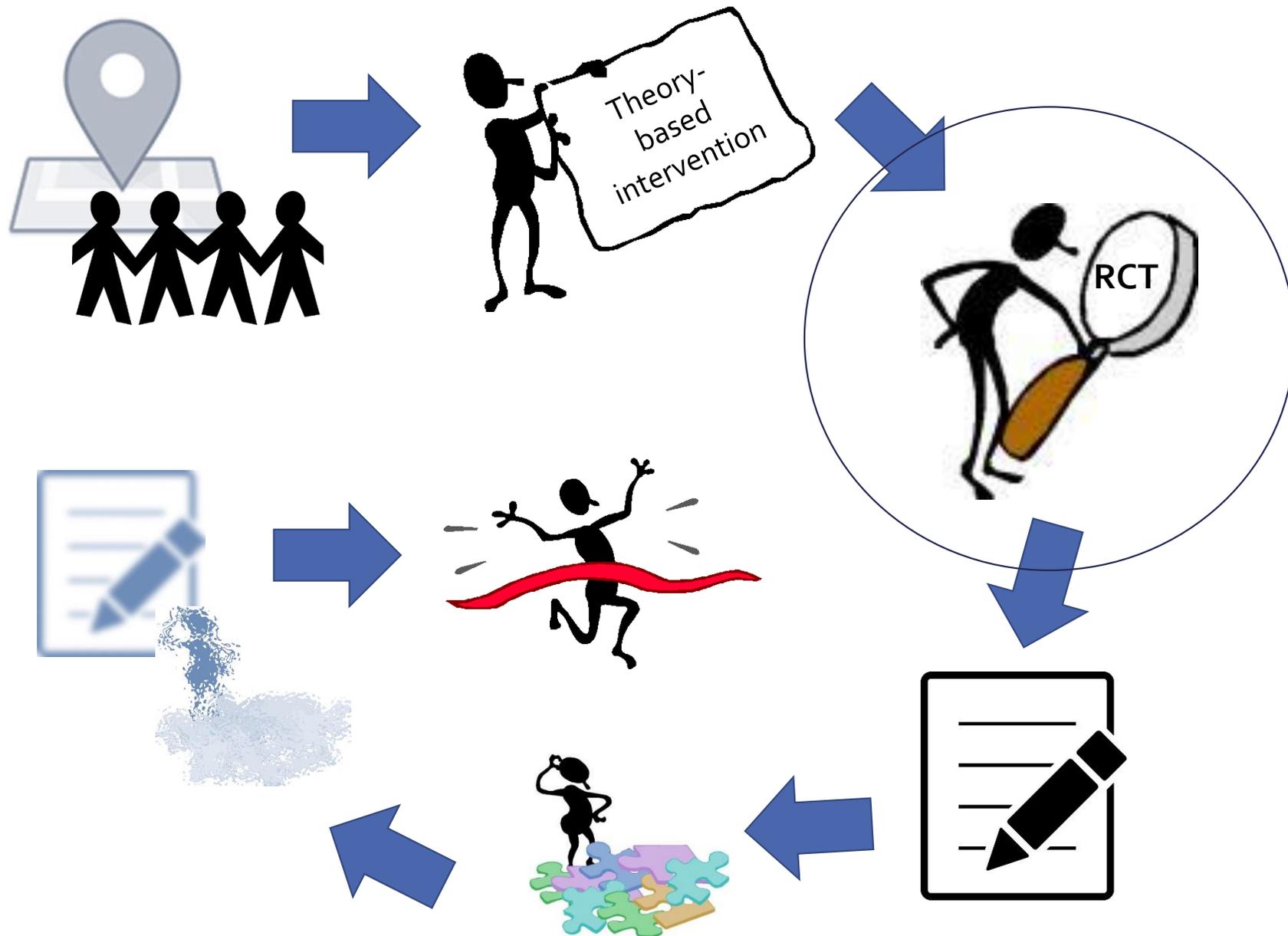
## The lack of evidence widens disparities gaps

- If we don't know what works, we can't intervene to reduce disparities.
- Groups for whom evidence is (relatively) easy reap the benefits of EBPs = **better outcomes**
- Groups for whom evidence is hard to build continue without EBPs = **static outcomes**
  - Researchers shy away from doing this work – process is harder and slower and riskier (for publication and academic promotion)
  - EBPs tied to funding – so less funding
  - Communities lack guidance on choosing among potential approaches and programs and have few (if any) proven strategies to access – so they have to wing it
- **Widening disparities**

Research inequities feeding health and developmental inequities – in pictures



Why do we lack evidence when we have such good protocols for building evidence?



## Why do we lack evidence?

Standard practice – RCTs – can be problematic and even impossible in many communities and contexts.

Forcing RCT can undermine rigor if it is employed without recognition that its essential components are not viable within a particular context or question.



# Defining Rigor

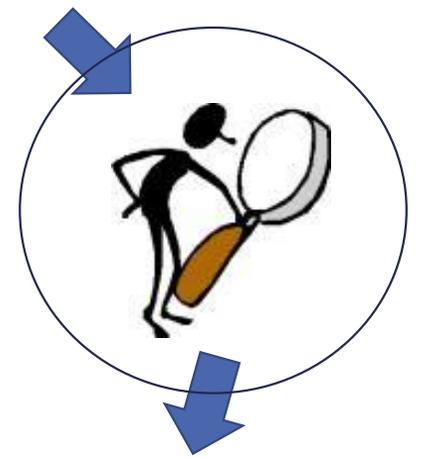
**Data that can be trusted**

to answer questions that are important about interventions

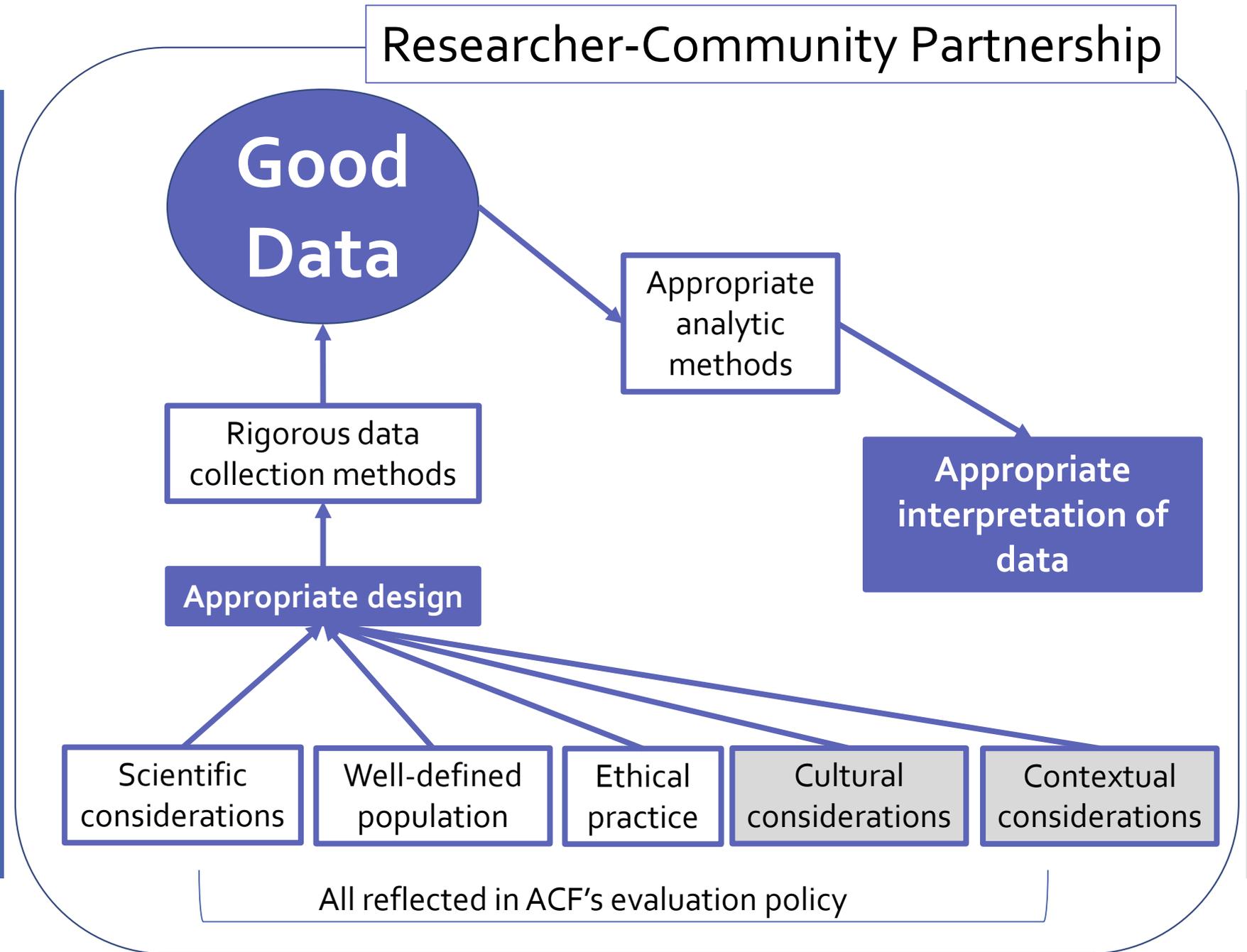
designed to improve outcomes and reduce risk.

**Rigor at the highest level** is about the kind of data the study produces, not about the particular design used.

A narrow focus on “rigorous methods” risks privileging standard approaches (e.g., RCT) that can undermine **rigorous data** in specific contexts.



# Defining Rigor



Some  
contextual  
and cultural  
considerations  
that  
make design  
challenging

Small populations and small samples

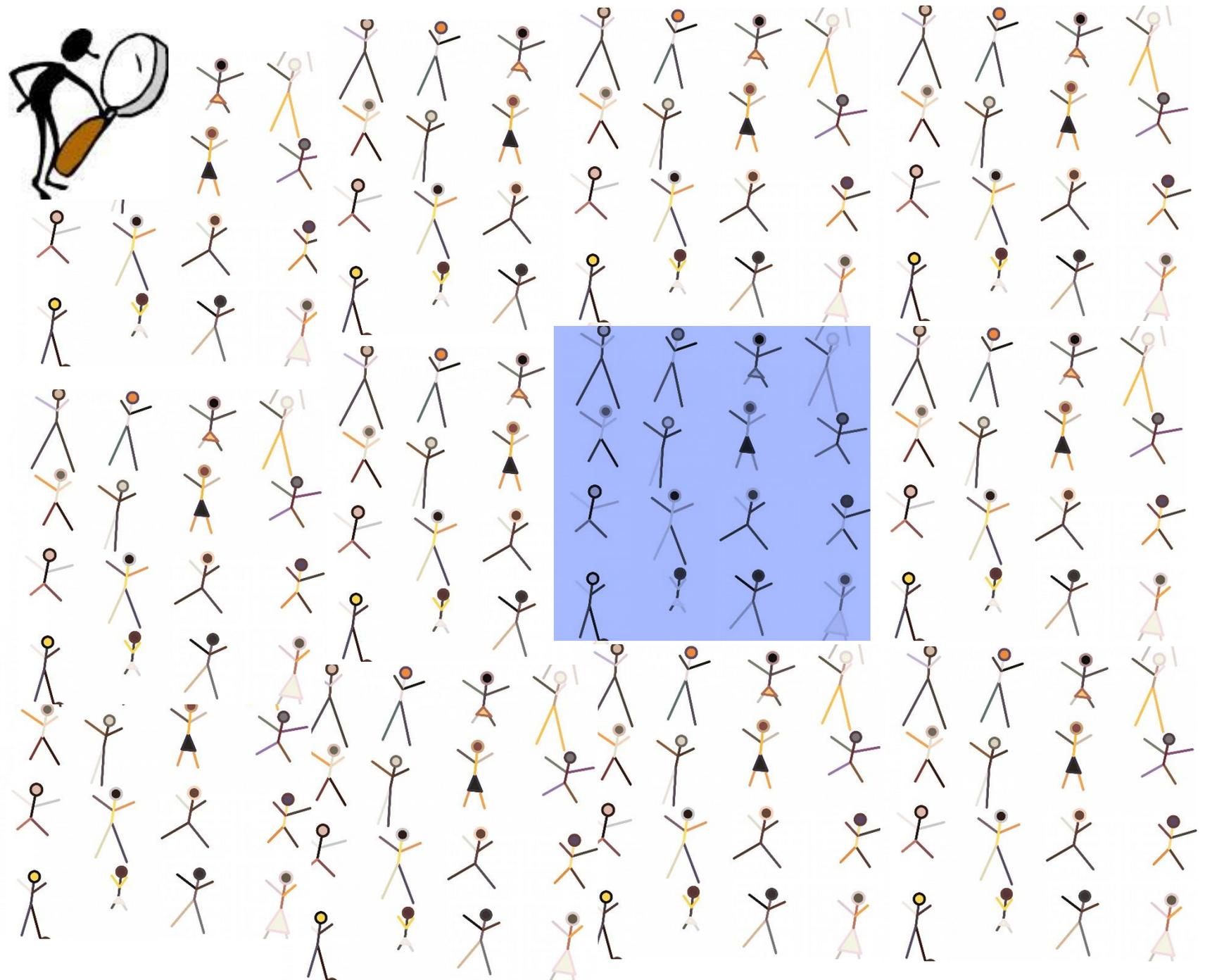
Community-level interventions

Ethical concerns

Roadblocks

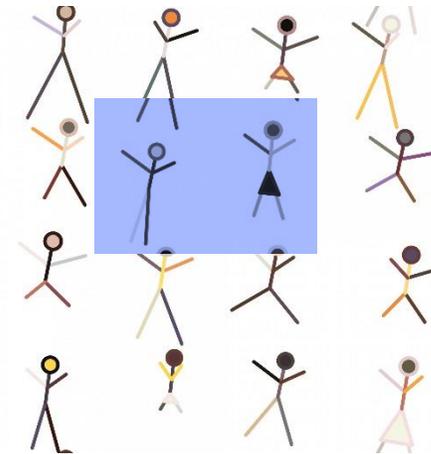
Culture in intervention and evaluation

# Small populations and small samples





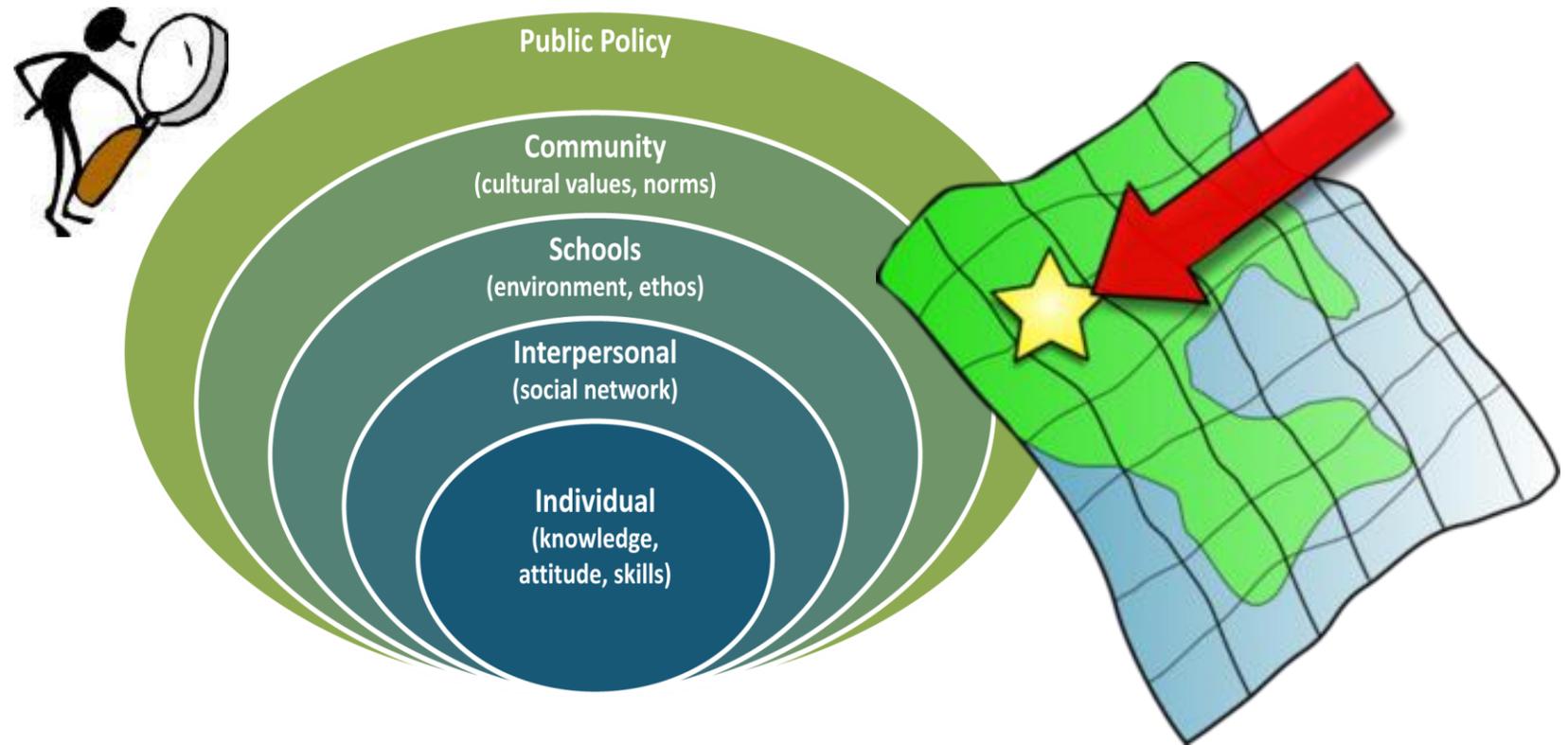
# Small populations and small samples



## Strategies for when $N$ can't be large

- Tribal population of 1,000
- Small urban neighborhood communities
- Specific risk groups

# Community-level Interventions



When individual outcomes are embedded

- Place-based initiatives
- Multi-level interventions
- Randomizing at the level of community with small populations *of communities?*

# Ethical concerns





## Control group



“Denying services” to create a comparison group – where need is great

- Value of comparison often not enough



# Randomization

## Cultural values that preclude randomization

- Fairness, allocation based on need



# Roadblocks





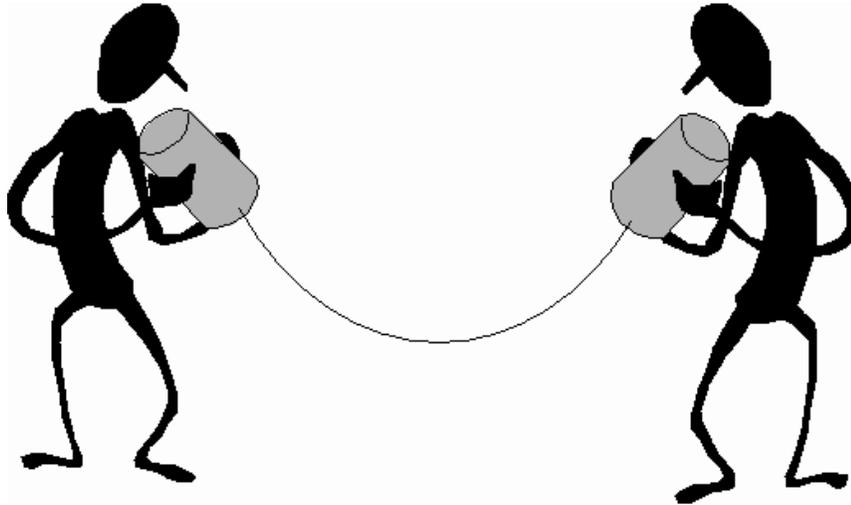
# Contamination



Contamination across groups in tight-knit communities – especially with proclivity to share

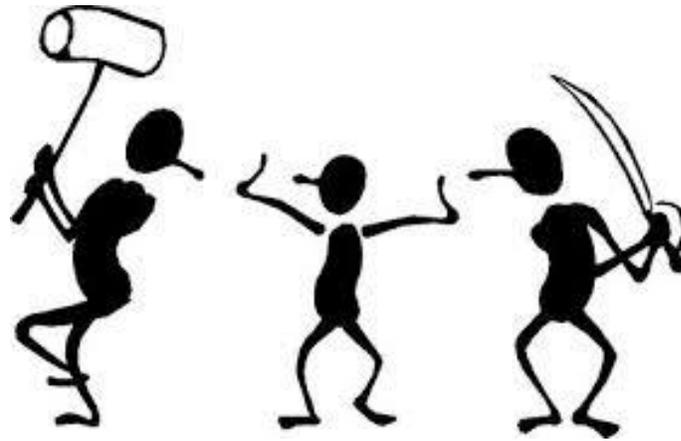
- Basketballs

# Feasibility



Lack of resources in communities

- Technology, staff, facilities



# Resistance

## Overcoming research history

- Fishbowls, anthropologists, and Havasupi

## Overcoming research apathy

- Priorities in a hierarchy of need



This conference  
Exploring  
solutions  
to *some*  
of the challenges  
of study design  
in these contexts

- **Small samples**
  - single subject
  - optimization
  - Bayesian analyses
- **Alternative randomized designs**
  - stepped wedge and other roll-out designs
  - preference trials
  - leveraging information from school lotteries
- **Alternatives to randomization**
  - comparative regression discontinuity
  - simulated instrumental variable
  - comparative interrupted time series
  - Innovative matching

# Contact info

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**Centers for American Indian &  
Alaska Native Health**

colorado school of public health



University of Colorado  
Anschutz Medical Campus

[www.tribalearlychildhood.org](http://www.tribalearlychildhood.org)



[www.ncreconnect.org](http://www.ncreconnect.org)

