



# Why Choose an RCT?

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# What are some considerations to make when deciding whether to choose an RCT?

- 1) Time and cost considerations
- 2) Ethics considerations
- 3) Considerations on validity of the conclusions
- 4) Considerations on what an RCT can really tell us? – solving the black box

# Time and Cost Considerations

This is a real issue! RCTs are complex require thoughtful time and attention.

Important considerations:

- 1) Survey data vs **administrative** data
- 2) Other **formats** of uses of **technology** – phone surveys, satellite images, etc
- 3) The outcomes of interest affect the **time span** of the study
  - *eg. Education intervention: long-term outcomes on employment vs short term outcomes on test scores (collected from official admtnve records)*
- 4) Trade off: Is the **RCT time & cost worth it compared to:**
  - value of the evidence
  - long-term costs of continuing to implement an intervention without understanding its effectiveness

# Ethic Considerations

These days many academics view the random assignment approach as the gold standard for measuring causal effects. Drugs are tested this way under the supervision of the Food and Drug Administration, with some patients randomly chosen to receive a drug and others randomly given a placebo (that is, a fake drug that is known to be of no help). Labor economists eagerly look for opportunities to randomly assign various labor market conditions (e.g., access to health insurance).

Perhaps most famously, development economists – randomistas as Prof. Angus Deaton calls them – have randomly assigned economic assistance to poor villages in order to measure the rates of return on that assistance. Prof. Jeffrey Sachs's Millennium Villages Project, an ambitious effort to help African villages escape poverty, has been criticized for, among other things, failing to randomly assign its treatments.

But Professor Sachs didn't accidentally forget to randomize his assistance. He thinks that it's wrong to withhold from poor people assistance that he's confident can help. The patients who get placebos in randomized F.D.A. trials would probably agree.

Casey B. Mulligan, *The Economics of Randomized Evaluations*, New York Times, March 5, 2014.

If we knew the impact, we wouldn't be evaluating!

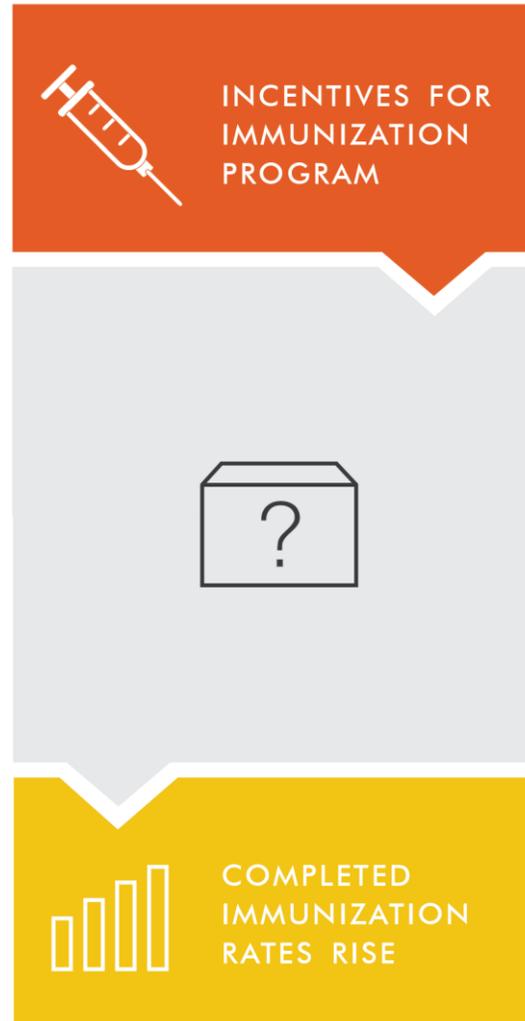
- When impact is unknown, it's **unethical not to evaluate!** – Despite best intentions, we may cause negative or *neutral* effects
- If not enough resources for everyone, **randomizing** the intervention among equal potential beneficiaries is the **most ethical option**
- **Possible to conduct RCTs without denying access to the intervention**, eg:
  - Randomize encouragement to enroll
  - Compare two different versions of an intervention
- **The importance of IRB / ERC**



# Considerations on Validity: External, General?



# Generalizability framework



# Test behavior and theory, *not* program components

Step 1: What is the disaggregated theory behind the program?

Step 2: Do the local conditions hold for that theory to apply?

Step 3: How strong is the evidence for the required general behavioral change?

Step 4: What is the evidence that the implementation process can be carried out well?



# Generalizability framework



# What can an RCT tell us?

- Only if the intervention was effective (black box)?
- If designed and implemented correctly, RCTs can also answer a number of other policy-relevant questions:
  - Test different versions of an intervention to understand **which components are the most important** for it to be efficient
  - Test an intervention's theory of change providing information on **intermediate outcomes**
  - **Heterogeneity analysis**: compare effect of an intervention on different subgroups
- Combine the results with economic theory, descriptive evidence, and local knowledge, to gain a richer understanding



Thank you



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