How do we interpret “evidence”?

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Kenya Evidence Forum - June 14, 2016

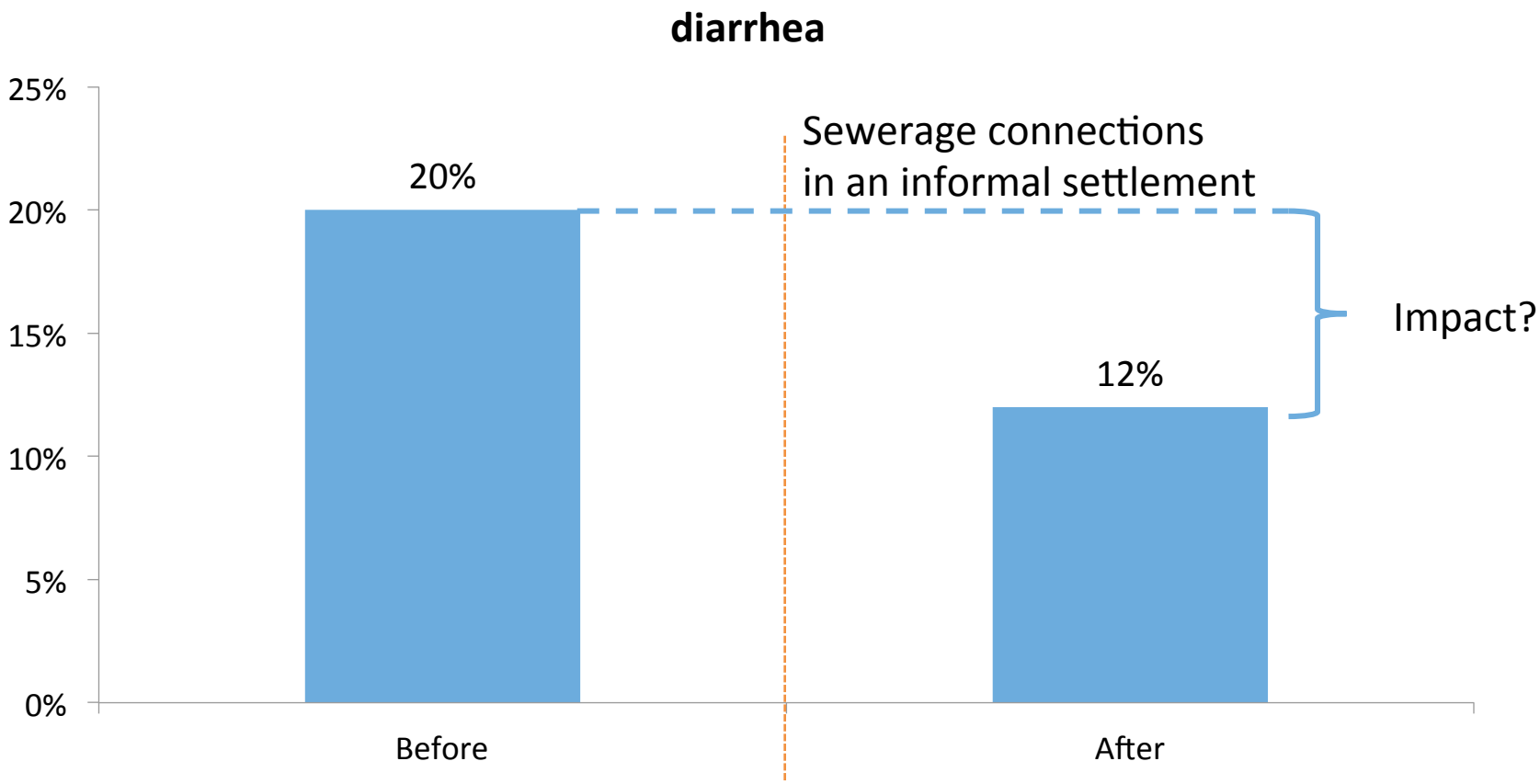
Using Evidence to Improve Policy and Program Designs

i2i DIME
TRANSFORM DEVELOPMENT

WORLD BANK GROUP

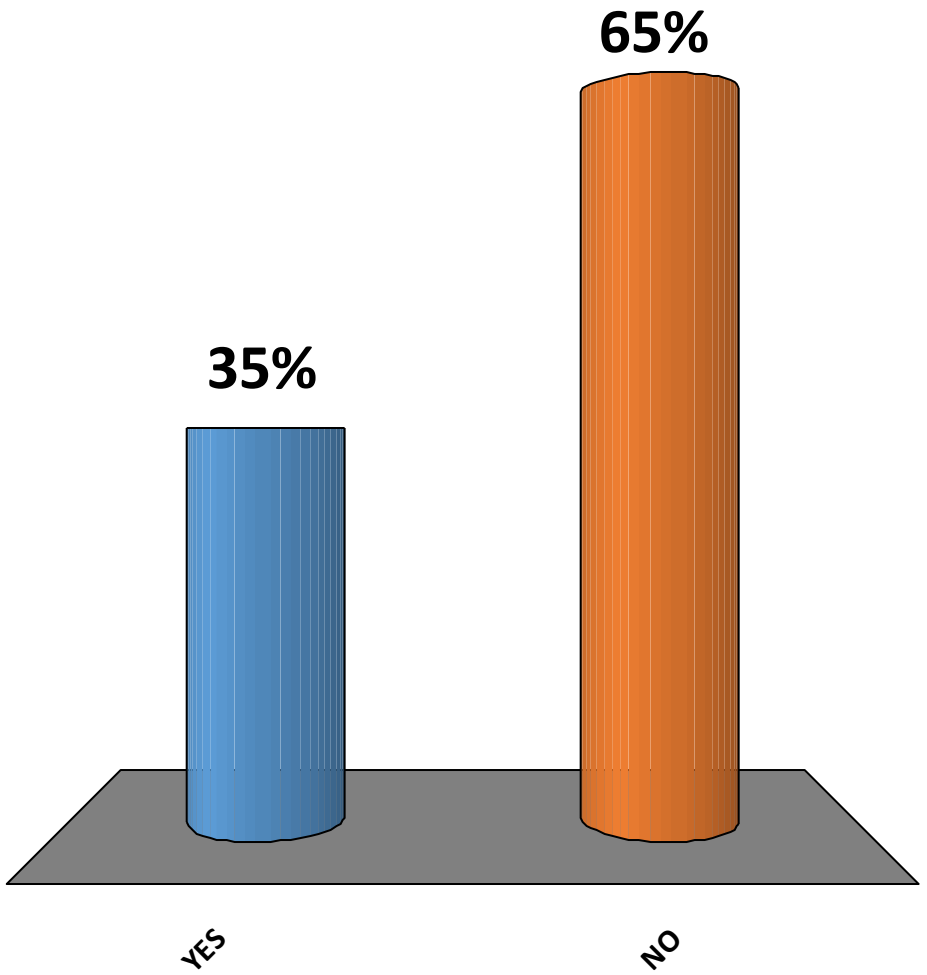
UKaid
from the British people

Impact of sewerage connections?

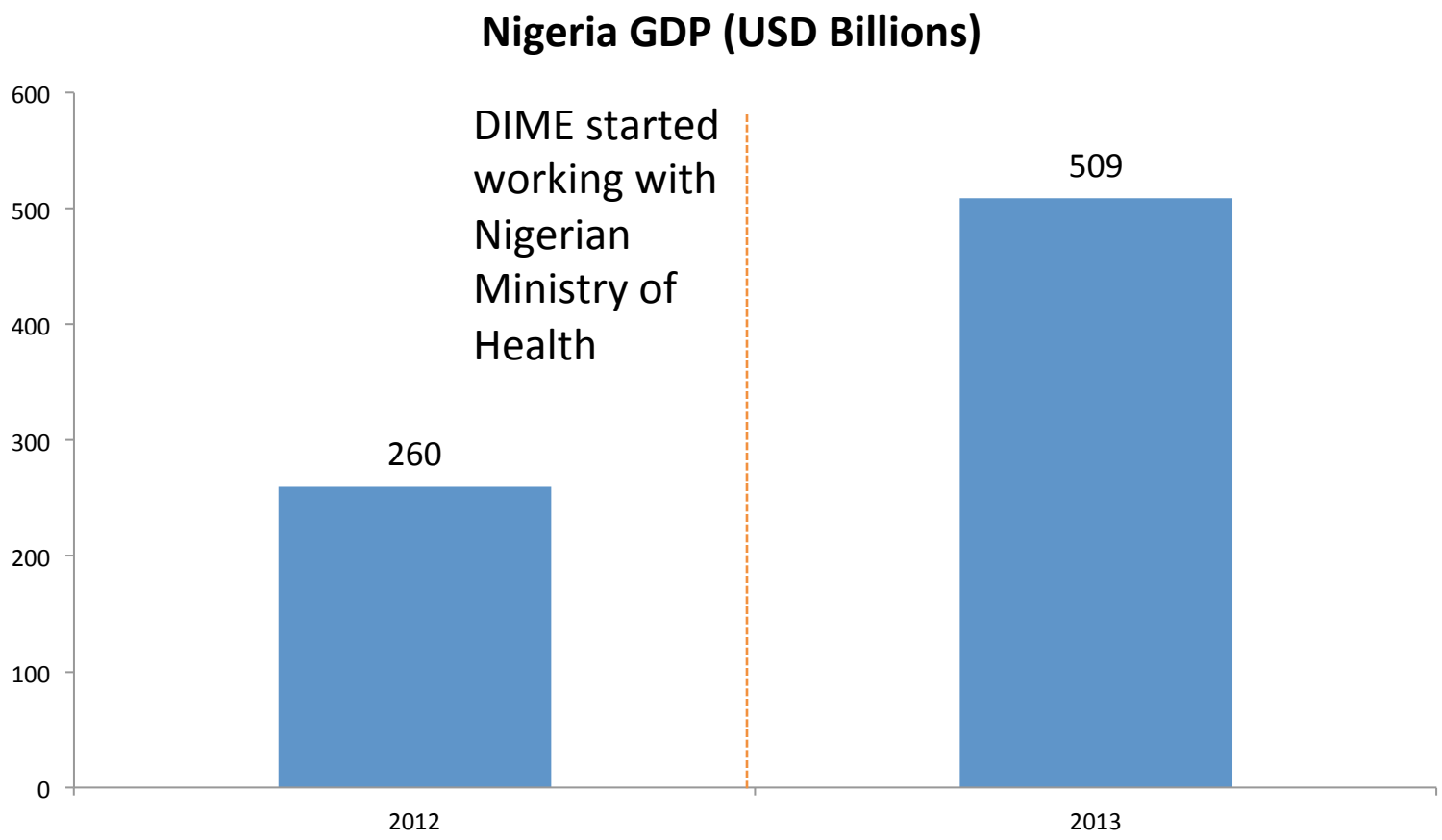


Is this the impact of providing sewerage?

A. YES
B. NO

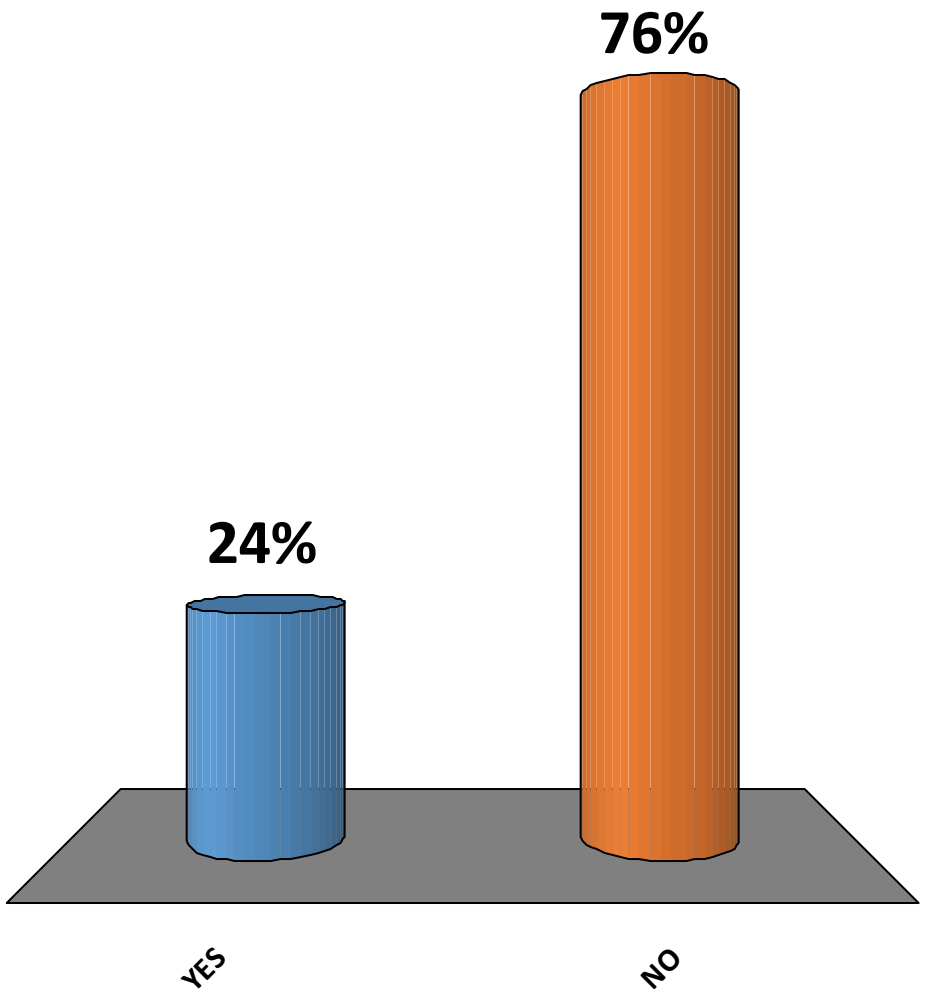


Impact of DIME



Is this the impact of DIME?

A. YES
B. NO



Monitoring vs. impact evaluation

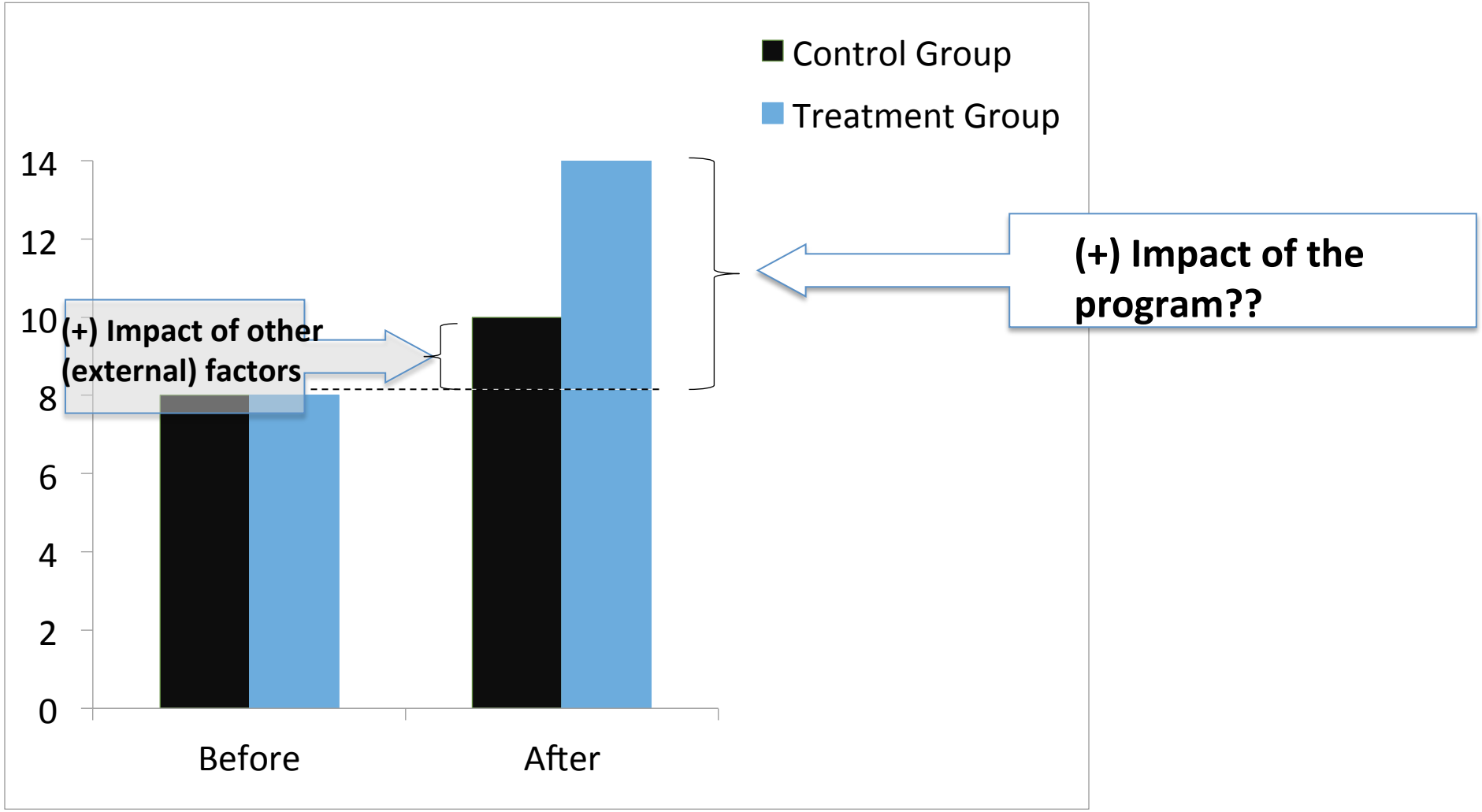
Monitoring

- Collects data on treatment groups to:
  - Track performance over time
  - Tell us whether we're moving in the right direction
- Describes what is happening, but not why or whether this is because of our intervention

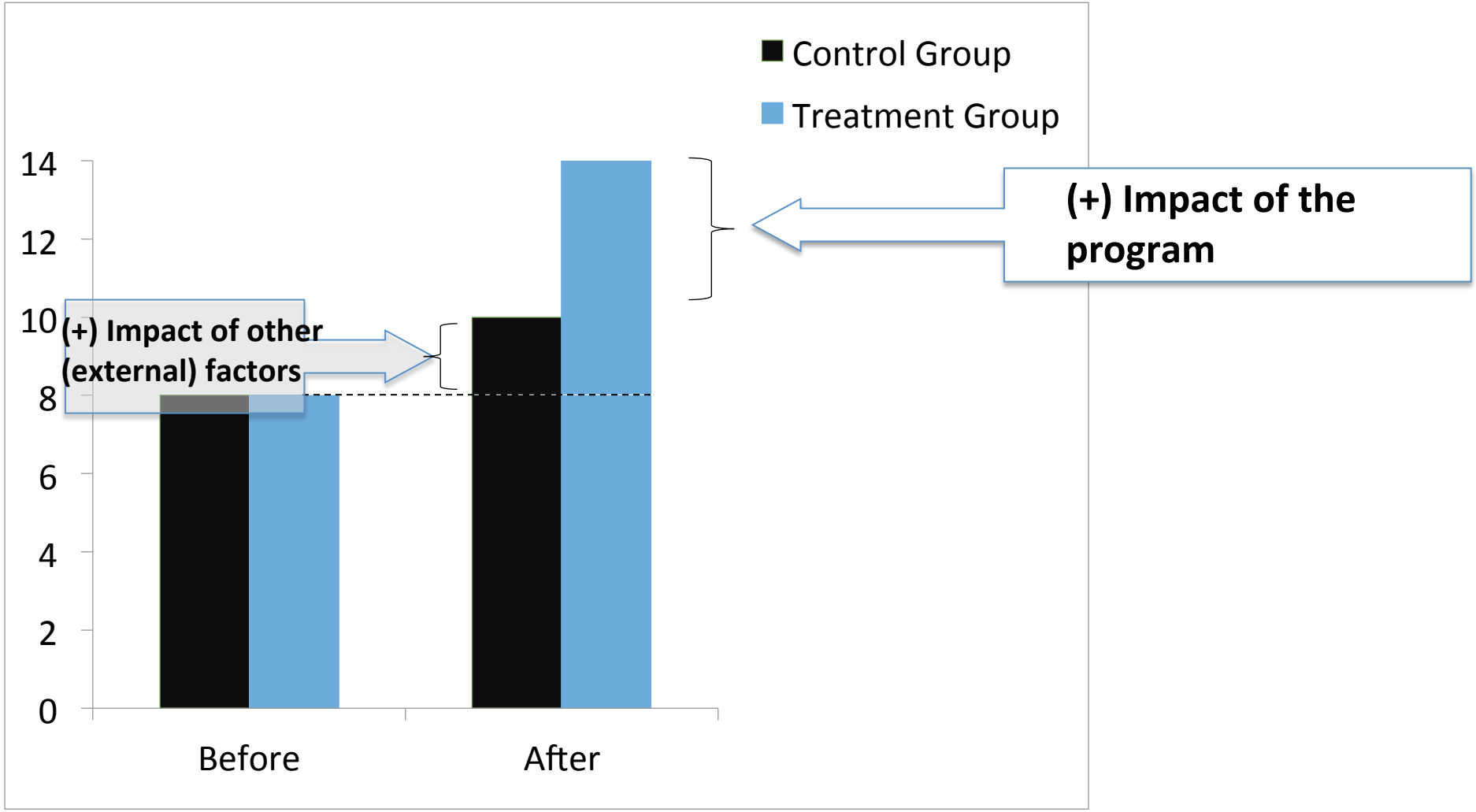
Impact Evaluation

- Assigns intervention to treatment and control groups to:
  - Measure counterfactual: what would have happened?
  - Establish causal link between intervention and outcome
  - So we can measure impact of policy, compare instruments, make better decisions and improve policy over time

The Value of a Control Group



The Value of a Control Group



Counterfactual criteria

Treated & comparison groups

- Have identical initial average characteristics (observed and unobserved)
- The only difference is the treatment
- Therefore the only reason for the difference in outcomes is due to the treatment
- We generate these equal groups through **randomized allocation: on average control and treatment groups are the same**

The production of useful research

It needs to be rigorous and relevant

It needs to be used

Tablet Questionnaire

- How can we produce evidence to more effectively inform policy?
  - What are your beliefs about the effectiveness of particular interventions?
  - What attributes of a study do think make the study most useful/ relevant?

Imagine a roulette table

Now to make it simpler let's imagine it has 100 numbers… (apparently this really exists…)

Question: what number do we think it will land on?

In this case all numbers are equally likely between 1 and 100

For each choice we make, we can estimate the chances / probability that the actual number lands below or above our choice

If we choose “75”, what is the probability that a number higher than 75 will come up?

What If we choose “50”? There is a 50% probability that a number higher than 50 will come up.

Finally, let's try 25… what is the probability of a larger number being drawn?

You've just had the stats course you always wanted to avoid in university!

- The roulette example describes **percentiles**
- The **median** or **50th percentile** is the number where the true result has a 50% chance of being above or below that number
- The 75th percentile is the number where the true result has a 25% chance of being above or a 75% chance of being below that number
- And…
- The 25th percentile is the number where the true result has a 75% chance of being above or a 75% chance of being below that number
- And so on…

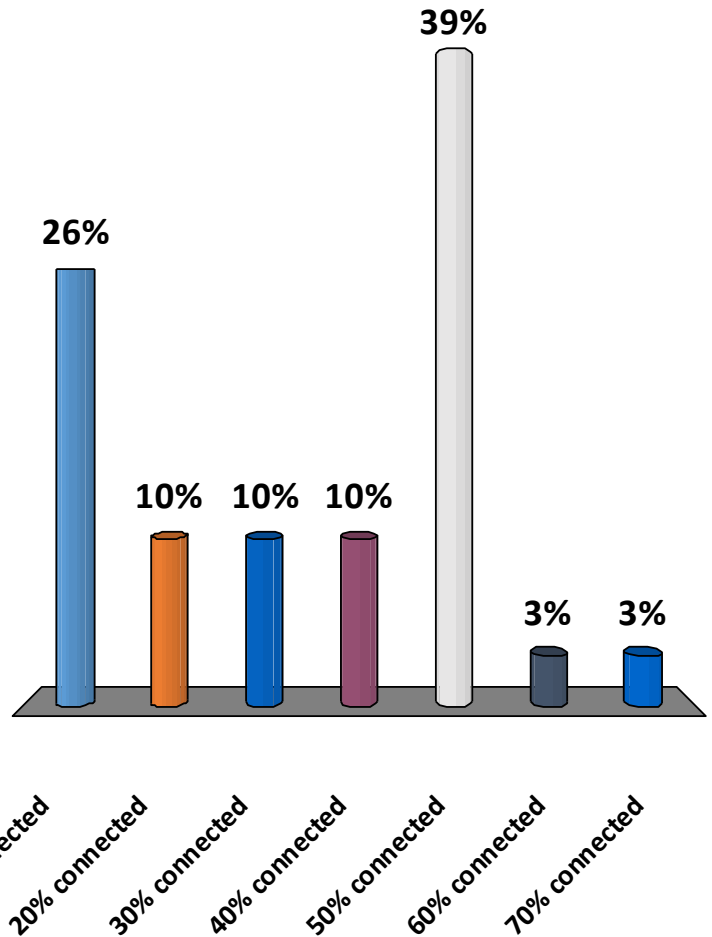
Estimating a program impact

- In reality, we make estimates (or best guesses) all the time…
- While gambling is pure luck, our estimates are based on informed guesses using our available knowledge.
- Let's take a shot at estimating the impact of a program:
  - Later you will learn about the impact of providing subsidies to rural households to connect to the electricity grid in Kenya.
  - Let's guess what the impact will be of reducing the cost of connection from 35,000 to KSh 25,000 ?

Median (50th percentile):

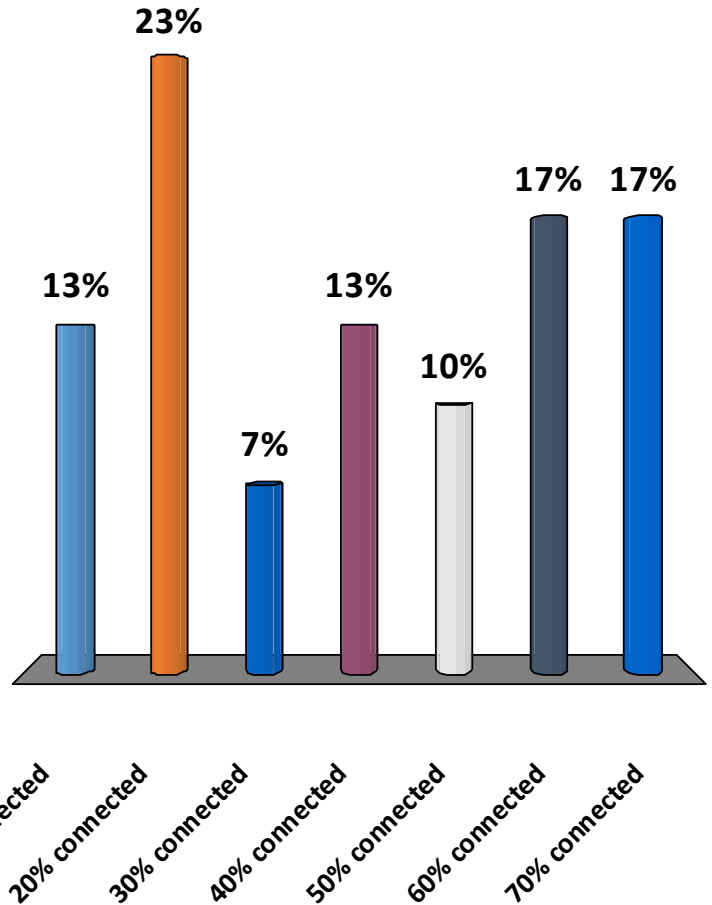
What is your median estimate of the program impact (the number where you think its equally likely to have been a larger or smaller impact)?

A. 10% connected
B. 20% connected
C. 30% connected
D. 40% connected
E. 50% connected
F. 60% connected
G. 70% connected



What is your estimate of the **75th percentile** of the program impact (the number where you think there's a 25% chance that the TRUE impact is bigger and a 75% chance it is a smaller impact)?

A. 10% connected
B. 20% connected
C. 30% connected
D. 40% connected
E. 50% connected
F. 60% connected
G. 70% connected



What is your estimate of the **25th percentile** of the program impact (the number where you think there's a 75% chance that the TRUE impact is bigger and a 25% chance it is a smaller impact)?

A. 10% connected
B. 20% connected
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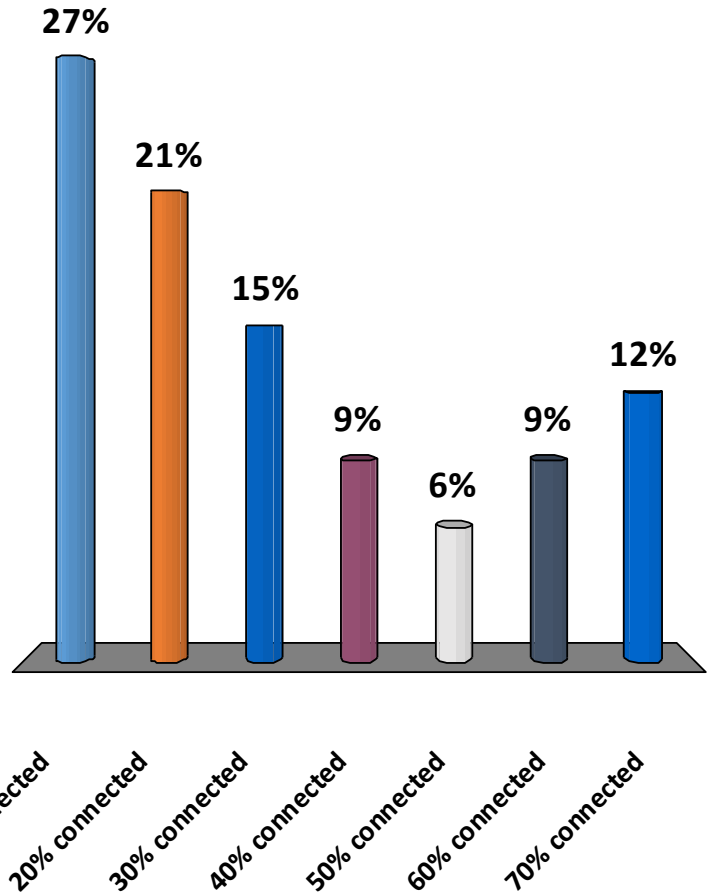

Now you’re ready to take this on your own…

ONLINE OPTION:

http://bit.ly/1UMOkME

Note the capital and small letters

Online Survey Software | Q... | Section 2 finished - aidanc...

https://stanforduniversity.qualtrics.com/jfe/form/SV_2reZSWpOwXwJY1f

Search

You are invited to participate in a research study about how evidence from impact evaluations is understood and used. Your participation is voluntary.

You have been provided with the researcher's business card. If you have any questions or complaints, you may contact them at the address or phone number provided.

Independent Contact: If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the Stanford Institutional Review Board (IRB) to speak to someone independent of the research team at (650)-723-2480 or toll free at 1-866-680-2906, or email at IRB2-Manager@lists.stanford.edu. You can also write to the Stanford IRB, Stanford University, 3000 El Camino Real, Five Palo Alto Square, 4th Floor, Palo Alto, CA 94306.

The extra copy of this consent form is for you to keep.

Name

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English

	Study A	*Study B*
Method	Quasi-experimental	Observational
Location	A country in a different region	Same country
Sample size	50	15000
Implementing agency	Government	NGO
Mean impact on enrollment rates	+5 percentage points	+10 percentage points

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