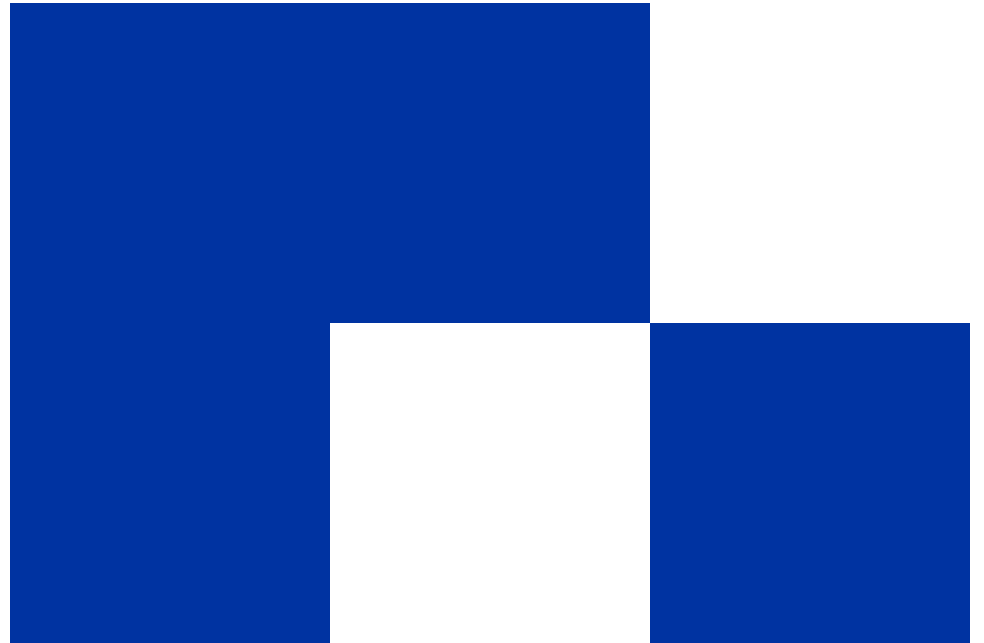


# Applying behavioural insights (BI) to programme design

Mark Millrine

Busara Center for Behavioral Economics



## Session overview

- The behavioural insights (BI) revolution [~30 mins]
- Recapping learnings from the Agora course [~60 mins]
- Applying BI to your work [~90 mins]



# The behavioural insights (BI) revolution [~30 mins]

# There's a behavioural insights revolution

- Governments, multilaterals, NGOs & companies are all applying BI to their policies, programmes & products



The Ministry of Education in Peru uses BI to improve educational outcomes



The World Bank applies BI to fight global poverty & reduce inequality

# UNICEF is on the cutting edge of this revolution by applying BI to child-focused programming

- Incorporating BI into the broader SBC toolkit
- Training country colleagues on BI
- Establishing long-term agreements with BI partners

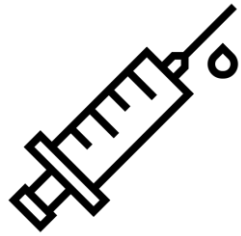
## Why is UNICEF joining the BI revolution?

- Robust evidence from across the globe that BI can improve the effectiveness of programmes - often at low cost



**[Plenary] What's an example of a BI intervention which improved the effectiveness of a programme?**

# In India, a BI intervention doubled immunisation rates



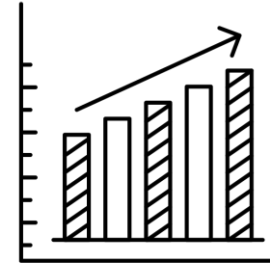
## Problem

Low immunisation rates among children in rural India



## Intervention

Providing parents with micro incentives (raw lentils & metal plates) if they completed their children's immunisation schedule



## Effect

Doubled % children who completed their vaccinations

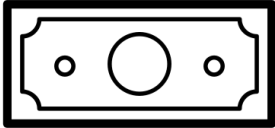


# In Morocco, a BI intervention more than halved school dropout rates



## Problem

Low education & school completion levels in Morocco



## Intervention

Sending unconditional cash transfers to the parents of children attending school and labelling these as a “child education benefit”



## Effect

Reduced dropout rates by 76%

# In Malawi, a BI intervention more than doubled the % of people learning their HIV status



## Problem

It can be tricky to get people to collect the results of their HIV tests & therefore learn their HIV status



## Intervention

Providing vouchers (\$1.01 on average) to people when they were getting tested which they could then convert into cash when they collected their HIV test results



## Effect

125% increase in the % of people who collected their HIV tests & learnt their HIV status

**[Groups: 5 mins]**

**Pick 1 of the examples: vaccination,  
school dropout or HIV test  
interventions. Why do you think the  
intervention worked?**

## Why do BI interventions work? Why can they improve the effectiveness of programmes?

- Offer **new** insights about what affects our behaviour
- These insights **complement** insights from other SBC approaches (e.g., HCD, community engagement, community feedback, etc.)
- We can design programmes based both on BI & insights from other SBC approaches

## We can complement communication insights with BI

- Suppose we want to encourage parents to vaccinate their children
- **Communication:** develop a persuasive SMS which can cultivate parents' **intention** to vaccinate their children
- **BI:** narrow the **gap** between parents' intention & actually taking their children to be vaccinated

**[Groups: 5 mins]**

**Suppose parents have the intention to vaccinate their children. What's an example of an intervention that can help them follow through on this intention?**

# Examples of interventions to help parents follow through on the intention to vaccinate their children

- Send parents a reminder SMS at a time when they are able to act on the SMS & take their children to get vaccinated
- Pre-book vaccination appointments for parents at a time when you expect them to be able to attend
- Provide small conditional cash transfers to parents who attend vaccine appointments



# In Colombia, Busara combined BI & other SBC approaches to increase outdoor play

- **Problem:** primary caregivers in low-income neighborhoods in Bogotá, Colombia, struggled to play outdoors with their children
- **Barriers:** lack of
  - Playgrounds within the neighborhoods
  - Time & money to visit playgrounds further afield

**We co-designed playgrounds with the community & implemented a BI intervention to encourage caregivers to visits these playgrounds**



## Our BI intervention drew on 5 behavioural insights

- **Hypothesis:** caregivers would be more likely to visit the playgrounds if they:
  - **Planned** when they would visit
  - Signed a **promise** to follow through with their planned visits
  - Received **reminders** before their planned visits
  - Received positive or negative **feedback** based on whether they visited playgrounds
  - Learned about the **number of other caregivers** who visited playgrounds

## Our BI intervention had 3 components

- Play diary
- SMS reminder system
- SMS feedback system

# The play diary drew on the planning & promising insights

LUGAR	DÍA	HORA	ACTIVIDAD

## Compromiso

Querido(s) hijo(s):

Quiero lo mejor para ti/ustedes.

Reconozco la importancia del juego al aire libre para su desarrollo y prometo hacer lo que pueda para salir a jugar. Voy a cumplir con las visitas programadas e intentar llevarlos a las áreas de juego cada vez que pueda.

Con cariño:

Como parte del compromiso, hoy mis hijo(s):

comparte(n) su(s) huella(s) como recordatorio de la importancia de jugar al aire libre.



## The SMS reminders system drew on the reminders insight

- Caregivers received reminders 5pm the evening before & one hour before on the day of each each planned visit
  - e.g., a caregiver who planned to visit a playground at 10am on Mondays would receive a reminder at 5pm on Sundays & 9am on Mondays

# The SMS feedback system drew on the feedback & norms insights

- Caregivers received weekly SMS messages with
  - Positive or negative **feedback** based on whether the caregiver had visited any playgrounds
  - Information about the **number of other caregivers** who had visited playgrounds that week



## Our BI intervention was effective

- Over ~1 month, caregivers who received our BI intervention made **8 more visits** to playgrounds, on average, than caregivers who did not receive the intervention

# Recapping learnings from the Agora course [~60 mins]

BI perspective

BI process

When to use BI?



# BI perspective

# We (humans) have limitations

- For example:
  - Time
  - Cognitive capacity: memory, processing power, attention, etc.
  - Motivation

# So our minds economise on effort to help us make decisions

- We often rely on **mental shortcuts**

**[Plenary] I want you all to take a minute to answer the following question in your head: what's the probability of a plane crashing during a flight?**



**[Plenary] I want you all to take  
another minute to think through  
HOW you came up with your  
answer?**



**[Plenary] Who did the following calculation: # flights which crash / total # flights?**

## We probably all used mental shortcuts

- **Feelings:** how **worried** do I feel about a plane crashing during a flight?
  - Really worried → high probability
  - Not worried at all → low probability
- **Availability:** how **easy** is it to remember instances of planes crashing?
  - Really easy → high probability
  - Really hard → low probability

# Most of the time mental shortcuts work really well

- We use **mental shortcuts** to effortlessly & automatically perform lots of complex tasks
  - Deciding when to cross the road
  - Sensing how someone else is feeling without them saying anything
  - Identifying a friend in a crowd of people

## But using mental shortcuts can also cause us problems

- When mental shortcuts go wrong → cause **biases**
  - e.g., plane crashes widely reported in the media → easy to remember instances of plane crashes → overestimate the probability of planes crashing (actually  $\sim 1/7.7$  mn)
- Biases → our **intentions** may never become **actions**

**[Plenary] Who intended to  
complete the Agora course?**



**[Plenary] Who actually completed  
the course?**

## BI provide us with 2 key tools to change people's behaviour

- **Identifying** which factors can influence a specific behaviour given how our minds work
- **Addressing** these factors in our programme design

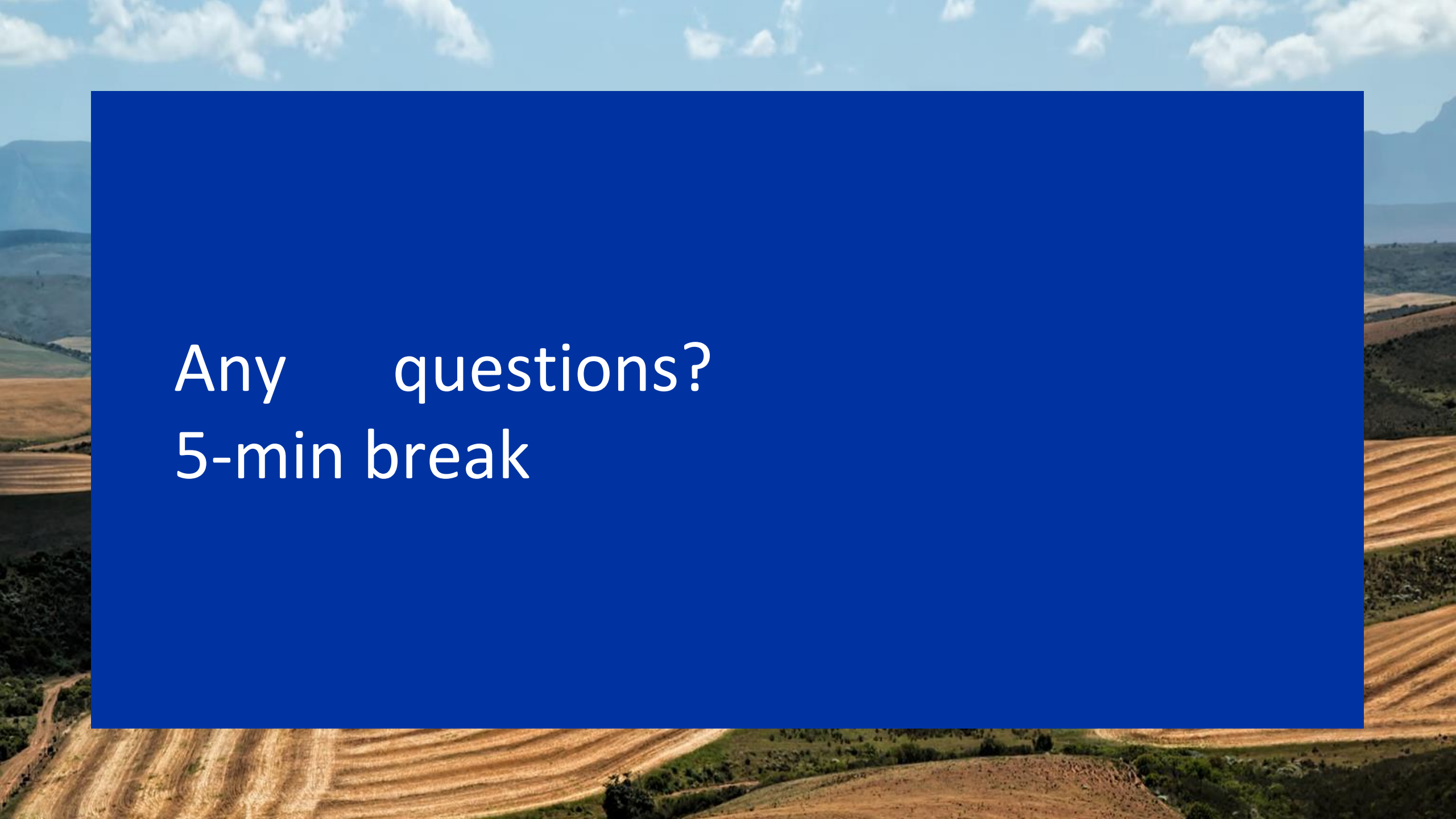


## You've likely applied BI (even if you didn't realise)

- For example, have you thought about **who** should communicate a message on your programme?
- Then you've applied BI (*messenger effect*)
- UNICEF drew on the *messenger effect* to partner with religious leaders in several ESAR countries - Kenya, Malawi & South Sudan - to endorse the COVID-19 vaccine & support the pandemic response

**[Groups: 10 mins]**

**When have you applied BI in your programmes?**

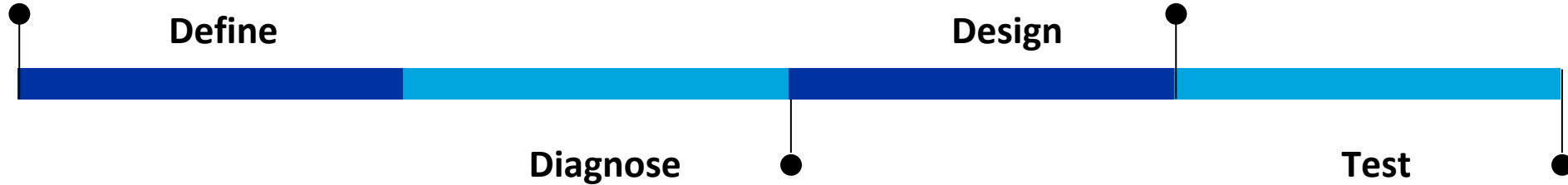


Any questions?  
5-min break

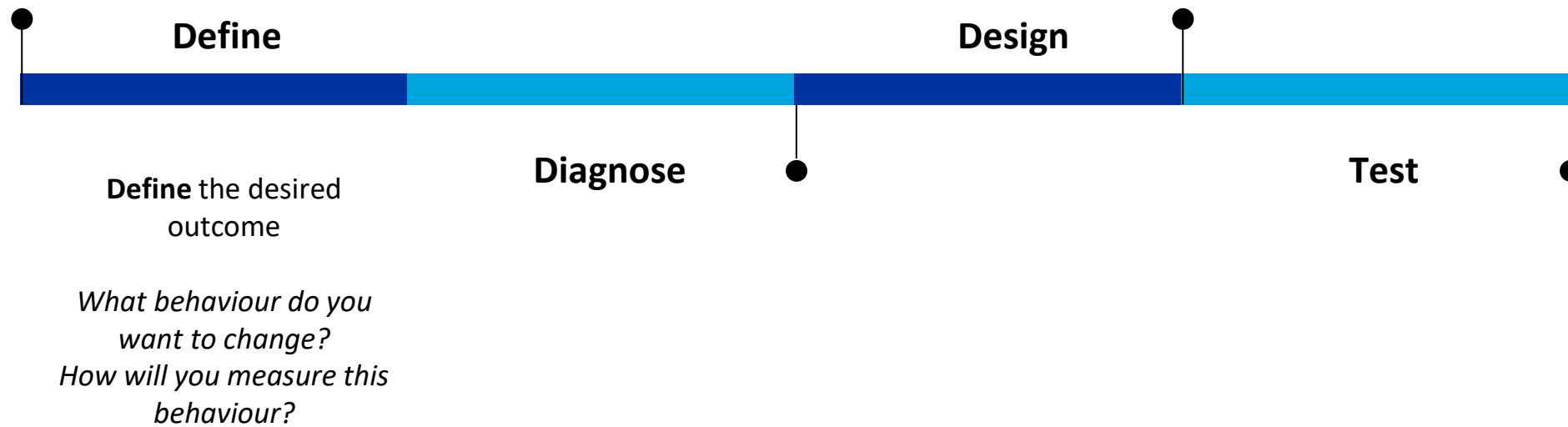


# The BI process

# You know how to incorporate BI into programme design using DDDT



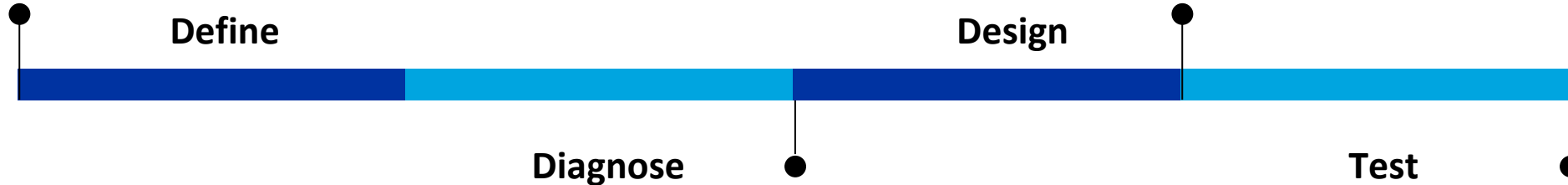
# You know how to incorporate BI into programme design using DDDT



# You know how to incorporate BI into programme design using DDDT

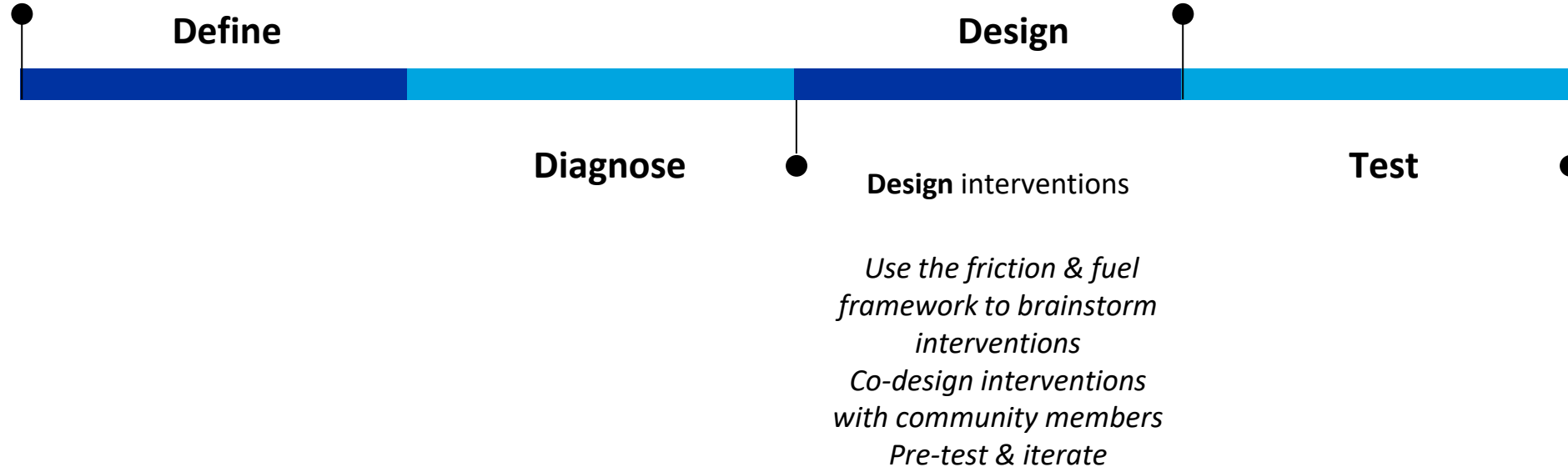
Diagnose the problem

*Why is the desired  
outcome not yet realised?  
What do community  
members & scientific  
literature have to say?*





# You know how to incorporate BI into programme design using DDDT

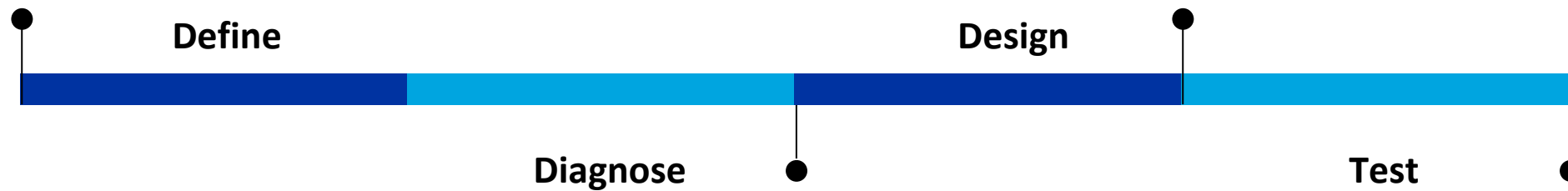




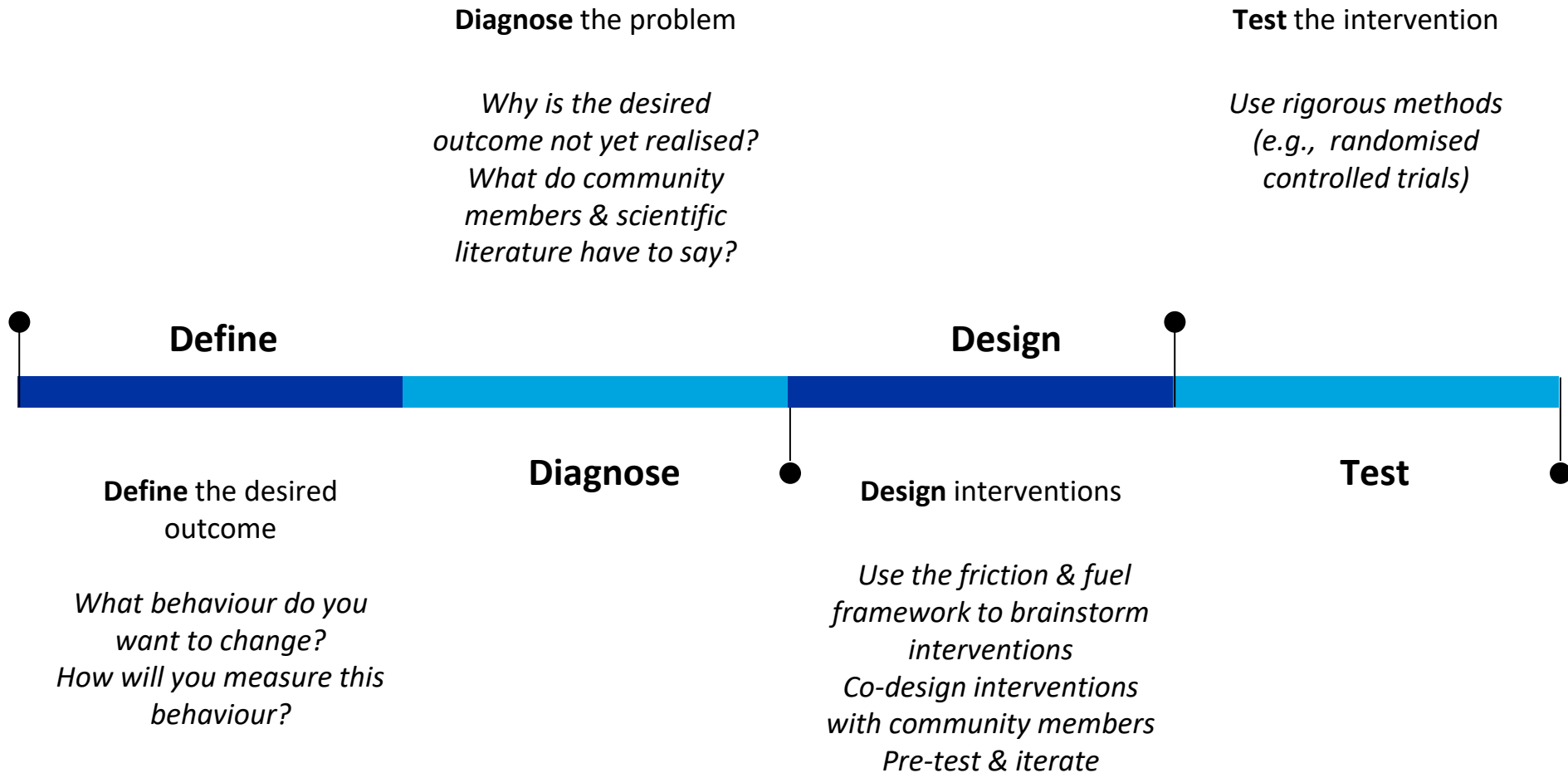
# You know how to incorporate BI into programme design using DDDT

**Test the intervention**

*Use rigorous methods  
(e.g., randomised  
controlled trials)*



# You know how to incorporate BI into programme design using DDDT



## Busara used DDDT to increase adherence to iron folic acid (IFA) pills among women in India

- Anemia is a pervasive health problem in India
- Anemia → low birth weight & cognitive issues in children
- IFA pills recommended for pregnant & lactating women to prevent these issues
- But adherence to the recommended regimen of IFA pills is low - despite free pills, reliable supply & high levels of awareness

## Stage 1: define the outcome

- Adherence to IFA pill regimen among pregnant & lactating women

## Stage 2: diagnose the barriers to IFA uptake

- Misconceptions about the **risks** of side effects → not taking the pills
- **Forgetting** about side effects (e.g., constipation) & how to cope with them → stopping taking the pills when side effects occur
- **Forgetting** about when to take IFA pills & when to stop → taking too few pills or taking pills for too long

## Stage 3: design interventions to address the barriers

- 2 interventions focused on different barriers:
  - Side effects (perceived risk & issues with recall & coping strategies)
  - Forgetfulness about when to take IFA pills & when to stop

# We drew on BI & co-design workshops to design a counselling card to address concerns about side effects

**Side effects:**  
sore stomach &  
dark stool

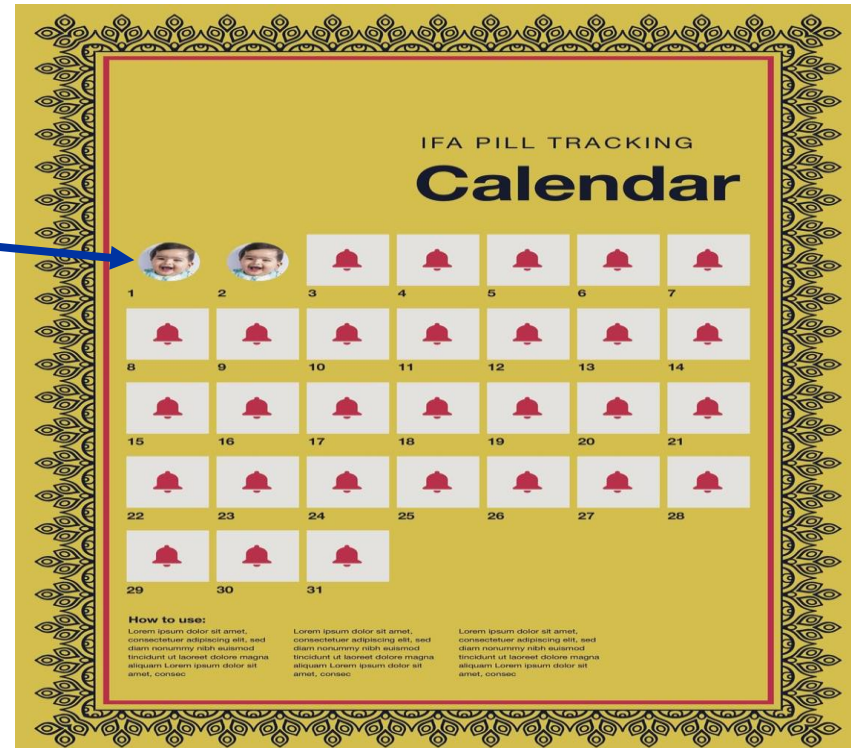


**Coping strategy:**  
take pill before bed



# We drew on BI & co-design workshops to design a calendar to address forgetfulness

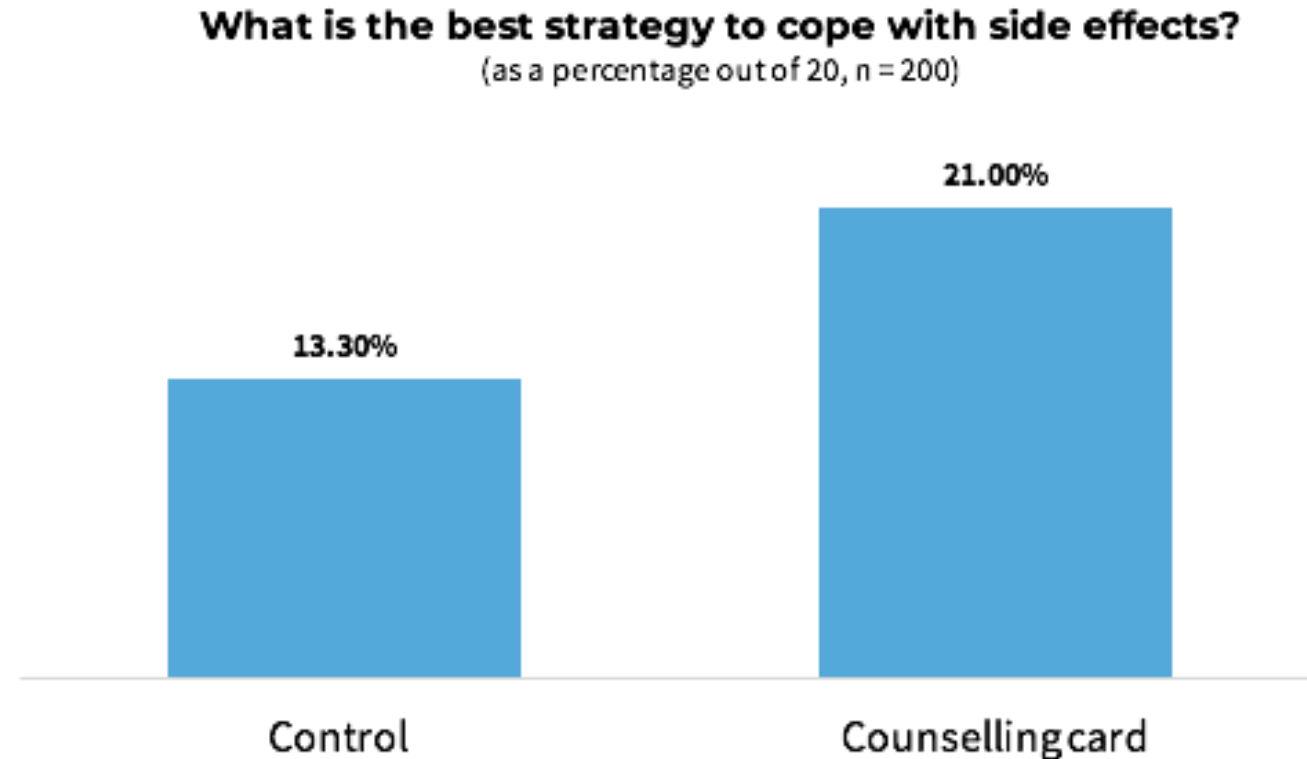
Peel off after taking pill to reveal a photo of a healthy baby



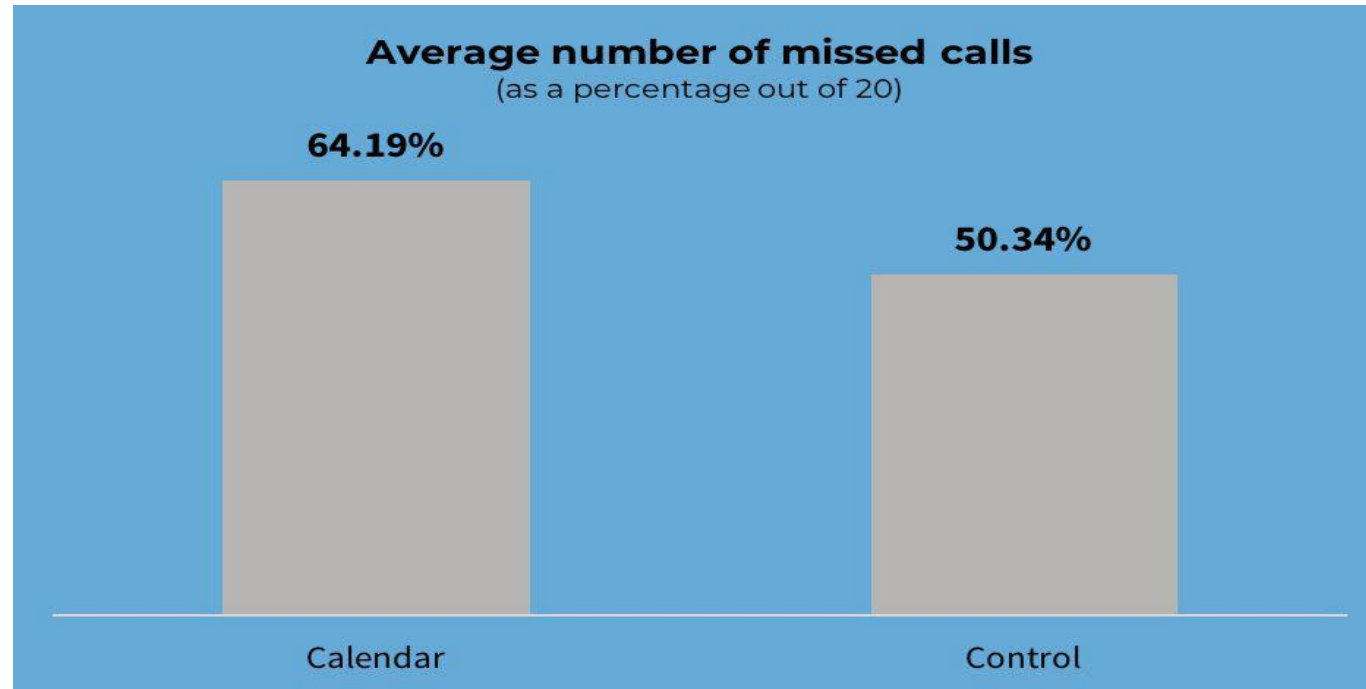
## Stage 4: test the intervention

- 2 randomised controlled trials (RCTs)
  - First, we tested whether the interventions addressed the barriers (*pre-test*)
  - Then, we tested whether the interventions improved the outcome (*field test*)

**In the pre-test, the counselling card increased recall of coping strategies by ~ 58%**



**In the pre-test, the calendar increased compliance to perform a daily behaviour by 28%**

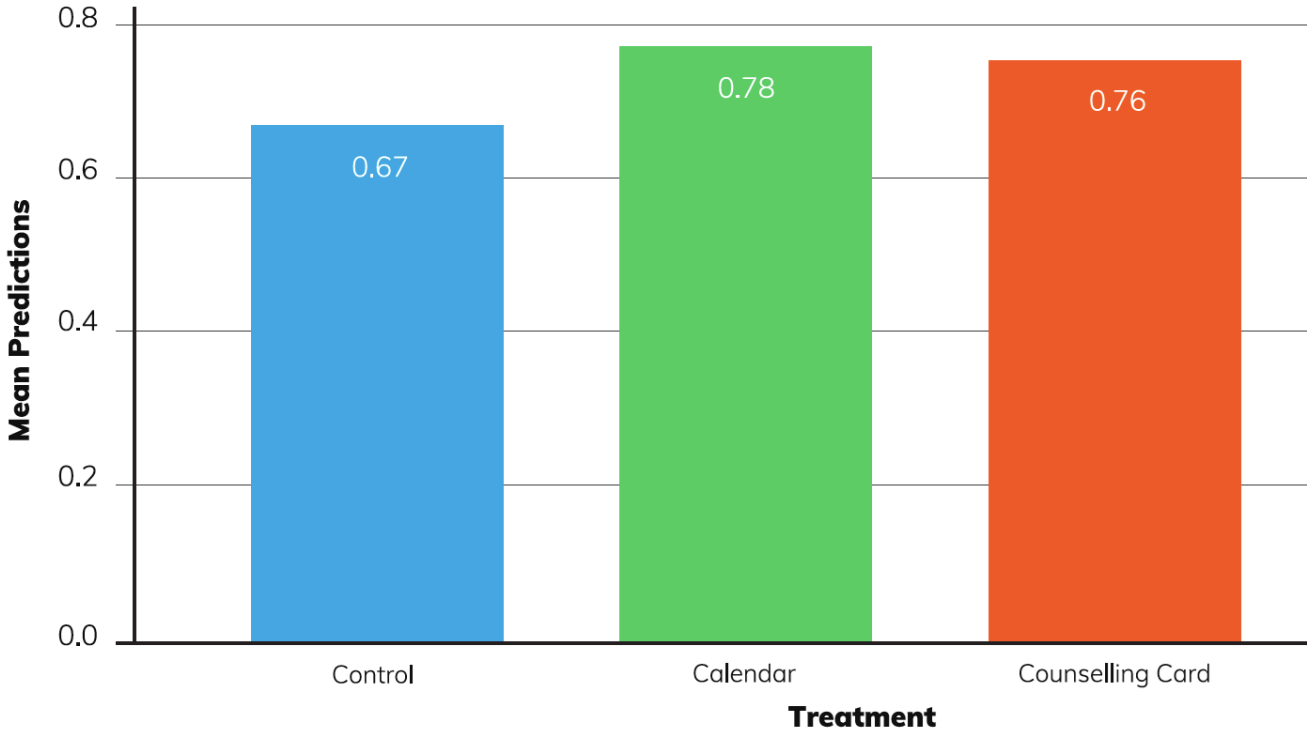


## We field tested the interventions with 1,200 pregnant women

- Randomly assigned women to 1 of 4 treatment groups:
  - No counselling card or calendar (*control*)
  - Counselling card
  - Calendar
  - Counselling card + calendar

# Each intervention significantly increased adherence

Are you currently taking IFA pills? Variable Response: YES (across treatments)



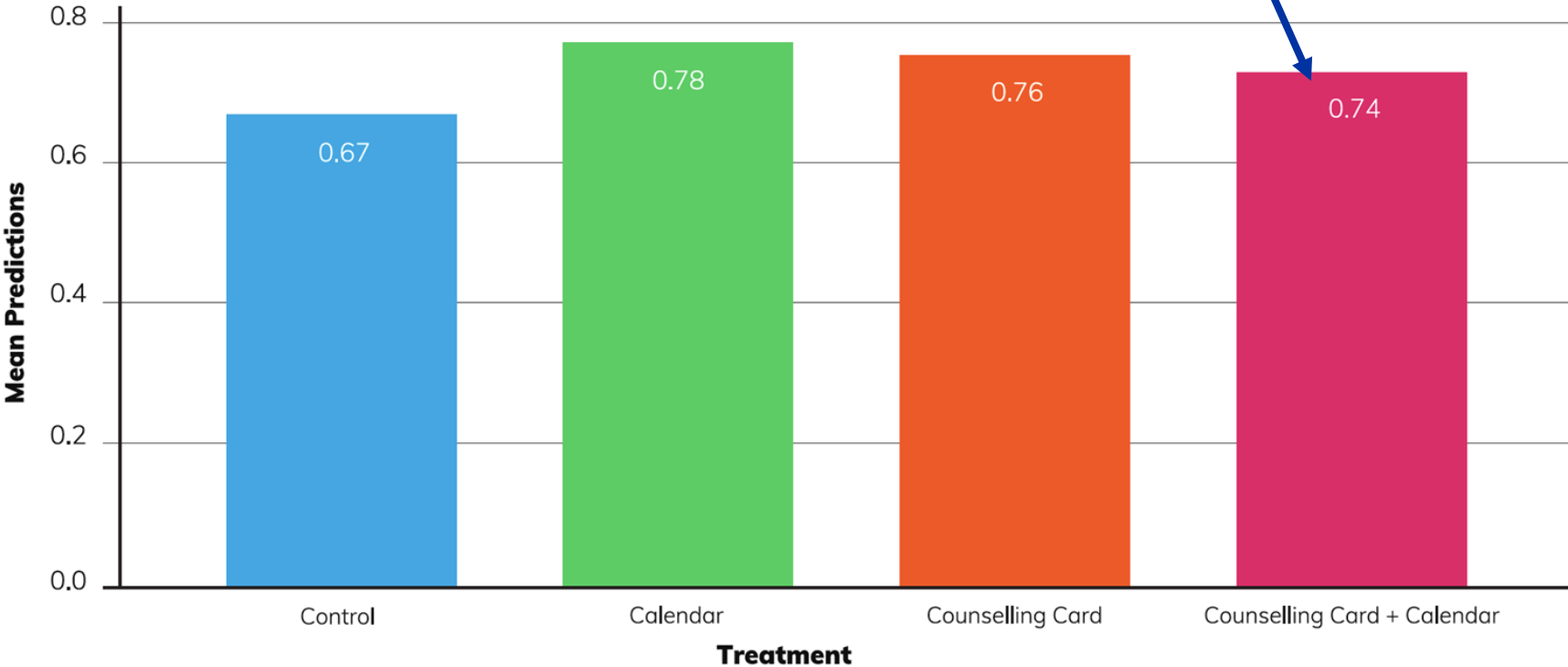
## The interventions also addressed the underlying barriers

- **Counselling card:** reduced the likelihood that woman **stopped** taking the pills due to side effects
- **Calendar:** increased the likelihood that woman **remembered** when to stop taking the pills



# What's interesting about the effect of the combined intervention (counselling card + calendar)?

Are you currently taking IFA pills? Variable Response: YES (across treatments)



# We test interventions because we don't always know what will work best

- We **expected** that the combined intervention would be the **most** effective because it addressed more barriers
- But it was **less** effective than the simpler interventions which addressed fewer barriers
- We only know the combined intervention was less effective because we **tested** it
  - (We suspect that the combined intervention may have been **too much information** at once, but we're not sure)



When to use BI  
interventions?

# When are BI interventions likely to be effective/ineffective?

- Does the target population have **agency** over the behaviour?
  - girls' education decisions in gender-supportive societies
  - ✗ girls' education decisions in gender-restrictive societies

# When are BI interventions likely to be effective/ineffective?

- Is a BI intervention likely to address the **key** barriers & levers?
  - e.g., forgetting about a vaccine appointment
  - **X** e.g., clinic has unreliable vaccine supply

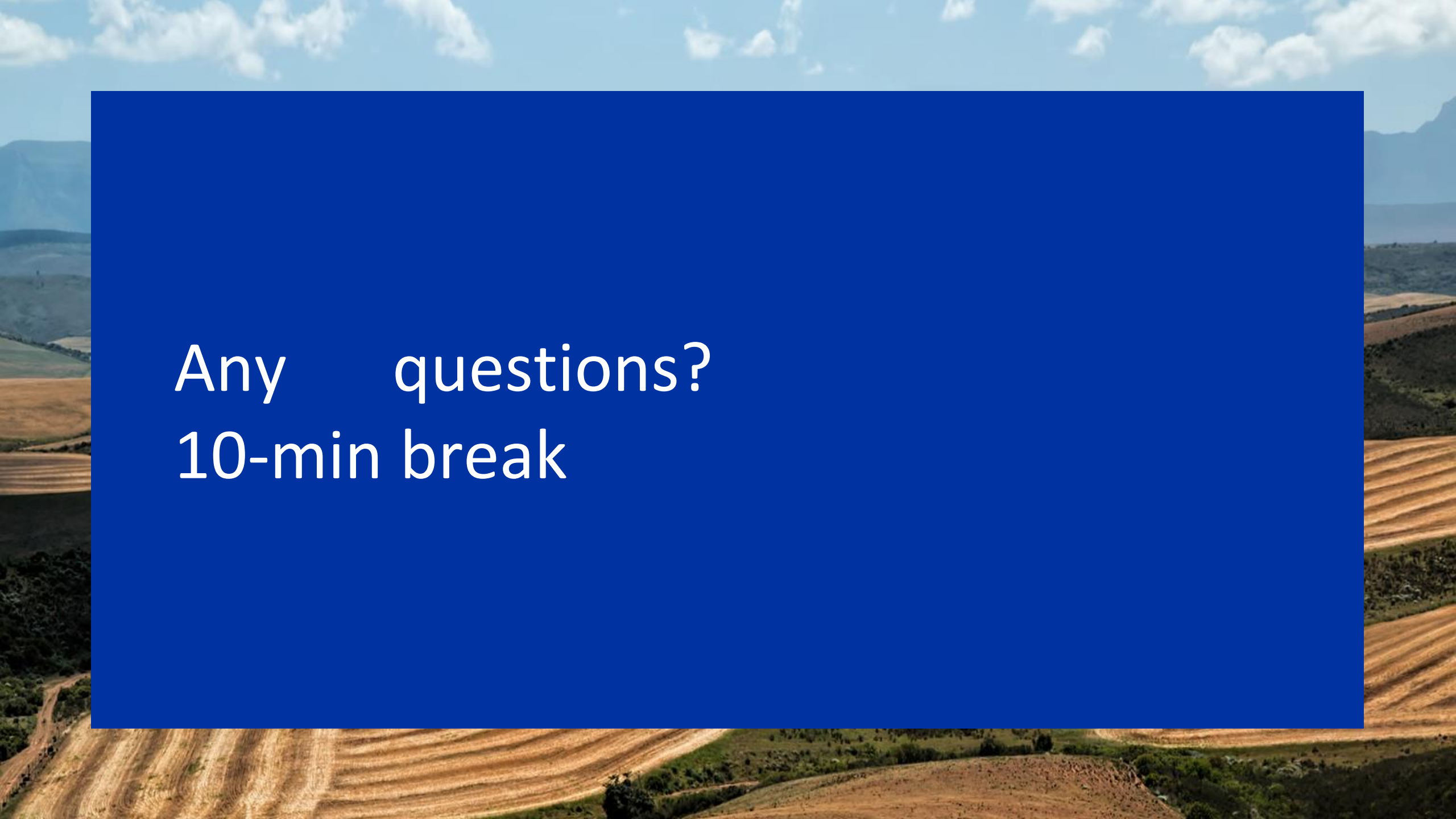
# When are BI interventions likely to be effective/ineffective?

- Is the intervention **scalable** given the money & effort costs?
  - e.g., SMS reminders for population with phones
  - ✗ e.g., in-person reminders among sparsely dispersed population



Questions?





Any questions?  
10-min break



# Applying BI in your work

[~90 mins]

# You already have a lot of BI knowledge

- You can
  - Look at a programme from a **BI perspective**
  - Implement the BI **process** DDDT

## Where do you apply this knowledge?

- To the tasks where it's likely to help

## 2 common tasks where BI can help

- Identifying potential **problems** with programmes & their underlying **causes**
- Designing **interventions** to address these problems → improve programme effectiveness

# How can BI help identify problems & underlying causes?

- 2 key behavioural insights we can draw on:
  - People often make decisions based on **mental shortcuts**
  - There's often a gap between people's **intentions & actions**

# How can knowing about mental shortcuts help you identify problems & causes?

- Mental shortcuts → people's decisions
- People's decisions → programme problems
- So you ask: *which mental shortcuts are likely to affect whether people perform the target behaviours on my programme?*



# Mental shortcut: I do what I think others do or think I should do

- Parent deciding between violence vs. positive discipline for their child
- “Others *use* violence or *think I should use* violence” → **likely** to use violence
- “Others *don’t use* violence or *don’t think I should use* violence” → **unlikely** to use violence

## How can knowing about the intention-action gap help you to identify problems & causes?

- You ask: *does my programme focus enough on helping people follow through on their intentions?*
  - For example: do I ...?
    - ... support parents when they struggle with positive discipline?
    - ... help parents plan so they can prioritise education?

[Plenary] Am I focusing too much on cultivating the intention to use BI? Should I focus more on helping you follow through on this intention?

# In practical terms, how do we use BI to identify programme problems & causes?

- **Diagnose** stage of DDDT

## Diagnose step 1: draw on your BI & programme knowledge

- Develop a list of potential **problems** & underlying **causes**

## Diagnose step 2: develop a ToR for a BI partner to conduct research

- Develop a list of **potential** problems & underlying causes
  - Inputs: BI & research on the topic, stakeholder discussions
- Propose a research plan to **assess** these potential problems & underlying causes
  - Inputs: qual (key informant interviews, in-depth interviews with beneficiaries), quant (admin data, survey)
- Provide a **final** list of problems & underlying causes
  - Inc. assessment of severity & potential for BI to address the underlying causes

## Diagnose step 3: review the BI partner's research based on your BI knowledge

- Are they thinking of **problems** that are likely to arise because of mental shortcuts & the intention-action gap?
  - *Tip: They should be thinking about problems that someone who doesn't know about BI is either unlikely to think about or is unlikely to recognise the importance of*
- Are they thinking of **causes** that are likely to arise because of mental shortcuts & the intention-action gap?
  - *Tip: They should not be saying things like "Awareness is the problem"; it should be more nuanced*



## Diagnose step 4: prioritise problems & underlying causes to focus on

- Expected impact
- Feasibility (e.g., cost, permissions, etc.)
- Other considerations (e.g., gender, equity, etc.)

*[Group diagnose exercise: 25 mins]*

*Caregiver programmes are a key pillar of early childhood development (ECD) programming. They try to support children's development by influencing caregivers' beliefs & behaviors (e.g., whether they believe reading is important & actively read to their children).*

*Suppose you are running a caregiver programme which encourages parents to engage in stimulation activities with their children at home (e.g., singing, reading, playing, etc.). Caregivers are to attend weekly group sessions in the local community meeting point, where they learn about the importance of stimulation & different stimulation activities, which they are to then practice at home.*

*Drawing on your BI knowledge:*

- 1. What do you think could be potential problems on this programme? [5 mins]*
- 2. What could be some of the underlying causes of these problems? [5 mins]*
- 3. What should we request in our ToR for the BI partner? [5 mins]*
- 4. Suppose the BI partner submits a final report which says the key problem with the programme is that caregivers don't practice the activities at home because they don't understand the importance of stimulation. Does this sound like a BI-informed assessment? What else might be going on? [10 mins]*

## How can BI help design interventions?

- Underlying causes → problems (e.g., people don't ... because of ...)
- BI → examples of intervention design **principles** & effective **interventions** to address underlying causes

## Intervention: address norms perceptions

- **Problem & cause:** suppose parents don't support their daughters attending secondary school because they think that **most** other parents think that girls shouldn't go to secondary school
- **Opportunity:** parents may **misperceive** what other parents think (e.g., maybe most parents actually think that girls should go to secondary school)



[Groups] What's an example of a BI intervention which could be effective here?

## Intervention: address norms perceptions

- **Design principle:** correct parents' perceptions of what other parents think (e.g., send an SMS stating *"Most parents think that ..."*)
- **Example intervention:** researchers in Saudi Arabia found that
  - Men decide whether their wives can work
  - **Most** men think that woman should be able to work
  - But they **underestimate** the % of other men who agree
  - When their perceptions are **corrected**, they're **more likely** to allow their wives to work

# In practical terms, how do we use BI to design interventions?

- **Design** stage of DDDT



# Design step 1: draw on your BI & programme knowledge

- Populate a list of **potential** interventions
- Each intervention should be based on a **theory of change**
  - e.g., intervention ... addresses barriers ... & levers ... & therefore will improve outcomes ...
  - e.g., providing micro incentives → makes some of the benefits tangible & immediate → parents more likely to vaccinate their children

## Design step 2: develop a ToR for a BI partner to design interventions

- Specify their **design** approach (e.g., BI + HCD)
- Draft **conceptual** interventions (e.g., micro incentives) and specify a theory of change based on the barriers & levers from the diagnose stage
- Solicit **feedback** on the conceptual interventions from key stakeholders
- **Prioritise** interventions (expected impact, feasibility, programme considerations)
- **Co-design** prototypes (e.g., plates & lentils) with key stakeholders
- Provide **final** recommendations & implementation plan for each recommendation

## Design step 3: review the BI partner's work based on your BI knowledge

- Are the interventions linked by a **theory of change** to barriers & levers from the diagnose stage?
  - *Tip: They should be explicitly state why the intervention might work*
- Are the interventions appropriate for your **context**?
  - *Tip: They should explain why a intervention which worked elsewhere might work in your context*
- Do the interventions only spark an **intention** to perform a behaviour or do they also help the person **follow through** on this intention?
  - *Tip: They should explain how they're making the behaviour easy to do*


*[Group design exercise: 30 mins]*

*Recall the previous example of the caregiver programme which encourages parents to engage in stimulation activities with their children at home (e.g., singing, reading, playing, etc.). Caregivers are to attend weekly group sessions in the local community meeting point, where they learn about the importance of stimulation & different stimulation activities, which they are to then practice at home. Suppose we learn that the key problem with the programme is that caregivers don't perform the stimulation activities at home because they forget to do so amidst all their other responsibilities.*

*Drawing on your BI knowledge:*

- 1. What could a potential intervention be? How would this intervention help them to remember? [10 mins]*
- 2. What should we request in our ToR for the BI partner? [5 mins]*
- 3. Suppose the BI partner recommends that we pilot a intervention which:
  - a. Employs different types of reminders (e.g., SMS & calendar)*
  - b. Asks caregivers to promise in the group meetings that they'll try to perform the stimulation activities on Tuesdays & Thursdays each week*
  - c. Helps caregivers come up with a plan in the group meetings to ensure they actually perform the stimulation activities on Tuesdays & Thursdays.**Are you comfortable that their intervention is supported by BI? [15 mins]**





Transforming the intention  
to use BI into an action

*[Individual & plenary exercise: 20 mins]*

*I'm going to hand each of you a piece of paper. You have 10 minutes to write:*

- *1 objective you have for applying BI in your work by 23 July 2022 (i.e., 1 month from now)*
- *A plan for how you're going to achieve this objective.*

*Call me over if I can help!*

*After 10 minutes, where each going to announce our objective & plan to the group.*

*I'll collect these pieces of paper, store your responses in a dataset which everyone here can access & follow up with you on 23 July to see how you got on.*



Questions?