Promoting Equity through Supply Chain Design

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October 17, 2023

17th TechNet Conference

Panama City, Panama | October 16-19, 2023

Immunization Programmes That Leave No One Behind

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Agenda

- Intro (5 minutes)
- Framework presentations (15 minutes)
- Case study (10 minutes)
- Q&A (15 minutes)
- Wrap up (5 minutes)

Promoting equity in immunization supply chains: From macro to micro

FRAMEWORK:
Gender equity and social inclusion in supply chains

A way to consider the pillars of achieving a gender equitable and socially inclusive supply chains throughout the product journey as told through experiences of users
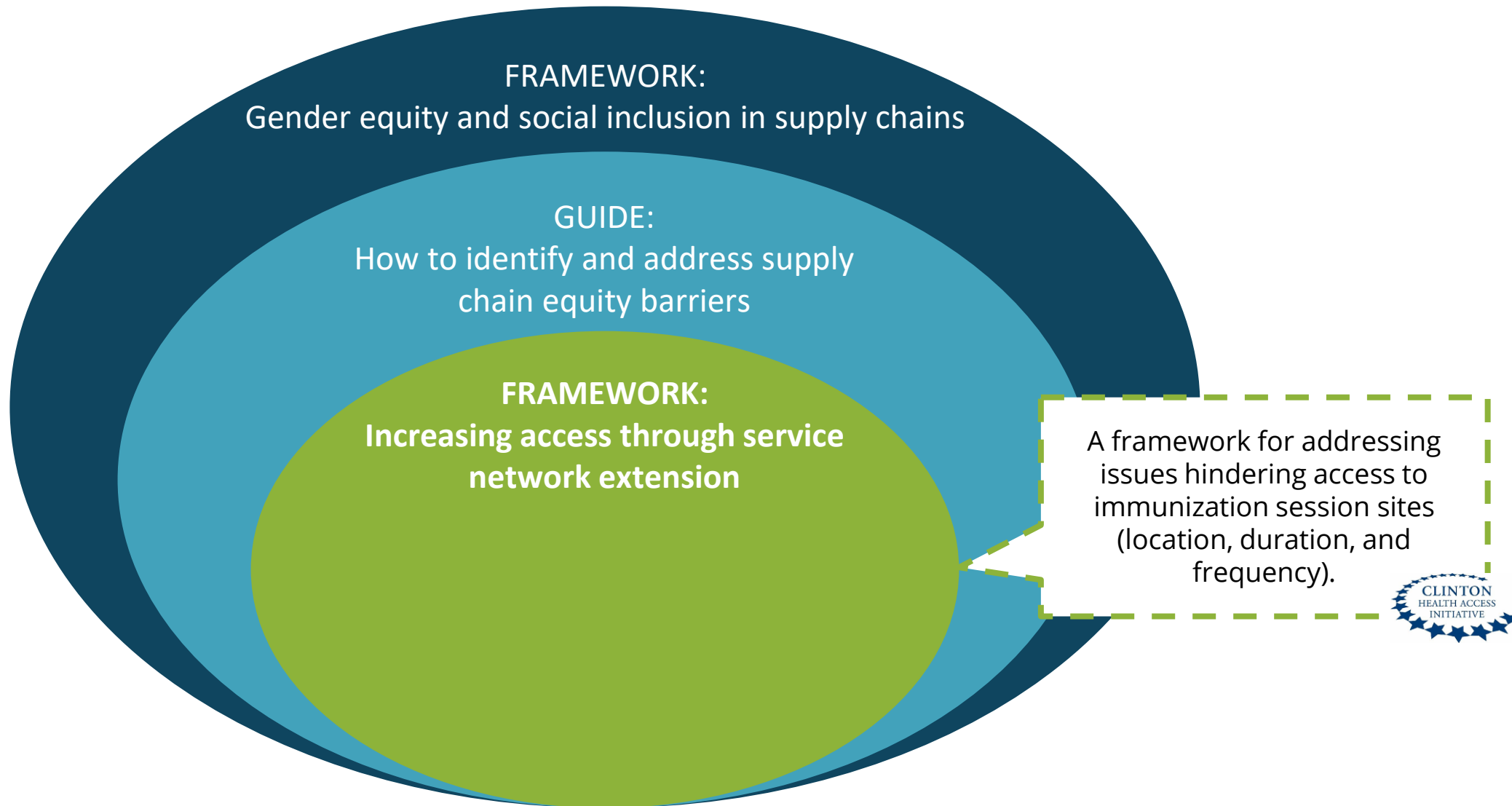
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Promoting equity in immunization supply chains: From macro to micro

FRAMEWORK:
Gender equity and social inclusion in supply chains

GUIDE:
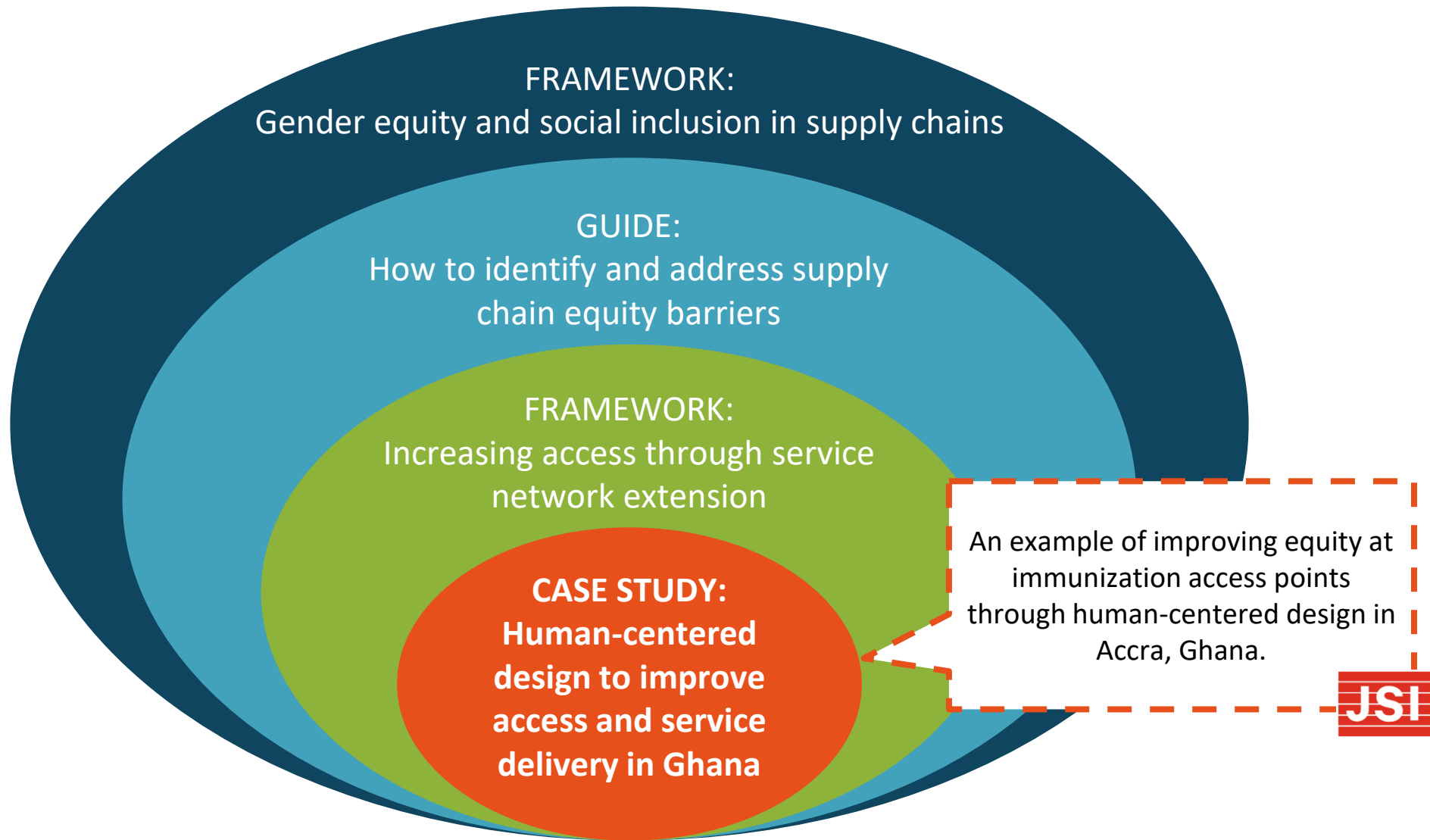Identifying and addressing supply chain equity barriers
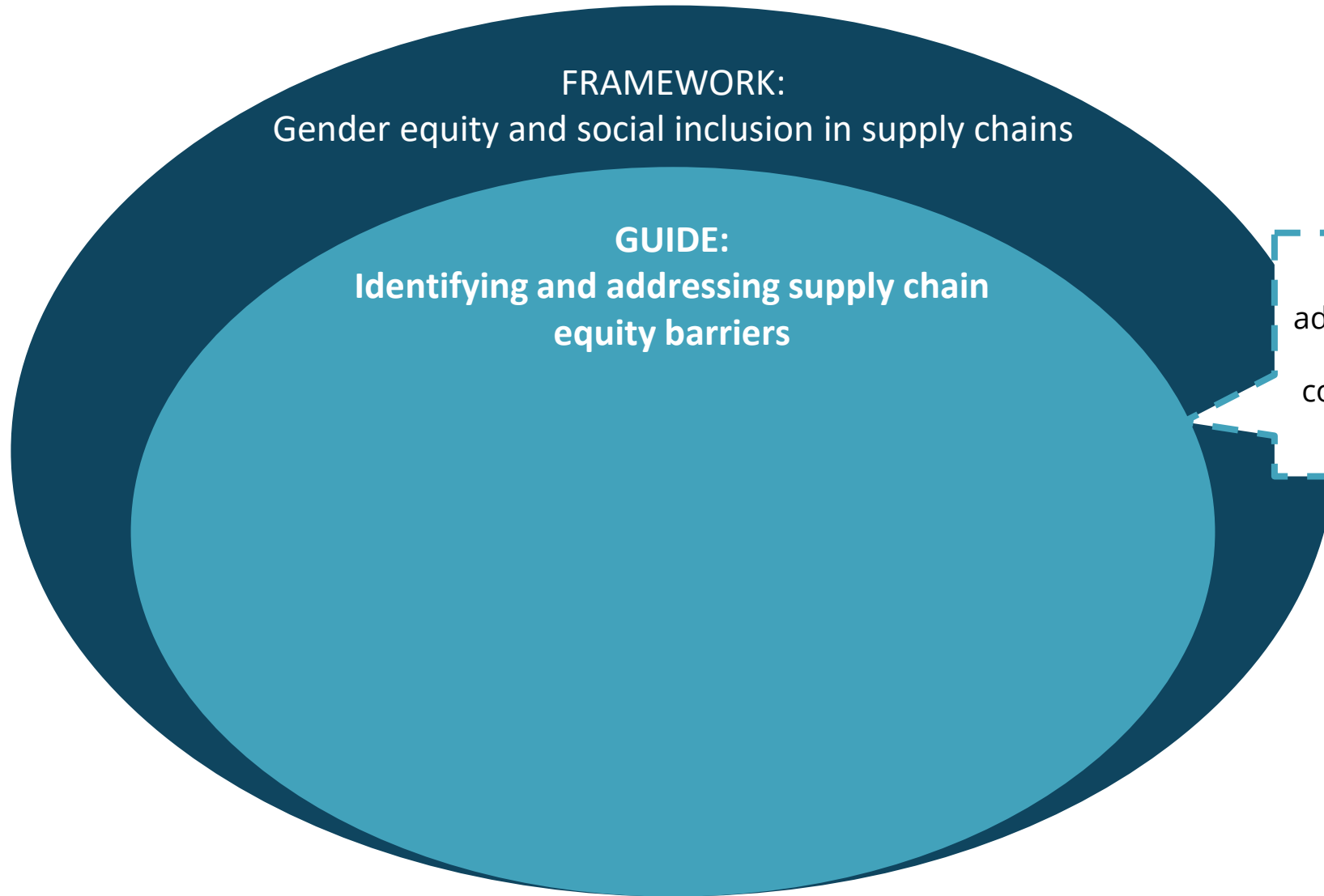
A guide to identifying and addressing supply chain barriers to equitable immunization coverage, from procurement to service delivery access.

VILLAGE REACH

Promoting equity in immunization supply chains: From macro to micro

Promoting equity in immunization supply chains: From macro to micro

FRAMEWORK:
Gender equity and social inclusion in supply chains

GUIDE:
How to identify and address supply chain equity barriers

FRAMEWORK:
Increasing access through service network extension

CASE STUDY:
Human-centered design to improve access and service delivery in Ghana

An example of improving equity at immunization access points through human-centered design in Accra, Ghana.

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How more equitable and socially inclusive vaccine supply chains can help us meet equity goals

Nicole Danfakha
MEL Advisor, Information Design
JSI

17th TechNet Conference
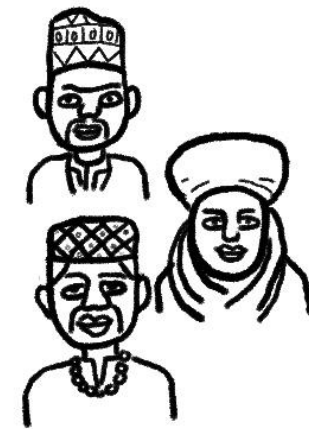Panama City, Panama | October 16-19, 2023

STAFF

CLIENTS

COMMUNITIES

CIVIL SOCIETY

MEET ZARA

Zara walked approximately 5 km from her remote, mountainous village to the health facility to vaccinate her 9 month old baby.
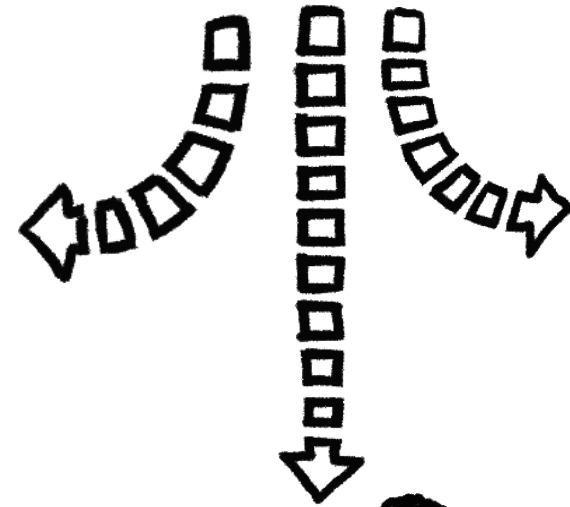
MEET ZARA
Zara walked approximately 5 km from her remote, mountainous village to the health facility to vaccinate her 9 month old baby.

Strategy 1:
Adapt the supply chain to more equitably serve all customers

PRODUCT SELECTION
1. _____
9. _____
10. _____

MEET NIA

Nia has been an administrative officer in her district for 5 years. Supply chain has always been of interest to her, but when a supply chain officer position was posted her supervisor discouraged her from applying citing concerns for her safety in a logistics position

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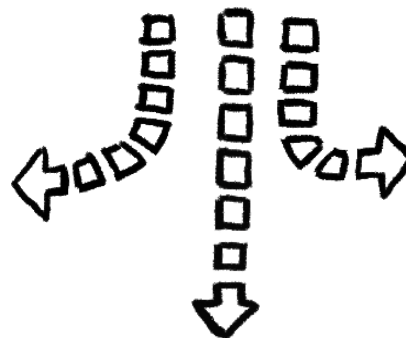
Strategy 2:
Equitable & inclusive workforce
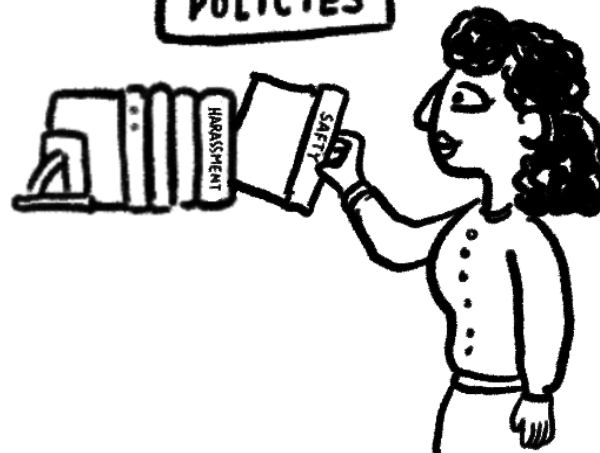
SUPPLY OFFICER

EQUAL OPPORTUNITY EMPLOYER

INTERNSHIP

POLICIES

HARASSMENT

SAFETY

MEET KEN
Ken is a member of a local community, comprised primarily of a minority ethnic group. He is part of a committee that monitors the delivery of vaccines at the local clinic. Unfortunately, recent deliveries did not match the demand and services have been impacted

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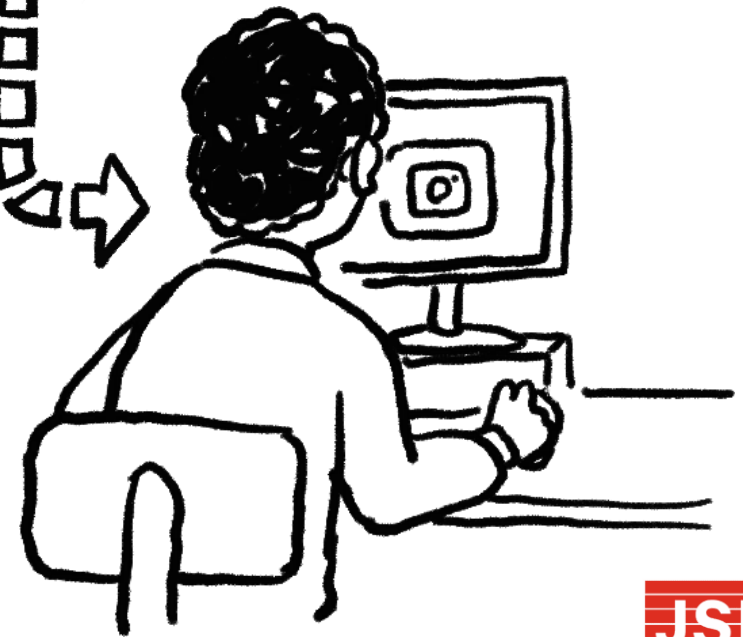
Strategy 3:
Enable customers to participate in the supply chain and demand high service

GOAL

A supply chain that equitably and inclusively serves customers of health products and improves their health and well being and responds to their needs

Strategy 1:
Adapt the supply chain to more equitably serve all customers

Strategy 2:
Equitable & inclusive workforce

Strategy 3:
Enable customer to participate in the supply chain and demand high service

Promoting equity in immunization supply chains:
A guide to design for zero-dose and under-immunized communities

Emily Gibson
Manager, Health Systems Team
VillageReach

The Supply Chain Equity Guide

WHAT is supply chain equity and WHY is it needed?

Designing to be responsive to the needs of under-immunized and zero-dose populations.

Supply chain equity goes beyond just remote/rural. Also:

- Urban poor

- Populations in conflict/security compromised areas

- Internal and cross-country migrant communities

WHY is it relevant for supply chain professionals?

VillageReach developed a [four-step guide](#) to applying an equity lens to supply chains.

Equity principles can apply to almost every aspect of supply chains. **The Equity Guide is a helpful tool to:**

- **Identify supply chain barriers** for under-reached communities

- **Develop mitigation strategies** and measure your progress

1 — Identify population:

What are the country's under-served populations and their characteristics?

▶ Use the guidance to outline the population's relevant characteristics.

▶ The guidance is built for four under-served groups: urban poor; people living in remote, rural areas; people in conflict or security-compromised areas; and internal and cross-country migrants.

POPULATION EXAMPLES:

A *An urban poor population that often accesses health services at private health facilities due to ease*

B *A remote, rural population that often travels long distances to access services at health facilities*

2 — Consider supply chain-related challenges:

Which challenges might be resulting in low coverage for this population?

▶ Select challenges from the guidance that are most applicable to the under-reached population.

▶ Challenges are related to transport, storage, demand forecasting, human resources, and governance, among others.

CHALLENGE EXAMPLES:

A *Potent vaccin... nearby privat... regulation of... stockouts and...*

B *Potent supplic... facility staff a... supplies from... b) maintain c... lack of transp...*

3 — Determine mitigation strategies:

What are appropriate strategies for addressing this challenge within the identified population?

▶ Choose relevant mitigation strategies from a list of options.

STRATEGY EXAMPLES

4 — Measure progress:

Which metrics are relevant to evaluate progress in reducing supply chain-related inequities?

▶ Select indicators for each challenge to assess progress toward the outcomes of access, availability and potency.

▶ Each indicator has a recommended target and guidance on measurement.

INDICATOR EXAMPLES:

...service delivery...h government for...the year when a...o transport...

The VillageReach Equity Guide follows this **FOUR-STEP** process.

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The VillageReach Equity Guide aligns with Gavi's IRMMA Framework for service zero-dose and missed communities.

IDENTIFY

Find, describe, listen, and understand

REACH

Tailor strategies, integrate, and sustain

MONITOR & MEASURE

Monitor outcomes, learn, improve

Identify under-reached population
It is important to understand context and factors impacting zero-dose and under-served populations

Fill information about the under-reached population or community identified:

Name of the population	*Be specific, as this will help develop relevant tailored strategies. E.g. Urban poor in X city, a specific nomadic group, or a refugee population.*
Population characteristics *(check all that apply and add other characteristics)*	❑ Urban poor ("slums") ❑ Unlikely to speak the official/common languages of the region where they live Other characteristics: ❑ Remote/rural ❑ Internal migrants/mobile/displaced ❑ External migrants/refugees ❑ Conflict or security-compromised area ❑ Urban rich
Describe any outbreaks in this population, especially of vaccine preventable diseases	*What disease(s) and when? Was any inf... What was done to respond to the outbrea... vaccination health needs that are not curren...*
Is this population served by outreach or mobile services?	❑ Yes ❑ No If yes: How often are... How often are there mobile services inte...
Is this population served by private health services?	❑ Yes ❑ No If yes: *Describe how private facilities interact with the EPI. Do they get vaccines from the EPI? Do they report data to the EPI? How are private facilities regulated by the public health system?*
Which partners are working on improving health services?	**Which, if any, community members who can be engaged?**
Resources to address supply-related inequities	*Consider: Given current resourcing, is there current capacity to meet the size/needs of the population?* *Can existing health services cover needs of population?* *Is there sufficient will to reallocate resources to cover under-served?* *If so, with whom can you partner and how can you build political will to address these needs?*

In **STEP 1**, the under-reached population is identified and described.

2

Explore and click supply chain challenges for low coverage relevant to the under-reached population

After clicking on a challenge you will see possible strategies to address that challenge and potential indicators for measuring progress

"Click" on challenges in Reading or Slide Show mode on PowerPoint or PDF

Lack of accurate population and/or consumption data, resulting in inaccurate demand forecasting

High actual and opportunity costs (long travel times/distance, long wait times, missed work) for people to access immunization services

Lack of functional or sufficient cold chain equipment (CCE) for storage and transport

Weak regulation of and lack of integration of private service delivery points into EPI resulting in (1) limited oversight on procurement coverage data

Lack of transport and poor road infrastructure which limit, (1) resupplying accessing services

Lack of physical infrastructure at service delivery points, such as electricity

Weak procurement and distribution processes at national level, leading to supply

In **STEP 2**, supply chain challenges relevant to the specific population are identified from a comprehensive list.

Delayed disbursement of and lack of transparency of use of funds resulting in delayed immunization activities

Insufficient funds for operating fixed, mobile and outreach service delivery, resulting in high costs for populations in accessing services

Siloed health programs result in (1) Missed Opportunity for Vaccination and (2) multiple trips by service delivery staff for resupply

Compromised security area, resulting in lack of medical supplies and shortage of health workers

See complete list indicators

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See complete list indicators

Challenge: High actual and opportunity costs (long travel times/distance, long wait times, missed work) for people to access immunization services

3

Strategies to help mitigate this challenge

- Assess and address financial resources & flows for service delivery points mobile and outreach) to reduce patients' expenditures
- Communicate time and location of immunization services (fixed/ mobile/outreach/community health workers) to caregivers (through TV, ~~social media etc.)~~
- Extend hours of service delivery to accommodate caregivers' schedule
- Assess road and traffic conditions from communities to public and private delivery points
  - Place service delivery points in locations which are accessible and affordable to communities
- Assess health care financing mechanisms for supply chain delivery for service delivery point and community health workers, to reduce personal expenditure by health workers or cost recovery from patients
  - Integrate delivery of commodities
  - Ensure funding is available to transport products
- Allocate dedicated staff for operating mobile/outreach sessions according to plan
- License and train community members (esp. conflict areas) as vaccinators
- Collaborate with humanitarian aid orgs in conflict areas to provide supplies and services
- Set up service delivery at transit points with supplies to vaccinate at bus stops, borders, etc.

In **Step 3,** mitigation strategies are identified. Each supply chain challenge in the guide has an associated list of suggested mitigation strategies.

Outcomes

- Estimated out-of-pocket cost to access routine immunization services
- Average wait times at service delivery points (priority for urban and rural areas)
- Travel time to access routine immunization services (priority for rural areas)
- Percentage of public service delivery point offering flexible hours of service (priority for urban areas)
- Percentage of outreach & mobile services conducted according to plan
- Health facilities in district receiving disbursed operation funds for immunization activities on time

Challenge: High actual and opportunity costs (long travel times/distance, long wait times, missed work) for people to access immunization services

Strategies to help mitigate this challenge

- Assess and address financial resources & flows for service delivery points (including mobile and outreach) to reduce patients' expenditures
- Commu... ... ...cation of ...
mobile ...
social ...
- Extend ...
- Asse... ...rvice
deli...
  - Pla... ...o
  co...
- Asse... ...care financing mechanisms for su... ...y for service delivery point and community health workers, to re... ...expenditure by health workers or cost recovery from patients
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In **Step 4**, outcomes and indicators are selected to measure progress towards improving equity for each mitigation strategy employed.

4

Outcomes

- **Access:** Vaccination services (fixed, mobile, outreach) are provided at accessible places, times, and languages for zero-dose and under-immunized communities
- **Access:** Private providers are supported to augment the reach of the iSC

Indicators to measure progress
(click indicator for more information)

- Estimated out-of-pocket cost to access routine immunization services
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How Human Centered Design can support person-centered immunization service planning and delivery

Lisa Oot
Senior Technical Officer
JSI

17th TechNet Conference
Panama City, Panama | October 16-19, 2023

Background

The **Behavioral Science Immunization Network project (BeSIN)** worked in partnership with the Ghana Health Service, to strengthen the capacity of immunization practitioners to use behavioral science to improve vaccine confidence and uptake.

This presentation focuses on the collaboration with district and sub-district health leaders to use human-centered design to develop and test behaviorally-informed interventions to increase COVID-19 vaccine uptake in Accra

- At the time of planning (August 2022), 36.1% of the eligible population was fully vaccinated against COVID-19 and vaccination rates were stagnating

- Limited knowledge of why there was low vaccine acceptance

- Collective decision to work in Ga South district in Greater Accra Region due to low COVID-19 vax, high unvaccinated children, and previous experience with HCD approaches

Applying BeSci to Immunization: Why incorporate HCD as part of Microplanning

- Tools from HCD enable us to better focus on the needs, perspectives, and experiences of people and communities

- The HCD process can help identify behavioral and social drivers of vaccination uptake

- The HCD process engages communities to design and implement solutions that are responsive to their needs and can reduce behavioral and social barriers to vaccination

The microplanning process is an entry point for this type of engagement because it is a tool used to address barriers and develop actionable solutions to reach every community with immunization services.

Workshop Design and Objectives

Human-centred design for tailoring immunization programmes

Goal: Promote the use of tools from the HCD process to engage communities in the design of microplans, with the aim of increasing demand for COVID-19 vaccination

Objectives

- Identify barriers to and enablers of COVID-19 vaccination uptake

- Design interventions with community members that have the potential to increase vaccine confidence and uptake
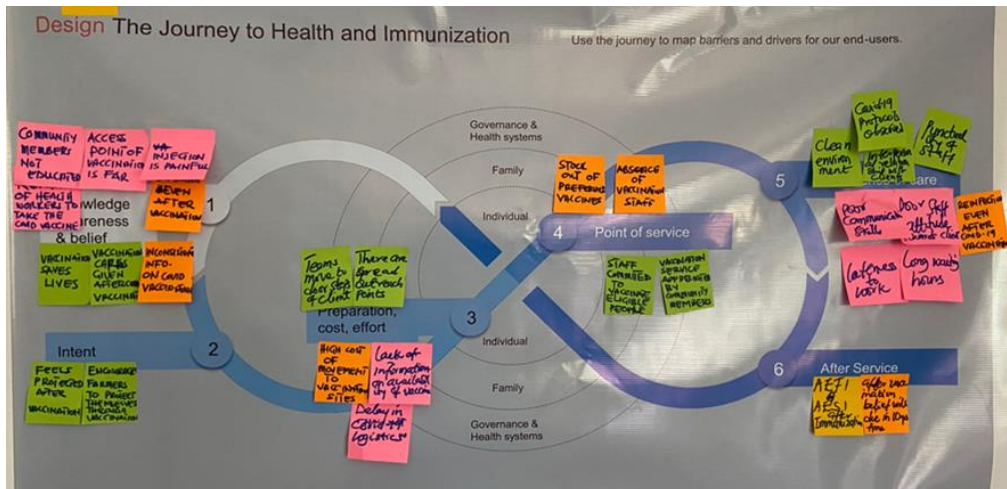
Two-phase workshop over four days

- Phase 1: district and sub-district health teams

- Phase 2: district and sub-district health teams + community members

HCD + Microplanning Workshop

Outputs:

- Personas and journey maps

- Prioritized challenges and interventions for action

- Draft action plans to append to sub-district microplans

Evaluation Methods

- Pre- and post-workshop questionnaires for health workers
  - Semi-structured and Likert-type questions (pre-workshop n = 23, post-workshop n = 17)

- Post-workshop questionnaire with community participants
  - Semi-structured questionnaires (n = 24)

- Rapid qualitative analysis

  "intensive, team-based qualitative inquiry using triangulation, iterative data analysis . . . to quickly develop a preliminary understanding of a situation from the insider's perspective" (Beebe 2001)

Community Member Perceptions of HCD-Incorporated Microplanning

Participation in HCD-Incorporated Microplanning Helped Community Members to Understand Vaccination Services

- Participation in microplanning was a new experience for this group of community members

- **Involvement in the workshop helped community members to better understand**

  - **The importance of vaccination**
    - Benefits of vaccination
    - How to educate other community members about the importance of vaccination
    - The COVID-19 vaccine

  - **Community-level vaccination processes**
    - Vaccination planning, delivery, and monitoring
    - Vaccination service delivery constraints

Barriers to Vaccination

During the HCD process, community members felt comfortable sharing barriers to vaccination in their communities and solutions to address these barriers

"The group work made me bold enough to share my thoughts."

The most commonly mentioned barriers to vaccination relate to lack of access, vaccine-related myths, and poor interpersonal communication with health workers

<table>
<tr>
<td>

Lack of access

- Shortage of vaccines
- Distance from health facility

</td>
<td>

Myths

- Infertility
- Death
- Impotence

</td>
<td>

Interpersonal communication

- Lack of encouraging dialogue with health workers about vaccines

</td>
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</table>

HCD Engaged the Community Members in Microplanning

- All community members reported that the HCD activities and tools used in the workshop were useful and easy to understand

- Community members especially appreciated use of the end user **persona** because it helped them to empathize with others

    "The persona helped me to know people in the community who refused to take the COVID-19 vaccine."

- Respondents had mixed feelings about the Journey to Health map. Some cited it as a favorite tool, while others considered it too difficult. This affirms the value of the tool while also indicating a need for additional training on it

Health Worker Perceptions of HCD-Incorporated Microplanning

HCD is a New Concept to Health Workers

- Prior to the workshop
    - Approximately half of the health worker respondents had heard of HCD before
    - Of those who had heard of HCD, most identified it as a 'problem solving approach'
    - Some knew that HCD involves understanding and engaging stakeholders
    - Most could not name any steps of the HCD process

- After the workshop, health workers:
    - Had heard of HCD and could list steps in an HCD process (diagnose, design, implement, evaluate)
    - Identified that HCD builds on existing motivations, ideas, and limitations to solve a problem
    - Felt that they could use HCD for microplanning *and other challenges*

"My training has equipped me with the knowledge to…use HCD for microplanning in my future programs."

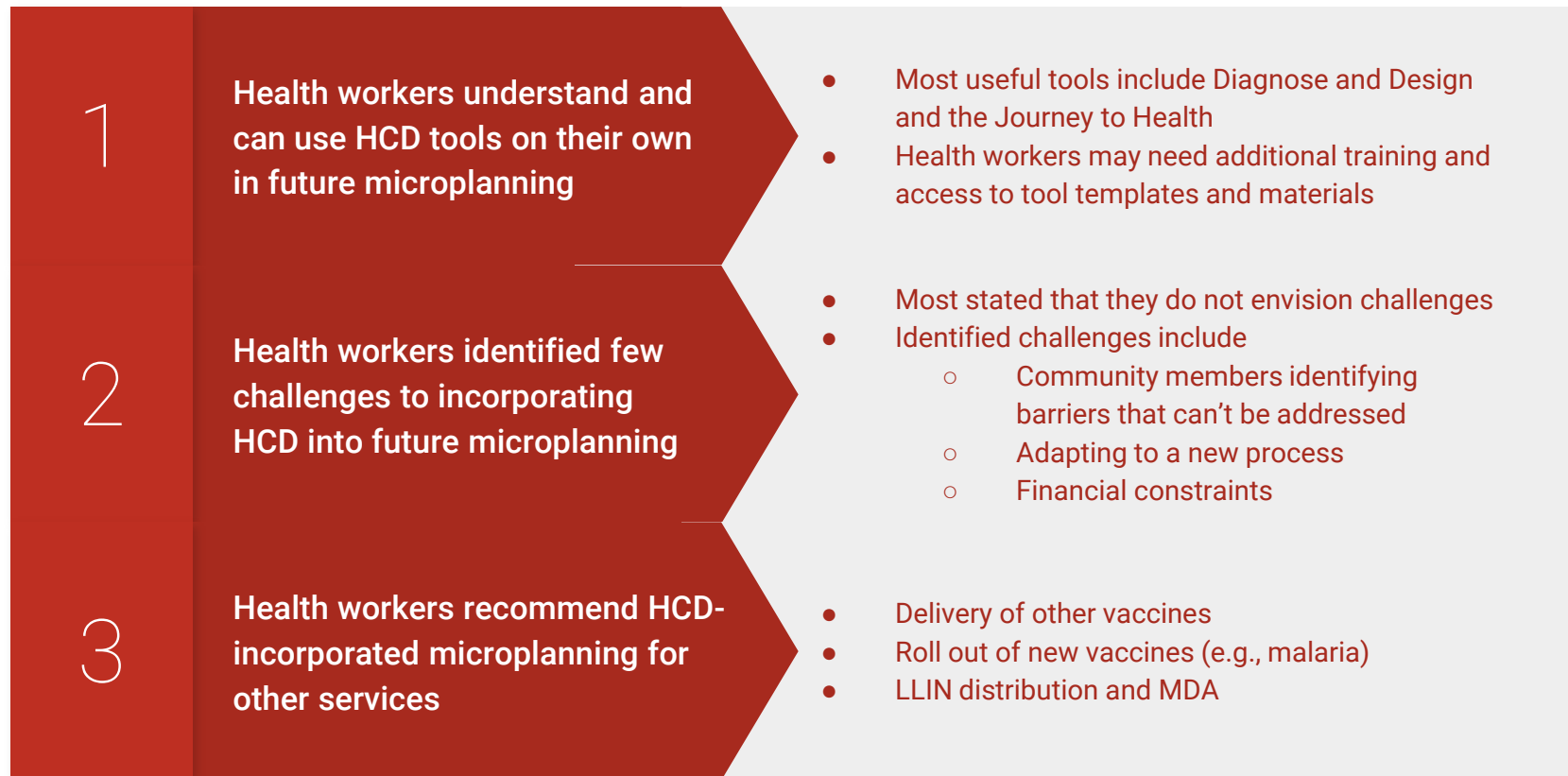**"I am able to solve other problems using the HCD approach."**

Health Workers See Value in Incorporating HCD into Microplanning

"[HCD-incorporated microplanning] lets [community members] feel they are. . . important and regarded as part of the health team."

"With the involvement of end users in HCD the community members (and staff) understand and learn new ideas about the problem . . . this does not happen in microplanning."

Community Member Involvement in HCD-Incorporated Microplanning

- Leads to Better Understanding of Barriers to Vaccination
- Boosts Community Ownership
- Addresses Vaccine Misconceptions
- Identifies Context Specific Challenges and Solutions
- Increases Vaccine Acceptance
- Motivates Community Members to Share Vaccine Information
- Increases Understanding of Vaccines
- Facilitates Implementation of Microplan

Health Workers Support Incorporating HCD into Future Microplanning

1
Health workers understand and can use HCD tools on their own in future microplanning

- Most useful tools include Diagnose and Design and the Journey to Health
- Health workers may need additional training and access to tool templates and materials

2
Health workers identified few challenges to incorporating HCD into future microplanning

- Most stated that they do not envision challenges
- Identified challenges include
  - Community members identifying barriers that can't be addressed
  - Adapting to a new process
  - Financial constraints

3
Health workers recommend HCD-incorporated microplanning for other services

- Delivery of other vaccines
- Roll out of new vaccines (e.g., malaria)
- LLIN distribution and MDA

Snapshot of quantitative results: Increased comfort in using HCD in the microplanning process

Following the microplanning workshop, all respondents agreed or strongly agreed they feel comfortable using HCD in the microplanning process.
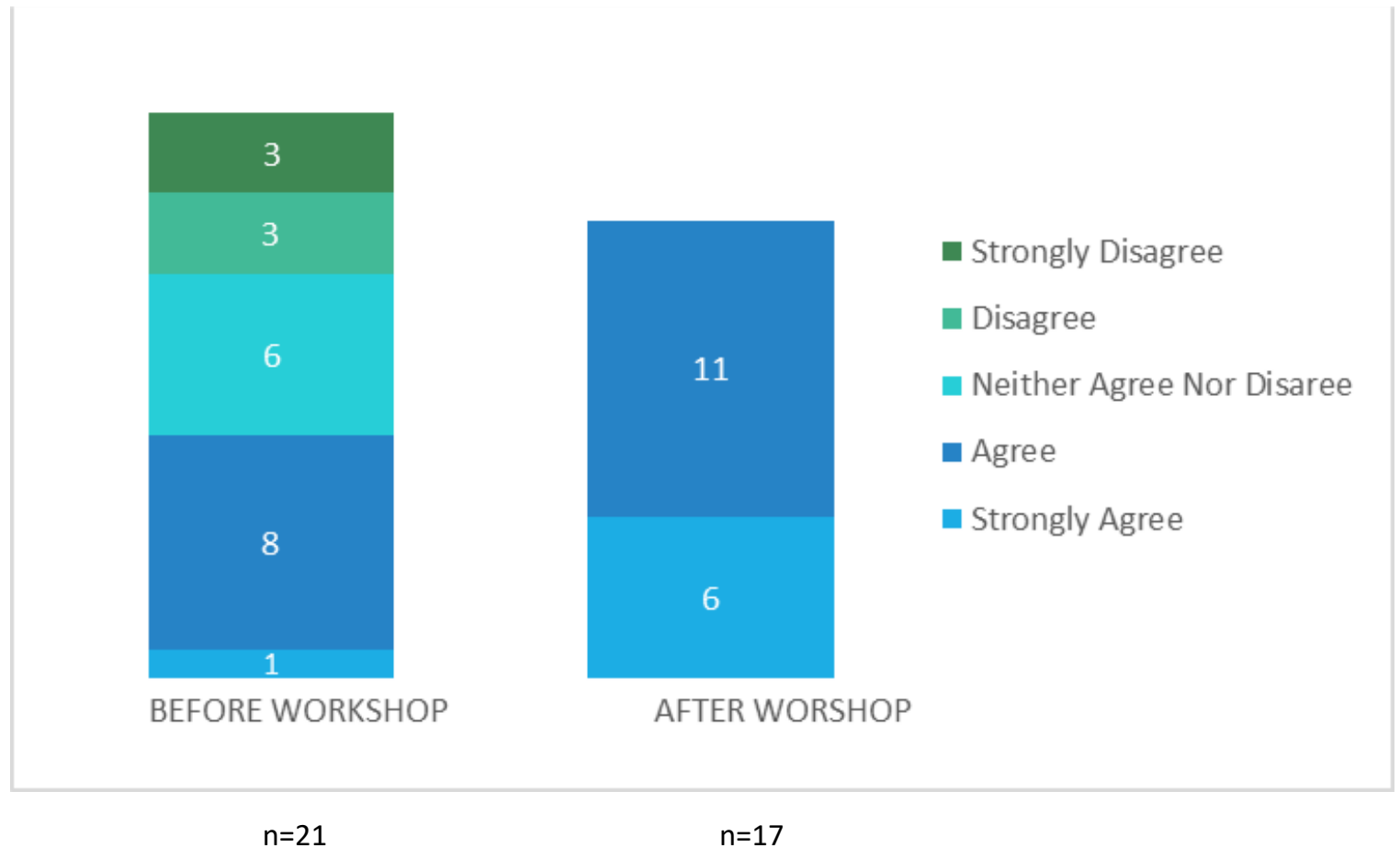
Microplanning with HCD will result in different vaccination activities

Before and after the workshop, almost all respondents felt that incorporating HCD into microplanning would result in vaccination activities that are different from those that would be developed without HCD
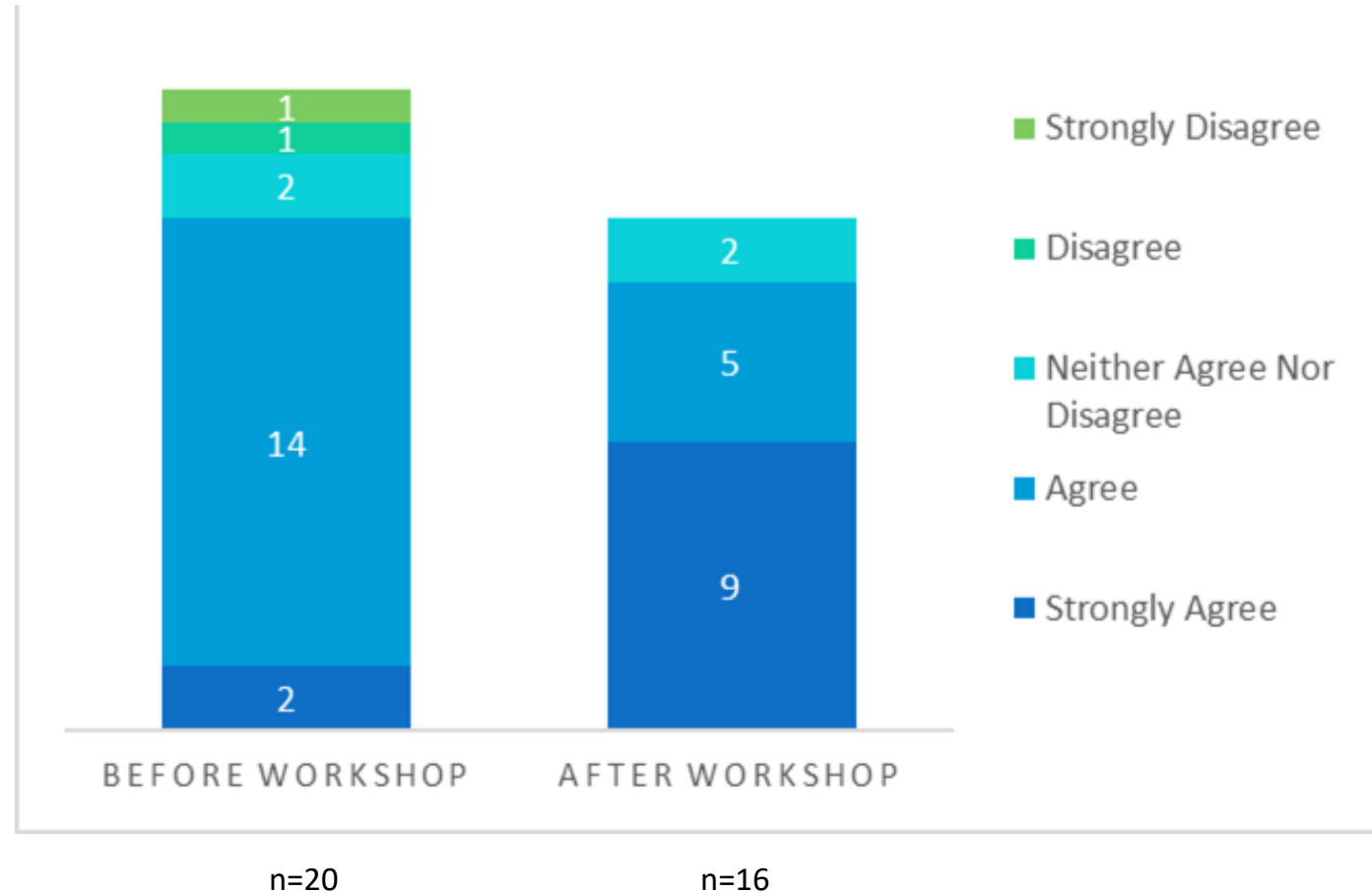
Intervention Implementation

Activity implementation planned around 14-18 December COVID-19 vaccination campaign. Activities implemented by sub-district include:

Amanfro
- Identification and use of community information centres and public address systems to share information about COVID-19 vaccination

Bortianor
- Training 10 health promoters for SBCC activities and community leaders to encourage their communities to get vaccinated
- Providing health education at child welfare clinics, OPD, churches, and CICs

Obom
- Establish new vaccination centers in locations selected based on community preference
- Publicize new vaccination centers and offer COVID-19 vaccination

During the 5-day COVID-19 vaccination campaign, Ga South district achieved 96.2% coverage of the target population. The three sub-districts contributed 80.5% of the coverage. While we cannot directly attribute these coverage improvements to the project activities, support from BeSIN did directly contribute to the establishment of new vaccination sites.

Follow-Up Interviews

Health Worker Reactions

Participants noted the following benefits of community member engagement:

- Improved strategy and communication approach
- Improved practical/logistic assistance
- More effective communication with communities (e.g., through identifying and engaging other key community members during implementation to finding necessary resources like PA systems and gas for transportation).
- Reached specific community groups more easily

In addition to these improvements, several health workers also noted that community involvement helped improve vaccine coverage. Community engagement helped the health teams to

- identify influential people (e.g., community chiefs, plantain queen mothers) that could convince others to get vaccinated
- understand community dynamics and strategies that would lead to increased vaccination
- identify appropriate target populations

Lessons Learned

- The inclusion of community members in micro-planning is a great idea as it brings practical issues to bare and allows stakeholders to be part of the decision-making process, which makes it easy for them to lend their full support to programs

- The HCD training and implementation of the validated micro plans have become indispensable resources that the MHD could count on in addressing public health related issues in the catchment area. Staff have additional knowledge and skills in planning for optimum health care delivery in the district

- Community members have gotten closer to the directorate as they find their inputs as part of the planning and delivery. New suggestions continue to pour in from the community leaders as to how they want things done with and for them

- Incorporating HCD into micro planning has helped the district to improve vaccination coverage as community members become more engaged

Q & A

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Thank You!

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