COOPER/SMITH

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BEHAVIORAL INSIGHTS IN SUPPLY CHAIN

OVERVIEW

April 16, 2021

OBJECTIVES

1

OVERVIEW

- Purpose
- Inception of BISC
- Work to Date

2

METHODOLOGY

- Thinking aloud
- Vignettes
- Mixed methods survey

3

NEXT STEPS

1 OVERVIEW

INCEPTION OF BISC

The User's Perspective on Supply Chain Information Systems project, conducted in collaboration with Lightwell, assessed the data and data systems used for making decisions around resupply for essential medicines and family planning commodities. It found that:

1. There is substantial variance geographically (in Nyeri and Mombasa) in terms of supply chain processes/procedures, perceived skills and capacity and tactics to avoid stock outs

2. Limited perceived agency at lower levels, but strong reported independence and data literacy; this may reflect an absence of the right mechanisms rather than lack of motivation/skills

3. Various factors act as barrier to data use in resupply decision; one of the most frequent barriers was related to personnel issues

PURPOSE OF BISC

THE PROGRESS

Significant strides have been made to improve supply chain outcomes in LMIC's. New technology and systems, such as bar codes and bar code readers and logistic management information systems, have been introduced in many countries.

The bulk of supply chain management technical assistance and data-strengthening activities in LMICs have focused on better tools, training, and technology with a focus on forecasting, inventory, and central planning.

THE CHALLENGE

However, these technologies have not solved all supply chain challenges. Outcomes remain suboptimal in many areas.

Studies have shown that even with complete information, the optimal decision is often not made by supply chain workers.

THE QUESTION

Little emphasis has been placed on the individual actors within a supply chain system and better understanding the cognitive, social, and systemic factors that influence their decision making.

A growing body of research in SCM seeks to employ behavioral economics and psychological principles to better explain why, empirically, people's behavior in supply chains don't match theoretical predictions based on traditional notions of solution optimality and best practices.

BISC OBJECTIVES

Objective 1

Conduct formative research to understand PHC-level staff behaviors, motivations, relationships, and barriers around supply chain data tracking, management, and use.

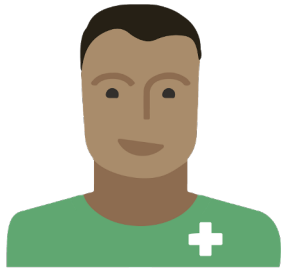
Objective 2

Generate potential hypotheses to test and recommendations for improving PHC-level supply chain data collection practices, supported by behavioral theory of change models.

Objective 3

Determine potential future investments applying behavioral science methodologies to improve staff data collection at the PHC level.

USE CASES



Dispense medicines

Jerry works in the pharmacy and dispenses medicines based on doctor recommendations. He also dispenses supplies to CHWs. He wants to ensure that the community's medicine needs are met.

Order Commodities

Fatima is the facility in charge. Coordinating with the pharmacy, she quantifies and forecasts commodities. She triangulates data to verify commodity requests and submits requests up the supply chain.

Train staff

Chizoba is the facility in charge and is responsible for training staff and CHWs on filling out commodity related reports correctly. She is also responsible for assessing the quality of data submitted.

USE CASE BEHAVIORS

DISPENSE

Check stock | Monitor trends | Document services | Data entry

ORDER

Quantify commodities | Allocate commodities | Place order | Data validation

TRAIN

Submit report | Assess data quality

ATTRIBUTES INFLUENCING USE CASES

Behavior

Front line workers may react differently depending on the task at hand.

- Type of behavior
- Behavior complexity
- Time pressure
- Confidence to complete behavior

Behavior Attributes

Individual

An individual's personal attributes that they bring to their job

- Demographics
- Personality traits
- Motivation and cognitions
- Perceptions
- Skills and abilities

Environment Attributes

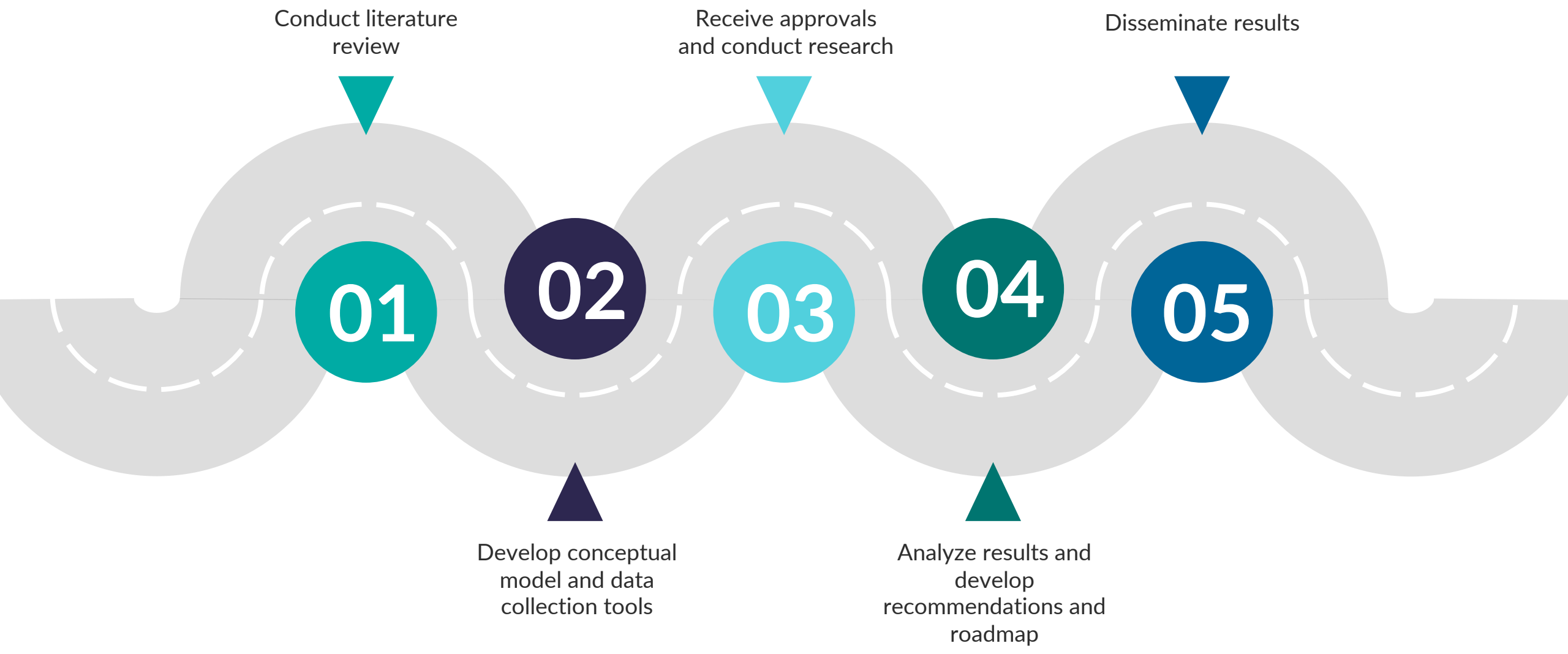
Individual Attributes

Environment

Macro-level factors that restrict the actors to a specific set of behaviors or influence their behaviors

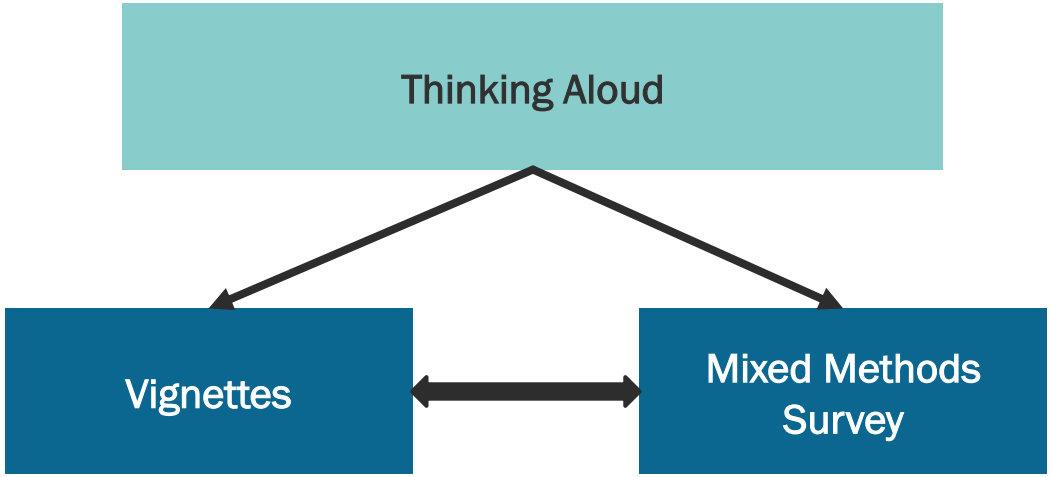
- External pressures
- Organizational culture
- Incentives
- Peer relationships
- Available tools and technology
- Workload
- Professional development

BISC ROADMAP



2 METHODOLOGY

METHODOLOGY



TECHNICAL STRATEGY

THINKING ALOUD

- Cognitive processing
- Decision-making
- Information access, use & interpretation
- Influence of information on actions & decisions
- Challenges encountered in everyday tasks & how they are overcome

VIGNETTES

- Attitudes, perception, motivation & beliefs
- Role of incentives
- Effect of external factors (outside the individual) on information use and decision making

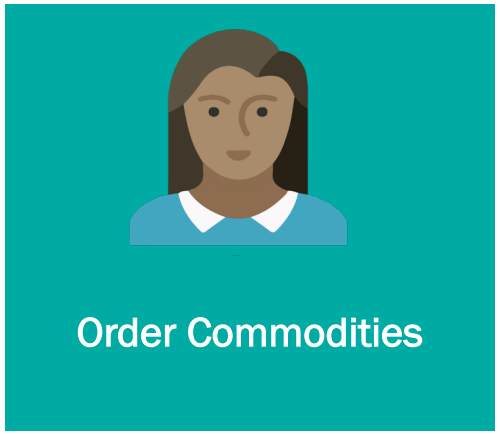
MIXED METHODS SURVEY

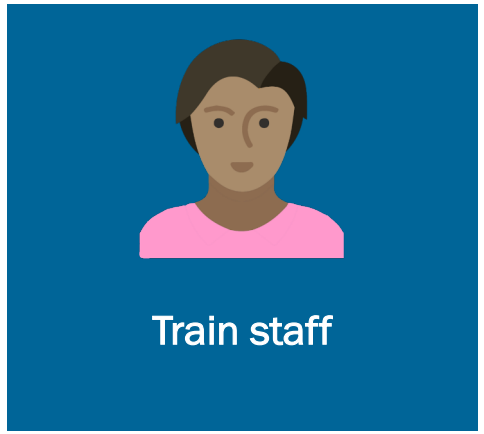
- Personality traits
- Current skillset & desired skills
- Information seeking & information use (with currently available data and desired data)
- Other findings from the thinking aloud and vignettes

METHOD 1: THINKING ALOUD

The thinking aloud will be used to:

- Validate the use cases and associated tasks/responsibilities
- Provide insight into data use and the decision-making process
- Inform current barriers to data use

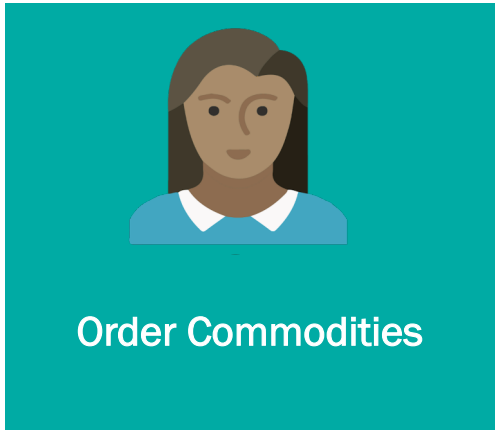


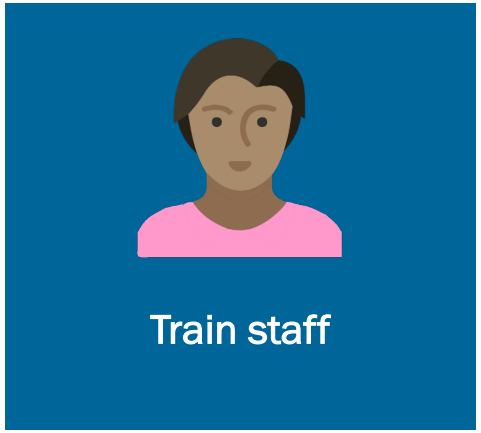


METHOD 2: VIGNETTES

The vignettes will be used to:

- Gauge attitudes, beliefs, motivation and incentives
- Test interventions and their relative influence on decision-making

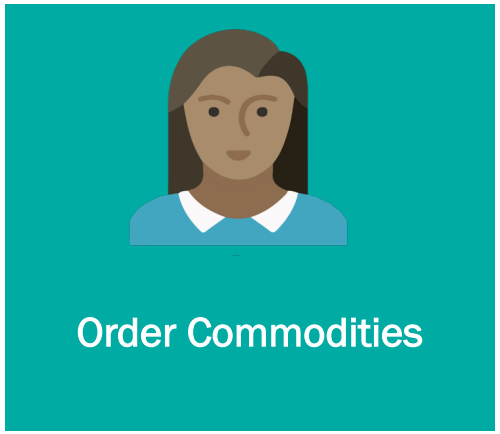


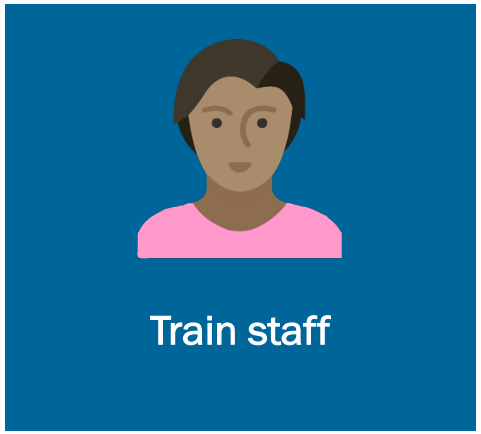


METHOD 3: MIXED METHOD SURVEY

The mixed methods survey will be used to:

- Better understand the influence of personality traits
- Decipher the role and effect of environmental factors
- Further capture and build upon findings from the thinking aloud and vignettes





3 NEXT STEPS