



Supply Chains **4** Community Case Management

# CCM Supply Chain Baseline Assessment Rwanda 2010



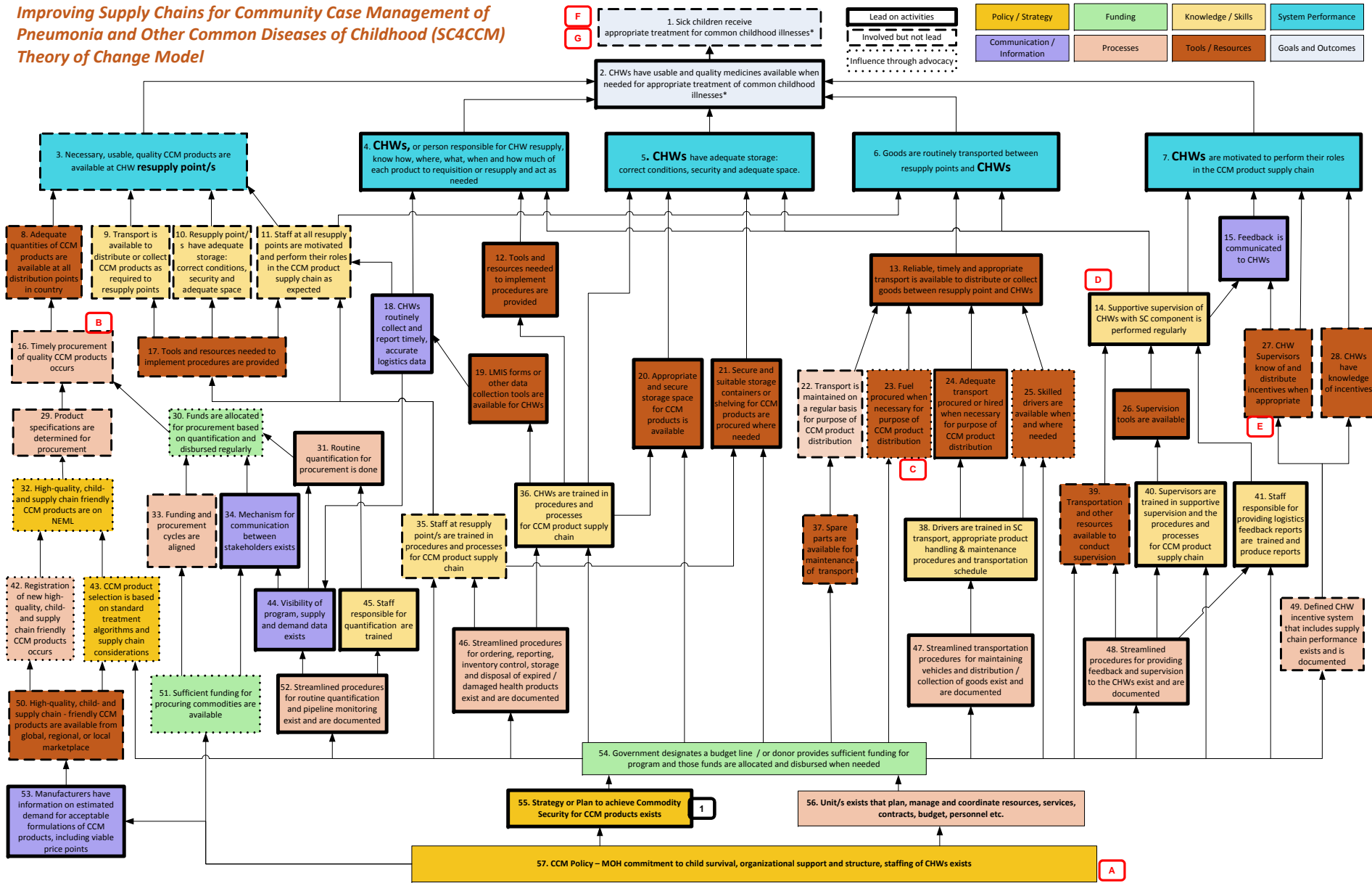
# SC4CCM Project Goal

SC4CCM will **identify**, **demonstrate**, and **institutionalize** supply chain management practices that **improve the availability** and use of selected essential health products in community-based programs.

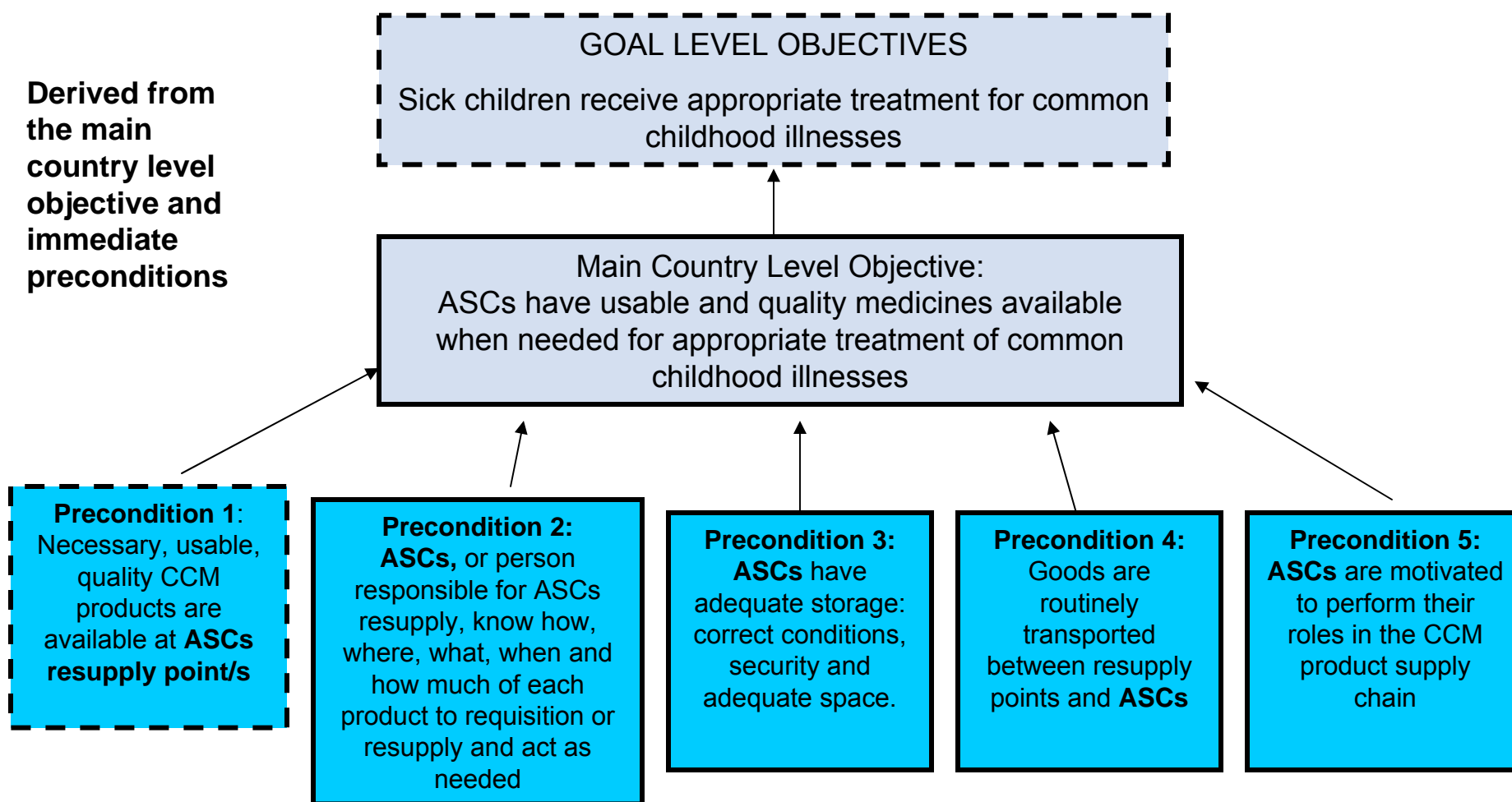
- In partnership with MoH, CCM and supply chain stakeholders



**Improving Supply Chains for Community Case Management of Pneumonia and Other Common Diseases of Childhood (SC4CCM) Theory of Change Model**



# SC4CCM Core Indicators



# Methodology

Both qualitative and quantitative methods were applied:

- Logistics System Assessment Tool (LSAT)
  - 40 participants, 24 from MOH institutions/districts, 16 from partner organizations
- Key informant interviews
- Logistics Indicators Assessment Tool (LIAT)
  - Mobile phones
  - Build local capacity partnering with local evaluation group: National University of Rwanda, School of Public Health (SPH)



# LIAT Sampling

Level of Administration / Facility	South	North	Kigali	East	West	Total
District	2	2	1	3	2	10
Health Center (CS)	20	22	8	30	20	100
ASC (Agent de Sante Communautaire – Binomes only)	67	72	22	103	57	321



# District Sample

<b>South</b>	<b>North</b>	<b>East</b>
Huye	Burera	Bugesera
Ruhango	Musanze	Ngoma
<b>Kigali</b>	<b>West</b>	Rwamagana
Gasabo	Nyabihu	
	Rutsiro	

# Limitations

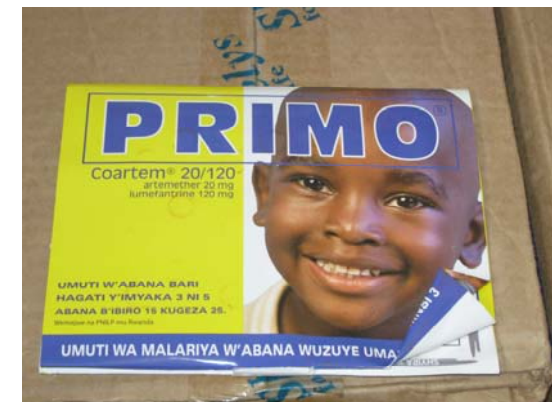
- Duration of field work lengthened by:
  - Contact information for ASCs not complete
  - Health facility staff absences due to ongoing MOH trainings
  - Delays in administrative and financial processes
  - Dropout of data collectors after initial fieldwork period lapsed
- Due to delays, survey conducted during rainy season (North, West):
  - Difficulties reaching sites
- Replacements necessary because some selected sites not active in CCM



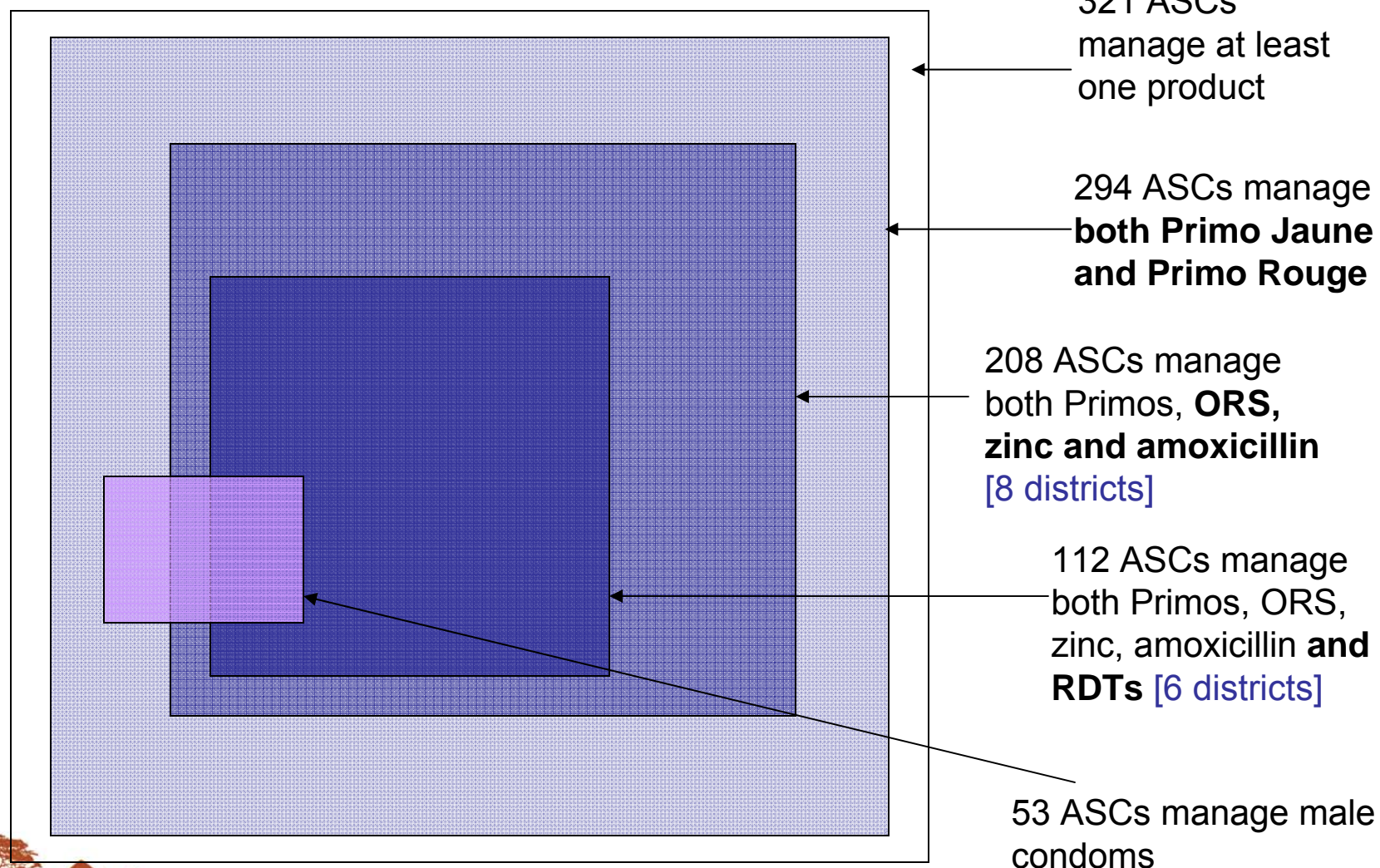


# Tracer Products

1. Amoxicillin 250mg dispersible tabs
2. Primo Rouge (ACT 1x6) tabs
3. Primo Jaune (ACT 2x6) tabs
4. Malaria Rapid Diagnostic Tests (RDTs)
5. Zinc 20 mg tabs
6. ORS sachets
7. Sur'Eau bottles
8. Male condoms
9. Injectable contraceptive vials



# Describing the ASCs Sample



# Baseline Results



## **Main Country Level Objective:**

ASCs have usable and quality medicines available when needed for appropriate treatment of common childhood illnesses

**Key Finding:** 49% of 208 ASCs who manage the 5 health products\* needed to treat common childhood illnesses (pneumonia, diarrhea, and malaria) had them all in stock on the day of visit (DOV)

\*ORS, amoxicillin, zinc and both Primos



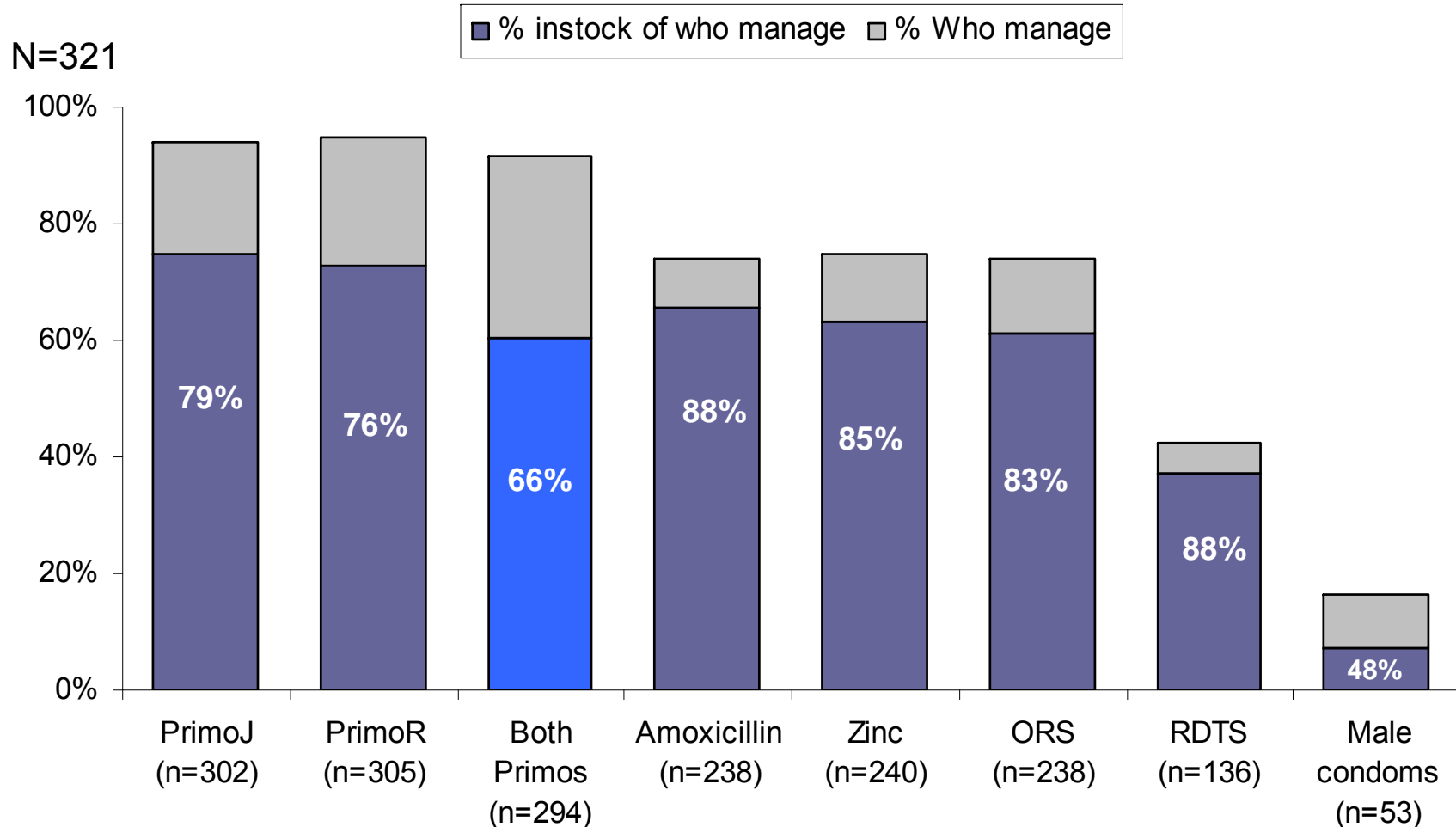
# In Stock at ASCs on DOV

195 of 294 (**66%**)  
ASCs who  
manage both  
Primos had them  
in stock

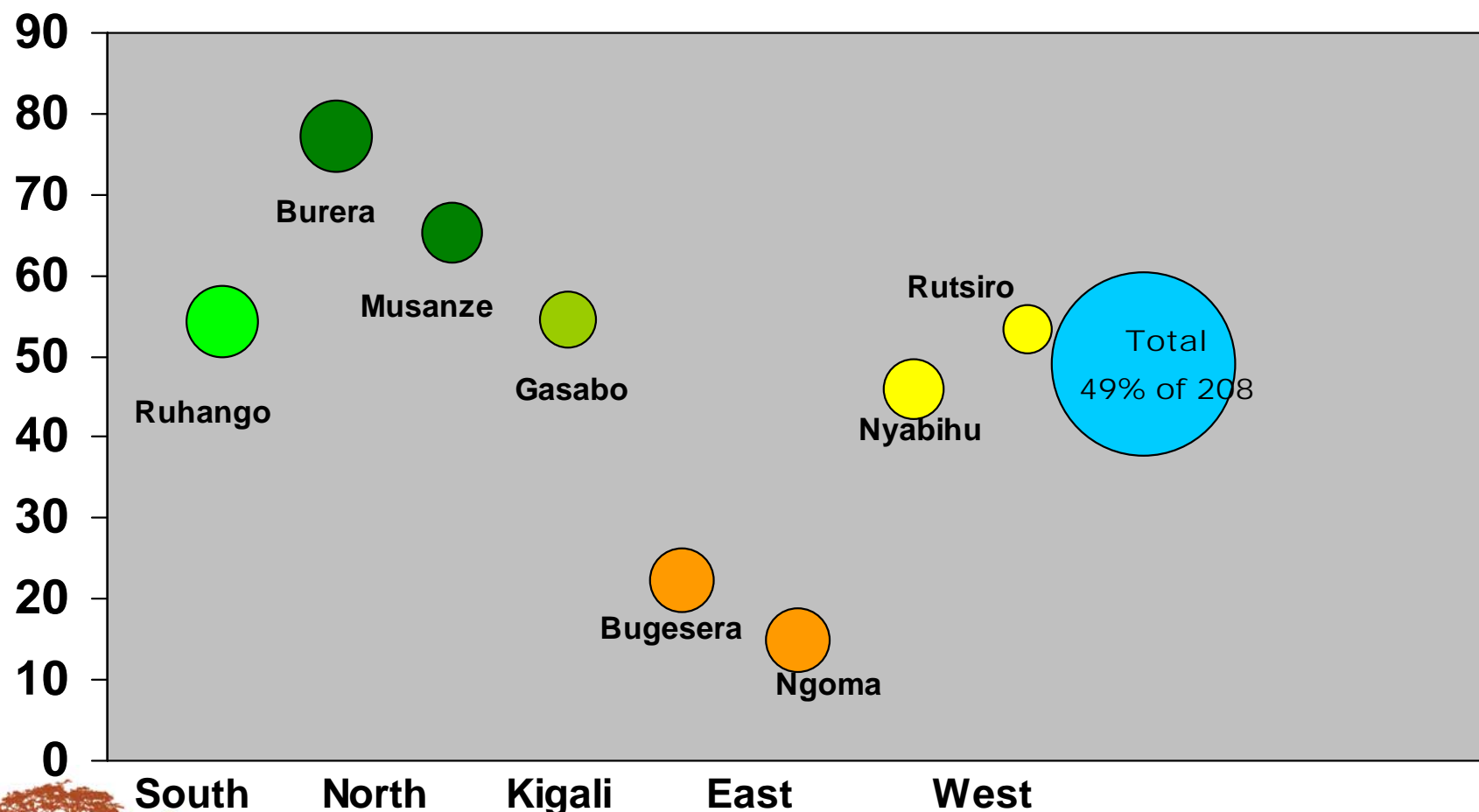
102 of 208 (**49%**) ASCs who manage  
both Primos, **ORS, amoxicillin and zinc**  
have all in stock

64 of 112 (**57%**) ASCs  
managing both  
Primos, ORS,  
amoxicillin, zinc **and**  
**RDTs** have them all in  
stock

# In Stock on DOV at ASCs by Product



# % ASCs with Five Key Drugs In Stock (Amoxicillin, ORS, Zinc & PrimoR/PrimoJ)



## Average Stock Card Information and Stockout Duration for ASCs, March-August 2010

Type of Product	Average months of information on stock card (of 6)	Average duration stockouts (months)
Zinc	2.7 (n=200)	1.6 (n=37)
Amoxicillin	2.6 (n=197)	1.7 (n=28)
ORS	2.6 (n=186)	1.5 (n=41)
Primo Rouge	2.9 (n=185)	1.6 (n=72)
Primo Jaune	2.6 (n=181)	2.0 (n=62)

Average of less than 3 months of data available out of 6

Stockout rates less than 40% but last 1-2 months duration



## PRECONDITION 1:

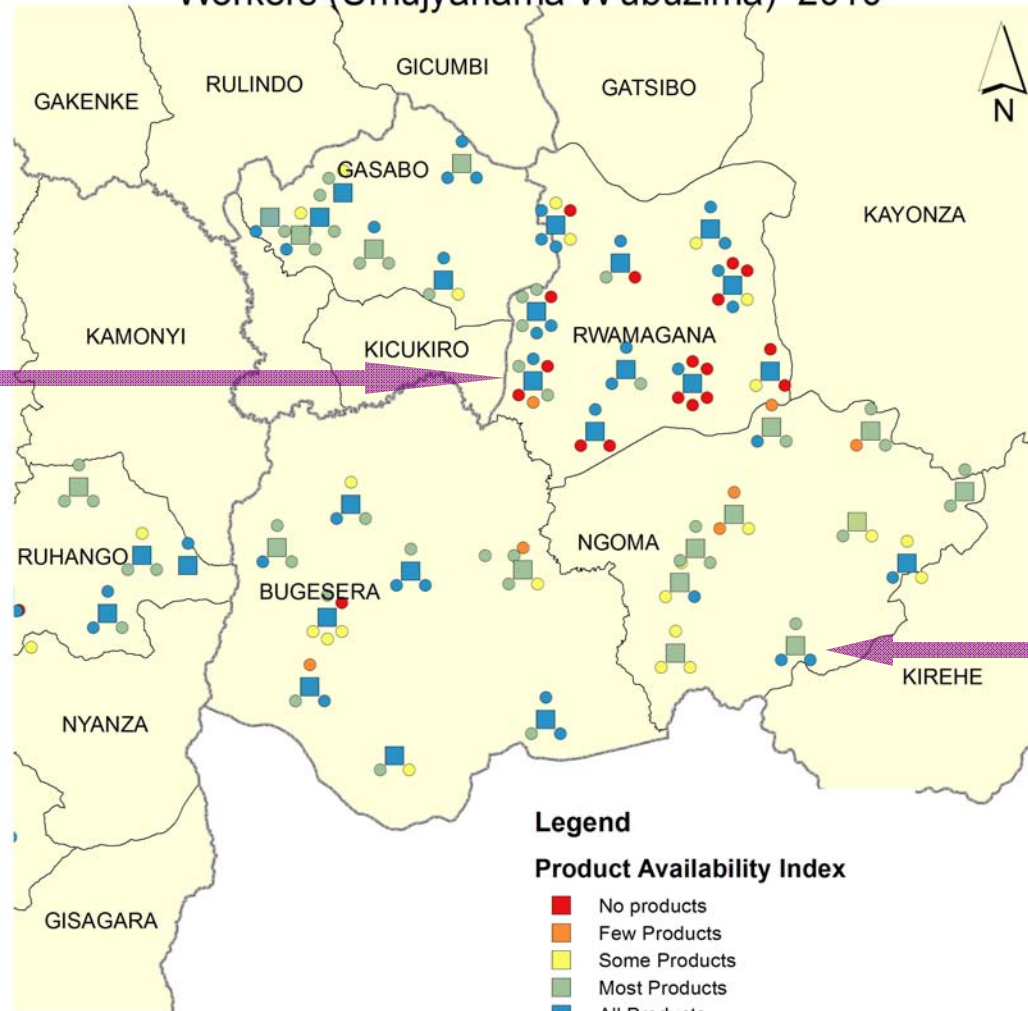
Necessary, usable, quality CCM products are available at ASCs resupply point/s

- Product availability at the resupply point is an important factor in predicting product availability at the ASC but is not the only predictor
  - Predictability varies by product; there appears to be a **stronger link** for Zinc & Amoxicillin
  - Considerable variation by district
- ASCs **considerably overstocked** in amoxicillin, zinc and ORS



# SC4CCM/Rwanda Product Availability Index at Health Centres (Ikigo Nderabuzima) and Community Health Workers (Umujyanama W'ubuzima) 2010

**CS fully stocked**  
**ASCs stocked out or not fully stocked**

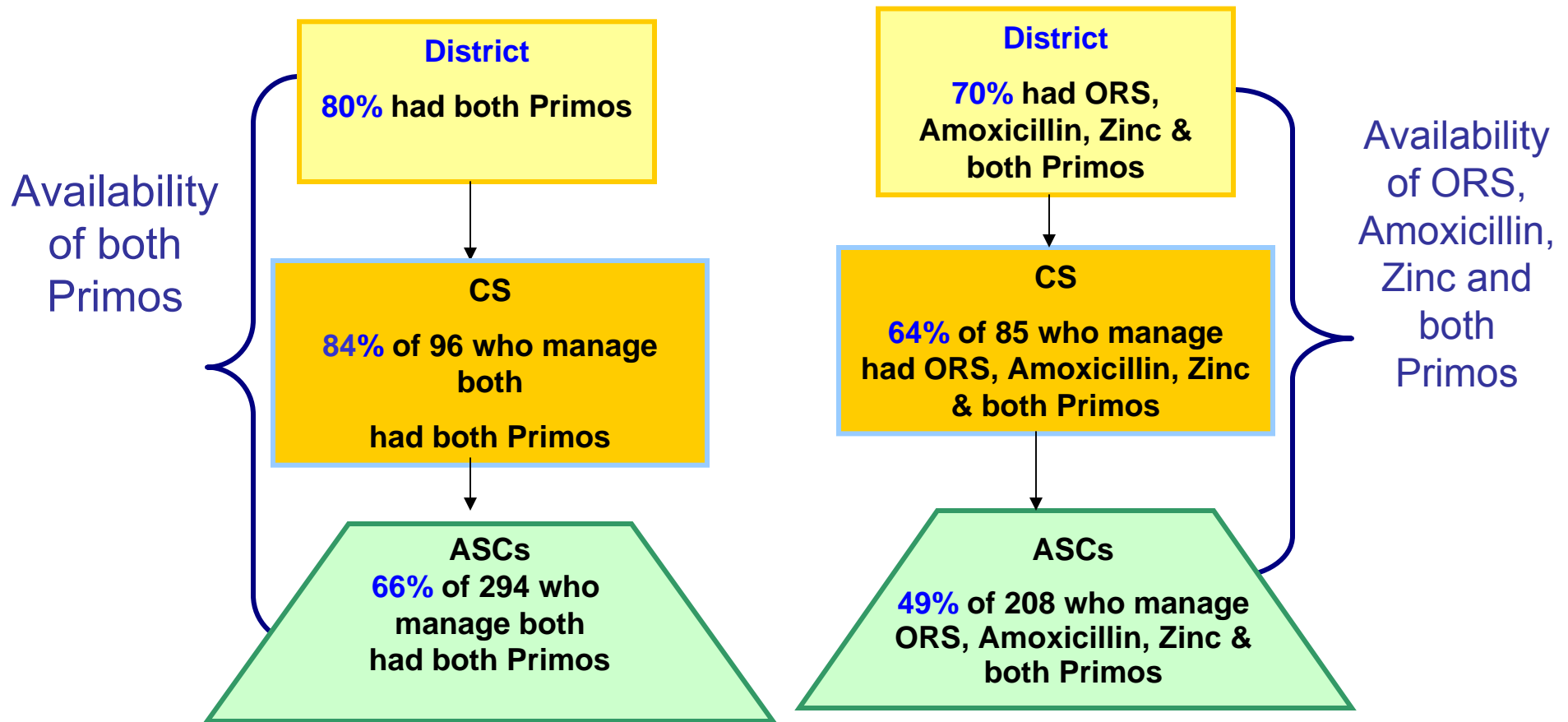


**CS not fully stocked**  
**ASCs have stock**



se Management

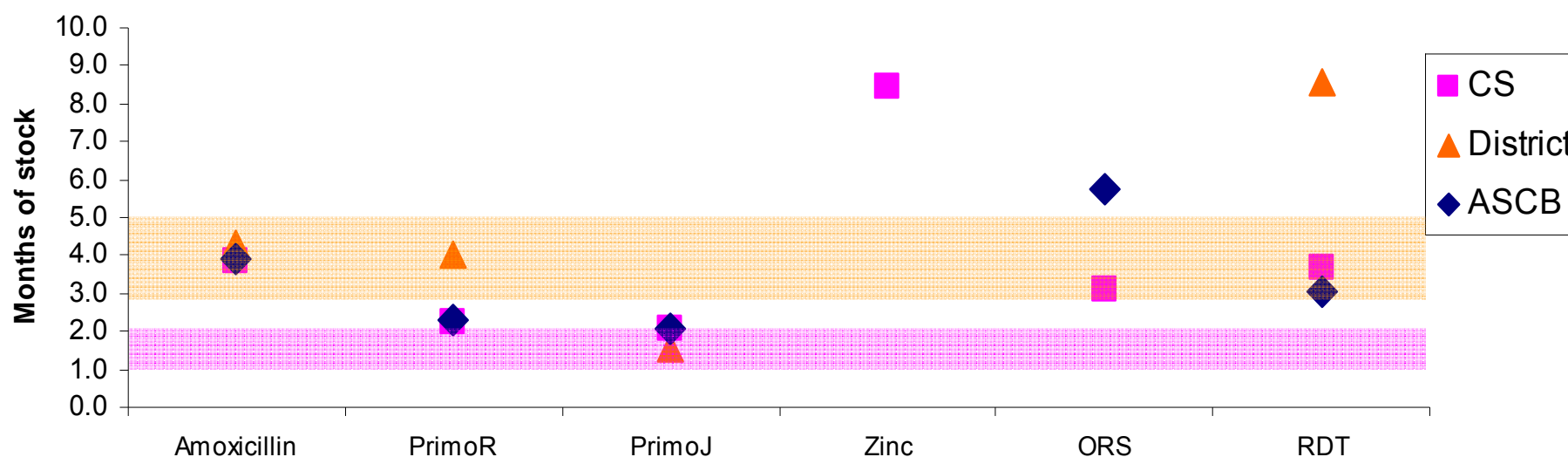
# Product Availability at All Levels on DOV



# Stock Status: (Mar-Aug) all levels, based on Min/Max

Average months of stock ASC*	
Zinc = <b>10.9</b>	PrimoR = 2.3
Amox = <b>3.9</b>	PrimoJ = 2.1
ORS = <b>5.8</b>	

*\*Stockouts not included*

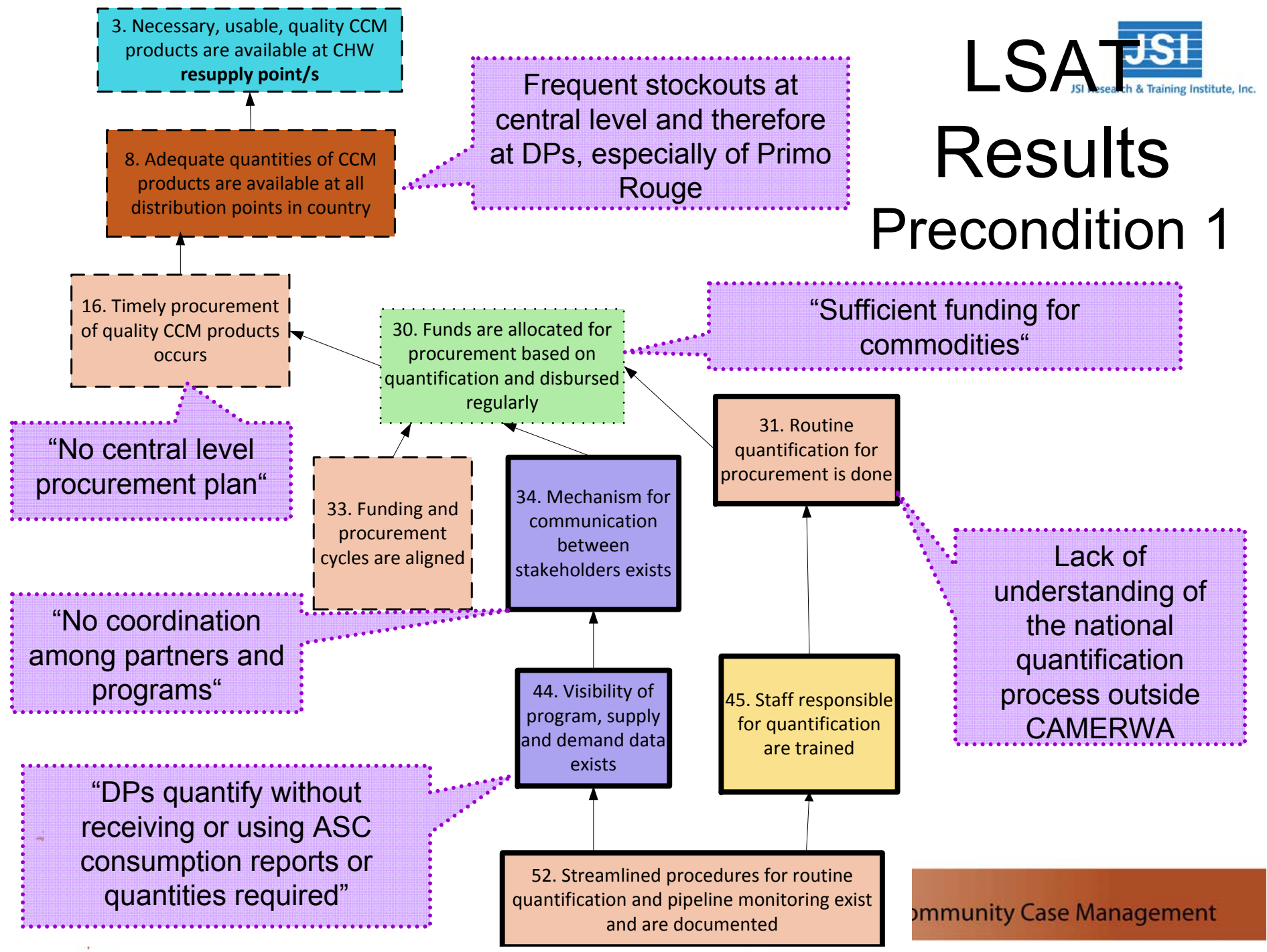


Colored bars represent ideal Min Max ranges for CS and District



# Results

## Precondition 1



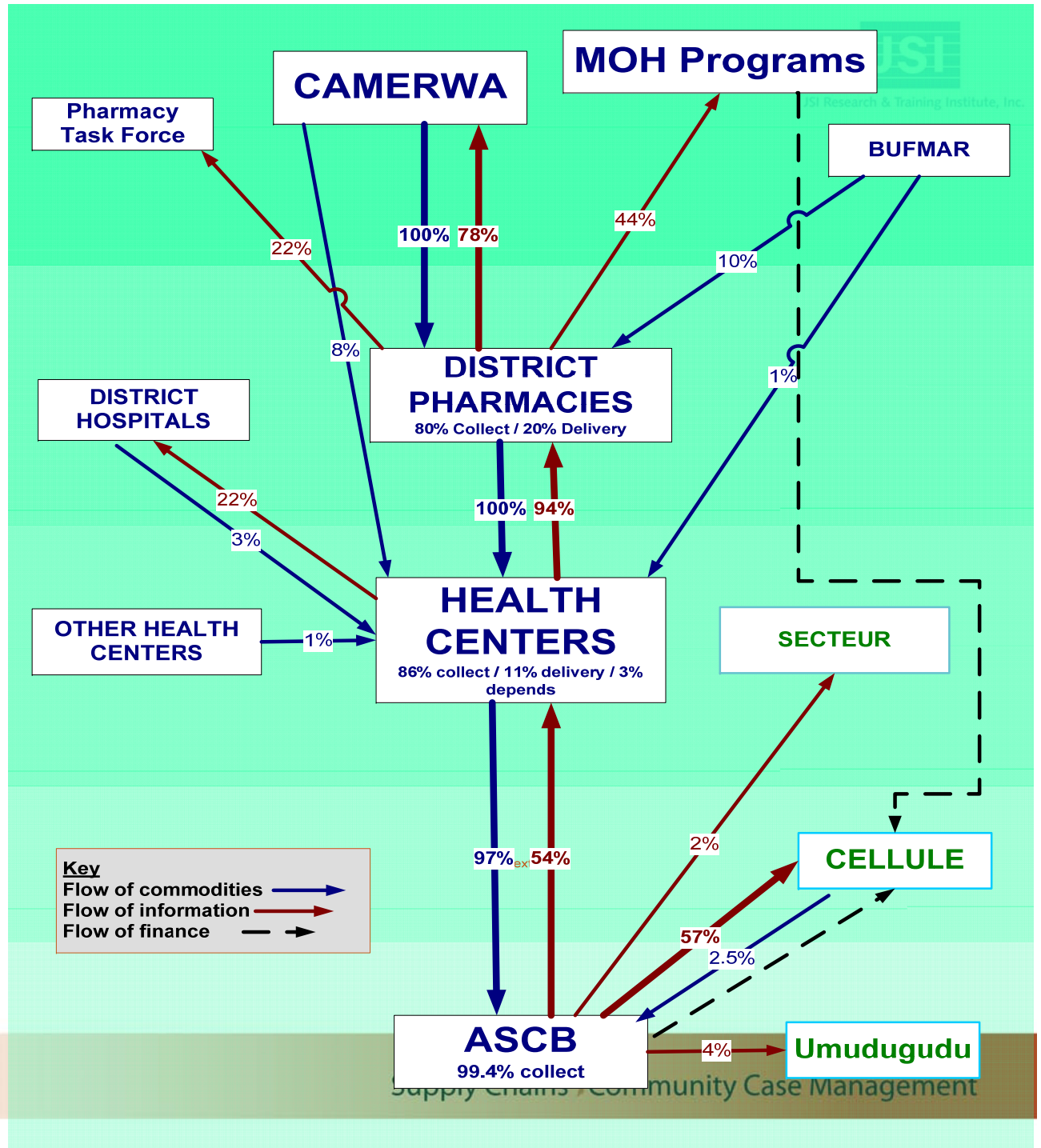
## PRECONDITION 2:

ASCs, or person responsible for ASCs resupply, know how, where, what, when and how much of each product to requisition or resupply and act as needed

- Supply chain data not visible at all levels of the system
  - District pharmacists do not routinely receive consumption, SOH or quantity required data from CS (and therefore ASCs)
- No standard operating procedures (SOPs) or standard formula for calculating resupply quantities for ASCs



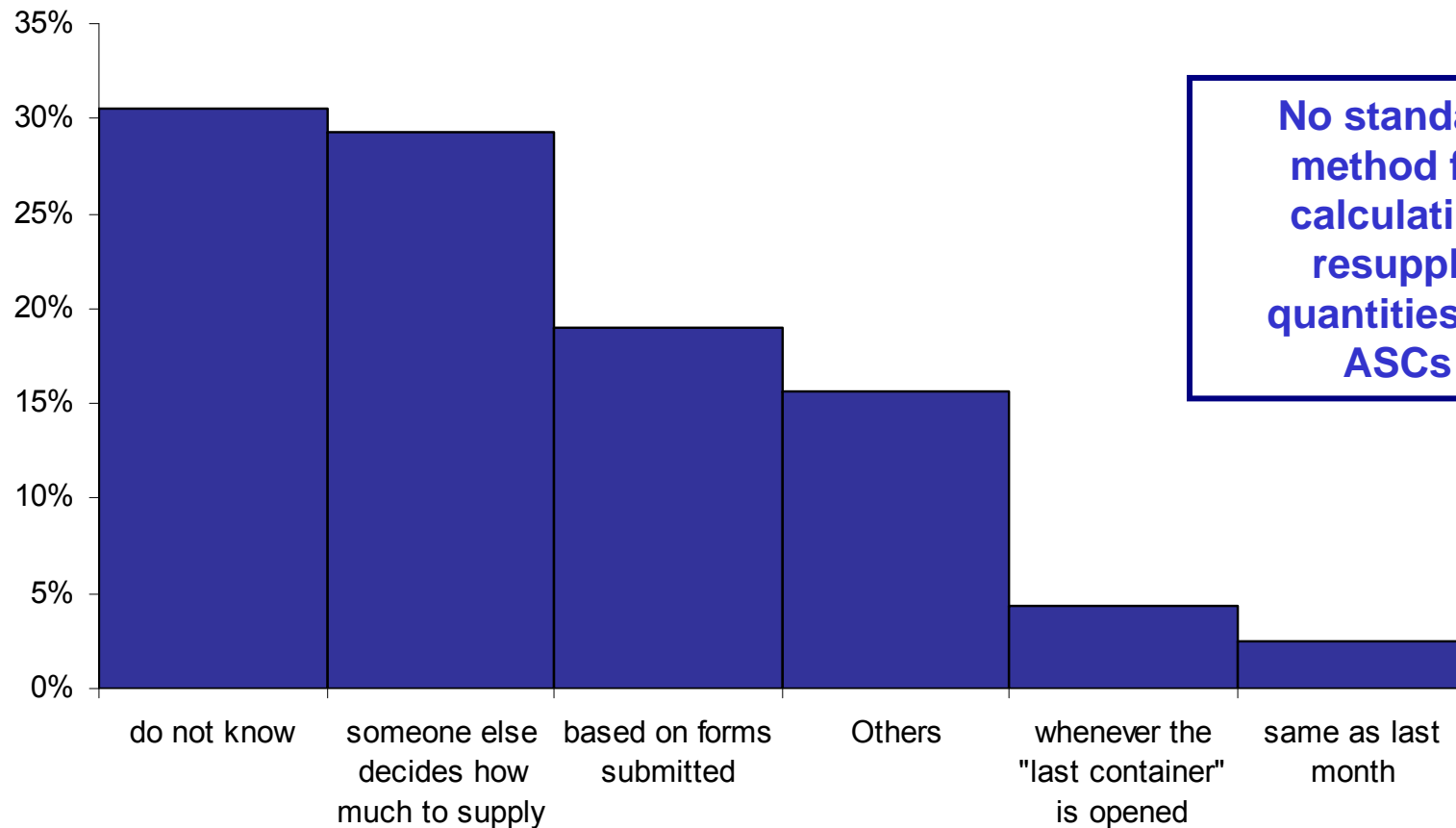
# Flow of Products and Information



# Methods for Determining Resupply Quantity



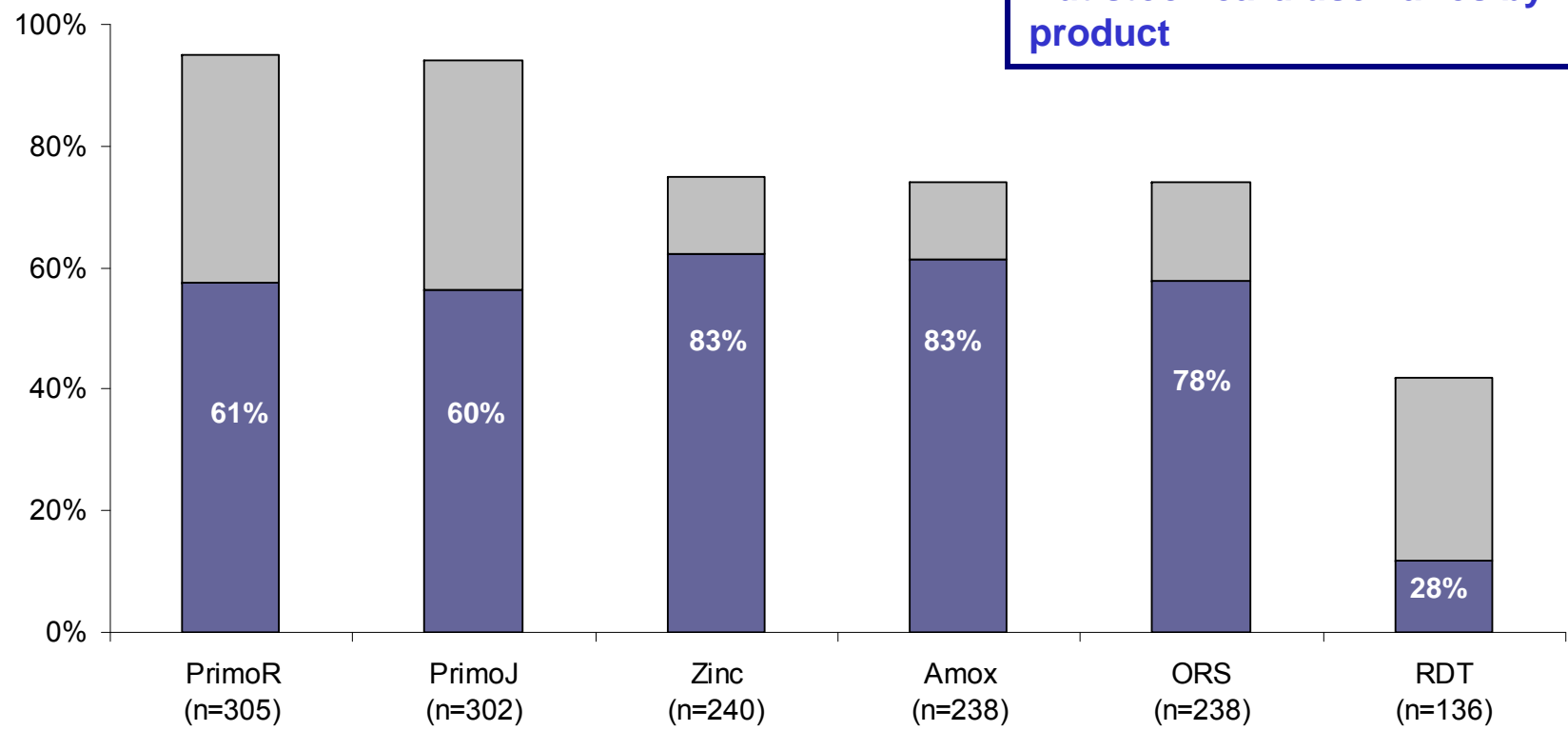
JSI Research & Training Institute, Inc.





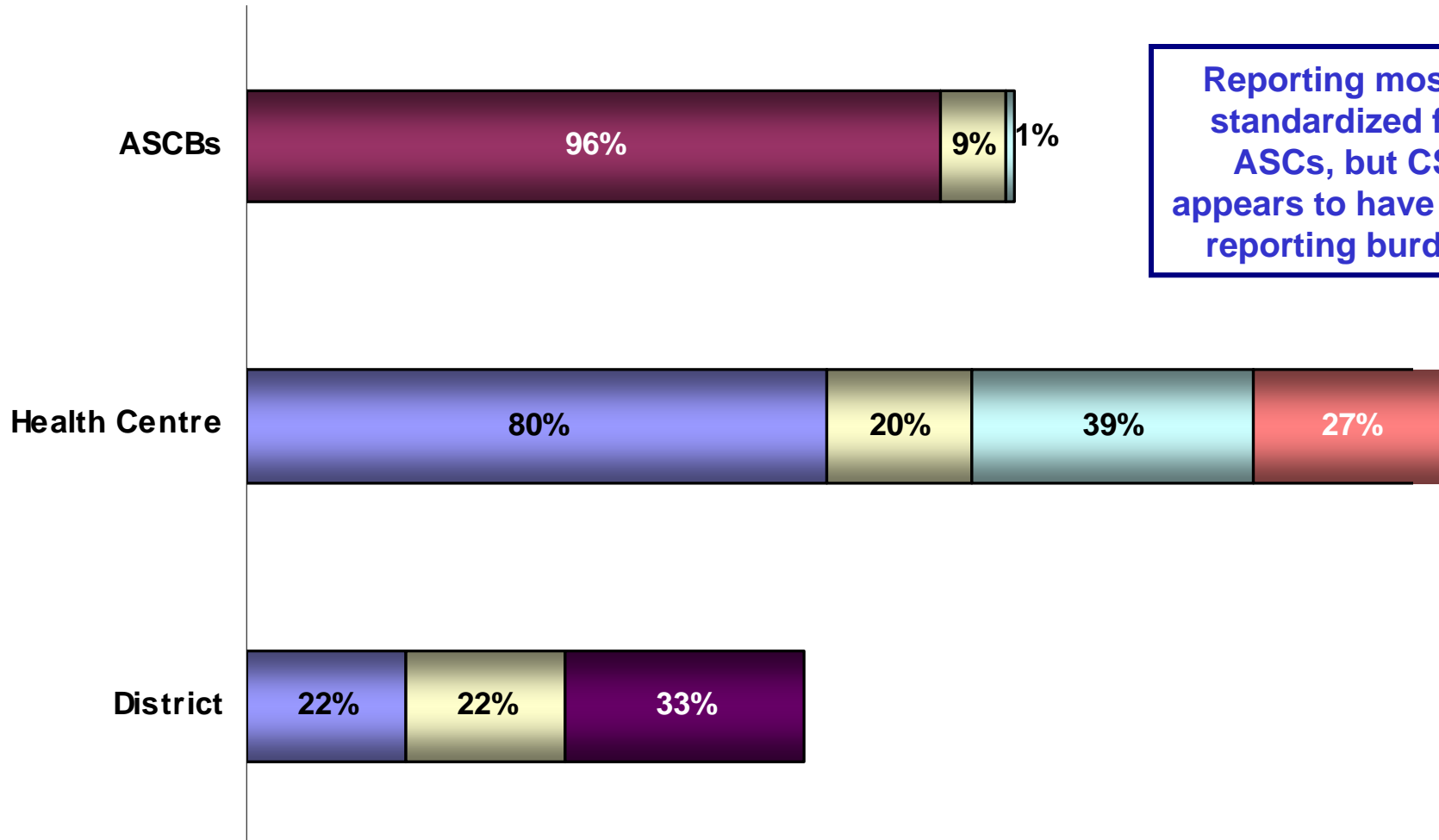
# Availability of Stock Card at ASC Level

72% of ASCs report using a stock card and being trained in record keeping  
But stock card use varies by product



■ Manages but no stock card for product  
■ Has stock card

# Types of Reports Submitted



Reporting mostly standardized for ASCs, but CS appears to have high reporting burden

- Requisition form
- Others
- Electronic requisition form
- Monthly activity report
- Electronic HMIS report
- Other standard report

4. CHWs, or person responsible for CHW resupply, know how, where, what, when and how much of each product to requisition or resupply and act as needed

18. CHWs routinely collect and report timely, accurate logistics data

12. Tools and resources needed to implement procedures are provided

“No documents that collect consumption data at ASC, requisition documents exist only for Primo”

“Not all products are included on LMIS forms “

19. LMIS forms or other data collection tools are available for CHWs

“This is a resupply and reporting system without a reporting tool”

“LMIS forms need to be harmonized “

36. CHWs are trained in procedures and processes for CCM product supply chain

46. Streamlined procedures for ordering, reporting, inventory control, storage and disposal of expired / damaged health products exist and are documented

e Management

# LSAT Results Precondition 2

## PRECONDITION 3:

ASCs have adequate storage: correct conditions, security and adequate space.

- Storage space and organization need improvement at all levels
- **93%** ASCs report being trained in both storage and FEFO



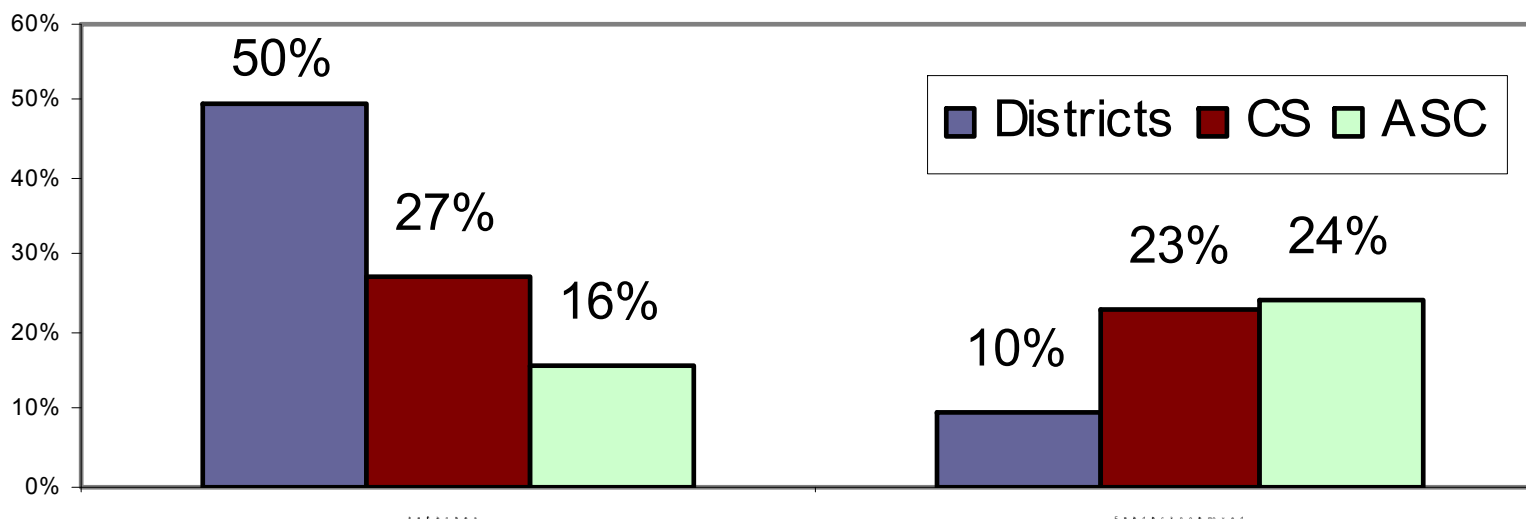
# Satisfactory Storage Conditions

Health products are stored:

1. in an area free of rodents or insects
2. securely with a lock and key, and with limited access
3. in an area that is protected from direct sunlight
4. at the appropriate temperature
5. in a clean, dry, well-lit and well-ventilated storeroom
6. in an area that is accessible during all normal working hours.
7. so that first-to-expire, first-out (FEFO) is observed
8. on shelves or stacked off the floor in stacks and away from walls
9. separately to damaged and/or expired health products
10. well organized in the drug box (ASCs only)



# Storage gaps: Two conditions require improvement at all levels



The current storeroom or storage area or box and organization are not sufficient for existing medicines and supplies

The stock card did not indicate removal of any damaged or expired medicines or supplies that are on site on the day of the visit



# Storage gaps: Conditions requiring improvement at each level

	District	CS
Do not store products on shelves or stacked off the floor	30%	13%
Do not store products organized by FEFO	20%	16%
Do no store products away from direct sun	10%	
Do not store them separately from chemicals and insecticides	10%	
		ASC
Do not secure the storage box with a lock and key, nor is access limited to authorized personnel	37%	
Do not store products in a clean, dry, well-lit and well-ventilated storage area	15%	
Storage area or box is NOT free of rodents or insects	15%	

5. **CHWs** have adequate storage:  
correct conditions, security and adequate space.

# LSAT Results Precondition 3

“Storage capacity not adequate  
...products stored near goats, cookers, bedrooms”

20. Appropriate and secure storage space for CCM products is available

21. Secure and suitable storage containers or shelving for CCM products are procured where needed

“Secure boxes are old, in poor condition and can't be replaced due to lack of funds”





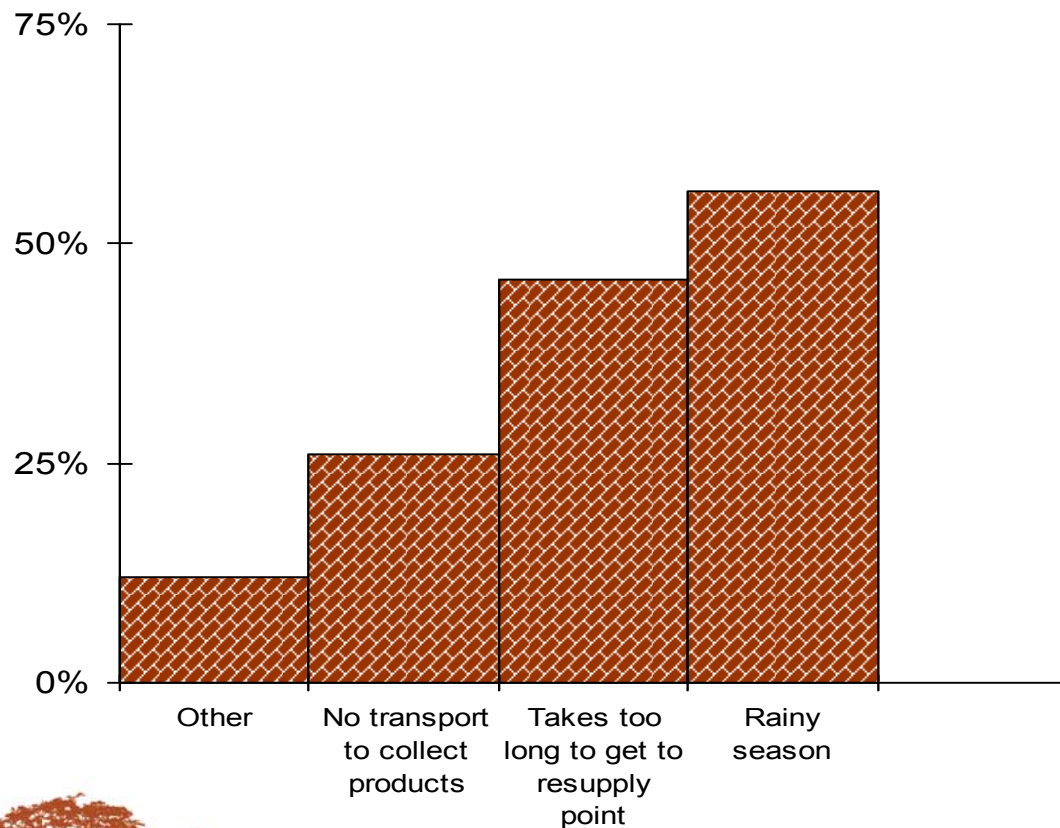
## PRECONDITION 4:

Goods are routinely transported between resupply points and **ASCs**

- ASCs are generally located in remote areas that are difficult to reach particularly during rainy season
- **26%** of 90 ASCs with problems related to collecting or receiving health products reported **lack of transport** as the major constraint



# Problems Collecting/Receiving Products Reported by 90 out of 321 ASCs



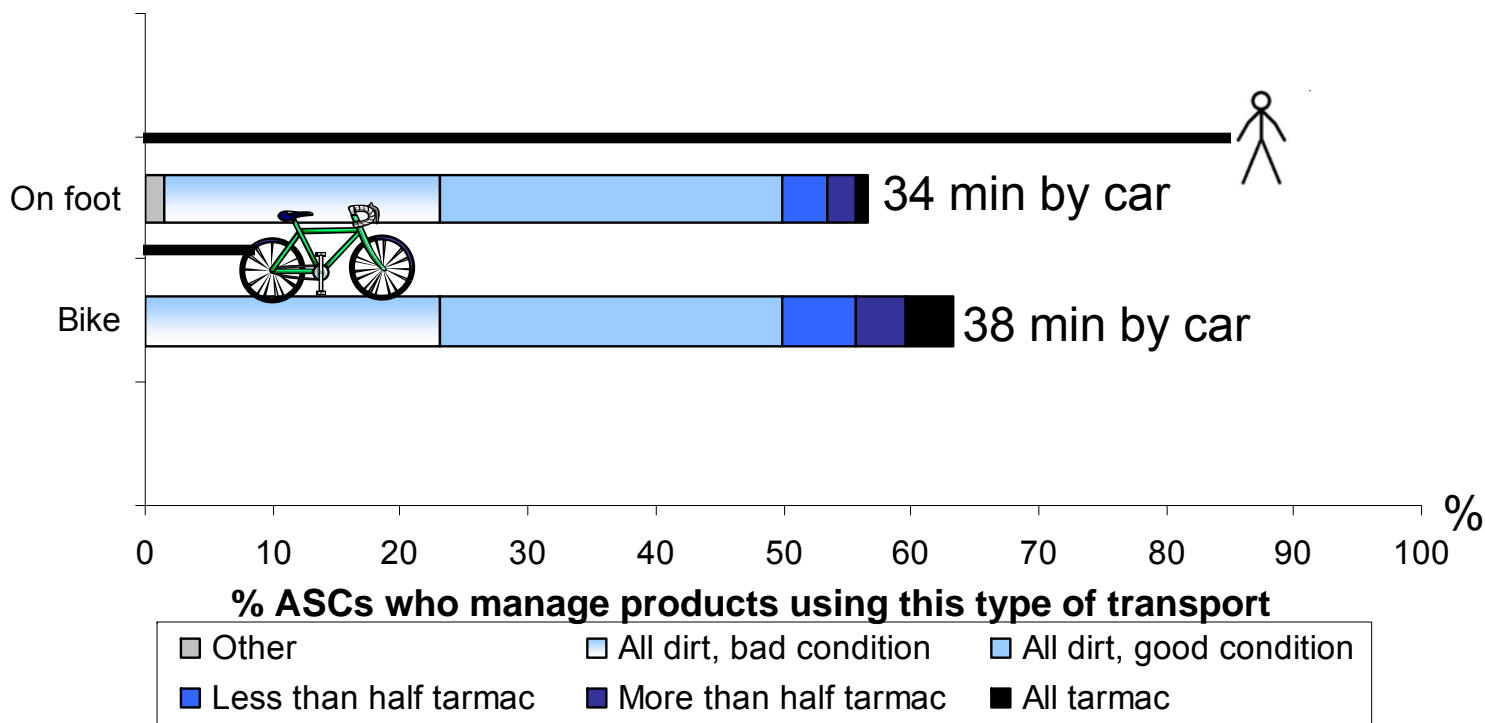
**Most ASCs travel less than an hour each way in dry season, while about half must travel more than an hour each way in rainy season**



# Transport and Distance

Most ASCs travel by foot, and the roads are overwhelmingly dirt.

88% of ASCs travel by foot, 10% use bikes, 0.9% use private vehicles, and 0.3% use public transport.



\*Length of bar indicates the distance an ASCs would have to travel to get to health center by car (in minutes).

\*Segments of bar indicate the proportion of ASCs using this type of transport who travel on various types of roads.

\*Line length indicates the percent of ASCs that use this type of transport.



# LSAT Results

## Precondition 4

6. Goods are routinely transported between resupply points and CHWs

13. Reliable, timely and appropriate transport is available to distribute or collect goods between resupply point and CHWs

“Distribution schedules exist for all levels but orders not delivered/collected on schedule.”

24. Adequate transport procured or hired when necessary for purpose of CCM product distribution

“Transportation is insufficient at all levels.”

“Transportation not used efficiently since there are too many uses for one vehicle.”

47. Streamlined transportation procedures for maintaining vehicles and distribution /collection of goods exist and are documented



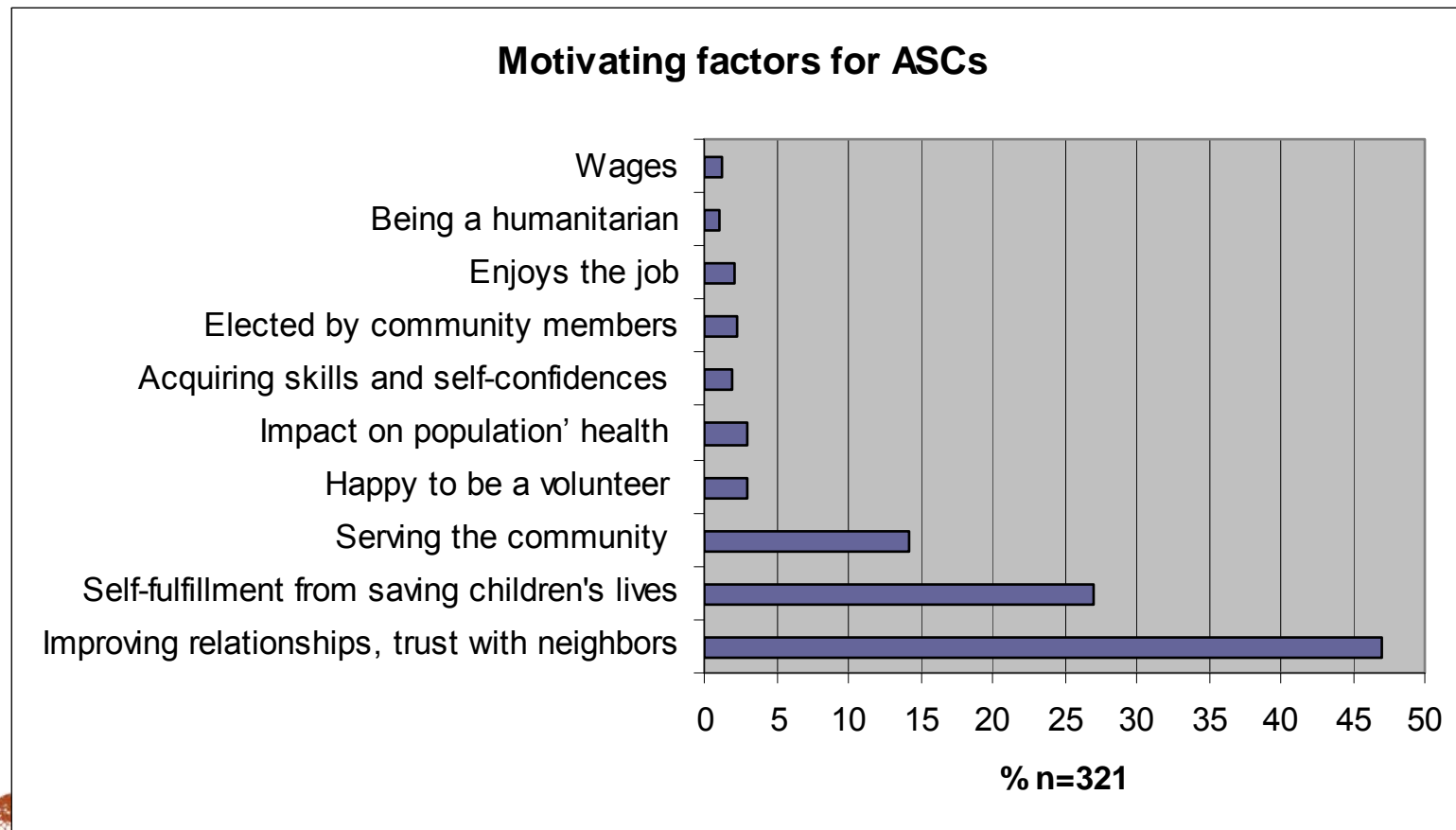
## PRECONDITION 5:

ASCs are motivated to perform their roles in the CCM product supply chain

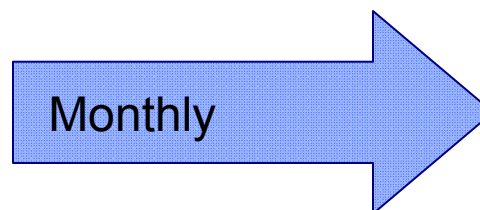
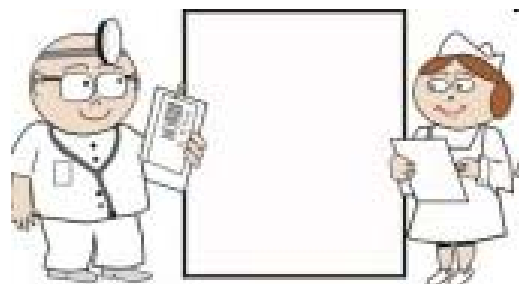
- Biggest motivators for ASCs
  - Social relationships, trust and esteem from neighbours (47%)
  - Being able to save children's lives/help community (27%)
- 90% ASCs reported being supervised at least once a quarter (54% monthly, 36% quarterly)



# What motivates ASCs to do their job?



# Supervision



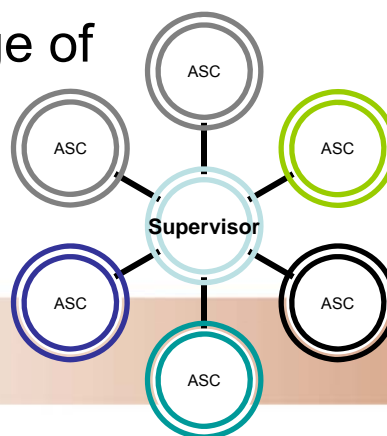
**52%** supervisors reported providing supervision to ASCs at least once a month

- **96%** supervisors reported providing feedback

**59%** ASCs reported receiving a supervisory visit in the last month

- **82%** ASCs reported receiving feedback specifically on managing products

...supervisors report supervising an average of **88** ASCs each

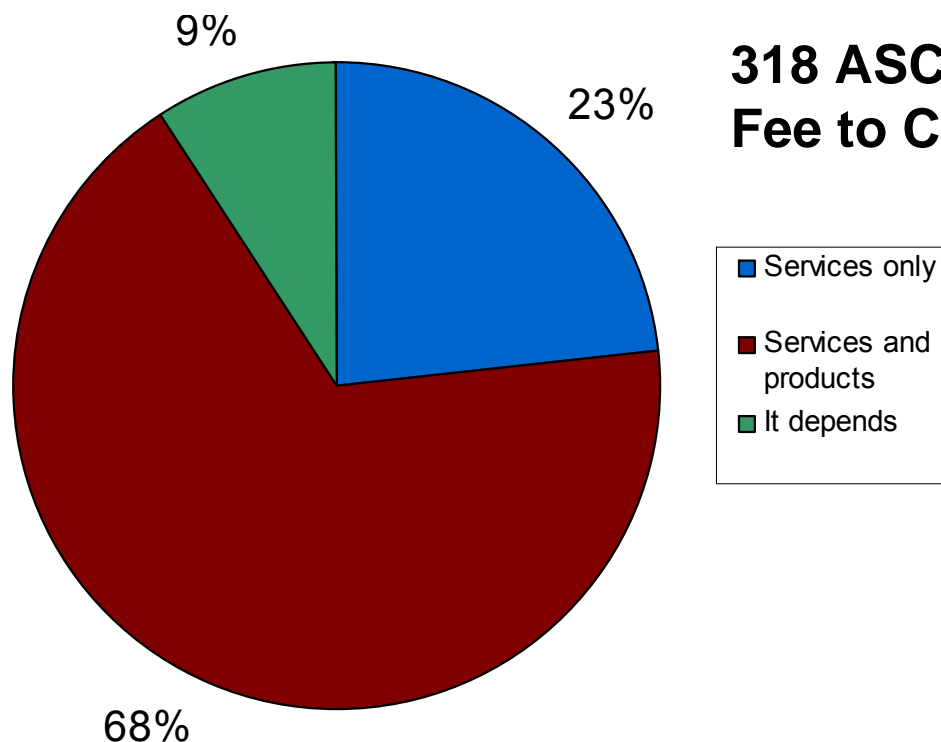


**Does most supervision visits occur in a group setting?**

**Are drug boxes viewed during supervision?**

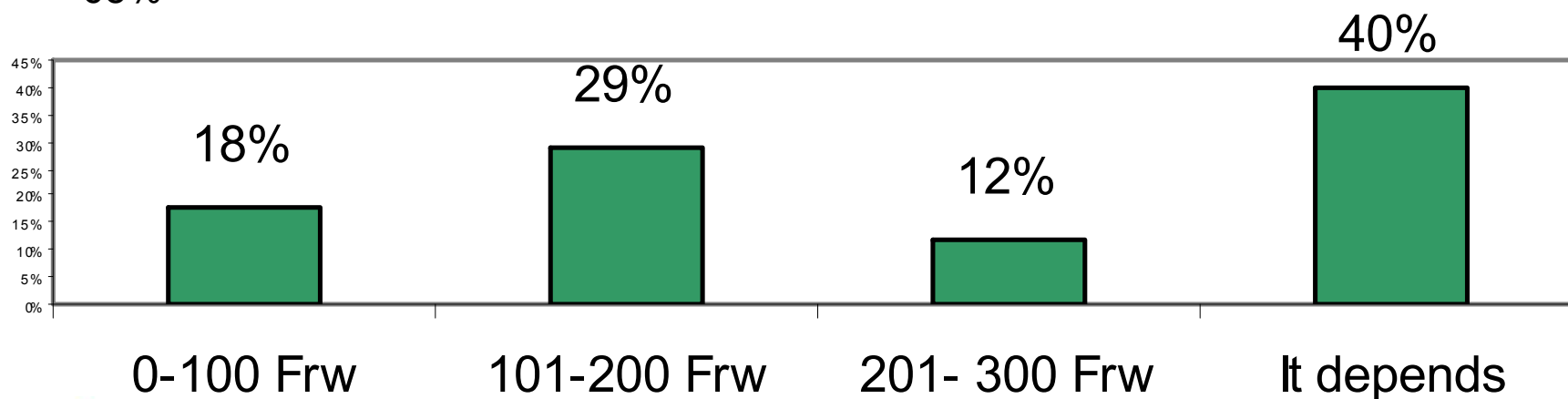


## 318 ASCs Report Charging a Fee to Clients



Some ASCs charge for consultation only.

Variation in amount of fees charged: Huye & Rwamagana are the only districts charging 0-100 Frw



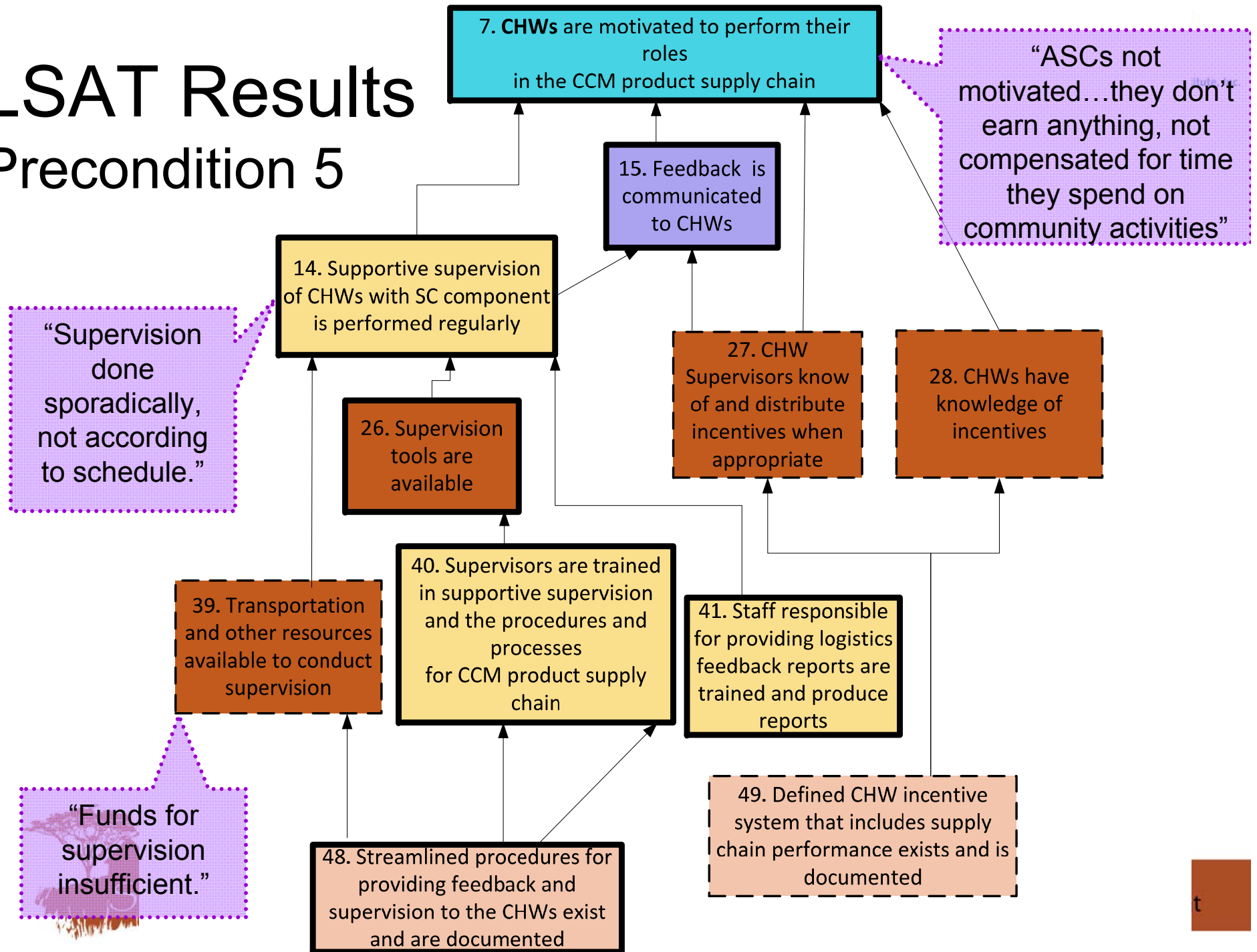
## Value of fees charged by ASCs



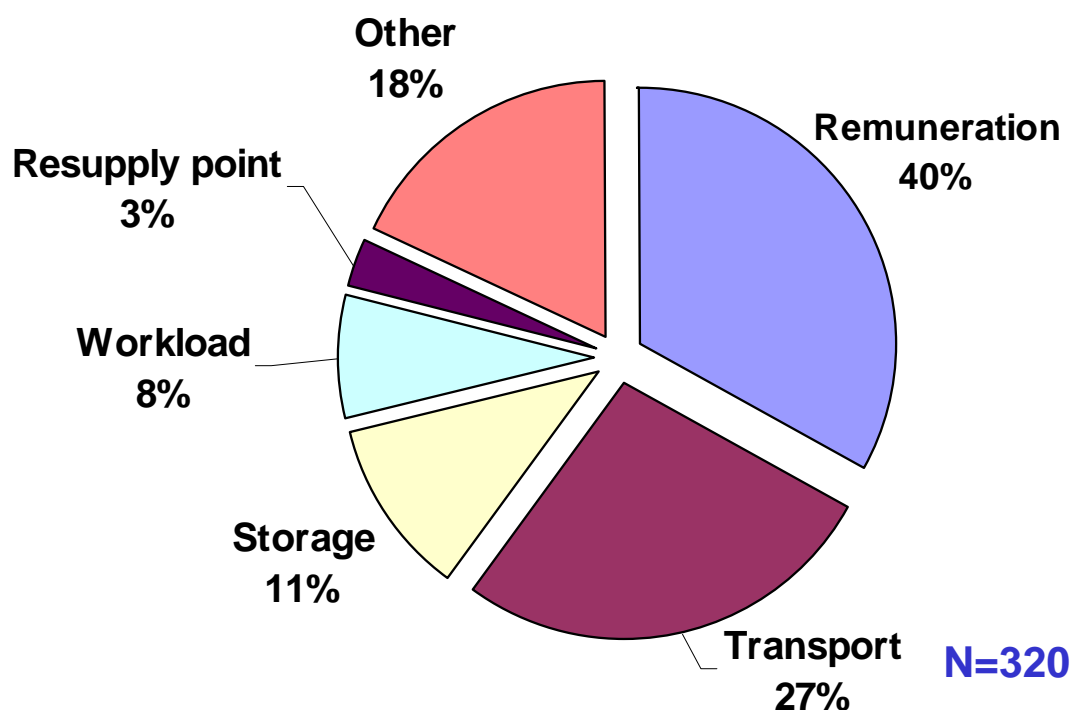


# LSAT Results

## Precondition 5



# General results: ASCs' Greatest Challenge in Managing Health Products



What would you consider your greatest challenge to managing health products?



# Consensus on Priority Problems

## Districts, CS, ASCs

- Lack of transport between ASC→CS
- Insufficient storage space/conditions
  - Boxes too small for products, reports, cash
  - Carrying bag not waterproof
- Lack of motivation → no compensation for time/travel (North/West)
  - Some ASCs have to pay out of pocket to go collect products, while dividends are received late and in low amounts
- Non-standardized reporting/inadequate SOPs (East/South)



# Other Problems Raised

## Districts, CS, ASCs

- No mechanism to communicate if lack of product availability between CS ↔ ASC
- Lack of ownership by CS pharmacy managers for CCM products
- Issues related to management of expiries
  - Districts often receive products from CAMERWA with limited shelf life remaining



# Question & Answer



## Discussion

# Ideas Proposed

- Transport
  - Bikes for each CHW, or cell coordinator only
  - Transport allowance when CHWs come to resupply point
  - Vouchers, incentives for using public transport
- Storage
  - Two boxes, one for reports/cash, one for products (bigger, impermeable, compartmentalized product box)
  - Waterproof bag for transporting products



# Ideas Proposed

- Reporting/SOPs
  - Integration of SIS and SISCOm will result in district pharmacists getting resupply data for CCM program
  - Better coordination of CCM product requirements between CS pharmacy managers and ASC supervisors
- Communication
  - Phone credit to ASCs for contacting CS prior to travel
  - SMS system for transmitting stock data
- Others?



# Thank You



JSI Research & Training Institute, Inc.



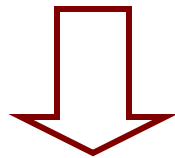
Supply Chains <sup>4</sup> Community Case Management



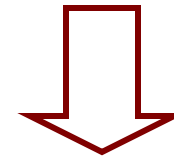
# Access to Communication Technology



**98%** of ASCs who manage health products have a mobile phone



**62%** have network coverage at work all the time,  
**85%** have at least sometimes



**39%** have source of recharge for phone battery  
**9%** have at least sometimes

