Community Health Supply Chain Midline Evaluation

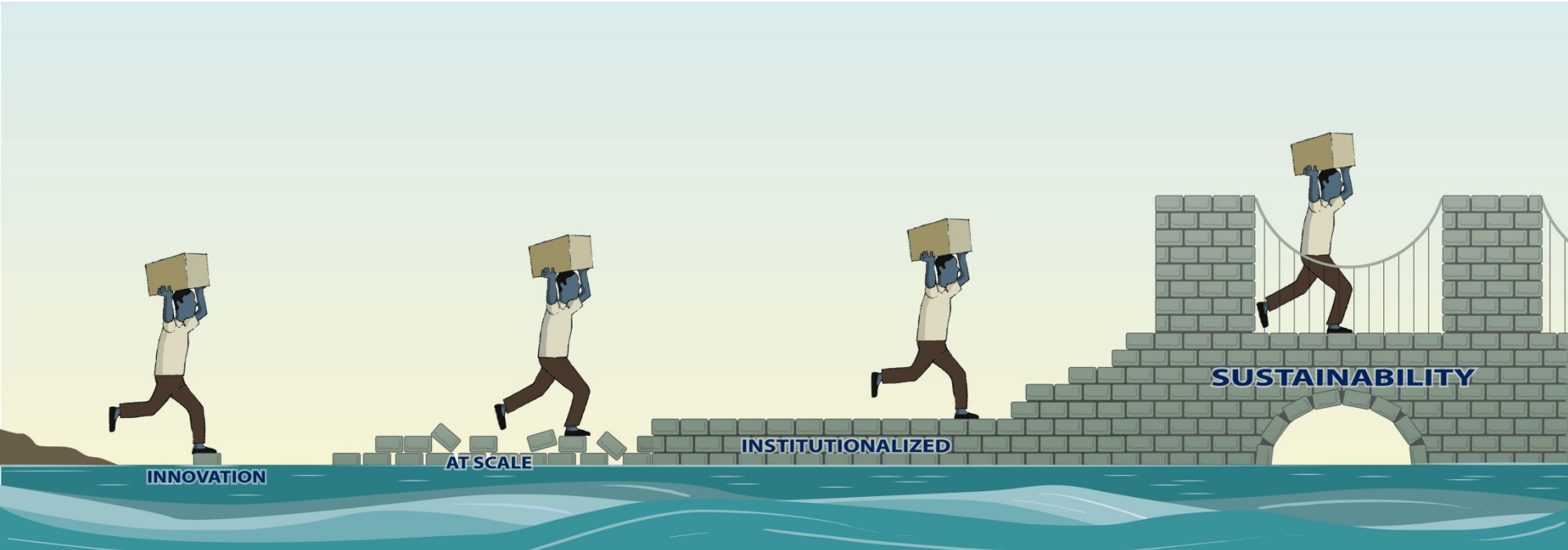
Rwanda

April – May, 2013

JSI Research & Training Institute, Inc.

SC4CCM Project

SC4CCM is a learning project that identifies **proven, simple, affordable** solutions that address unique supply chain challenges faced by CHWs. The project seeks to foster a **sustainable approach** to scale up and to ensure that MOH can own and adapt successful models to strengthen community supply chain practice. This will be achieved through facilitating the establishment of coordination mechanisms to guide stakeholders as they embark on institution building.



Baseline Assessment (2010)

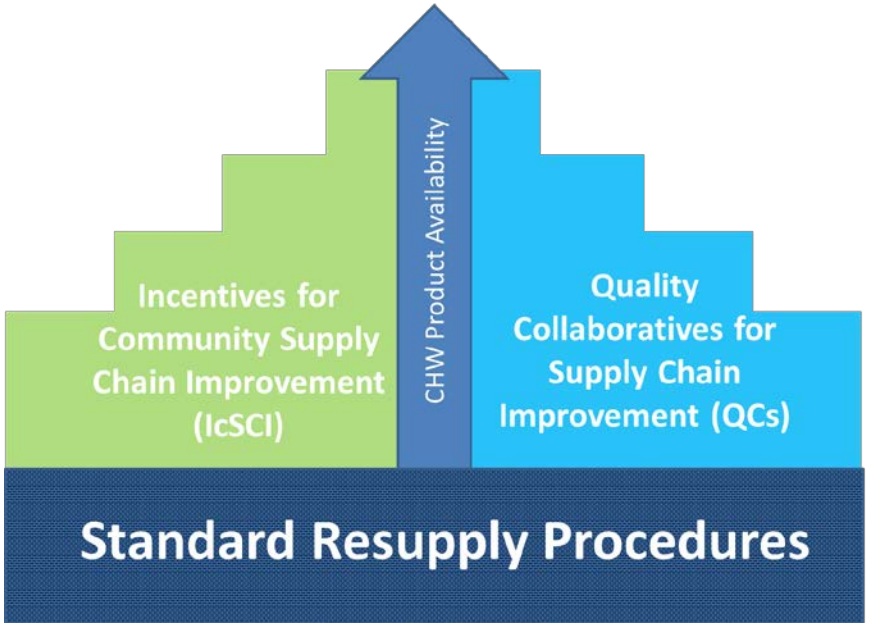
- **49% of CHWs** who manage health products had **five CCM tracer drugs** in stock on day of visit (amoxicillin, ORS, zinc, ACT 1x6, ACT 2x6)
- **No Standard Resupply Procedures**
  - No standard formulas for calculating resupply quantities for CHWs
  - Flow of information not streamlined or aligned with product flow
  - CHWs report to multiple places, but often not to their resupply point
- **CHWs lack sufficient storage and organization for existing medicines and supplies**
  - 18% of CHWs observed had insufficient storage for existing medicines and supplies
- **Transportation is difficult between resupply points and CHWs**
  - 88% of CHWs travel by foot, 10% bikes, 0.9% private vehicles, 0.3% public transport
  - CHWs reported lack of motivation to travel to collect supplies as there was no compensation for time/travel

Improving Product Availability

Two Interventions to Operationalize RSPs

Foundational (cross-cutting) Intervention: **Standard Resupply Procedures (RSP)**, simple tools and procedures designed to ensure that CHWs always have enough CCM products to serve clients

IcSCI aims to build on and strengthen RSPs by using the existing community based performance-based financing (PBF) scheme for CHWs to incentivize CHWs to improve supply chain performance



QCs aim to establish a network of health center-based quality improvement teams with shared objectives and indicators on how best to operationalize RSPs

...both with the goal of **reducing stockouts** and **improving product availability**

Objectives of Midline Assessment

1. Assess & compare the **impact of the two intervention groups** (QC and IcSCI) on improving supply chain performance at the community level against a group of 4 baseline but non-intervention districts

2. Provide **evidence about implementation and use of resupply procedures** as an effective system for resupplying community health workers

3. Use evidence from the interventions tested by SC4CCM to identify successful SC practices to support the MOH of Rwanda to take action towards **scaling up promising activities**.

Assessment Methodology

- **Qualitative**
  - Logistics system assessment workshop (LSAT)
  - Key Informant Interviews
  - Supplemental Focus Group Discussions, themes drawn out across districts
  - Learning sessions (QC)

- **Quantitative**
  - Facility based survey (LIAT) using mobile data capture
  - Stock data for 6 tracer commodities:
    - Amoxicillin 125 mg tablets
    - ORS sachets
    - Zinc 10 mg tablets
    - Primo Rouge tablets (1x6)
    - Primo Jaune tablets (2x6)
    - Rapid Diagnostic Tests (RDTs)

LIAT Sampling: Midline (BL)

	QCs	IcSCI	NI	Total
	Ngoma, Nyabihu, Rutsiro	Bugesera, Burera, Huye	Gasabo, Musanze Ruhango, Rwamagana	
District	3 (3)	3 (3)	4 (4)	10 (10)
HC	31 (30)	37 (31)	40 (39)	108 (100)
Cell coordinators	70 (NA)	78 (NA)	NA	148 (NA)
CHWs (binomes)	105 (85)	116 (102)	128 (134)	349 (321)

Focus Group Discussion (FGD) Sampling

1 FGD per intervention district (6 total) with staff from 2 HCs per district (CHW Supervisors, HC Pharmacy Managers, CCs and CHWs)

At baseline 65% of 321 sampled CHWs managed all 5 CCM products; at midline 94% of 349 CHWs were managing all 5 CCM products.

Additional Sources of Data

- **QCs**
  - Learning session feedback
  - Self assessment survey LS #3 (March 2013)
  - Feedback (verbal voting) from LS #4 (April 2013)

- **IcSCI**
  - Quarterly performance scores from incentives database for all IcSCI districts and HCs (May 2012 – March 2013)

- **QC / IcSCI** (December 2012 – May 2013)
  - Monitoring/Intervention support checklist - interim data collection at HCs during the course of the intervention period (QCs = 24 HCs, IcSCI = 34 HCs)
  - Midline data collection used the same checklist for competency/accuracy checks (QCs = 12 HCs, IcSCI = 10 HCs)

Context

- Non-intervention districts did not roll out the standard RSPs as planned
- Shortages of ACTs early in 2013 may have impacted incentive scores where in-stock was included; however, scores were overridden when stockouts were caused by national shortages
- Change in products after BL (amox 250 → 125mg, zinc 20 → 10mg) in Sept/Oct 2011
- New drug box rolled out at end of 2012 (in process)
  - In Burera, Bugesera (IcSCI) and Nyabihu (QC) only at time of survey

Product Flow
All districts → HC

- 69% of the time the district always delivers products to HC
- 13% of the time HC collects
- 18% of the time it varies

→HCs in IcSCI districts have highest percentage of variation and lowest percentage of districts delivering

Health Centers resupply an average of:

QCs - 72 CHWs
IcSCI – 85 CHWs
NI – 75 CHWs

Source: LIAT

Contextual Results: LSAT

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Pediatric friendly dispersible tablets used for CCM

Community level products differentiated by packing and strength of formulation

GoR/GFATM: Amox, zinc and ORS

GFATM/PMI: Primos and RDTs

- Quantification conducted regularly and funding generally available to fully cover CCM product needs
- Data for forecasting varies in completeness, accuracy
- Procurement delays have impacted product availability for Primos (ACTs)

MCH TWG is a coordinating point for MOH, donors and partners

MPDD procures for all programs

Ability to procure up to 18 months (framework contract) but there have been delays in some recent ACT procurements

Financial pipeline for procurement is direct (MPDD is sub recipient for Global Fund)

Coordinated by CHD for amox, zinc and ORS

Coordinated by NMCP for Primos and RDTs

Quantification plan revised at mid-year point

Midline Results

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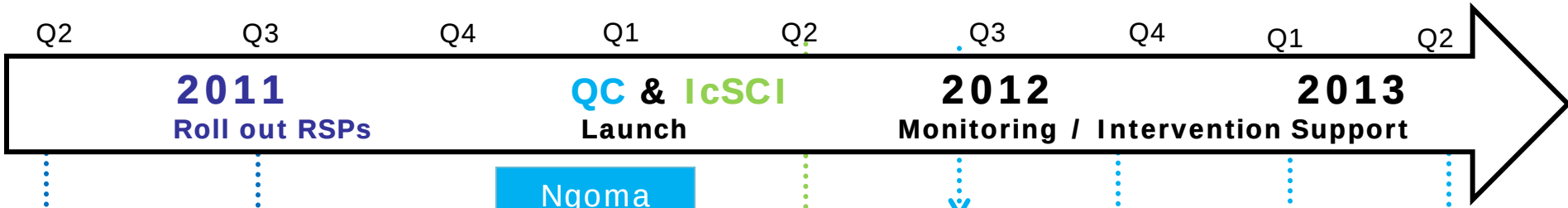
Implementation: Rollout, Monitoring, Intervention Support



- Resupply procedures validation workshop
- RSP Orientation for national trainers

- TOT for 6 district pharmacists
- Roll out training to HC staff and CCs in 6 districts

Ngoma training

Rutsiro training

Nyabihu training

Huye training

Bugesera training

Burera training

Confirm CCs trained on IcSCI and received summary supplemental check lists

LS 1: simplifying the QC process

LS 2: reinforcing RSPs

LS 3: Consensus on useful elements

Final LS (All QITs): best practices to scale up

Targeted OJT for HC CHW sup on completing CHW log & evaluation reports

Coaching visit by district coaches and program staff to QIT meetings

RSPs: Core Features

Cell Coordinators are the key players. **Three tools**: stock card, resupply worksheet, "magic" resupply calculator

- **Cell level**: CHWs bring their stock cards and meet at Cell Coordinator's (CC) house or other convenient venue to report each month
  - CCs use each CHW stock card, magic calculator to determine how much resupply required, enter on resupply worksheet
- **HC level**: CHWs and CC attend HC monthly meeting
  - CCs give HC Pharmacy Managers resupply worksheet
  - HC use resupply worksheet to prepare orders for all CHWs, give to CCs
  - CC distributes quantities to CHWs, either at meeting or afterwards

Stock Card Availability & Use

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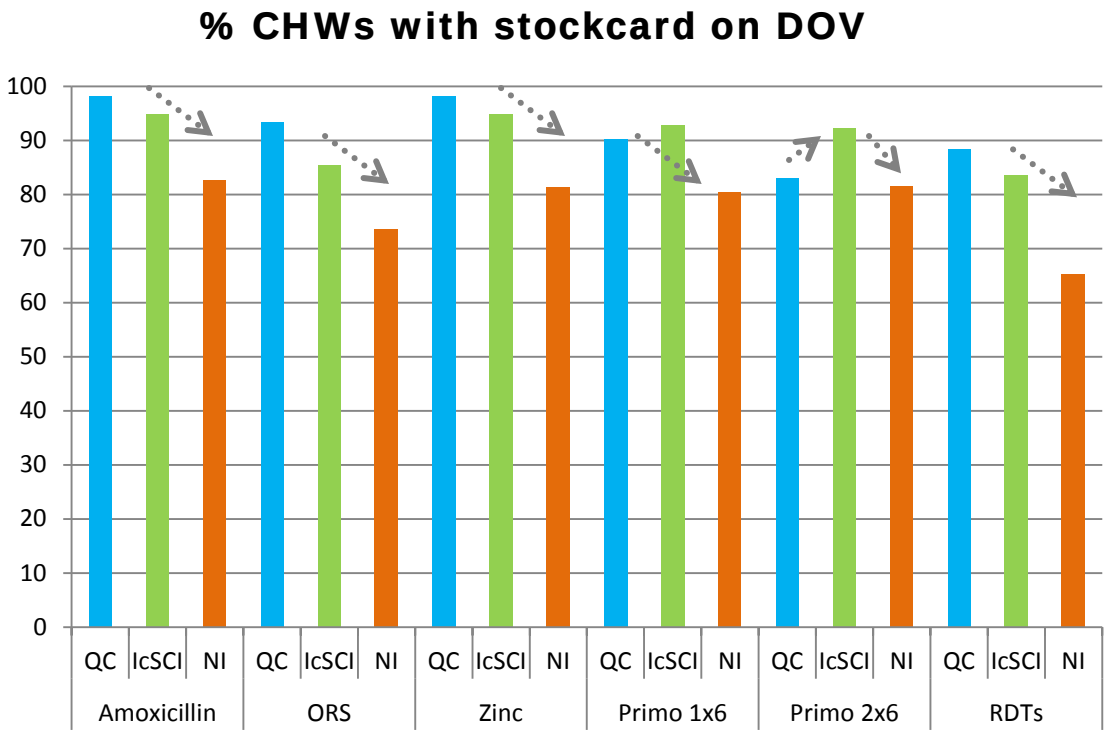

Arrow indicates significant difference p≤0.05

Stock cards existed before RSPs but use and availability are key to RSP process

- 100% CCs report holding **regular cell meetings** to compile data and 100% CHWs report attending such meetings
- 92% CCs report **all CHWs bring stock cards** to cell meetings
- 99% CCs report **no problems completing RSW** for cell **prior to** monthly HC meeting

High availability of stock cards, slightly better in QC/IcSCI compared to NI districts, except for Primo Jaune (2x6)

Cell meetings held regularly, most CHWs bring stock cards to help CC complete RSW

Determining Resupply

Who determines resupply quantities? (reported by CHW)

Expected response (RSP Design):
✓ Cell Coordinator

Group (n)	✓ CC	CHW Sup
QC (105)	**91%**	8%
IcSCI (116)	**86%**	5%
NI (128)	18%	**62%**

How are resupply quantities determined? (reported by CHW)

Group (n)	✓ Magic Calculator
QC (104)	**50%**
IcSCI (116)	**53%**
NI (128)	17%

FGDs: The fiche de calcul is like a bible to us…it tells us what the CHW needs exactly. And the CHW knows it's the exact amount required because s/he can read it. (Pharmacy Mgr, Nyabihu)

% CHWs reporting receiving resupplies **every month**

QC (105)	**77%**
IcSCI (116)	**83%**
NI (127)	64%

- Cell coordinators determine resupply quantities most of the time in both **QC** and **IcSCI**, CHW Supervisors determine in NI districts
- **Much greater proportion of CHWs** in QC/IcSCI vs. NI districts report that resupply quantities are either determined using the magic calculator or a formula

High adherence to some RSP procedures; use of magic calculator could be better understood

Competency in Using RSW

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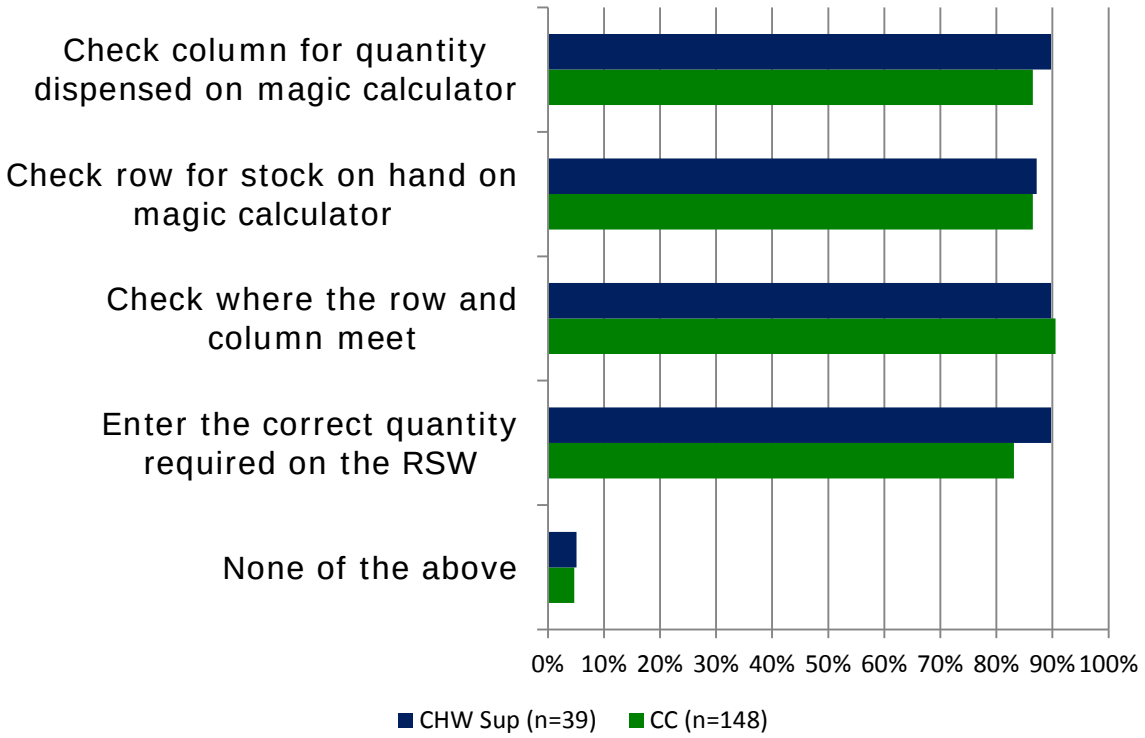
% CCs, HC CHW Supervisor using RSW correctly



86% CCs who use RSW are able to enter the correct quantity required, no differences between QC and IcSCI districts

Only 7 of 136 (5%) CCs trained reported problems using RSW

- Problems cited (other than stock card availability):
  - →Tool too complex/don't understand how to complete
  - →Not enough pages in the RSW
  - →Did not have the resupply calculator

High levels of competency among CCs and CHW Supervisors in completing RSW; most RSWs completed by CCs

Resupply Process at HC

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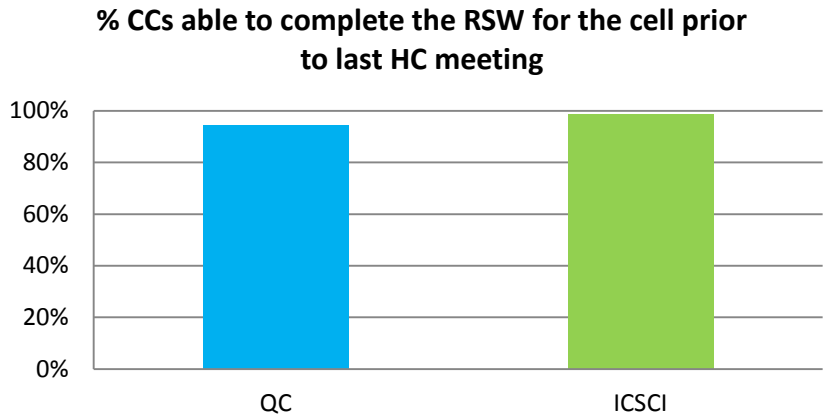
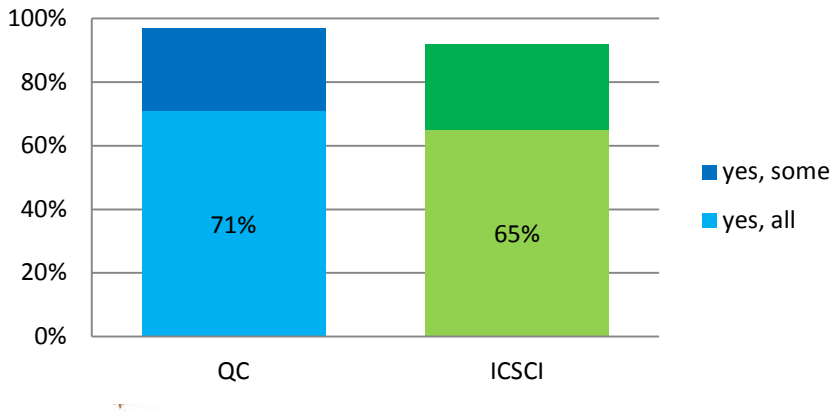


- **95% CCs** report picking up products for all CHWs in their cell after every monthly meeting
- **93% CHWs** report receiving products from CC; 14% receive from CHW Supervisor; 3% from HCPM

68% of HC Pharmacy Managers had copies of RSWs from all cells, 26% had copies from some – wide variation amongst districts in both intervention groups



Benefits of RSPs

FGDs: [Prior to RSP implementation] it was jungle law and often many CHWs went away empty handed. The quick ones took away too many drugs which kept expiring in the community…As a result of all this confusion, [we] were in constant conflict with pharmacy staff…now…total harmony reigns between us and the pharmacy staff. No unnecessary drugs are expiring…we used to have as many as 3000 doses of amoxicillin expiring. (CHW Sup, Ngoma)

Resupply process at HC level mostly well implemented

RSPs: Summary

Successes

- Implemented mostly as planned
- Created foundation for good stock management – improved collection and movement of data and formulaic decisions about resupply quantities
- Availability and use of stock cards significantly higher in intervention groups
- CCs were able to play important role in coordination of resupply data and process and were the primary source of resupply for CHWs
- Tools, processes well understood and followed for the most part
  - High rates of availability and correct use of other tools
  - High competency in use of resupply worksheets by CCs, CHW Sup
- Monthly meetings held regularly; more regular (monthly) resupply seen in intervention districts compared to NI districts

Challenges

- Use of Fiche de calcul/magic calculator needs to be better understood

Quality Collaboratives

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District Coaches: District Hospital Monitoring and Evaluation Officer, Monitoring and Evaluation Officer from Mayor's Office, District Pharmacist, District Data Manager, District CHW Supervisor

QIT Members

Health Centre QIT team members: CHW Supervisors from HC level, Pharmacy Store Managers, Data Manager and Cell Coordinators

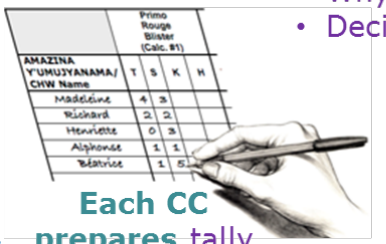
Quarterly Learning Sessions: All QITs from one district
- Monthly journal
- Action plan

District COACHING

QIT Monthly Meeting at HC (CCs, CHW Supervisor, Pharmacist, Data Mgr)
- Why-Why analysis
- Decision matrix

QITs:
Ngoma – 12
Nyabihu – 15
Rutsiro - 17

QIT prepares/ reviews action plan, monthly journal



Each CC prepares tally sheet, bar graph

QIT implements action plan through supervision, monthly HC meeting with CHWs
- Supervision checklist
- Coaching guide

Monthly Allowances to:
- District coaches for coaching
- CCs to facilitate supervision

CC collects data from CHWs on common SC problems
- Supervision checklist
- Coaching guide

Quarterly Cycle

Monthly Cycle

nity Case Management

QC Core Features

Objective: Test a quality improvement collaborative approach by implementing quality improvement teams (QITs) at the health center level to find solutions to challenges operationalizing resupply procedures at the CHW level, and share best practices through a peer-to-peer learning approach. Original plan-do-study-act

Quality Improvement Teams (QITs) – 1 per HC

1. Meet monthly at HC prior to regular monthly meeting
2. Cell coordinators use supervision checklist to supervise all CHWs once per quarter, use supervision checklist to identify problems
3. Tally sheet, bar graph and decision matrix used by QIT during monthly meeting to assess progress and prioritize problems to address
4. Prepare action plan and document progress using monthly journal
5. District coaches attend monthly QIT meetings

Quality Collaboratives (QCs) – 1 per district

1. All QITs in the district meet at quarterly Learning Session (LS)
2. Share lessons and successes to promote peer-to-peer learning
3. Final Learning Session with participants from all QITs

Supervision

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Supervision

- 99% of CCs report visiting all CHWs quarterly and collecting SC data
- 100% CHWs report receiving supervision, 90% citing visits are once or more a month

FGDs: Supervision visits are the foundation of the QIT approach

FGDs: The facilitation [allowance] was very important in helping conducting regular supervision visits. Without this facilitation, it will be almost impossible to sustain the QC approach in our district (CHW Supervisor, Rutsiro)

During DVWs, CHWs highlighted their appreciation for and the value of having CCs conduct home supervision. CC visits were perceived to greatly improve communication between CHWs-HCs and to help with reinforcing RSPs and skills

- **High levels of reported CHW supervision by CCs, corroborated by CHWs**

Monthly QIT Meetings & District Coaching

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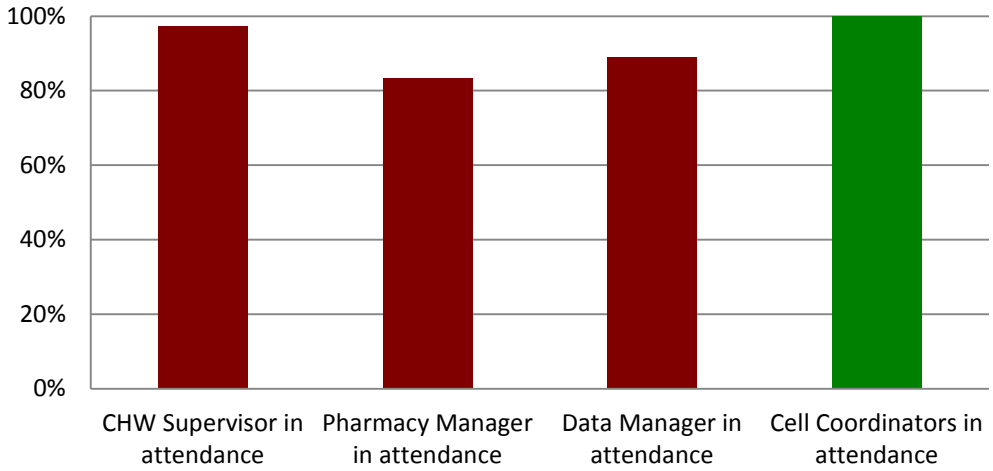
QIT members present at QIT meetings



75% of expected members attended QIT meetings. Least consistent participants were pharmacy and data managers

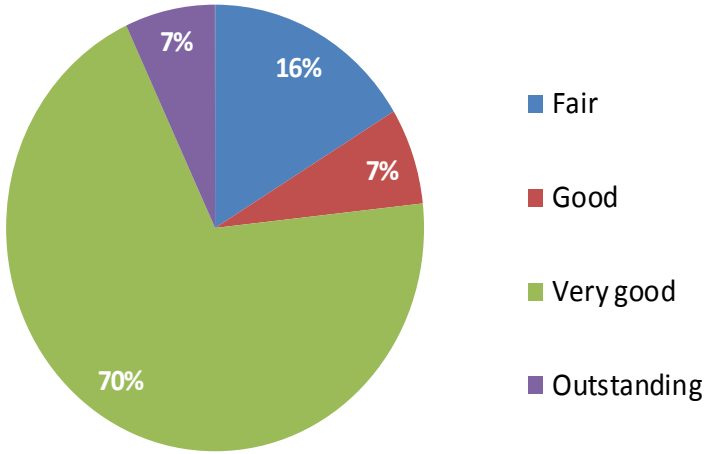
- 19% of CHW Sup said not having allowances for the HC staff was a challenge

QIT Meetings valued.
55% QITs met **after** the final learning session (either in April or May)

District Coaching at QIT Meetings

% CHW Supervisors reporting QIT coaching visits	
√ √ √ **Every month**	**57%**
√ √ Every few months	23%
√ Every quarter	20%

How helpful were coaching visits?



Most Health Centers rated coaching visits as very good

QIT: Tools & Skills

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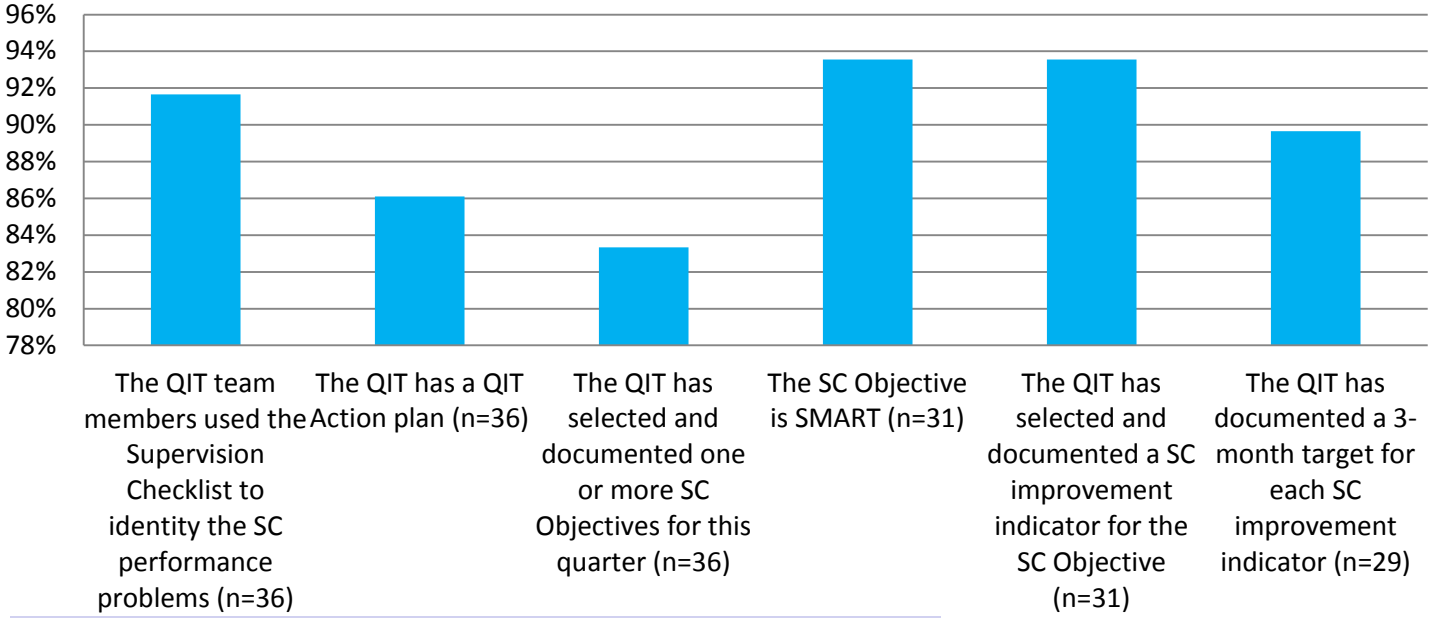
Assessment of Skill in QIT Processes



High availability and effective use of QIT tools by cell coordinators and HCs; all districts scored above 70% in skills in each step in the process

TOOLS

Value: CCs in all three QC districts placed a high value (>80%) on all tools they used for QITs

Accurate use:

- **Over 90%** CCs could show the Tally sheet and Bar Graph for last month of QIT
- For those that could show tally sheets and bar graphs there was **90% agreement** between the two records for March 2013

Most useful learning from QC process (reported by QITs, 3rd LS):

- Identifying root cause/root cause analysis
- Collecting and interpreting data
- Collaboration
- Finding solutions/QITs solving issues themselves
- Preparing action plans

Quarterly Learning Sessions

100% of those who attended LS reported learning something that helped **improve supply chain performance** in the district

Source: QC Evaluation at 3rd Learning Session

Enabled peer to peer learning

FGDs: Learning Sessions (L/S) were very important. Each group would exhibit their achievements and challenges. This allowed us to learn from those who had faced a similar challenge in the past and how they solved it... (CHW Supervisor, Nyabihu)

Issue	Solutions tested by QITs
Stockouts	Do the requisition for drugs in time as a strategy to reduce the stockout rates
Filling of stock cards	(i) Stock cards be taught on induction of every new CHW and during all refresher training (ii) Regular supervision visits and mentorship
Ability of CHWs to read expiry dates	Prepared simple tools in local languages to aid in understanding expiry dates
	Training, supervision and mentorship with simple tools

- **LS were perceived to be very important, valuable and cited as the favorite part of the process**
- **However, costs of LSs were extremely high, benefits realized may not be worth the investment**

Recommendations for scale up from Final LS:

1. Supervision visits
2. QIT monthly meetings
3. Learning sessions

QCs: Summary

Successes

- Implemented mostly as planned:
- High levels of training in QIT processes
- QITs met regularly and used the tools to help problem solve
- Revised, simplified tools were necessary, including procedures on holding/organizing the meeting (meetings reduced by 1-2 hours)

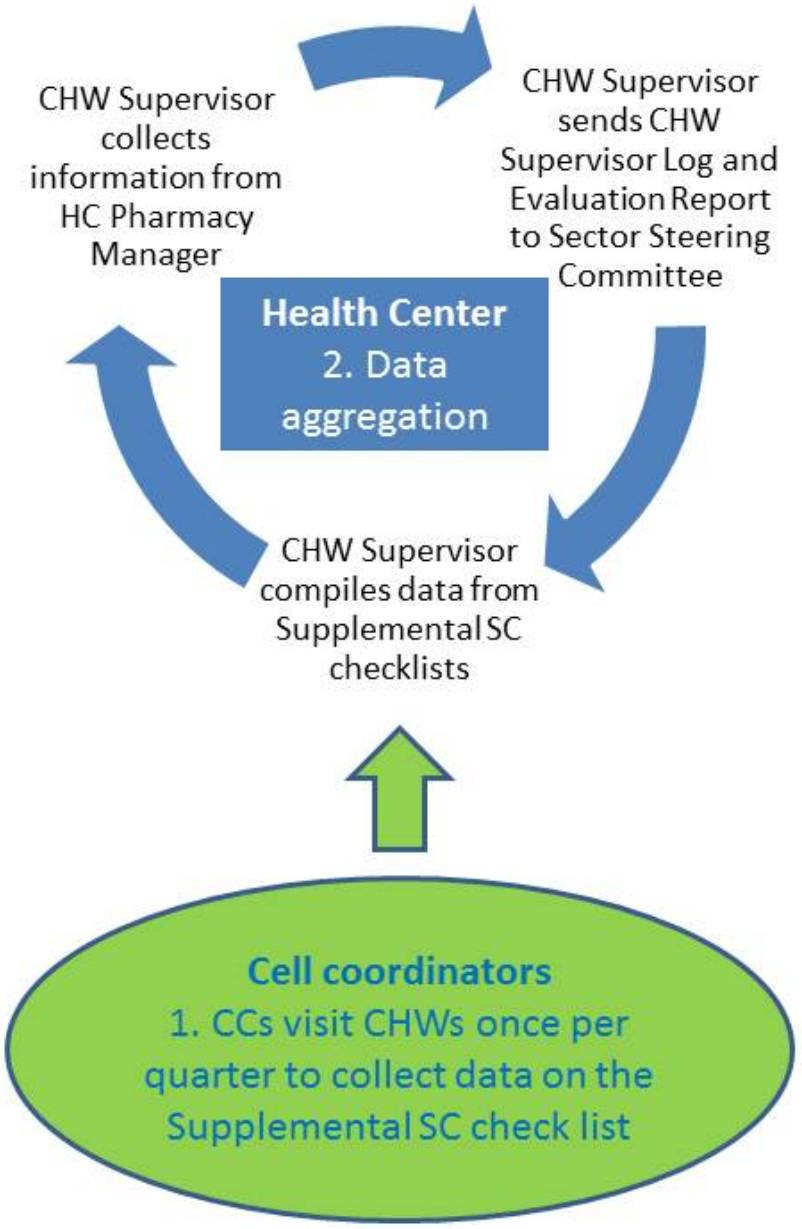
- Feedback suggests QIT process had positive impact on strengthening **team** relationships as well as on supply chain practices

Challenges

- Staff turnover resulted in gaps in training
- Coaching by district based coaches was not feasible every month; perceived to be most valuable at the beginning of the quarter

FGDs: ...the QIT has built such a good relationship along the entire chain. For me the biggest prize has been to learn how to work on plan and be able to achieve it every month. (Pharmacy Manager, Ngoma)

IcSCI key tools: Summary of CHW supplemental SC checklist, CHW Supervisor log and evaluation report, Supplemental SC Checklist for CHW, Scoring sheet



Sector Steering Committee
3. Verify data, generate scores, and send report to District

2 Step QA Process:

Validation: CHW Sup presents analyzed data to steering committee, who are supposed to validate and confirm results

Verification: District CHW Sup visits HC to cross check if raw data is correct before authorizing payment (SC4 did this during intervention period not district)

SC4CCM and District
4. District data manager enters data to SC4CCM database; SC4CCM confirms data and sends quarterly payments and feedback to HCs

IcSCI: Core Features

Key players: cell coordinators, Sector steering committee, Cooperative president, district CHW supervisor, district data manager

- List of 9 SC indicators to be monitored quarterly
- Cell coordinators receive a monthly allowance to be applied for transport, communication
- CCs conduct quarterly visits to all CHWs in the cell to collect data on SC indicators
- HC CHW supervisors compile data on SC indicators and present scores to sector steering committee every Quarter
- Sector steering committees verify indicator scores awarded and indicate incentives amount earned
- Districts receive and enter into the data base scores and incentive amounts to be paid out
- Project validates reports and pays out quarterly incentive to each cooperative

Key tools: Summary of CHW supplemental SC checklist, CHW Supervisor log and evaluation report, Supplemental SC Checklist for CHW, Scoring sheet

Nine Supply Chain Indicators

#	Indicator	Maximum Points
1	The proportion of CHWs who attended health centre monthly meetings in the past quarter	**5**
2	The proportion of CHWs for whom stock card data was included on all resupply worksheets in the past quarter	**15**
3	The proportion of CHWs with stock cards for CCM products* on day of visit	**10**
4	The proportion of CHWs with stock cards for CCM products* where *physical inventory matches stock card balance* for all on day of visit	**15**
5	The proportion of CHWs with no expired CCM products* on day of visit	**5**
6	The proportion of CHWs who have at least one treatment for a five year old child in stock, for each CCM product*on day of visit	**10**
7	The proportion of cell coordinators who presented complete resupply worksheets during monthly health centre meetings, in the past quarter	**10**
8	The proportion of cell coordinators who presented complete resupply worksheets *without any calculation errors* during monthly health centre meetings, in the past quarter	**15**
9	The proportion of cell coordinators who need products, who collect them for their cell from the pharmacy after health center meetings, in the past quarter	**15**

Data Collection & Aggregation

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Cell Coordinators

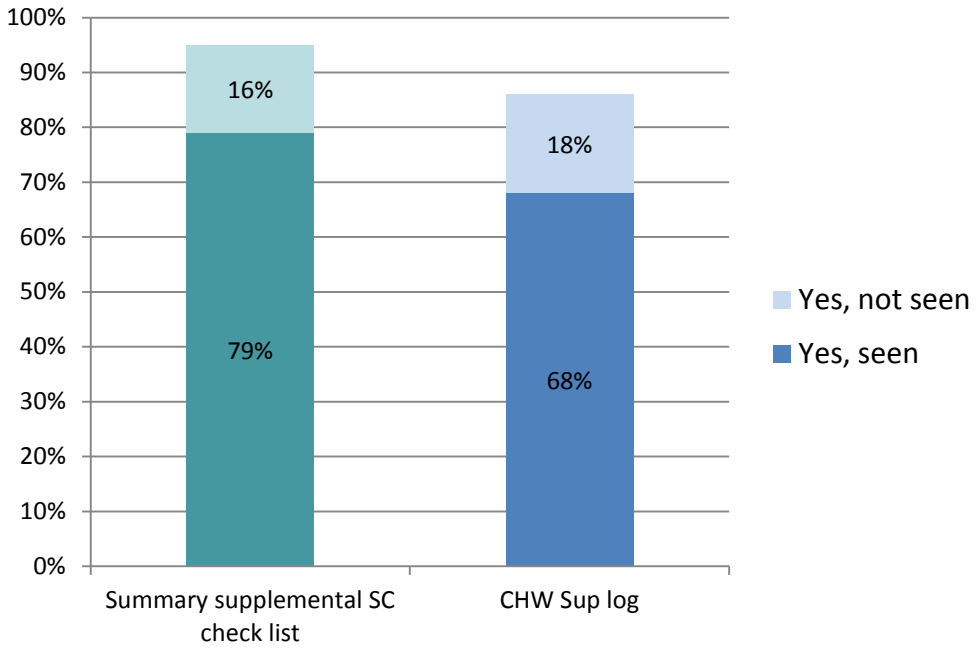
100% CCs report submitting the supplemental SC checklist each month

79% of CCs were able to show copies of complete Supplemental SC checklist for the last quarter

Facilitation allowances (5,900 USD) paid out to 218 CCs for data collection for 4 quarters (1USD= 625RWF)

CHW Supervisors

97% CHW Supervisors report submitting the log to the steering committee every quarter



Process appears to work well at both CC and HC levels: CHW Supervisors at HC appear to have no challenges collecting, aggregating data from checklists and compiling for submission to Steering Committee

% of HCs with copies of CHW Sup Log and Summary Suppl SC checklist

Data Validation & Verification

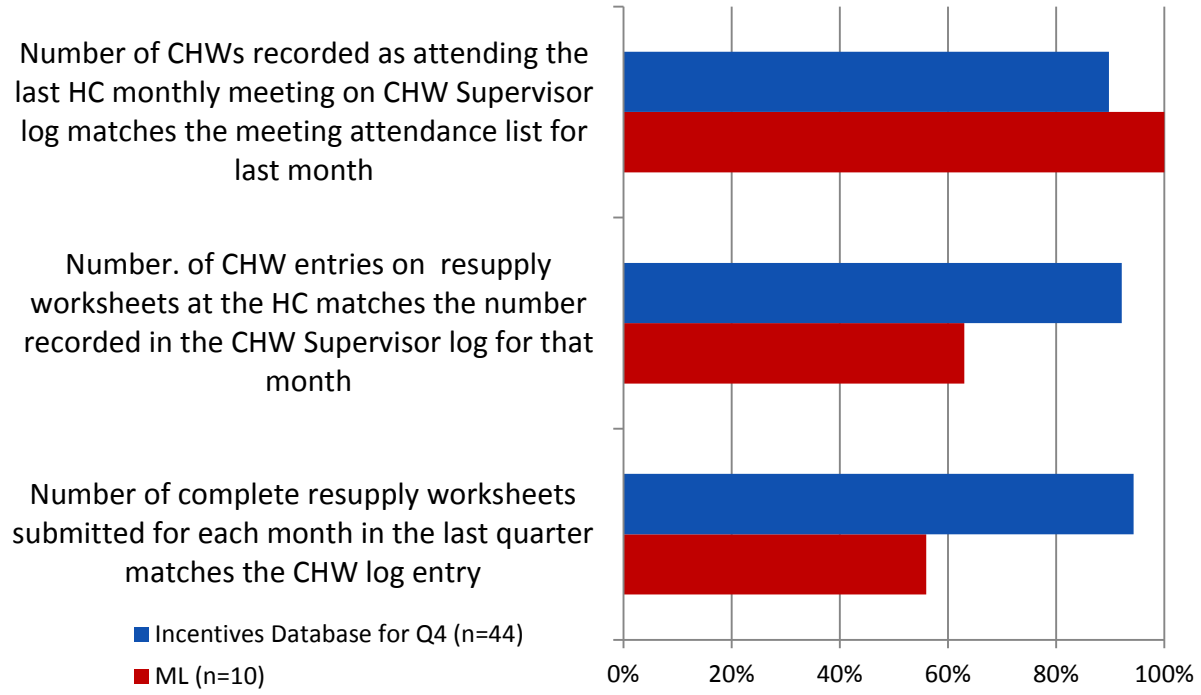
89% of Health Sector Steering Committee (HC) reported no challenges validating CHW log & evaluation report

However…

Verification data (from SC4CCM) shows **mismatch** between actual number of complete RSW submitted and number of CHW entries on RSW compared to the CHW log

Challenges exist with the validation process

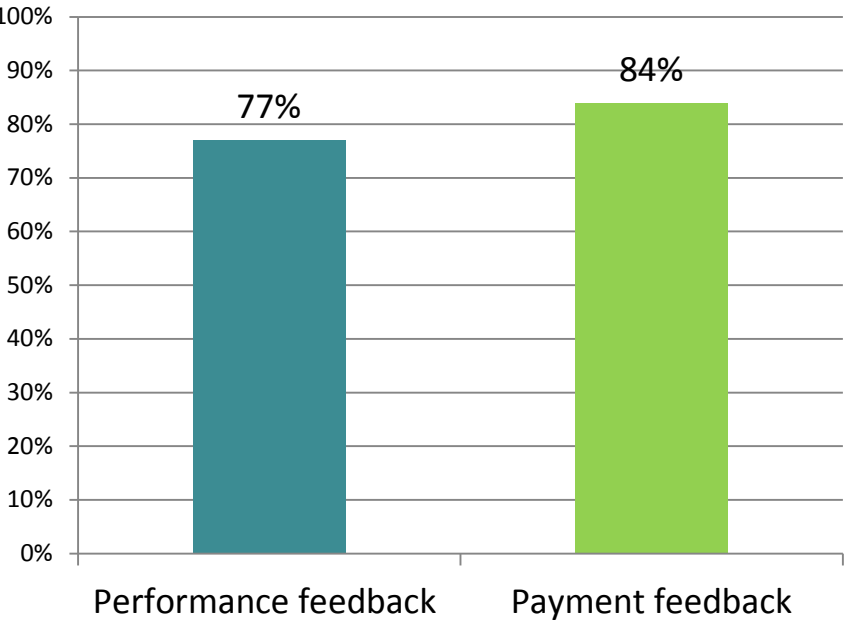
Data collected during ML shows **mismatch** with actual reports by HCs in the incentives database



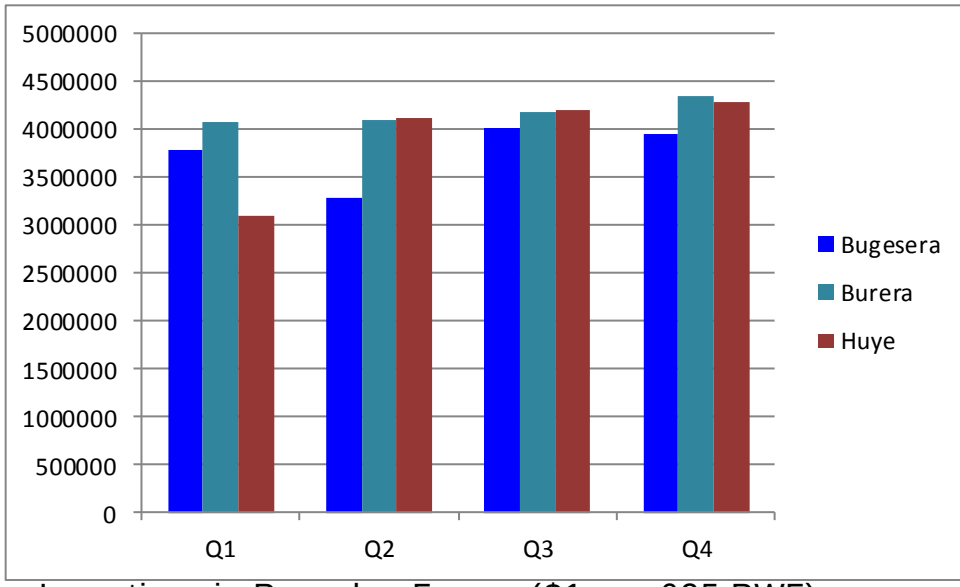
Mismatch is higher for indicators that require more time / attention by CHW Supervisors (e.g. calculation checking) compared to routine tasks

Feedback on SC Performance & Incentive Payments

% CCs receiving feedback on **SC performance** and **amount of incentive** earned by cooperative



Incentive payments by district by quarter



Incentives in Rwandan Francs ($1 = ~625 RWF)

89% of CHW Supervisors report cooperatives have been able to access incentives payment for SC

CHW Sup rather than districts primarily provide feedback. **100% (all) CHW Supervisors** report discussing SC performance with CHWs at monthly meeting. Topics most frequently discussed: recording, reporting, and stock cards

47,483,000 RWF paid out in incentives **(~ $76,000 USD)** to 44 HCs over 4 quarters

- Avg $415/HC in Q1 → $476/HC in Q4 (out of $500/max)

Indicators with No Significant Change

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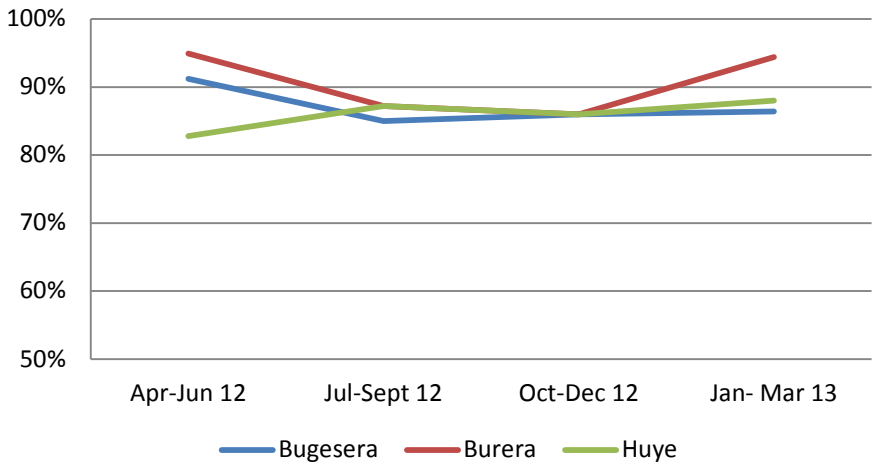
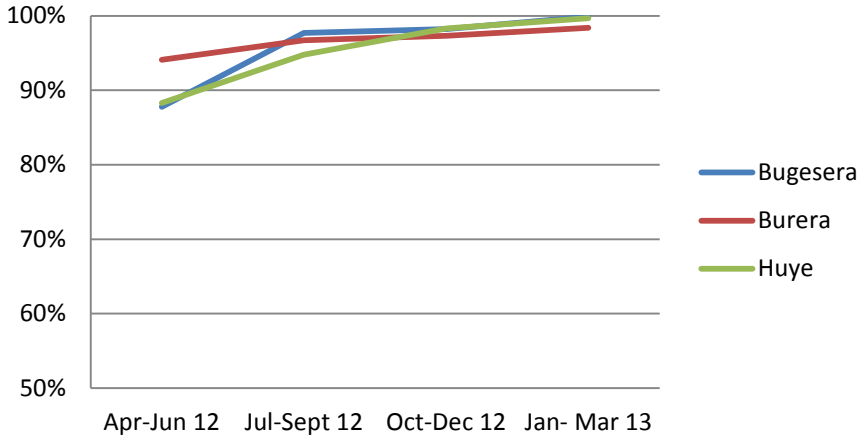
Indicator 1 (5 points)

% CHWs who attend monthly cell meetings



Indicator 5 (5 points)

CHWs with no expired CCM products on DOV



Source: Incentives Data base

Surprisingly, 100% attendance at monthly cell meetings was hard to achieve; might be unrealistic to expect from volunteer CHWs

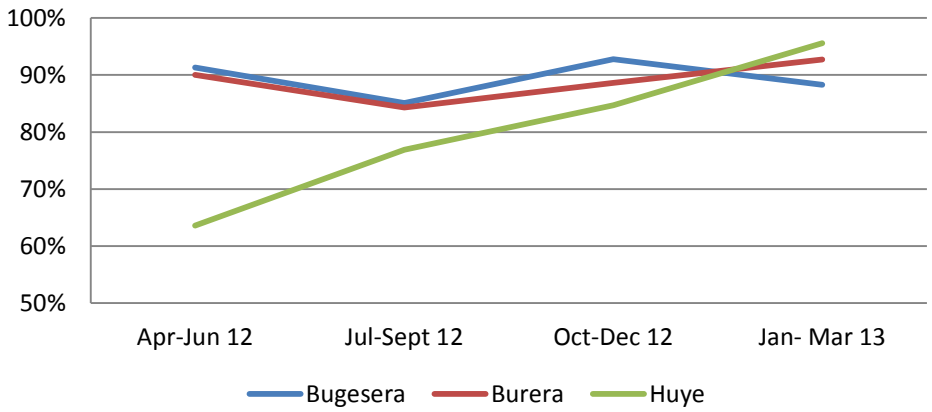
Indicator #5 already at a high level of performance – little change seen over time

FGDs: The most difficult indicator is: "The proportion of CHWs who attended health center monthly meetings in the past quarter". There is no way everyone can attend the meeting every month. People fall sick, or have other family issues. (CC, Bugesera)

Indicators with Significant Change in Huye

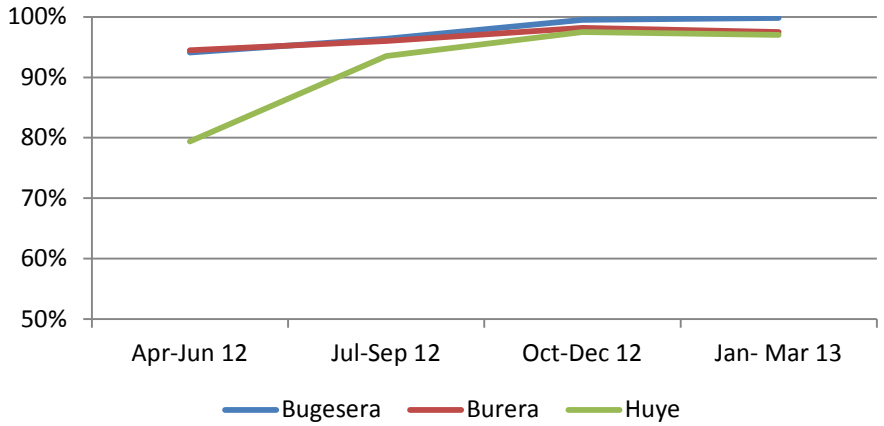
Indicator 2 (15 points)

% of CHWs with stock card data included on all RSWs



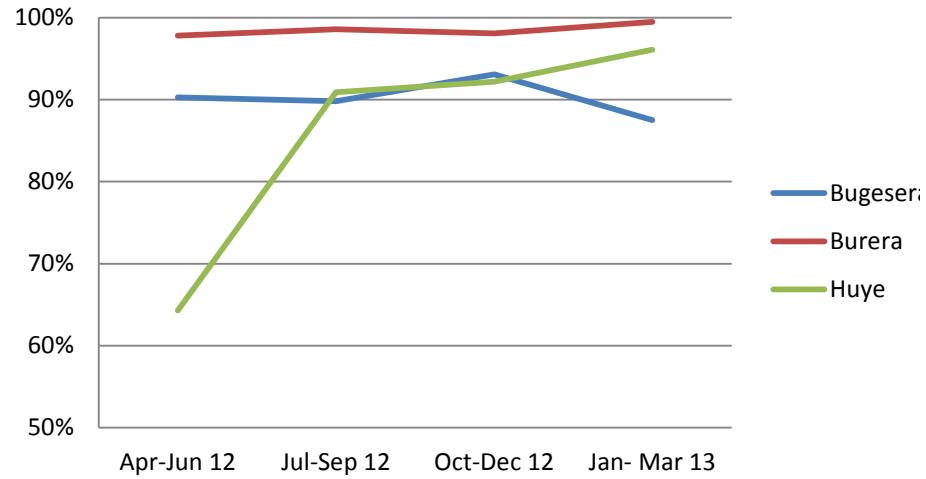
Indicator 3 (10 points)

% CHWs with stock cards for all CCM products on DOV



Indicator 7 (10 points)

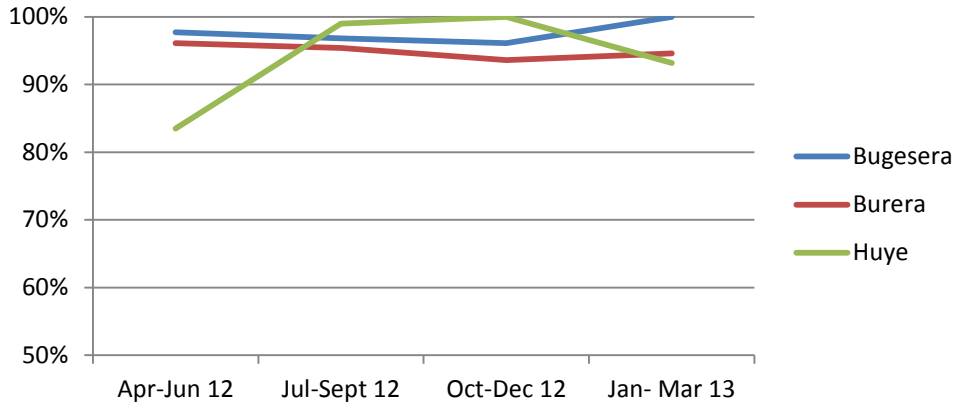
% CCs who present complete RSW



Significant improvement for districts starting at a low level of performance

Indicator 9 (15 points)

% CCs who need and collect CCM products after HC meeting



Indicators with Significant Change in All Districts

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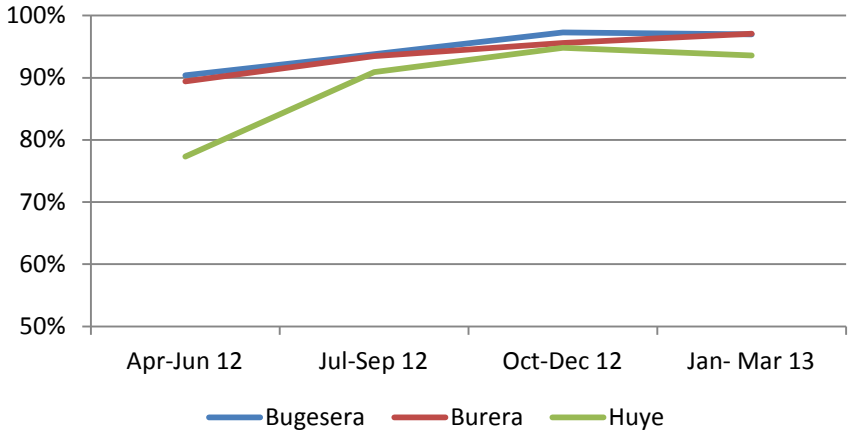
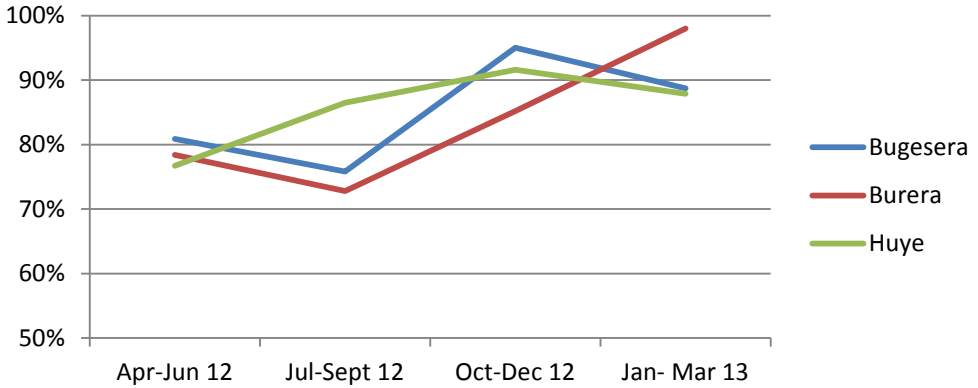
Indicator 4 (15 points)

% CHWs with stock cards where physical inventory matches stock card balance

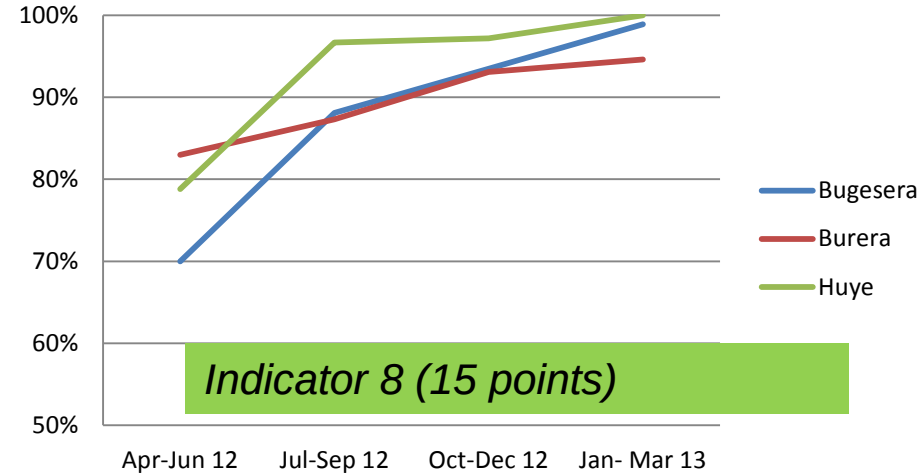


Indicator 6 (10 points)

% CHWs with at least one treatment for each CCM product on DOV



% CCs with accurate Resupply worksheets



Indicator 8 (15 points)

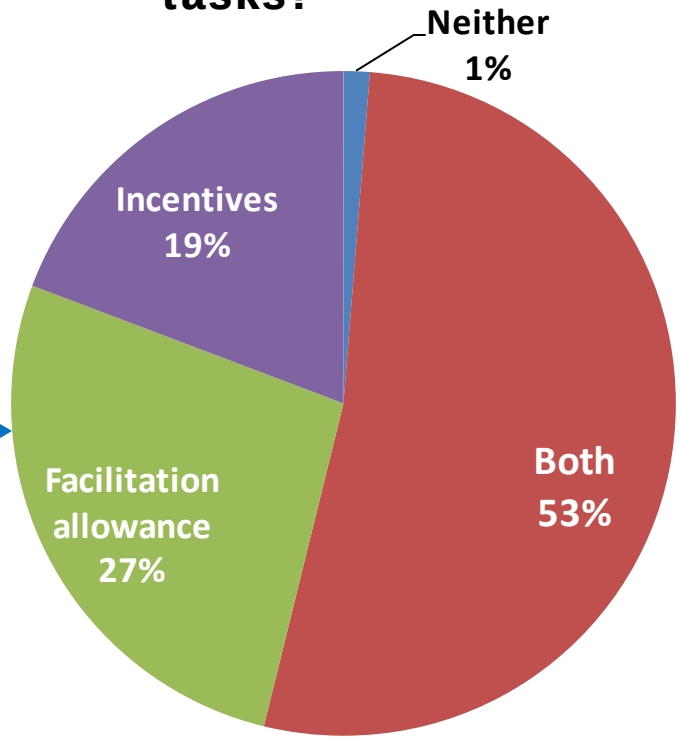
Consistent improvement across all three districts in all four quarters in these performance areas (regardless of starting point)

Source: Incentives Database

Perception of Role of Incentives & Allowances on SC Practices

- **94% of CCs** report that incentives have contributed to the changes in use of RSP in their cell
- **92% of CHWs** report that incentives have helped to improve management of medicines

Which is more motivating in enabling CCs to perform their tasks?



Facilitation allowances were perceived to be more motivating than the incentive payment

FGDs: Although both funds are important, the facilitation fees go directly to the pockets of the CCs and thus help them perform better on SC indicators. It helps us make calls to arrange CHW visits and affords us transport thus enhancing coordination of all activities (CC, Bugesera)

IcSCIs: Summary

Successes

- CC and CHW Sup able to complete and tally the supplementary SC check list and the summary supplementary check list respectively without challenges– process implemented as designed
- Feedback – generally provided as reported by respondents
- Incentive payments effected as planned
- Facilitation payments identified as more important than incentives

Challenges

- Validation and verification process not implemented as designed and limitations in data verification observed (as shown by verification)
- Inaccuracies and discrepancies in results possibly attributed to:
  - Competing priorities for the CHW sup, so limited time for reviewing Resupply worksheets
  - Too many indicators to check
- Delays in transferring of reports required as proof before payments at HC, district and project levels delayed payments

QC vs. IcSCI Districts Comparing SC Performance

QCs and IcSCI were meant to reinforce and strengthen RSPs and product management

Was there a difference in performance for standard SC indicators between the QC and IcSCI intervention groups?

- Storage
- Reporting
- Use of stock cards
- Order fulfillment

Storage at CHW Level

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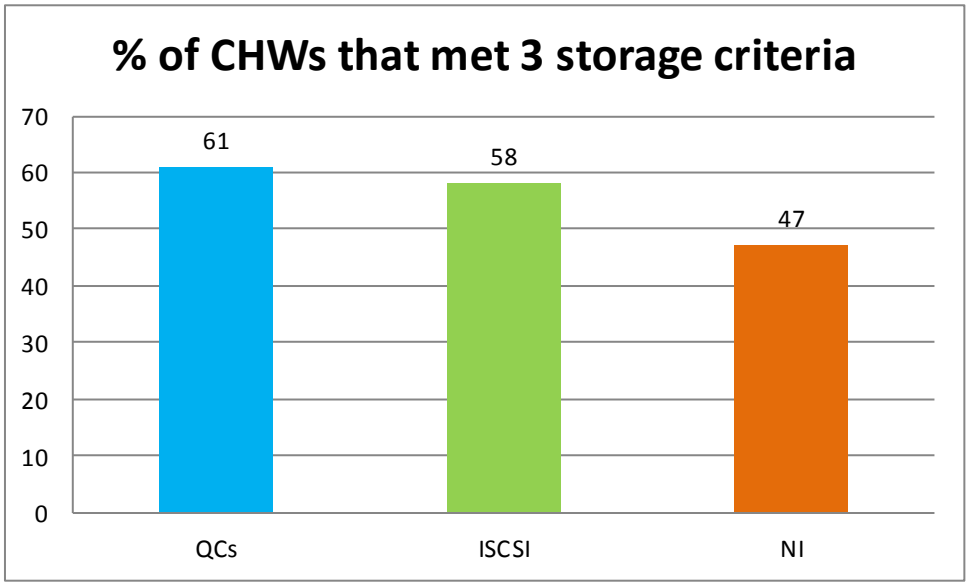
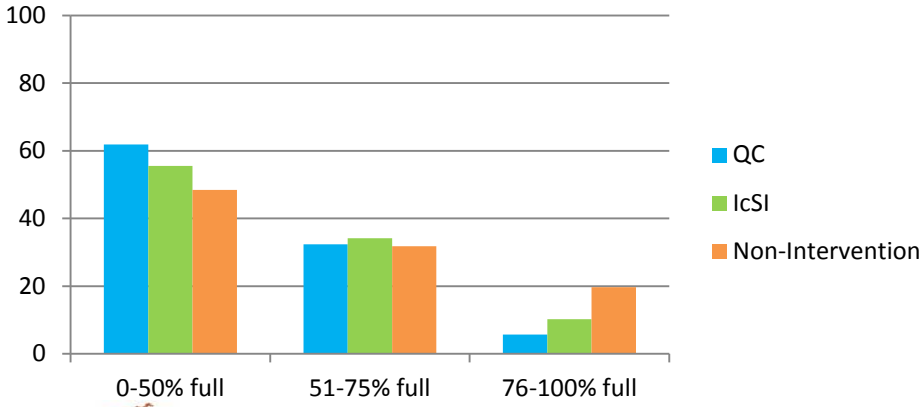
Over half of CHWs visited maintained three key storage criteria: had lock and key, storage area clean and dry, and free of insects and rodents.

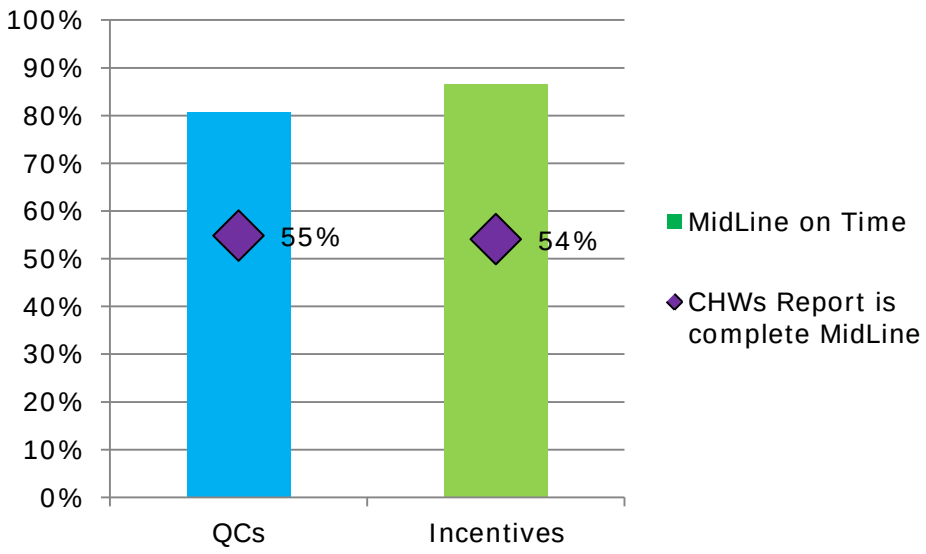


Assessment of fullness of CHW storage boxes



Both QC and IcSCI districts did better than NI districts, however, little difference in performance between the intervention groups. IcSCI indicators did not reward these practices

Timely & Complete Reporting



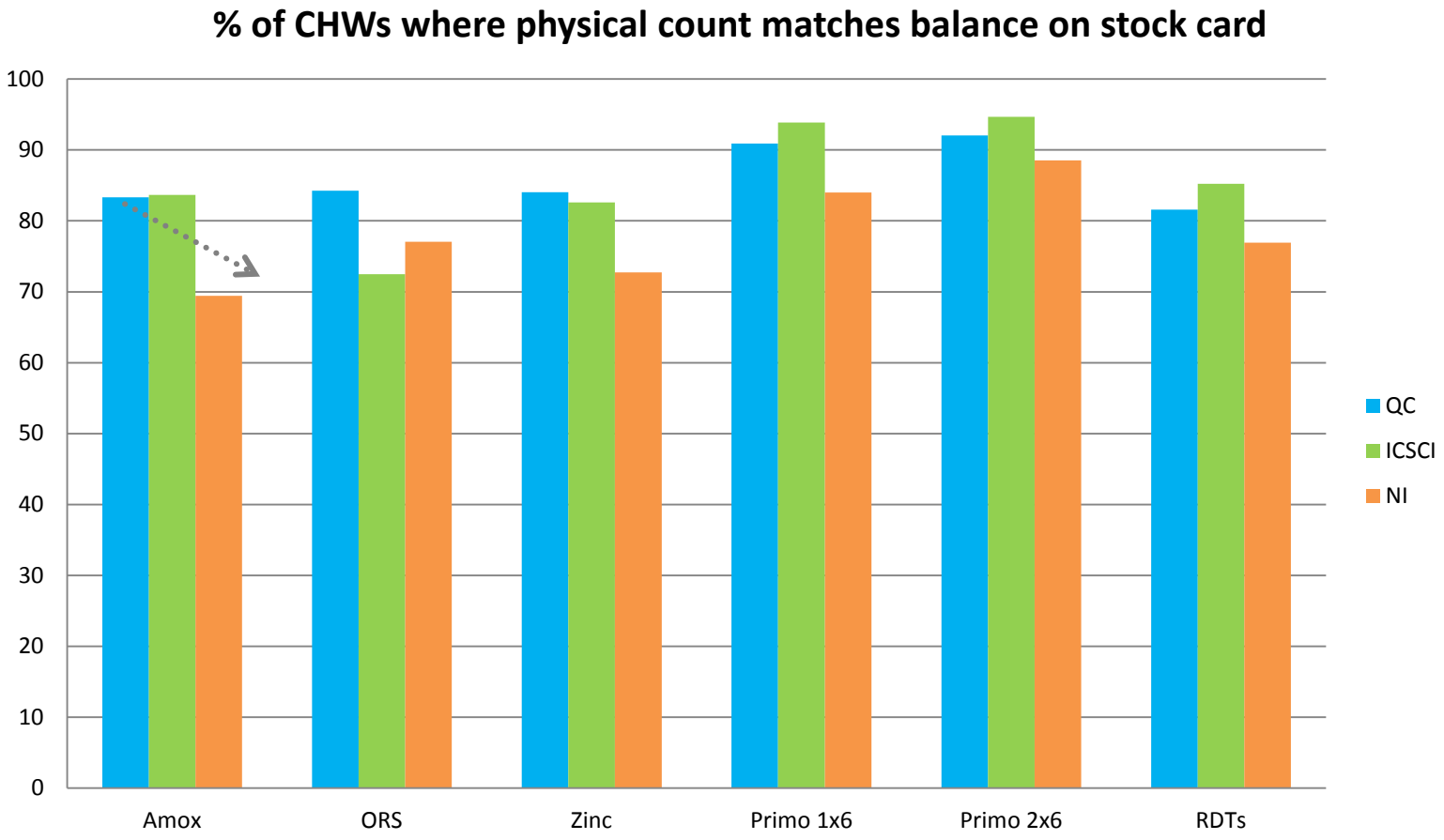
All intervention districts reported high levels of on-time reporting (always or sometimes), but completeness (stock on hand and quantity dispensed only) was lower

FGDs: "Before the new RSP, CHWs would demand and spend even up to 2 months without getting products, while commuting to the HC all the time! Now they come when all their products are pre-prepared and they receive them instantly after the meeting. This is because the resupply worksheet is submitted beforehand." (CHW Sup, Bugesera)

HC Pharmacy Mgrs report that **90% of CHWs or CCs** send the resupply worksheets.

Both interventions achieved a high level of consistency in using a standard form for resupply

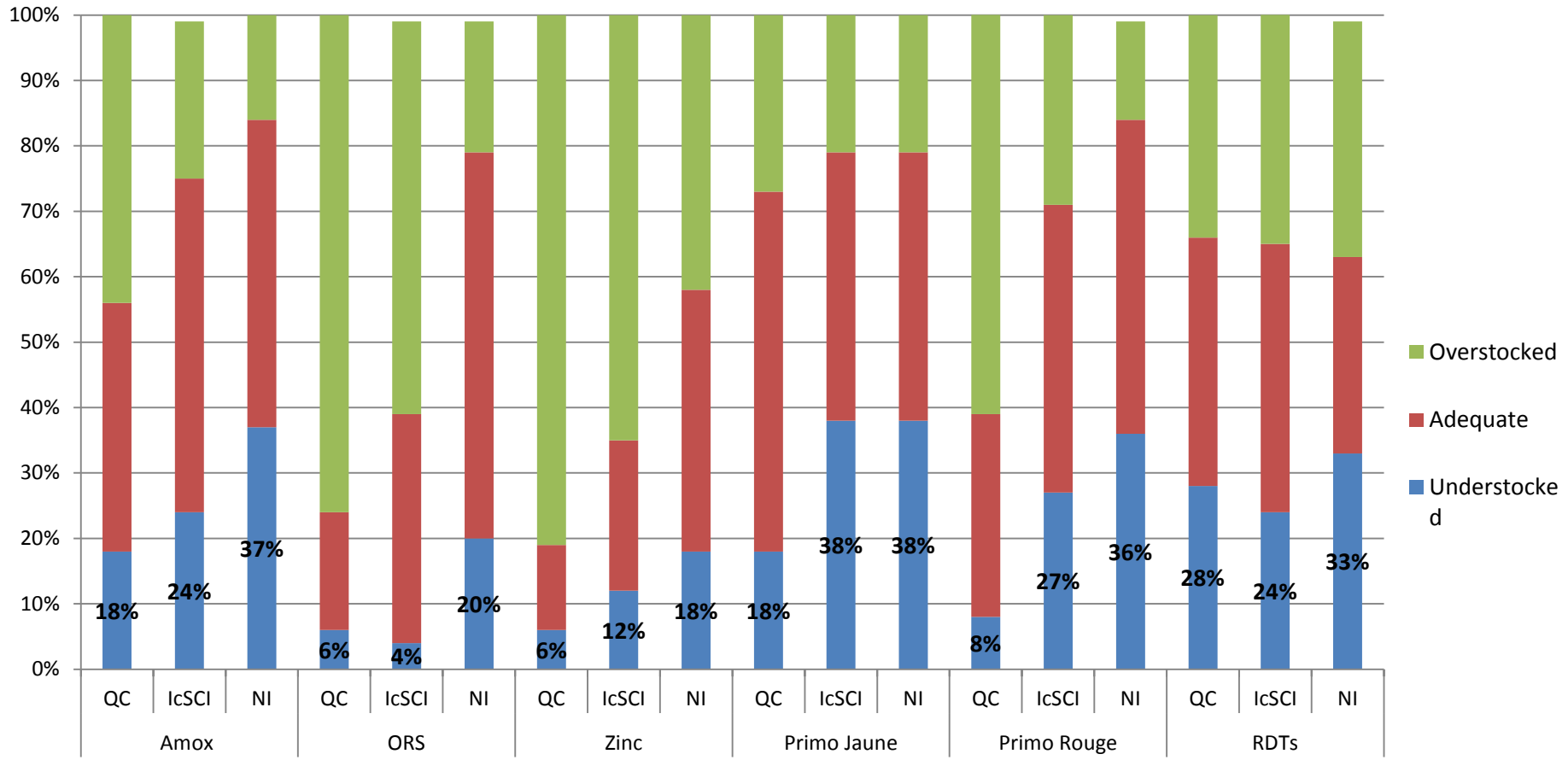
CHW Stock Card Accuracy DOV



Arrow indicates significant difference p<0.05

- Accuracy was higher on CHW stock cards in QC and IcSCI districts than NI districts (with the exception of ORS)
- **Mismatch for IcSCI districts between this data (ML) and indicator #4 (incentives dbase) reinforcing the need for better validation in the PBF process (or any self reported system)**

CHW Stock Status



Fewer CHWs in QC and IcSCI districts, on average, were under-stocked for all products

Overstocking may reflect low levels of consumption and might not represent excess inventory necessarily

QC vs. IcSCI: Summary

- Improvements in supply chain performance seen across both intervention groups with noticeable differences compared to NI districts
- QC appears to do slightly better on all indicators
- Incentive database results may inflate actual performance slightly due to adjustments made and/or gaps in validation and verification processes
  - ML results for same indicator show lower performance

FGDs:

"No more out of stock arising from internal supply chain issues since we have been trained…" (Pharmacy Manager, Rutsiro)

"Resupply procedure is the method we use to obtain more products, we are now used to resupply procedures, we write down opening stock, dispensed medications, expired and resupply quantities needed and give the information to our CCs." (CHW, Burera)

Product Availability

- A greater proportion of CHWs manage all CCM products except Primo 1x6 at ML than at BL
- Overall decline in product availability on DOV, primarily due to NI districts (increases in QC, IcSCI for the most part)

Picture 1: the new drug box

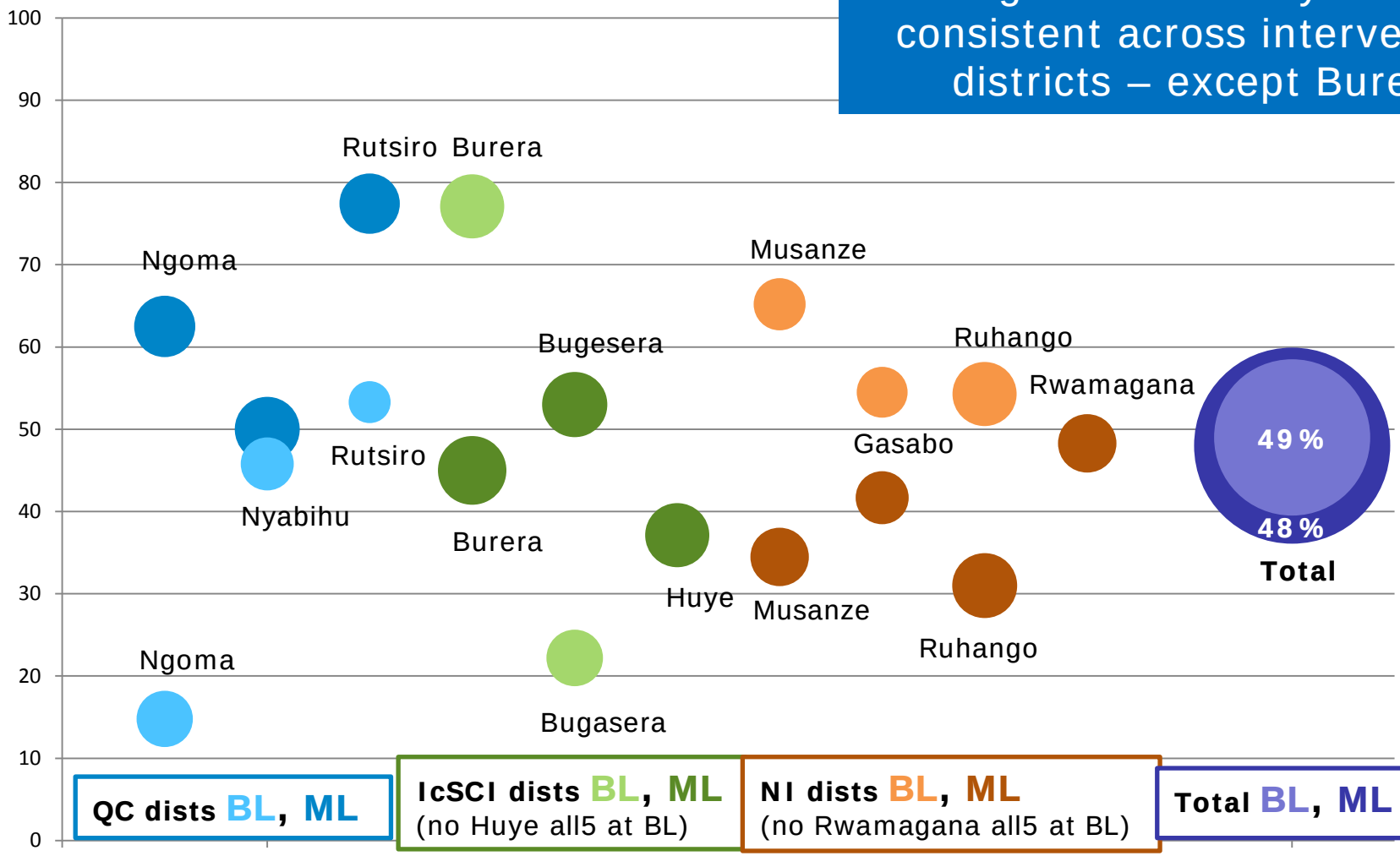
Picture 2: a CHW with her drug box

FGDs: [Before] "*we could not know who has taken what or who still has products in stock. The CHWs could bounce several times before they got any products. But now the whole procedure is completely streamlined, everyone knows resupply is once a month and the specific date.*" *(Pharmacy Manager, Huye)*

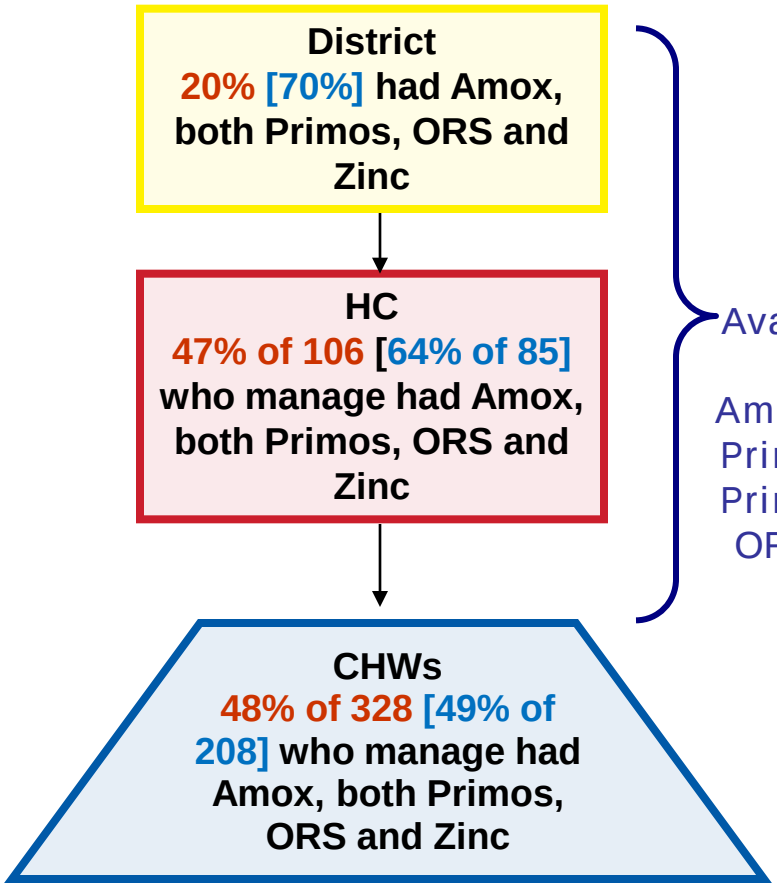
% CHWs with Five Key Drugs In Stock DOV

Amox, ORS, Zinc, Primo 1x6 & Primo 2x6

Higher availability at ML consistent across intervention districts – except Burera



Product Availability at All Levels on DOV at ML [BL] (all districts)



Despite increased shortages at district and HC resupply points, community level availability is fairly stable from BL to ML – availability is prioritized for CHW level, a sign of a **responsive** supply chain.

% CHWs In Stock DOV:
BL vs. ML and by Intervention Group

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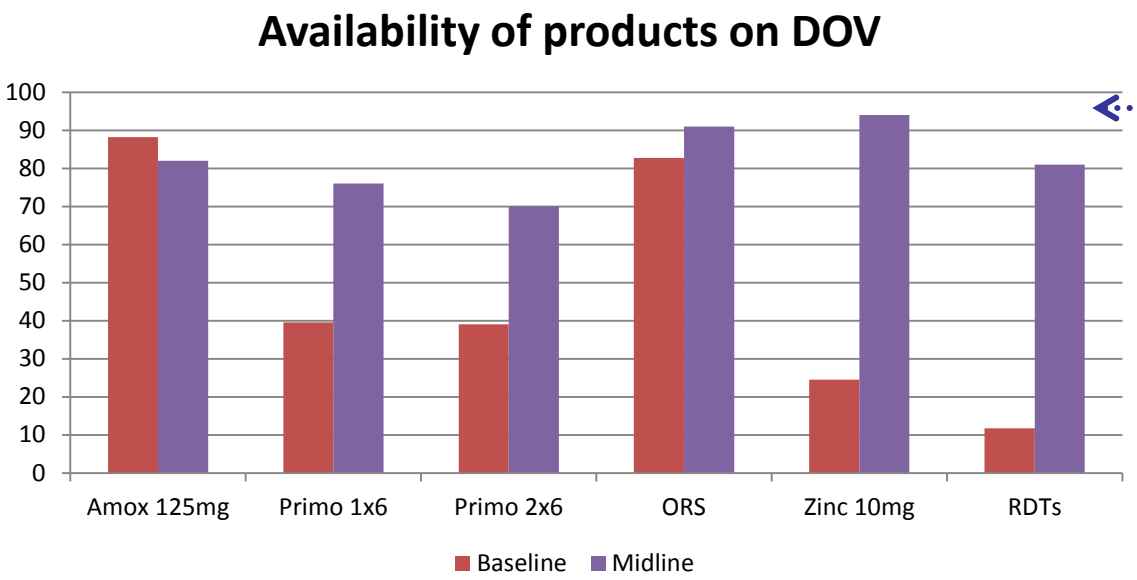
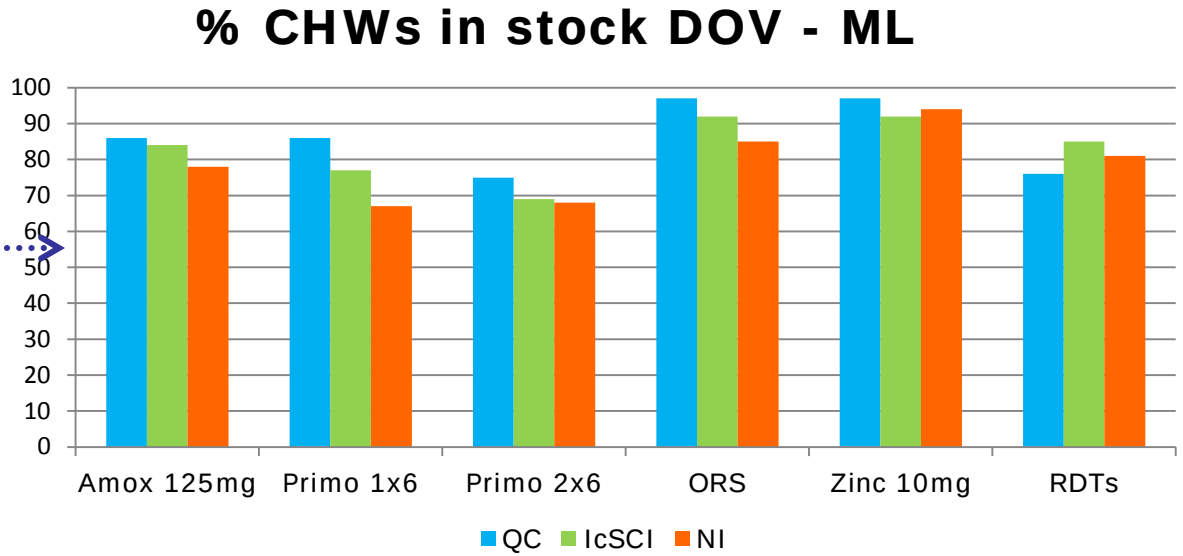


Increased availability of all products, except amoxicillin

Better product availability on the day of visit for intervention districts



SC4CCM

Six Month Stockout Rates for CHWs Nov 2012-Apr 2013

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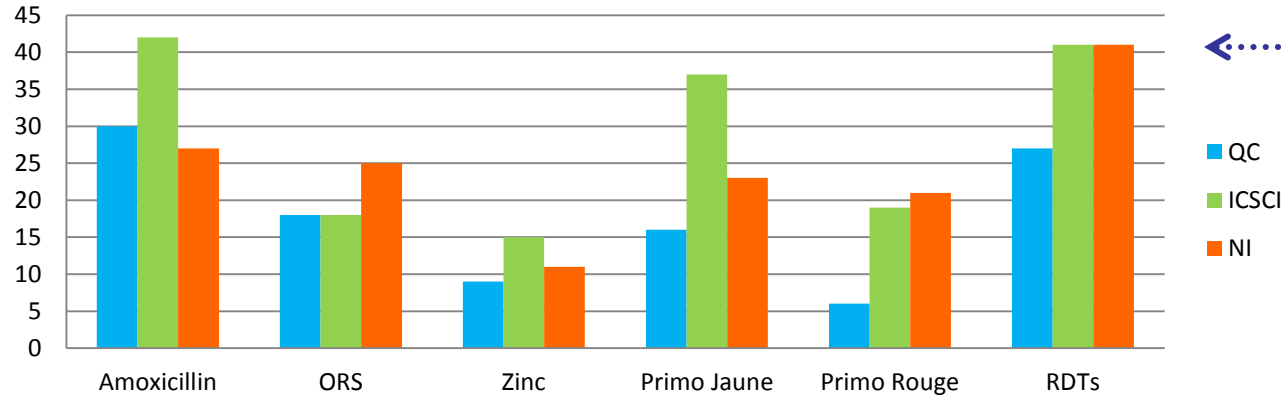
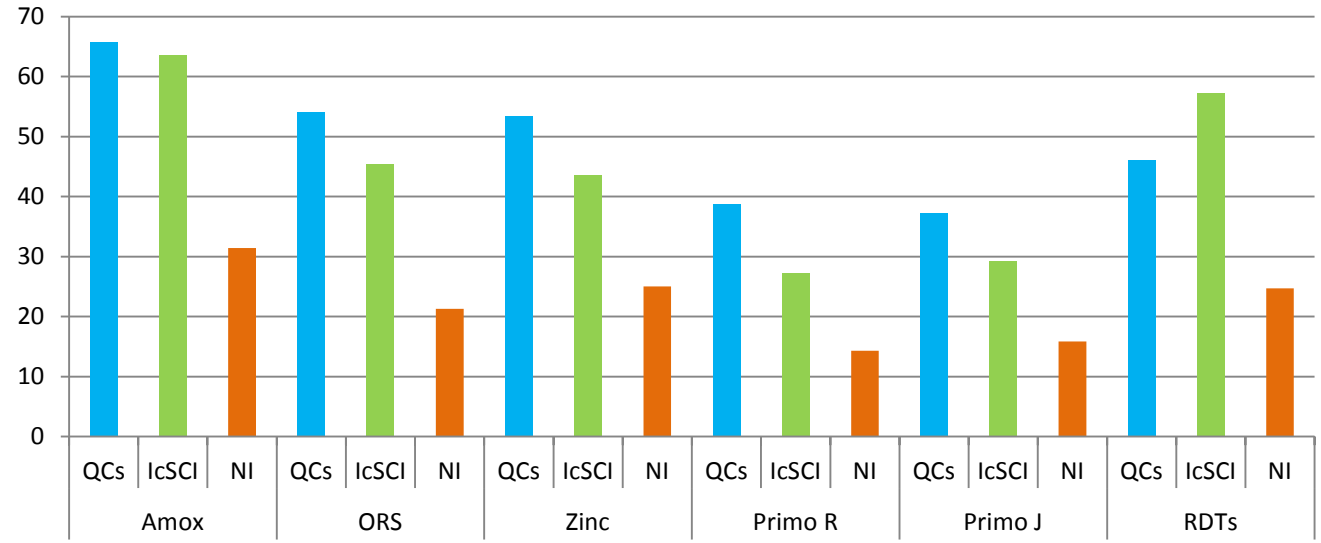
of stockouts in last 6 months



- QCs had the lowest six month stockout rates for all products
- Across all groups and all products there was an average of only 1 stockout lasting longer than 3 days

→ Suggests short lead time and **high responsiveness** to stockouts

% CHWs that have 3-6 mos of info on Stock Card



QCs and IcSCI have more months of information on stockcards vs NI districts

Snapshot of Findings

- **Product availability** increased for most products at ML vs BL and was better in QC and IcSCI vs NI districts
- **Resupply Procedures** was well implemented, improved community SC practices and processes, improved relationships between CHWs-HCs, and was liked by users
- **Quality Collaboratives** were well-implemented and had a positive impact on strengthening resupply procedures
  - QIT meetings perceived to be key element of process
- **Incentives for community supply chain improvement** were well implemented, also had a positive impact on strengthening resupply procedures
  - Not all indicators equally effective – only 3 were significant across all districts
- **CC supervision and facilitation allowances** were recognized as the cornerstone of both interventions
  - Appreciated by both CCs and CHWs

QC District Recommendations

Scale up RSPs, Quality Collaborative elements with the following modifications

Continue

1. RSPs as per design and implementation
2. CC quarterly supervision (allowance)
3. QIT meetings with most tools (no bar chart, no monthly journal)

Modify

1. **District coaching**: more useful only at the first QIT meeting of the quarter to help with Why-Why and identifying solutions
2. **Learning Sessions**: (SC4CCM Recommendation): Because LS are very costly and were only intended to run for the duration of the learning period, the benefit realized is not worth investment. Instead, districts could look for less costly opportunities for targeted peer-to-peer sharing and learning

Participants felt that the QIT process could be applied and used for other cPBF indicators, but suggested starting with only with supply chain. Once QITs are able to successfully apply the techniques to one area (SC), it is felt they will naturally begin to apply it to other areas

IcSCI District Recommendations

Scale up RSPs and IcSCI with the following modifications

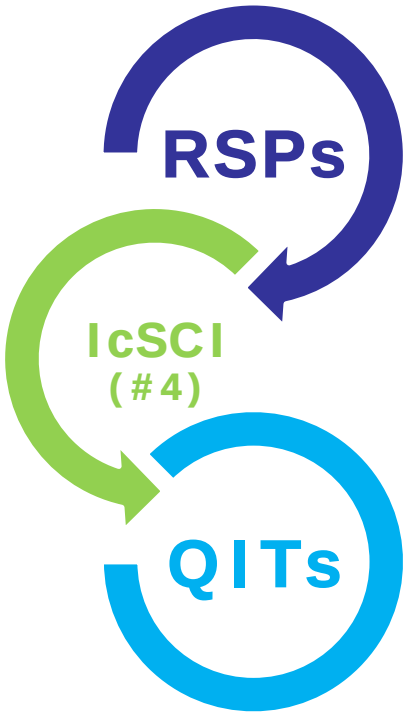
Continue

1. RSPs as per design and implementation
2. CC supervision and data collection (allowance)
3. Following the cPBF process (as this intervention did)
4. Incentive payouts as per national cPBF policy

Modify

1. Number of indicators that should be scaled up, majority of participants recommended scaling up indicator #4: % CHWs with stock cards where physical inventory matches stock card balance

Proposal for Scale Up



Endorse district recommendations for scale up of **RSPs** and **modified QC** and **IcSCI packages**

- Incorporate indicator #4 into cPBF scheme
- Combine majority of RSP, IcSCI (one indicator) and QIT training into one integrated supply chain training package to be further integrated with CCM training, administered by CCM Master Training Team
- Develop and administer separate module during **first QIT meeting** to establish CC-HC QITs, set norms and demonstrate effective QIT meetings
- Provide CCs with a token allowance as a contribution towards communication and transport to ensure quarterly home supervision continues
- Support district coaching once per quarter