SC4CCM

Supply Chains 4 Community Case Management

SC4CCM Endline Evaluation

Malawi

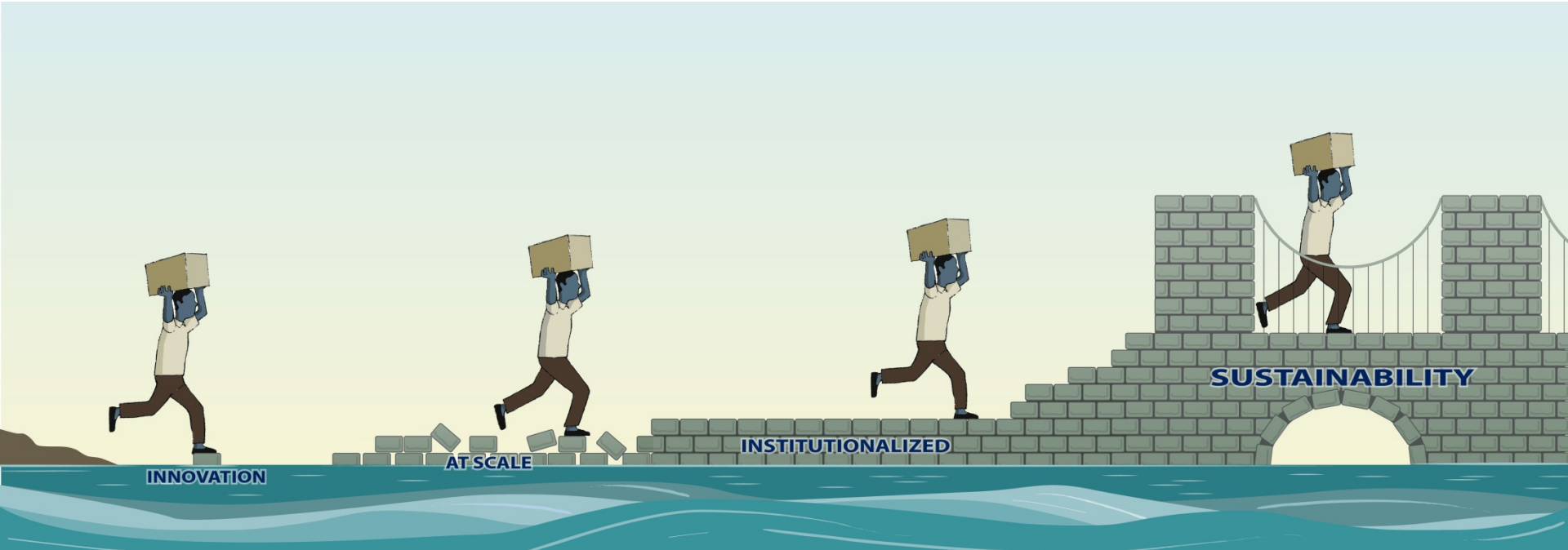
2014

JSI

JSI Research & Training Institute, Inc.

SC4CCM Project

SC4CCM is a learning project that was tasked with identifying **proven, simple, affordable** solutions that address unique supply chain challenges faced by CHWs. The project's mandate was 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.



Baseline Assessment (2010)

- Very low levels of CCM products available at community level
  - only **27% of HSAs** had all CCM products needed (cotri, ORS and both ACTs) in stock on DOV
- HSA consumption data not consistently available at levels other than health center for timely logistics decisions
  - **43% of HSAs** reported they submit a report containing logistics data to health centers
  - Only **13% of health centers** reported HSA data separately from their own data to districts, others aggregated it or didn't report it at all
- 80% of HSAs relied on bicycles, 11% travelled on foot to collect products
  - **20%** HSAs identified transport as a constraint for collecting products, including "transport was always broken," "no transport available," "difficulties carrying supplies," and "too long to reach the resupply point."

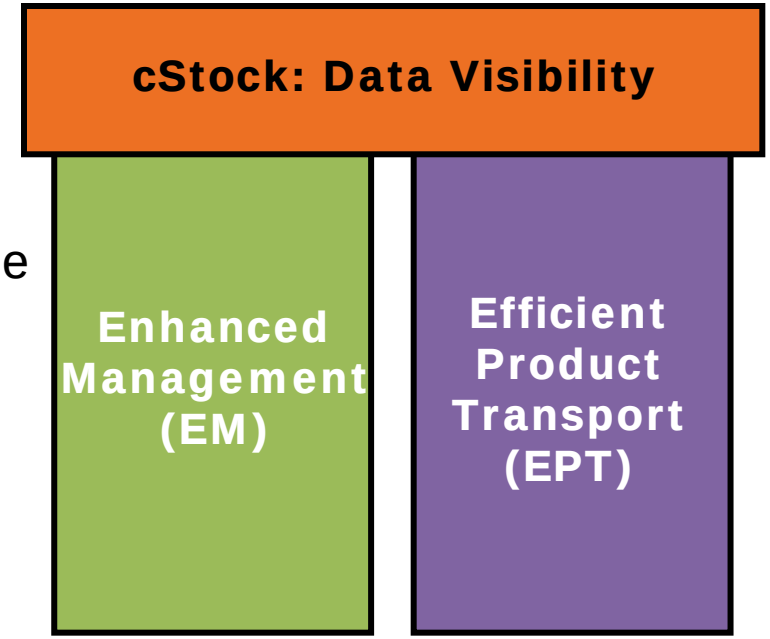
Two intervention packages tested with one common theme

Cross Cutting Intervention: **cStock**, a SMS-based reporting and resupply system, to improve data visibility. cStock plays a **different role** in each intervention.

EM uses a team and customer service approach to:

- **meet** regularly
- **monitor** performance
- **problem solve**
- **recognize** achievements

cStock used for HSA resupply and performance monitoring



EPT aims to make transportation more efficient by:

- teaching HSAs **bicycle maintenance**
- making **product collection more flexible**.

cStock used for HSA resupply

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

Midline Assessment (2013)

Enhanced Management districts performed better than EPT districts in key SC performance indicators:

- Reporting rates in EM Districts were on average 10% higher than EPT districts: >90% compared to >80%
- Completeness of reporting in EM districts was on average 13% higher than EPT districts
- HCs in EM districts took on average 7.6 days to respond after a request compared to 13.5 days in EPT districts (lead time)

EM endorsed by MOH for scale up

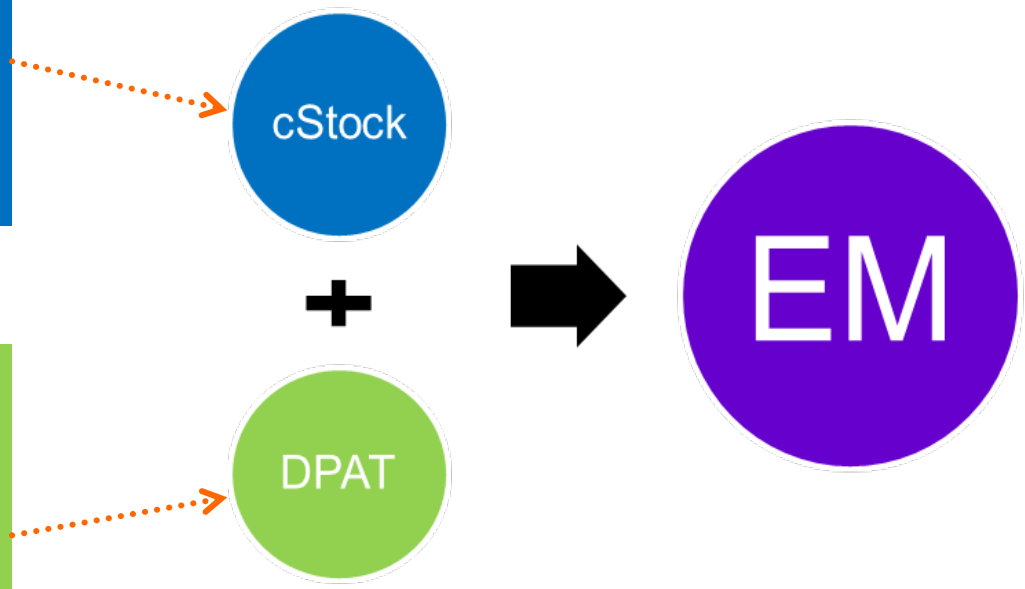
Enhanced Management Approach for Scale Up

cStock

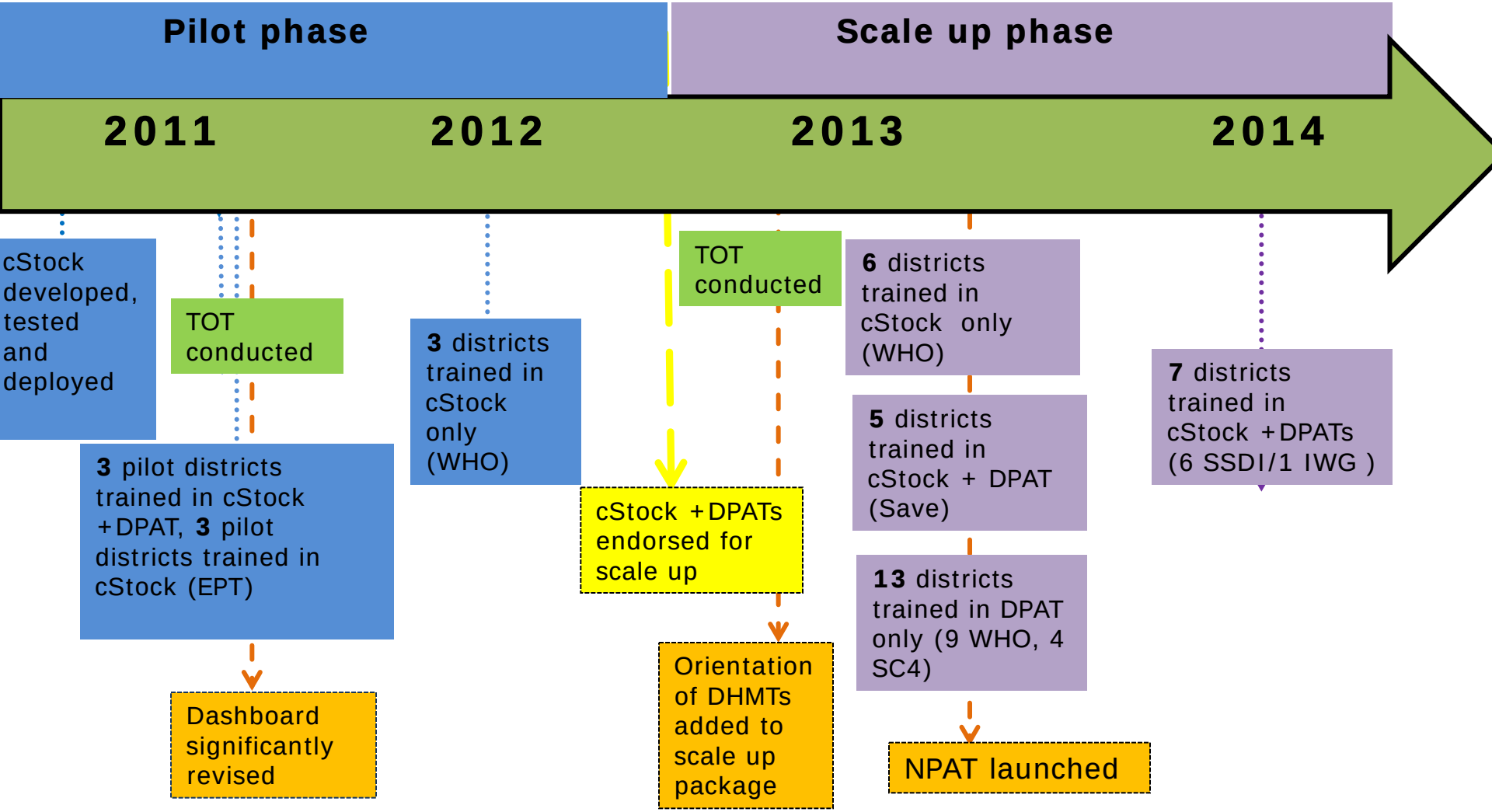
A mobile health application effective in improving community logistics data visibility at all levels by providing data on a web-based dashboard

District Product Availability Team (DPAT)

A team with a shared goal & performance targets that uses data to monitor and strengthen the supply chain



Timeline for EM Implementation & Scale up

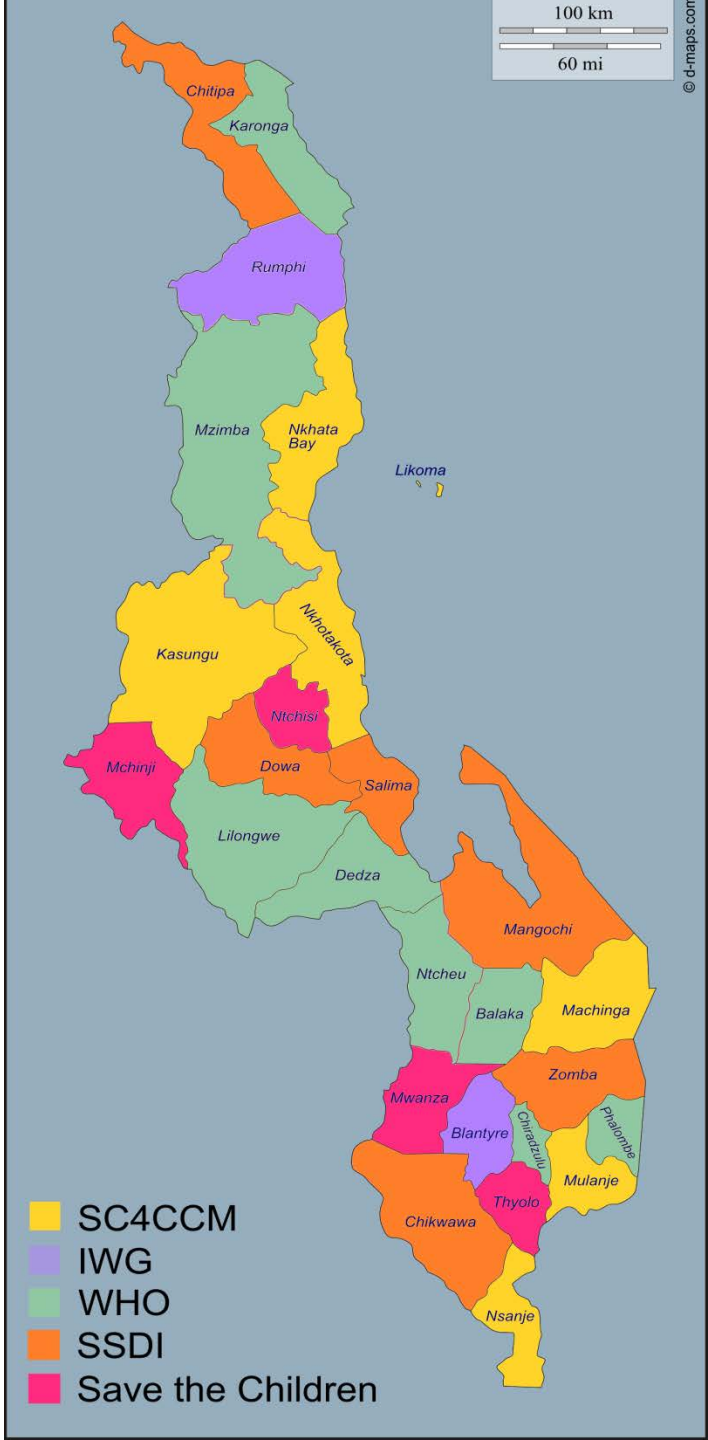


Cumulative No. districts trained	**6**	**9**	**21**	**28**
HSAs trained	**638**	**971**	**2208**	**2943**

Partner Support for Scale Up

- The Enhanced Management approach has been scaled up to 28 of the 29 districts, the last district Blantyre will be trained in October 2014

- Scale up has been led by MOH and supported by a number of partners – WHO, Save the Children, SSDI, IWG



Endline Questions

- To what extent (geographic breadth and institutional depth) have the SC4CCM interventions to support commodity availability at the community level been **scaled up** in Malawi?
- To what extent have the program effects of SC4CCM observed at midline been **maintained** at endline?
- To what extent have the interventions been **institutionalized** at endline?
- What aspects of the SC4CCM design, implementation, and overall project approach contribute to **scalability** and **sustainability** of the particular intervention supported in Malawi?

Endline Methodology

Mixed Methods:

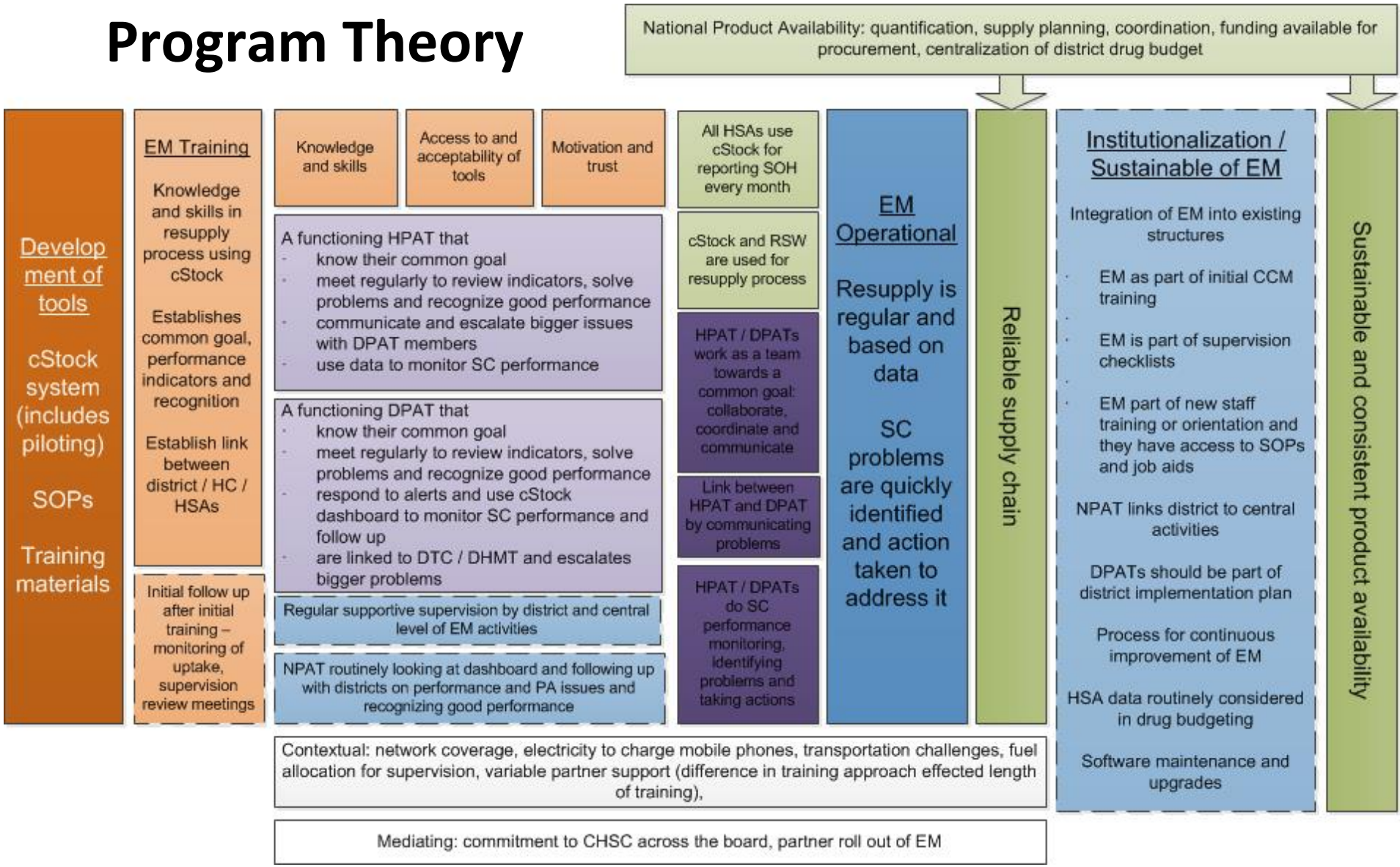
- Qualitative: Case Study Approach
- Quantitative: Analysis of cStock reports
- Triangulation of qualitative and quantitative findings

Rationale for cStock as quantitative data source:

- A Rapid Data Quality Assessment (RDQA) conducted Dec 2013 showed cStock data of very similar quality in both original EM and new districts, suggesting that data quality does not change substantially over time or with experience. cStock data was therefore considered reliable enough to show true changes in performance by district, over time, specifically between ML and EL
- Compared with a facility-based survey, cStock reports:
  - Offer much larger sample sizes (both districts and HSAs)
  - Provide monthly data trends, yielding a richer analysis

Key Findings

Program Theory



Progress in Training on EM

With staff turnover, cStock and DPAT training might not occur together for new staff or DPAT might be underemphasized

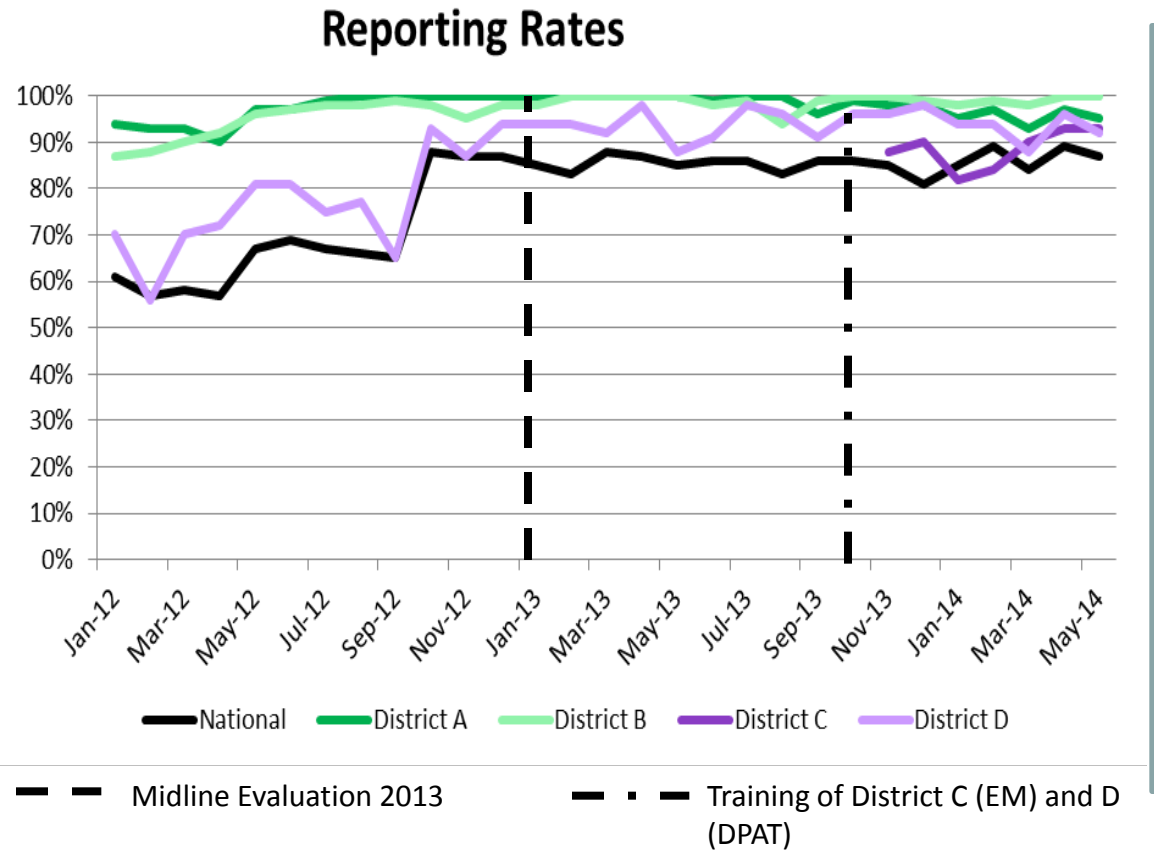
District		Training Type	Training Dates (Project)	HC 1*					HC 2*				
				HSA 1	HSA 2	HSA Super-visor	HC In Charge	Cluster Super-visor	HSA 1	HSA 2	HSA Super-visor	HC In Charge	Cluster Super-visor
Original Districts	A	cStock Training	Oct 2011 (JSI)	√	√	√	OJT	√	√	√	√	Not trained	√
		DPAT Training	Oct 2011 (JSI)	√	√	√	√	√	√	√	√	Not trained	√
	B	cStock Training	Aug 2011(JSI)	√	√	√	√	Not trained	2014	2013	2014	√	√
		DPAT Training	Aug 2011 (JSI)	√	√	√	√	Not trained	Not trained	2013	Not trained	Not Trained	√
Scale Up District	C	cStock Training	Oct 2013 (Save)	√	√	√	√	√	√	√	√	√	√
		DPAT Training	Oct 2013 (Save)	√	Not trained	√	√	√	√	√	√	√	√
	D	cStock Training	June 2011 (JSI)	√	√	Oriented 2013	√	2013	√	√	√	deputy interviewed	2013 (TOT)
		DPAT Training	Oct 2013 (JSI)	√	√	√	√	Not trained	√	√	√	deputy interviewed	2013 (TOT)

* Based on interviews

Resupply Process Findings Outline

- HSA Role: reporting, emergency orders
- HC Role: RSW, OFR, pre-packing
- Lead Time
- Benefits & Challenges

% HSA Reporting SOH



- All 4 case study districts had reporting rates equal or above the national reporting rate
- Two original EM districts (A and B) have maintained reporting rates since midline
- District C showed high reporting rates immediately after training
- District D shows high reporting rates, but these did not change after DPAT training

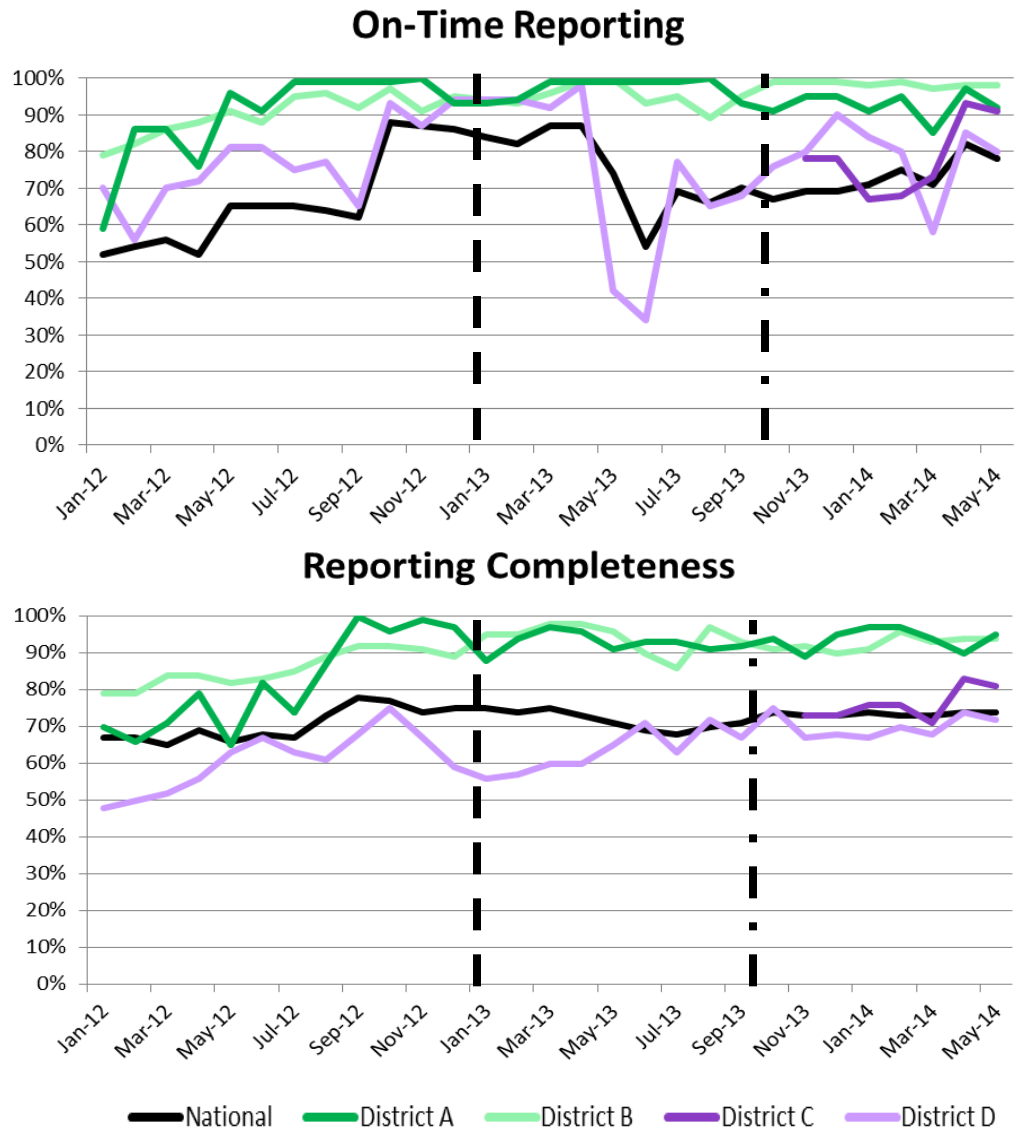
Original Districts	Before midline (Jan 2012 to Dec 2012)	After midline (Jan 2013 to May 2014)	Scale Up Districts	Before training (April 2013 to Sept 2013)	After training (Oct 2013 to May 2014)
District A	97%	98%	District C	N/A	89%
District B	95%	99%	District D	94%	94%

HSA Reporting to cStock

All HSAs visited in the case study, from both original and new districts, demonstrated **a good understanding of their reporting responsibilities**, namely they knew they were to report stock on hand every month to cStock, to report receipts to cStock when they collected products and send an emergency order when stocks were low.

- ***"In a month I send SOH and when I am responded to and I come to collect products and then I also send a report acknowledging receipt. But if in the middle of the month I run out of some products I also send emergency order." HSA A1.1, original***
- ***"I use it once or twice in a month, oooh! No, I use it twice a month. Because at the beginning of each month I send SOH, and when health center says that my products are ready, I go and collect and then I send REC. so its twice a month" HSA D2.1, scale up***

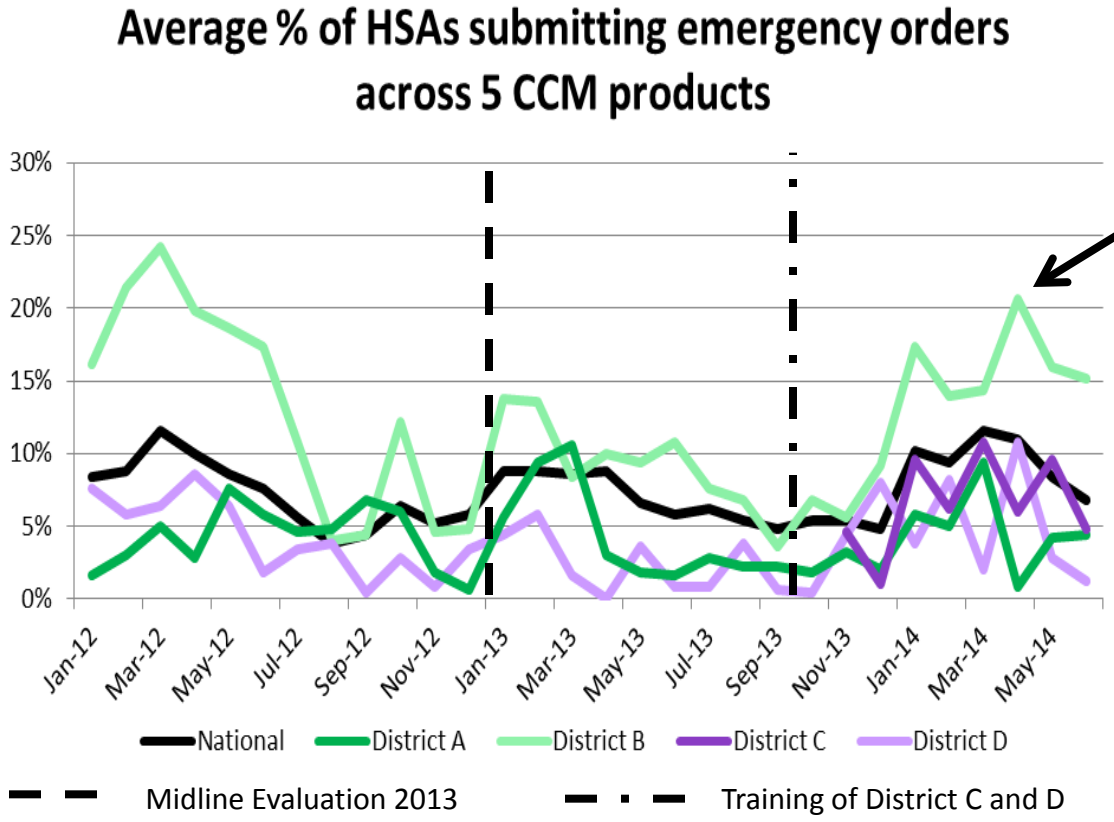
% HSAs Reporting on Time and Completely



- Rates of completeness and timeliness maintained in original districts
- District C saw improvements in completeness and timeliness in March 2014 (time of DPAT review meeting)
- On time reporting has been erratic for District D

- National on-time reporting is less erratic over time even as new districts have been added
- National complete reporting is stable over time, despite new districts coming on board

Emergency Orders



- District A and C have EO rates below the national average
- In District B, as they receive their order from CMST mid-month, they ask HSAs to send an EO when it arrives

"So when we receive CCM products mid-month, we tell them to send an emergency order because we know that we didn't give them enough products at the beginning of the month." HC In-Charge." HC B1

- No real change in number of EOs before or after midline, however for District D they appear to go up after DPAT training

Original Districts	Before midline (Jan 2012 to Dec 2012)	After midline (Jan 2013 to May 2014)	Scale Up Districts	Before training (April 2013 to Sept 2013)	After training (Oct 2013 to May 2014)
District A	4%	4%	District C	N/A	7%
District B	13%	11%	District D	2%	5%
National	7%	8%			

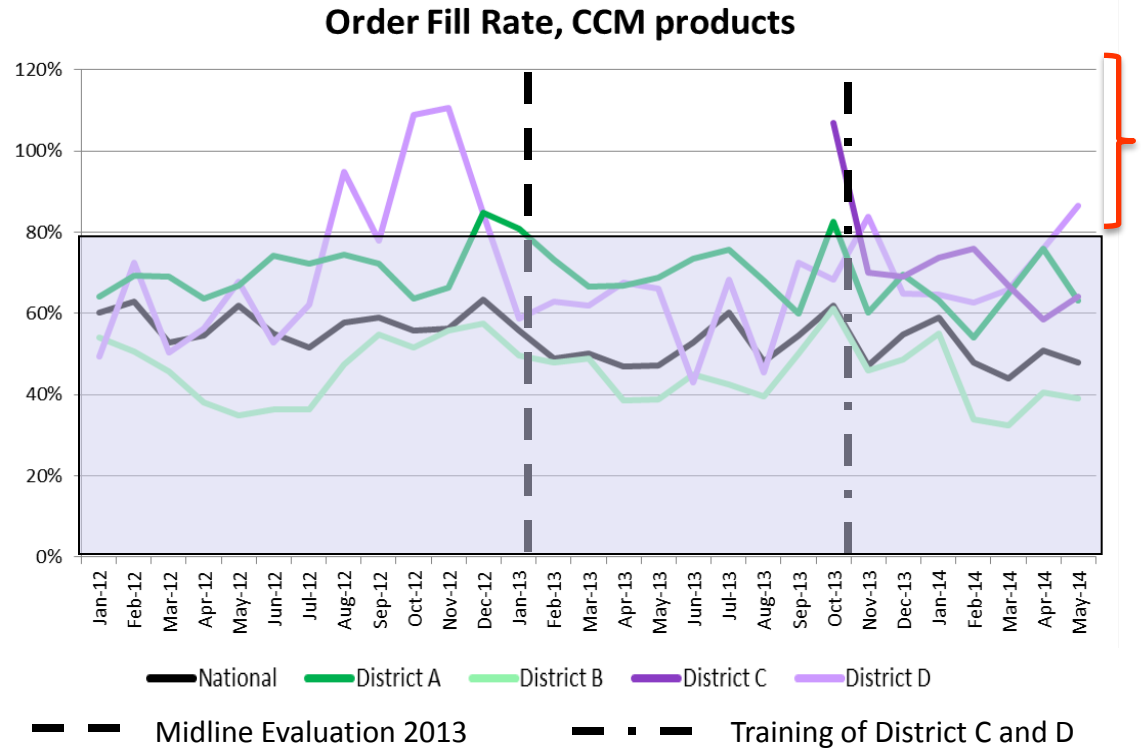
Consistent and Correct Use of the Resupply Worksheet by HCs

In the original districts there is more **consistent and correct use of RSWs** as well as **consistency in who is responsible for the RSW** compared to new districts.

In new districts, there was less consistency in who is responsible for the RSW (District C) and use of the RSW in District D was found to be less correct and consistent.

	Original Intervention				Scale-up			
	District A		District B		District C		District D	
	HC 1	HC 2	HC 1	HC 2	HC 1	HC 2	HC 1	HC 2
Person Responsible for RSW	HSA Supervisor	HSA Supervisor	HSA Supervisor	HSA Supervisor	Community Health Supervisor	HC In-Charge	HSA Supervisor	HC In-Charge
Consistent Use	Not observed – reported to be used monthly	Observed monthly use since Sept 2012	Monthly use: observed June 2014	Monthly use: observed June 2014	Monthly use: observed June 2014	Observed used monthly since Nov 2013	Observed only June 2014, others not available	Observed Oct & Nov 2013 and Feb- May 2014; no June 2014
Correct Use*	Not observed	Fully complete and correct	Fully complete and mostly correct	Fully complete and correct	Fully complete and correct	Fully complete and correct	Incomplete but correct for quantities included	Complete only for Nov 2013, others missing data

Order Fill Rate



- HC staff generally supply less than cStock requests, often due to low availability of products at HC, but also sometimes due to the perception by HC staff that cStock overestimates the resupply quantity.
- This trend has been consistent before and after midline.

	District A		District B		District C		District D	
	HC 1	HC 2	HC 1	HC 2	HC 1	HC 2	HC 1	HC 2
Perception of cStock over (O) or under-estimating (U) resupply quantities								
HSA Supervisor		U		U/O	O		U	
HC In-Charge			U/O		O		U/O	
Cluster Supervisor					O			
RSW Observation								
Under filled	Not observed	0	8	5	3			Nothing recorded
Correctly filled		6	0	2	1	4	1	
Over filled		1	1	1	3			

Multiple Sources Used To Determine Resupply Quantities

HC staff across all case study HCs **did not use cStock exclusively** to determine resupply. The most common other source is the availability of stock at the HC level. About half the HCs said they sometimes also refer to paper-based report to check the HSA stock on hand or the number of cases.

Information used for determining resupply	District A		District B		District C		District D	
	HC1	HC2	HC1	HC2	HC1	HC2	HC1	HC2
cStock	X	X	X	X	X	X	X	X
HC Stock Levels	X	X	X	X	X	X	X	X
Paper	X		X	X	X	X		
Population	X							

- *"So what do you do now to determine how much to resupply the HSA? We check the balance on the A1 forms and compare with cStock and what was used in the last 3 months." Community Health Supervisor, HC C1, scale up*
- *"How do you determine how much product HSAs get? I do it according to the report and the population they have. If they don't have enough drugs, or if they have too few drugs…we had that problem before, but we have bridge now. If the pharmacy has a low stock, then they give less. If the HSAs tell me to give them more drugs that are not according to the population, I can't. cStock gives the right quantity." HSA Supervisor, HC A1, original*

Why cStock is not used exclusively

Reasons stated for why HC staff are not using cStock exclusively to determine resupply quantities vary from:

- Low product availability at HC

  "If cStock gives us a figure, if we don't have enough we have to reduce." HC In-charge, HC B2 original

- A lack of trust or understanding in how the system calculates request quantities (cStock should top up to the maximum stock level of two months of stock)

  "… cStock is supposed to give I think a three-month supply to HSAs, but it sometimes over- or underestimates this number… Yes, the three-month supply is fine. I'm talking about the mistakes cStock makes at times, where it over- or underestimates this quantity." IMCI Coordinator, District A, original

- Greater comfort with using other more traditional methods of calculations (e.g. paper based reports, cases, population)

  "We first use the cStock information. But when we look at the paper-based report, we'll see that the HSA has enough cotri, even though cStock tells us to give him a lot more cotri. We decide what to give based on the paper-based SOH." HSA Supervisor, HC B2, original

- In one HC in the new cStock district, there was a lack of trust in the data that is entered by HSAs into cStock

  "Sometime back, the HSAs were cooking information…..Cooking information?...Yes. For example, and HSA would have 100 tablets but would want to get more so he would put that he has 0 products. But now, with supervision, this isn't happening anymore." HC In-Charge, HC C1, scale up

Prepacking by HC Staff

All health centers in the endline evaluation except one **reported prepacking orders for HSAs as a standard practice**, and the one HC that did not prepack stated the reason was because they do not have sufficient supplies and must ration between the HSAs.

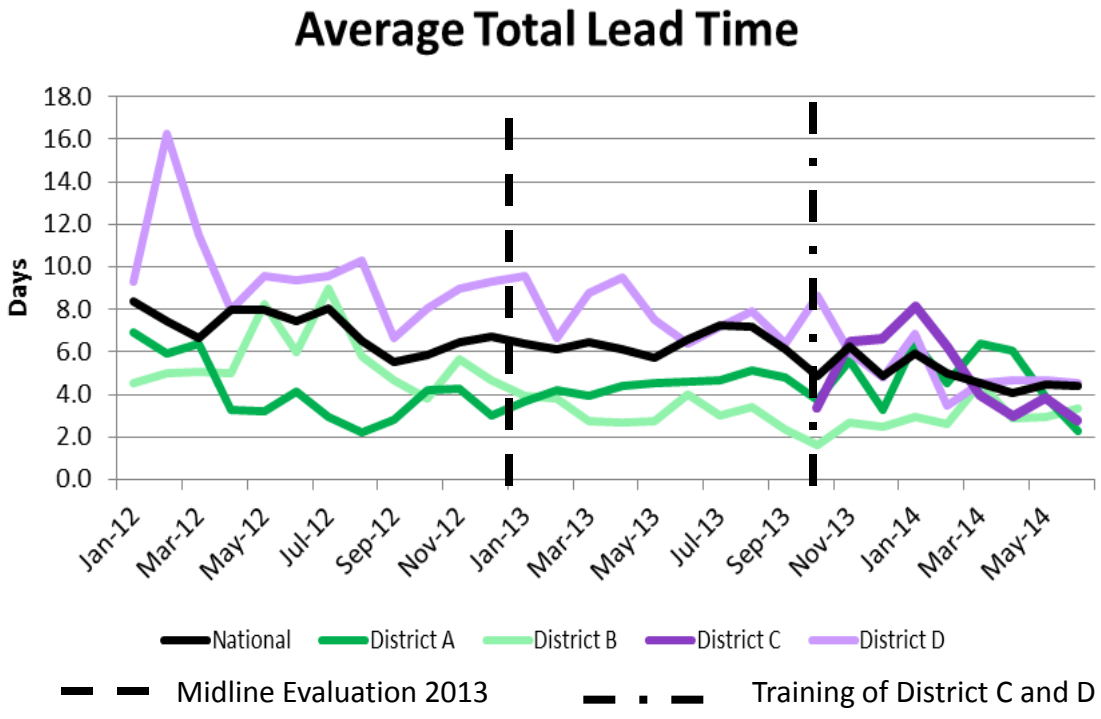
- ***"After getting a message, I document the information in this one [pointing to the notebook that had the RSWs]. Then, we coordinate with the in-charge to prepack the drugs, then I respond to the orders so that the HSAs can come collect the supplies." HSA Supervisor, HC B2, original***
- ***"We're supposed to pack the products before the HSA comes… [Brief interruption while interviewee takes a phone call] …..the problem is that, we can't prepack before the HSA arrives because sometimes the drugs are in short supply at the HC. So we call all the HSAs, we tell them, 'look, we only have this many products' and we decide how to resupply them based on the quantities we have available. Because you see, I have 13 village clinics. We discuss with the HSAs, say to one, 'you have enough to last you a month' and we say to another, 'you get more 'cause you don't have enough.' This is the system we've come up with. But we are supposed to prepack the products for the HSAs if we have enough stock." HC In-Charge HC B1, original***

Prepacking by HC Staff

As designed, in general HSA Supervisors and HC In-Charges work together to prepack the orders. However, in some case study HCs there is variation in how the process is carried out and who is involved in the process:

- In HCs with Pharmacy Assistants (PA), the HSA Supervisor works with the Pharmacy Assistant to prepack the orders. However, PAs have often not been trained in cStock and could result in the HC In-Charge being less aware of what is or is not being supplied to HSAs.
  - ***"Who packs the medicines for HSAs? The pharmacy assistant and I do this. If I am not here, he packs it." HSA Supervisor, HC A1, original***
  - ***"When you prepare the orders and pack the drugs, who do you work with? I have a pharmacy assistant who works with me." HSA Supervisor. HC C1 scale up***
- HSA Supervisors and In-Charges find different ways of working together.
  - ***"Does anyone help you pack the drugs? I don't have the right to go in the drug store. I just communicate the message to the in-charge, and he brings drugs to my table so I can pack them." HSA Supervisors, HC C2, scale up***

Total Lead Times

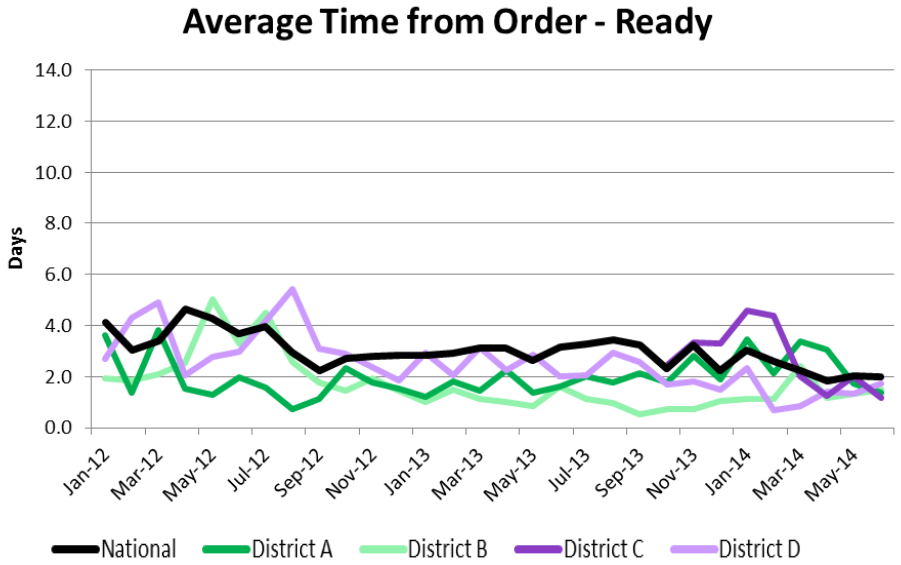


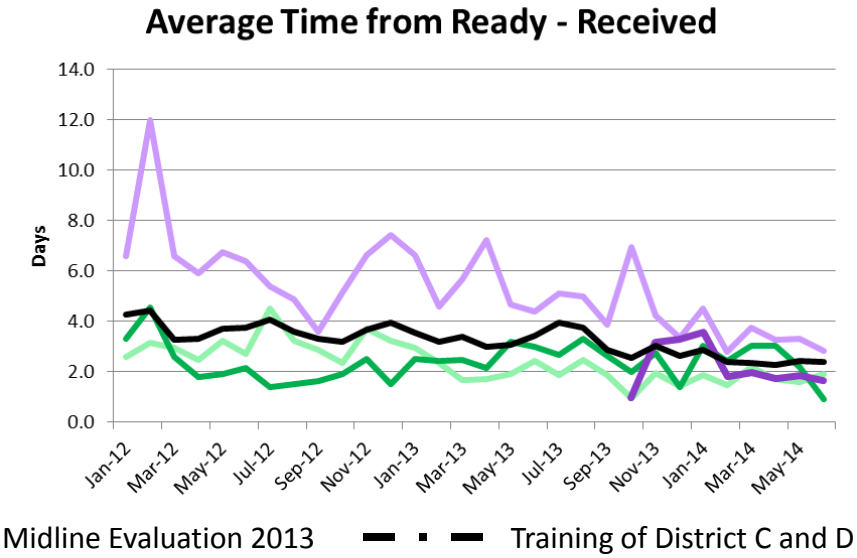
- Nationally lead times have been sustained, and even reduced, as EM has scaled up to more districts
- In the original districts, lead times stayed the same in one district (A) and reduced in the other (B).
- For District D there was a reduction in lead times following the introduction of DPATs.
- For District C lead times reduced after the DPAT cluster review meetings

Original Districts	Before midline (Jan 2012 to Dec 2012)	After midline (Jan 2013 to May 2014)	Scale Up Districts	Before training (April 2013 to Sept 2013)	After training (Oct 2013 to May 2014)
District A	4.1	4.6	District C*	N/A	4.9
District B	5.6	**3.0**	District D	6.5	**4.9**

Lead Time Components

District B and D showed improvements in both the time it takes for the HC to respond to a request (order to order ready), and in the time it takes a HSA to respond to an order ready message and send a receipt.





	Average Order to Order Ready (days)		Average Order Ready to Receipt (days)	
Original Districts	**before midline**	**after midline**	**before midline**	**after midline**
District A	1.9	2.1	2.2	2.5
District B	2.5	**1.2**	3.1	**1.9**
Scale Up Districts	**before training**	**after training**	**before training**	**after training**
District C	N/A	2.7	N/A	2.2
District D	2.5	**1.5**	5.0	**3.9**

Perceived Benefits of cStock

HSAs and HC staff say that cStock has provided **a simple process for them to request and resupply products in a systematic way.**

Perceived Benefit	Key Quotation
Ease of reporting	*"…it has also reduced workload by simplifying the reporting system." HSA A1.1, original*
Reminders for reporting	*"Now the system assisted me in timely delivery of reports. The system also has reminders which remind us on reporting issues. Mostly, When I forget to report or I am about to report." HSA A2.1, original*
Reduced Travel Burden	*"...with cStock, they come only after we send them a message that their order is ready." HC In-charge, HC D1, scale up*
Eases calculation of resupply	*"Our work is reduced because cStock gives us the exact amount to supply." ~ In-charge, HC D2, scale up*
Ability to report low stocks	*"Drug availability has improved a lot because when supplies are about to run out we send an emergency order" HSA B1.2, original*
Improved communication and relationships	*"It helps with communication. It makes it easier to reach the person responsible to do a particular duty.." Cluster Supervisor, HC A1, original*
Improved relationships and transparency	*"cStock has improved our relationship because we can sit together and look at the data. They know why I'm giving them that quantity. There's transparency and accountability." In-charge, HC B1, original*

Perceived Challenges of cStock

Network challenges or system glitches have the potential to discourage use of cStock.

Perceived Challenge	Key Quotation
Perception that cStock over or under estimates request quantities	*"For cStock, the calculations it gives is not reliable. … cStock is supposed to give I think a three-month supply to HSAs, but it sometimes over- or underestimates this number… Yes, the three-month supply is fine. I'm talking about the mistakes cStock makes at times, where it over- or underestimates this quantity." IMCI Coordinator, District A, original* *"The other time cStock calculated too much zinc and ORS for me, what the supervisor did was to trim the quantities for me." HSA C1.1, scale up*
Network coverage	*"…Sometimes network is a problem like where I come from network is a problem so I have to search for network to be able to send the report." HSA1 HC A1, original*
Access to electricity	*"Charging of my phone because there is no electricity where I live." HSA2 HC C2, scale up*
Connection problems	*"I tried for three times then on the fourth attempt I sent SOH and it went through. Did you report this? I called the Senior HSA and that time I was with a friend who was also experiencing a similar problem and the Senior HSA responded that the problem was with the system. He also said that he had received similar complaints from some HSAs." HSA2 HC B1, original*
Recent system upgrade (May 2014)	*"Like the other time I sent SOH, the reply I got from cStock was 'your order was too much'. When I presented my problem to him, He advised to send SOH again but with less quantities. When I did, my message went through." HSA2 HC D2, scale up*

Summary: cStock & Resupply Process

The endline evaluation demonstrates that cStock is scalable and institutionalizable

- HSAs use the reporting procedures as designed and report to cStock routinely as a standard business practice
- HCs prepack orders as a standard practice and notify HSAs when the order if ready
- However, the quantities of products resupplied to HSA are sometimes not based solely on the cStock recommended quantities, as was intended in the original design

Product Availability Teams Findings Outline

- DPATs work as a team towards a common goal: collaborate, coordinate and communicate
- HPAT SC performance monitoring
- HPAT benefits and challenges
- DPAT SC performance monitoring
- DPAT benefits and challenges
- Linking HPAT and DPAT
- NPAT

Product Availability Teams

After midline the DPAT structure changed to add District Malaria/ FP/HIV Coordinators, HMIS Officers and Cluster Supervisors. The previous model of DPATs encompassing districts, HCs, HSAs in one meeting was **abolished** but cluster Supervisors were added to the HPAT meeting structure as the link between HPAT and DPAT. They are expected to raise unresolved issues from HPAT at the DPAT meetings.

Enhanced Management (EM)

DPAT/HPAT Meetings

- Quarterly District Meetings (DPAT) with Program Coordinators, Pharmacy Technicians and Cluster Supervisors
- Monthly HC Meetings (HPAT) with HC, HSAs and Cluster Supervisors
- Topics discussed include
  - Performance plans & recognition
  - Reporting timeliness and completeness
  - Stock management , expiries & overstocks, and product availability

Performance Plan

- Supply chain performance indicators and targets
- cStock data and resupply worksheets used to track performance
- Formal recognition system to drive SC performance
- Management diaries used to track issues and actions taken

cStock Data

Frequency of HPAT Meetings

Review of the entries in the HPAT management diaries showed that meetings were taking place in majority of HCs, but at varying degrees of regularity. Aligning the meeting with product collection or a day of the month does seem to result in more consistent meetings.

- *"I think, on cStock, because we combined them—the HPAT meeting and the HSAs coming to collect supplies, I think time has been minimized. It has even reduced our workload because HSAs come on one day and we assist them." ~ HSA Supervisor, HC B2, original*

`	Original intervention				Scale-up			
	District A		District B		District C		District D	
	HC 1	HC 2	HC 1	HC 2	HC 1	HC 2	HC 1	HC 2
Reported Frequency*	monthly	No meetings since 2013	monthly	monthly	monthly	monthly	Monthly: no meeting since Feb	monthly
Timing of meeting*	2nd of the month	N/A	Aligned with product collection	Aligned with product collection	Agree on date of next at end of meeting	Combined with general staff meeting	Aligned with product collection	Aligned with product collection
HPAT Meetings in 2014**	no diary to observe*	0	3	4	1	2	2	5

* Based on interview, ** Based on observation of management diary

HC SC Performance Monitoring

HCs all had management diaries, but did not have copies of the district performance plan or recognition plan; however many discussed DPAT indicators and gave verbal recognition during HPAT meetings. Most common indicators included reporting rates, timely and complete reporting, lead times, stock issues and emergency orders.

	Original intervention				Scale-up			
	District A		District B		District C		District D	
	HC 1	HC 2	HC 1	HC 2	HC 1	HC 2	HC 1	HC 2
Document used for monitoring	No mention	Report from district	No mention	RSW	RSW	RSW	Form 1A	No mention
Performance Plan	No	No	No	No	No	No	No	No
Management Diary	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recognition Plan	No	No	No	No	No	No	No	No
Indicators discussed during meetings								
• Reporting		X	X	X	X	X	X	X
• Lead times		X	X		X	X	X	
• EOs		X		X	X			
• Stock Issues		X			X		X	X

Perceived Benefits of HPAT

Respondents identified a range of benefits of HPAT meetings, even in HCs that had stopped holding HPATs. Many of these benefits reached beyond CCM product availability issues and were related to **improved communication, coordination, and collaboration between the HC and HSAs.**

Perceived Benefit	Key Quotation
Enables collective problem-solving	*"With HPAT meetings I am now able to ask friends if I have problems" ~ HSA2 HC A1, original*
Facilitates better performance	*"You correct the mistakes that you were making be it reporting late or coming late to collect products when advised to do so" HSA 2, HC B1, original*
Enables knowledge and experience sharing	*"A lot because it has improved the way I am working considering that there are times where I am able to meet and share experience with colleagues ." HSA2 HC C2, scale up*
Allows encouragement and motivation of one another	*"We encourage each other to work harder on cStock. e.g. telling each other the importance of sending our different reports at the right time." HSA HC D2, scale up*
Fosters team spirit to solve problems	*"We are now working as a team - now we are able to solve problems." HSA1 HC C1, scale up*
Increased coordination and collaboration	*"....but now we are meeting frequently and there is coordination among us..."~ HSA2 HC C1, scale up*

Challenges of HPAT Meetings

Most challenges mentioned related to workload and motivation barriers, such as long distances to travel to attend, long meeting times and lack of refreshments.

Challenge	Key Quotation
Transportation/distance	*"HSAs stay too far away so they can come late for meetings and to collect drugs. Sometimes they have to use their own money to get here. Some HSAs have bikes, some don't." In Charge, HC B2, original*
Length of meeting and lack of refreshments / allowances	*"No there are no problems we have bicycles but the main problem is having to spend a long time there without taking any food." HSA2 HC B2, original*
Absence of HPAT members (HSAs and HC staff)	*"One attendance was low and another time the in-charge was not here" HSA Supervisor, HC C1, scale up*
Integration of other activities (like product pick-up) in meeting	*"In June, the 1st was on a Sunday so the HSAs failed to come. Some came on Monday to get their products. Some came on Tuesday." HSA Supervisor, HC B2, original* *"This is because we had no products to supply HSAs with so they didn't come here." HSA Supervisors HC B1, original*
Lack of district engagement and feedback	*"I think people from the district are lacking seriousness, of late they are not even asking us why we are not meeting." HSA 1, HC A2, original* *"However the main challenge is that we don't get feedback from the DHO about the problems that we present so it is like at HPAT we are always discussing the same issue." HSA 1 HC D1, scale up*

Frequency of DPAT Meetings

In the 4 districts visited by the case study team, **a total of 6 of the expected 8 DPAT meetings had occurred between January to June 2014** (time of data collection) based on observations of the management diaries and interview responses.

Only **2 of the 4 districts conducted regular DPAT district level meetings**, the other two districts relied on partner supported review meetings held at cluster level, which are heavily dependent on funding and are not a true substitute for DPATs (address cluster issues only).

`	Original intervention		Scale-up	
	District A	District B	District C	District D
DPAT Meetings Conducted in 2014*	0	1	0	2
Attendance at DPAT Meetings	N/A	District staff	N/A	District staff and cluster supervisors
Partner funded DPAT review meeting in 2014	1**	1**	1	N/A
Attendance at DPAT Meetings	District, cluster supervisor, HC staff, HSAs	District, HC staff, HSAs	DHMT, HC staff	N/A

*Based on observation **Based on interview, both held at cluster level

Variations on the DPATs

- A confounding factor for the DPATs is the **district-level review meeting**. Three case study districts had partner-supported review meetings: resulting in a **mixed commitment** to holding stand-alone DPATs in some districts.
  - ***"We've decided that maybe we, the district staff, can travel to the individual clusters and hold DPAT meetings for each of them. We've been doing that every quarter." IMCI Coordinator, District A, original***
  - ***"For DPAT, the meetings require resources. We've managed to have them still because of [partner], but we can't manage alone." IMCI Coordinator, District A, original***
  - ***"Do you have a plan to resolve the lack of resources for the DPAT? We look to the partner XXXX for that. We are trying to discuss it but we haven't yet found a solution." IMCI Coordinator, District C, scale up***
- Some suggested it is hard to have a DPAT by itself and it needs to be **integrated into other meetings**
  - ***"Is there any difference between review and DPAT? I'm not sure what they called it. Even at the HC, we integrate the issues because it's hard to have a DPAT meeting by itself." Deputy IMCI Coordinator, District A, original***
- In another district DPAT members meet informally to address problems
  - ***"Formally we meet quarterly, but if we meet in the corridors we usually share experiences and make decisions like calling the health facilities where there is a problem. We have a problem of documenting (informal meetings) but when we meet formally we document" IMCI Coordinator, District B, original***

Performance Monitoring and Action Taking

- All four IMCI Coordinators and two District PTs said they **access the dashboard to monitor performance**; frequency of use varied from daily to weekly to monthly.
  - ***"...I look at it at every month end. The last time I used it was in end of May" IMCI Coordinator, District C, scale up***
  - ***"How often do you use the dashboard? Every day. It's a part of me." District PT, District B, original***
- Some district staff **follow up on issues by phone or through targeted supervision**
  - ***I receive alerts on my phone and then I go to look on the dashboard. I get alerts like % of HSAs that have not reported so I call specific HSAs to ask why they are not reporting. .." IMCI Coordinator, District B, original***
  - ***"What are the benefits of cStock?.....We can also plan for targeted supervision and go to support those who need support." IMCI Coordinator, District A, original***
  - ***"Even if I can't go to the HCs, I can provide remote supervision to see what is happening at the HCs and HSAs. I can interact via phone. It also helps us monitor our problems", IMCI Coordinator, District D, scale up***
- The cStock dashboard is used to **set the DPAT agenda** and is often projected during the meeting
  - ***How do you set the agenda for the meeting? It is taken from cStock dashboard to see HSAs reporting rate; order fill rate; lead time; health facility reporting..." IMCI Coordinator, District B, original***

Perceived Benefits of DPAT

All the benefit types were related to **improved coordination, communication, and collaboration**, and **the availability of data** that supported improvements in performance monitoring and problem-solving.

Perceived Benefit	Key Quotation
Enables problem-solving for product availability	*"It's [DPAT is] very beneficial because usually, we collectively solve problems. There's a lot of improvement because after our discussion, actions are taken." – IMCI Coordinator, District A, original*
Promotes stronger linkage across levels	*"Yes as of now DPAT has strengthened our connections. Before, HSAs, HC, and district were working on their own. With DPAT, we are all working as a team. It has helped us iron out any issues that we have compared to just having cStock without DPAT. At this time we didn't have much communication between us." IMCI Coordinator, District D, scale up*
Improves relationship between DPAT members and allows for shared responsibility for supply chain	*"Also, the district pharmacist now appreciates the issues of supplying the community. Before, it was business as usual. With DPAT, everyone appreciates the supply chain issues." ~ IMCI Coordinator, District C, scale up*
Enables performance monitoring and improved/targeted supervision (data visibility allows this)	*"It [DPAT] gives us a wake-up call on issues we don't see here but are faced in the facilities. It gives us a way to plan for supervision and tells us what is happening in facilities in terms of products and what to order for our drug store." ~ Pharmacy Technician, District A, original*

Linking HPAT and DPAT

- After midline Cluster Supervisors were intended to be the link between HPAT and DPAT meetings - communicating HC issues to DPAT. In original districts not all cluster supervisors are trained and aware, and for others challenges in transportation prevent attendance.
  - ***"I'm not trained so I haven't been called to the meetings." Cluster Supervisor, HC B1, original***
  - ***"By design, are you supposed to attend the HPAT meetings? Yes, but I haven't been able to because of fuel problems." Cluster Supervisor, HC D1, scale up***
- Some HCs do feel they can call or visit the district to help solve problems, whereas others are demotivated by the lack of feedback from the district
  - ***"Some of the problems can be solved here so we discuss possible solutions. But some problems require higher levels, so we identify them but we can't find their solutions. Who is the higher level? The IMCI coordinator, the pharmacy technician." HSA Supervisor, HC B2, original***
  - ***"However the main challenge is that we don't get feedback from the DHO about the problems that we present so it is like at HPAT we are always discussing the same issue." HSA D1.1, scale up***
- Supervision provides an opportunity for the linking district to HC
  - ***"Have your received supervision on cStock or DPAT?" "Yes, he even checked the discussion in the book" HSA Supervisor, HC B1, original***

National Product Availability Team

At midline, districts who had implemented the DPAT recommended the creation of the NPAT. The NPAT is designed to support the DPATs in achieving their product availability goals by extending the community to district link to the central level of the supply chain. The NPAT is expected to be incorporated into LMIS review meetings, although these are not yet occurring regularly.

- Since it was established in November 2013, the NPAT has only met three times, but is considered by the MOH to be critical to the institutionalization of the EM approach.
  - *"So the NPAT has to work with the DPAT to address challenges so that cStock is kept alive. Sometimes, just a visit from the central level says a lot, it says 'I've been looking at how you're doing'. We, as the NPAT should work hand-in-hand with the DPAT, and should visit DPAT. It's motivation for them if they know that we are watching.*" *MOH*
- The challenge is finding the time and resources to meet as a NPAT and conduct supervisory activities as the NPAT.
  - *"Maybe we are not able to do supervision or attend the DPAT meetings, because of funding. For us to move around, there needs to be funding. The other challenge is, if we're too committed to other things, we can neglect the NPAT. So we need to create time and attend the meeting." MOH*

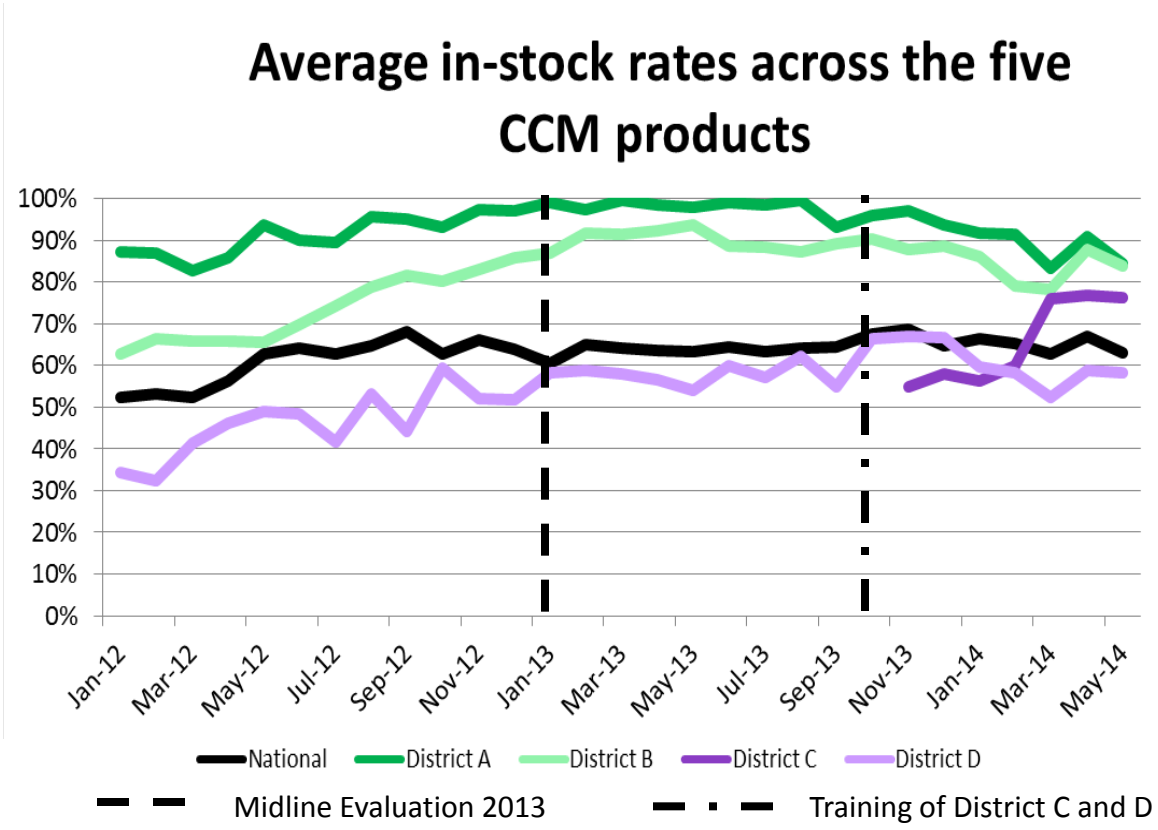
Summary: HPATs, DPATs, NPATs

- The case study shows that both the benefits and challenges of the DPATs and HPATs were quickly realized in the new districts, and were the same as original districts
- HPATs, DPATs, NPATs are considered to be important for improving coordination, communication, and collaboration.
- At all levels meetings are considered important, but are challenging due to issues of transport, resources and time
- Performance monitoring and follow-up between levels to try and achieve the performance indicators was evident, facilitated by easily-accessible cStock data via the RSW and/or the dashboard
- Targeted routine supervision and remote support by phone are other opportunities for linking levels – communicating, motivating and building relationships – but are often prey to the same barriers as holding meetings.
- Cluster supervisors have not achieved their intended role of effectively linking HPATs and DPATs

Product Availability Findings Outline

- HSA product availability across 5 CCM products
- Average number of stockouts by district, product
- HSA product availability: each individual product
- Explaining in stock, good stock and duration of stockouts
- Perceived benefits of HPATs/DPATs on PA
- Product Availability

HSA Product Availability (PA) Across 5 CCM Products

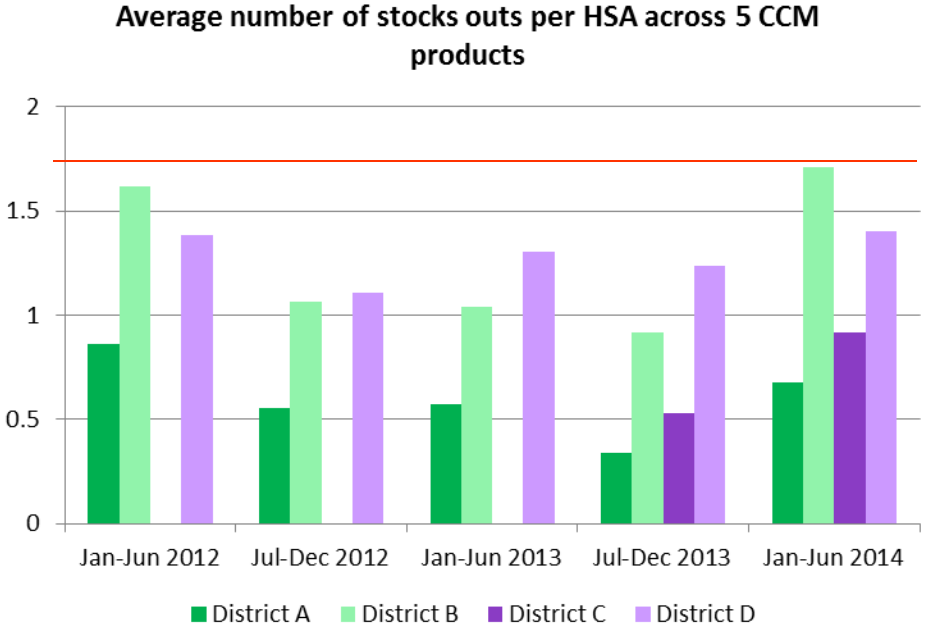


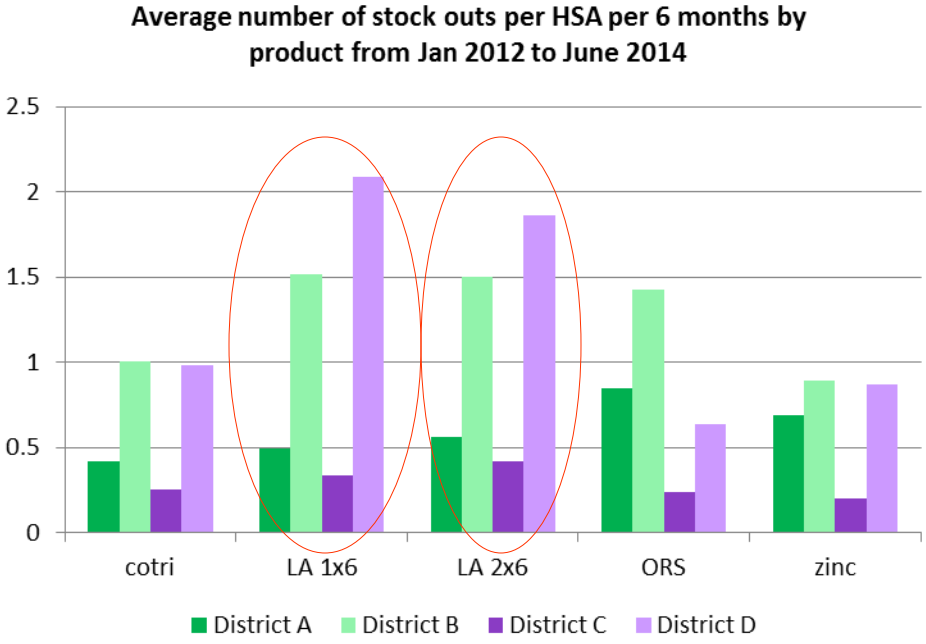
- In original districts, in-stock rates steadily increased until the midline, were mostly maintained post midline, but saw a slight decrease towards the time of the endline (change in drug budget policy?)
- For District D, PA was erratic during the early stages and appears to have become more steady after midline.
- District C appears to have had a substantial increase in product availability in March 2014

Original Districts	Before midline (Jan 2012 to Dec 2012)	After midline (Jan 2013 to May 2014)	Scale Up Districts	Before training (April 2013 to Sept 2013)	After training (Oct 2013 to May 2014)
District A	91%	95%	District C*	N/A	65%
District B	73%	88%	District D	57%	61%

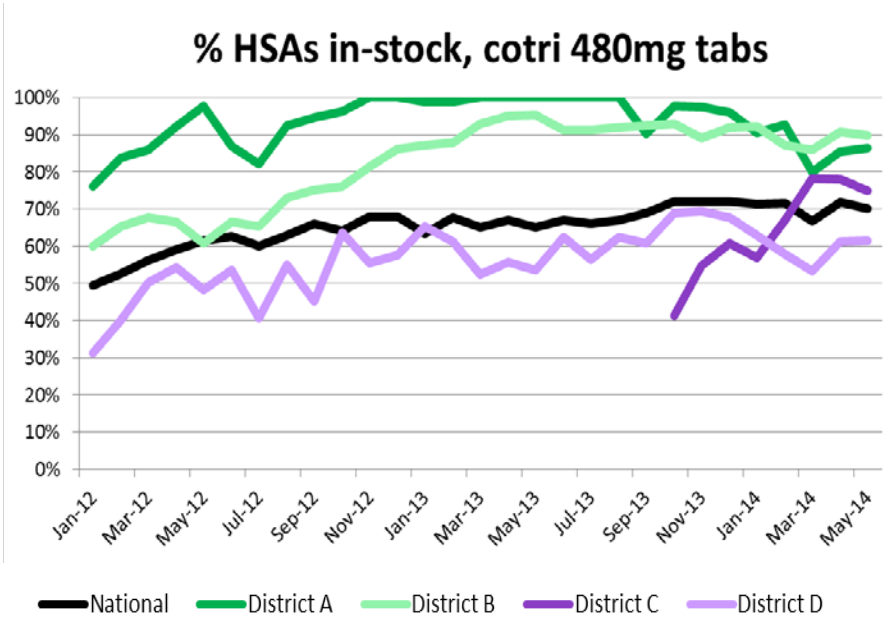
Average Number of Stockouts by District, Product

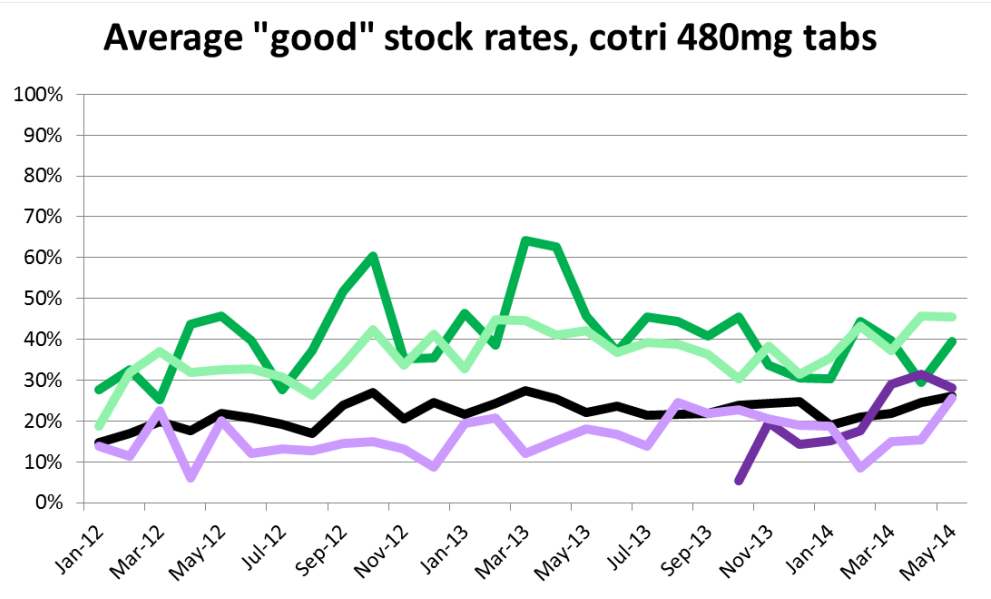
All districts have relatively **low stockout rates over 6 months (<2 stockouts/6 months)**. However, district B and D consistently had more stockouts than District A and C over the different time periods. Looking by product, stockouts in District D are primarily with LA 1x6 and LA 2x6, sometimes reaching almost 2 per HSA per 6 months, whereas District B also had supply issues with ORS.



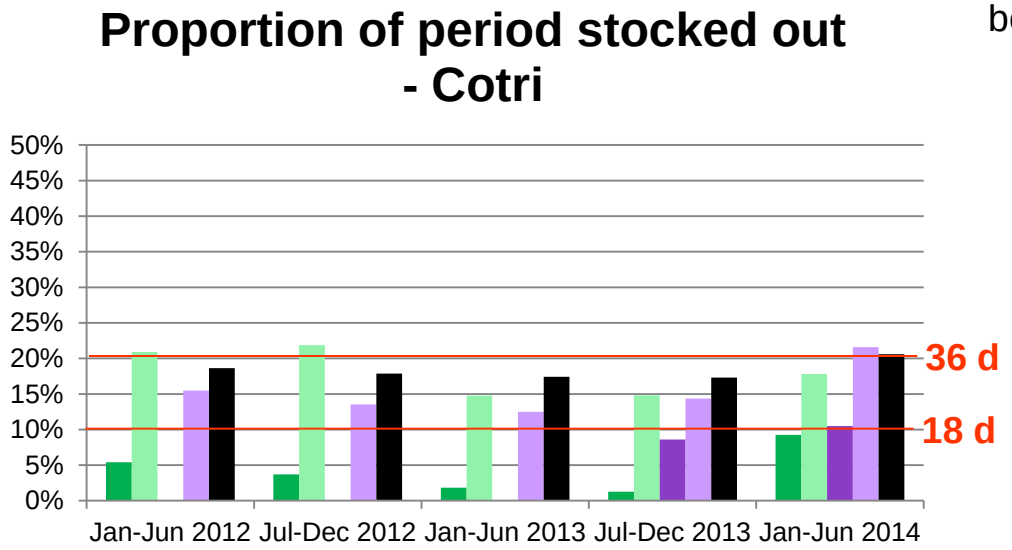


HSA Product Availability: Cotrimoxazole



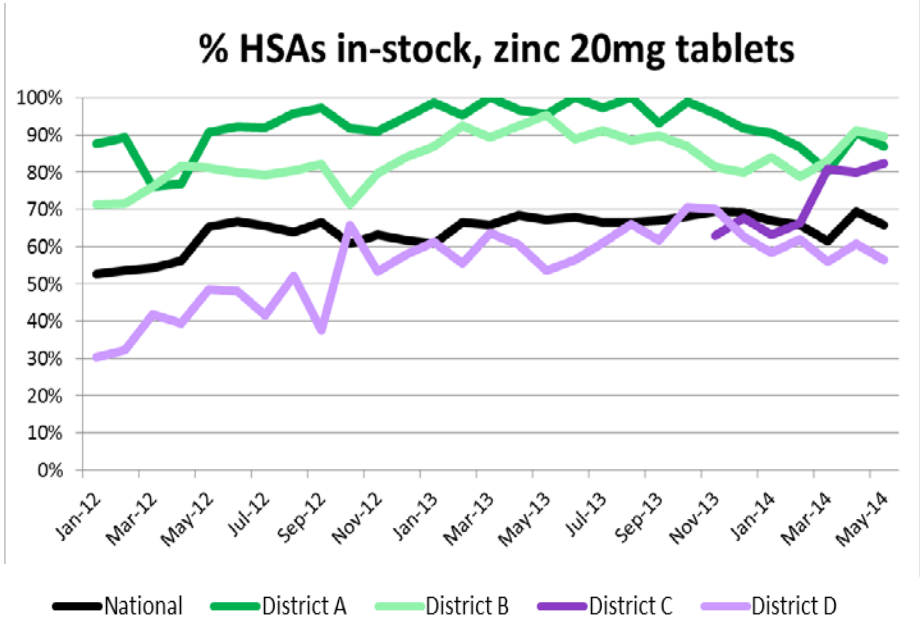


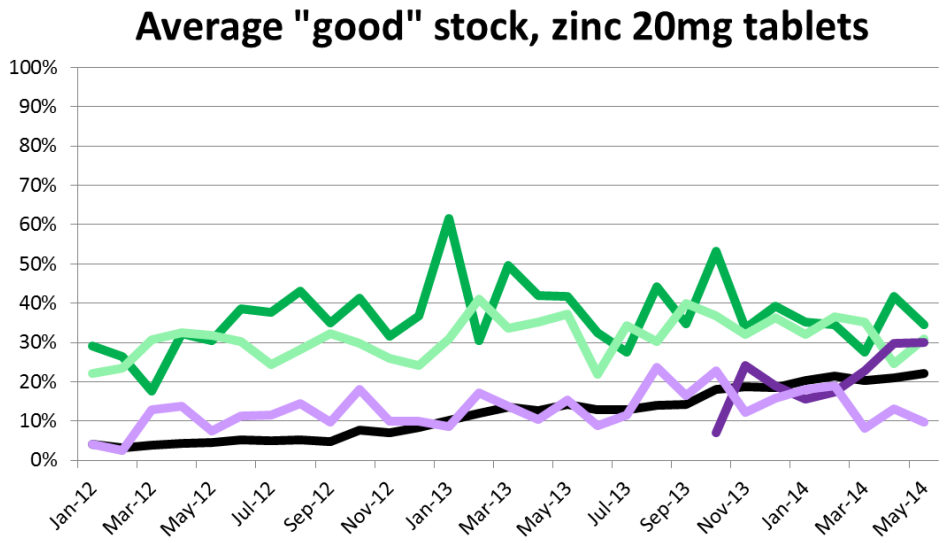
Good stock rates are defined as stock levels between EOP and Maximum stock levels

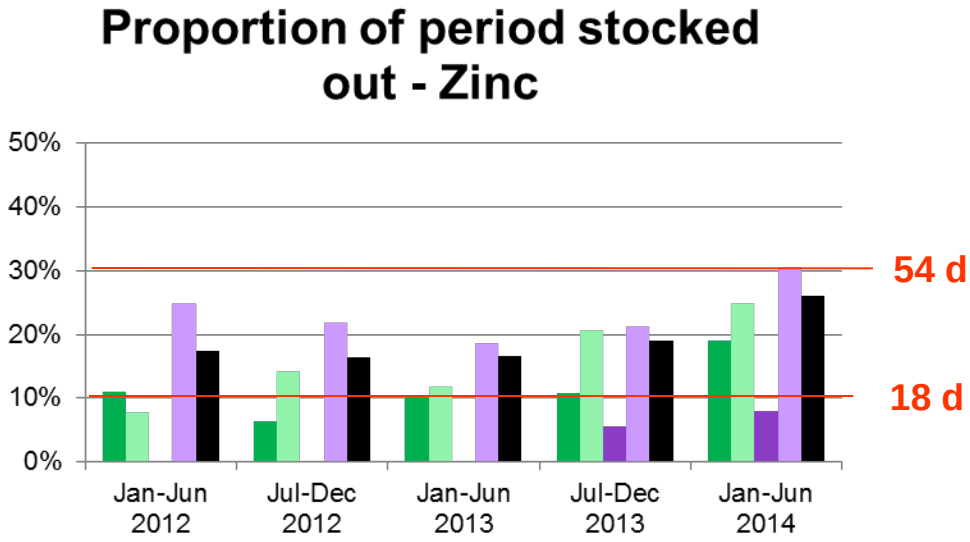


- In stock rates are highest for original districts
- Good stock rates are lower for all products, but still highest for original districts
- Except district A, HSAs stocked out between **18-36 days** in 6 month period

HSA Product Availability: Zinc

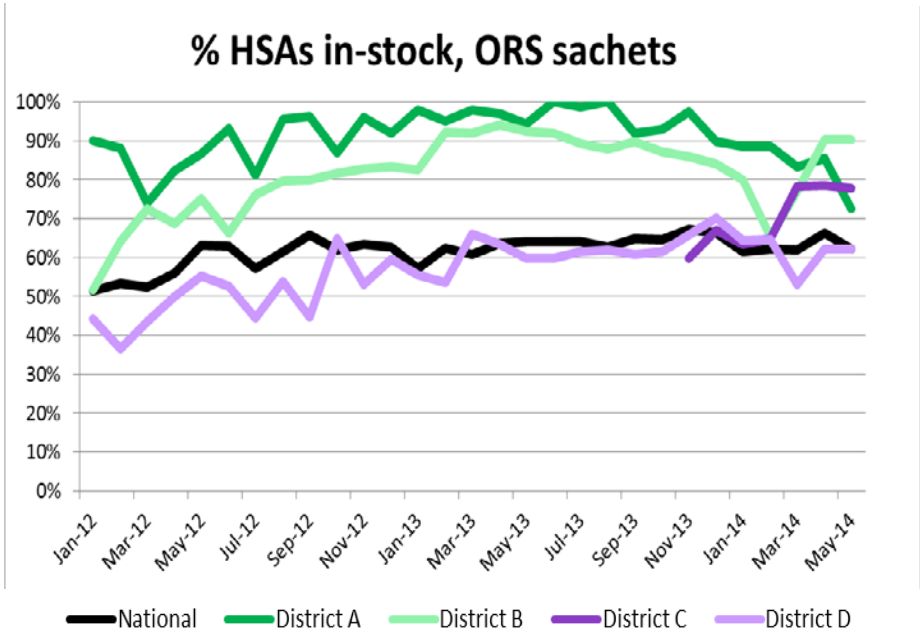


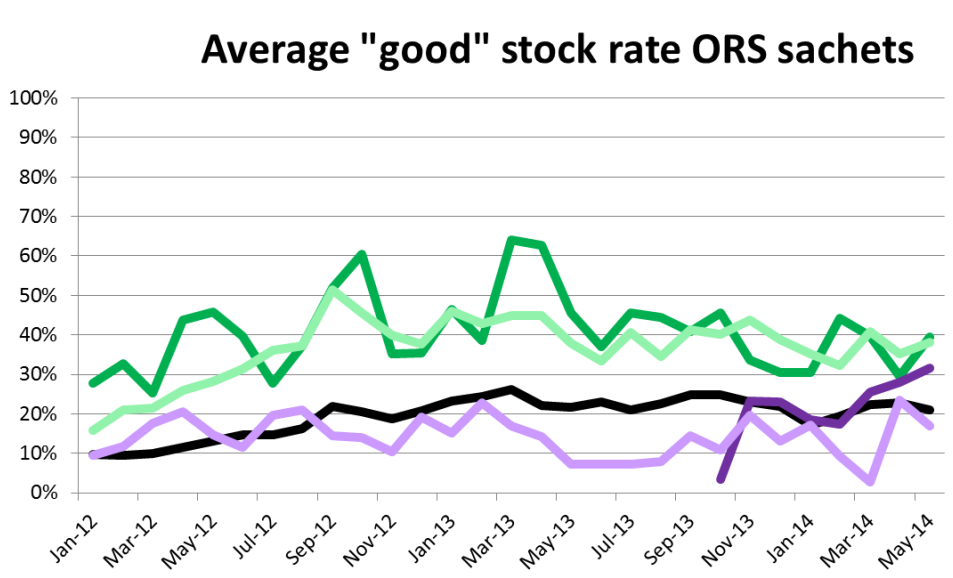


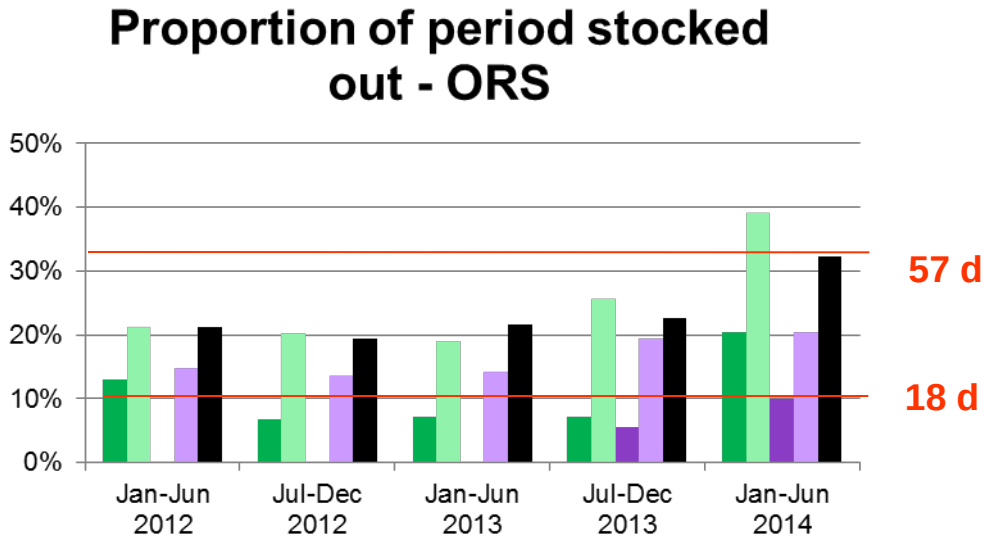


- In stock rates are highest for original districts
- Good stock rates are lower for all products, but still highest for original districts
- Most HSAs in most districts stocked out between **18-54 days** in 6 month period

HSA Product Availability: ORS

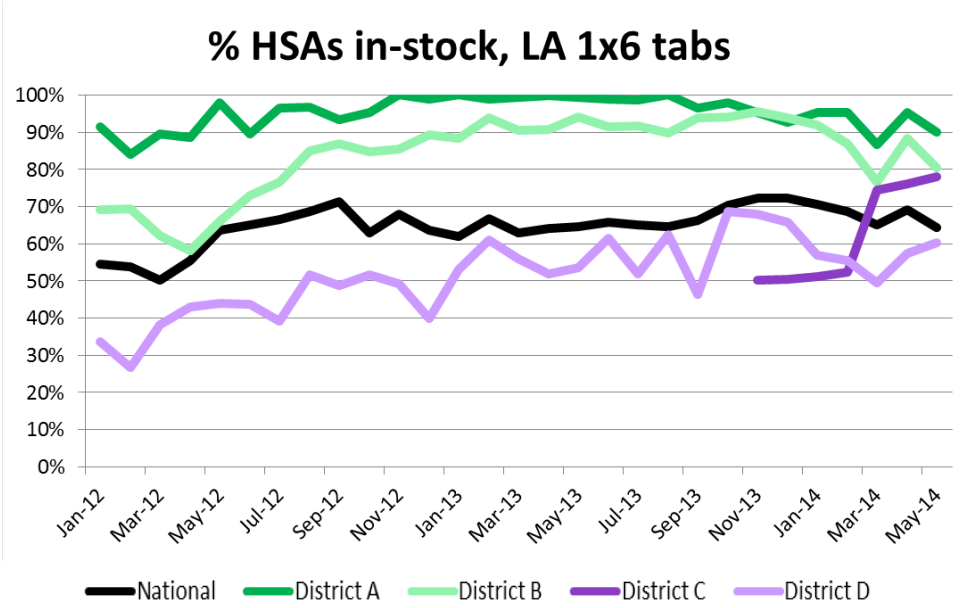


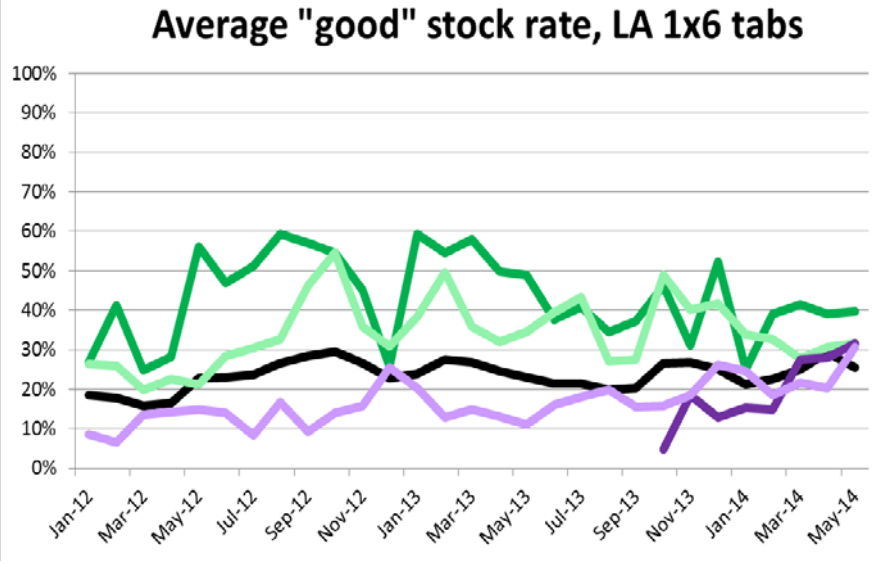


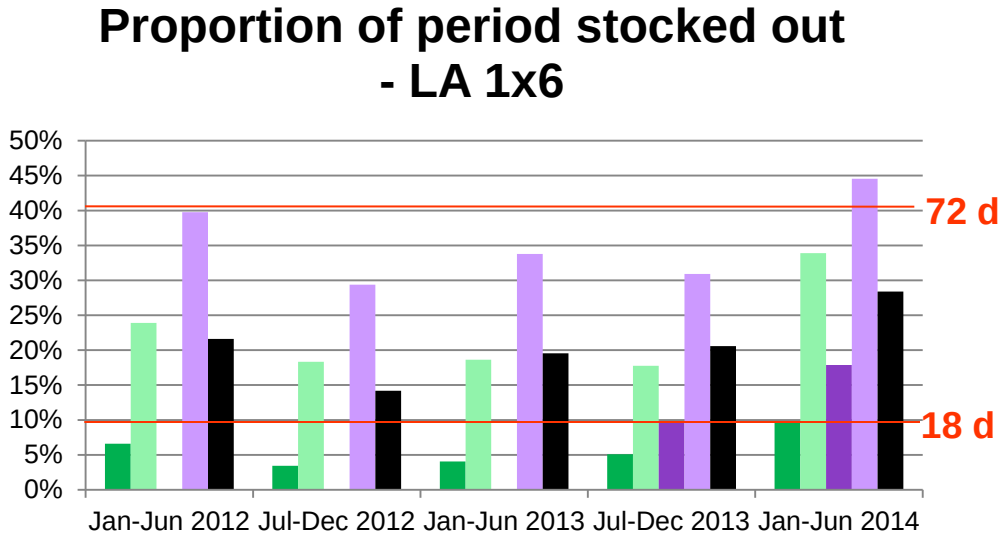


- In stock rates are highest for original districts
- Good stock rates are lower for all products, but still highest for original districts
- Most HSAs in most districts stocked out between **18-57 days** in 6 month period

HSA Product Availability: LA 1x6

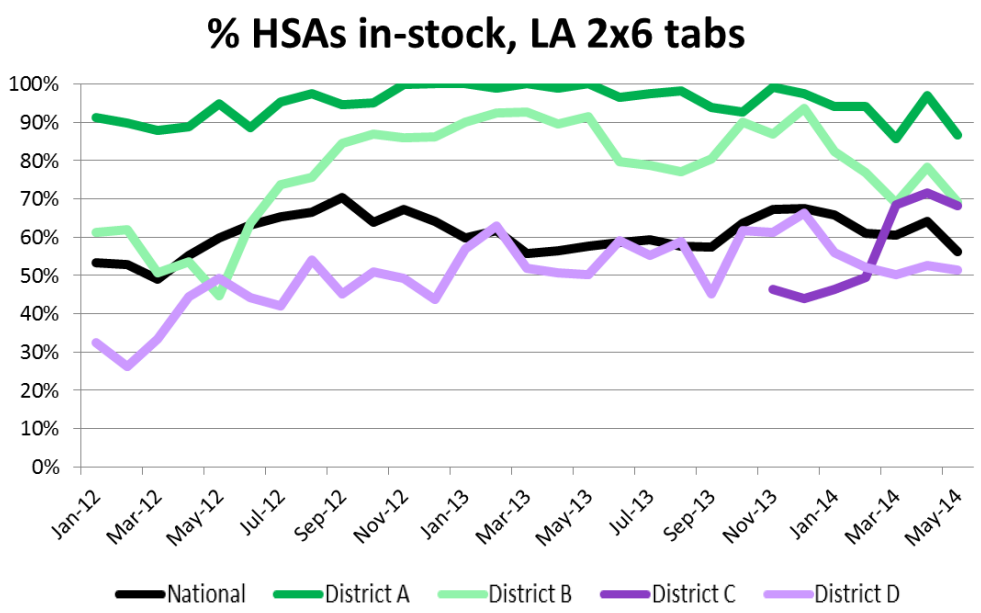


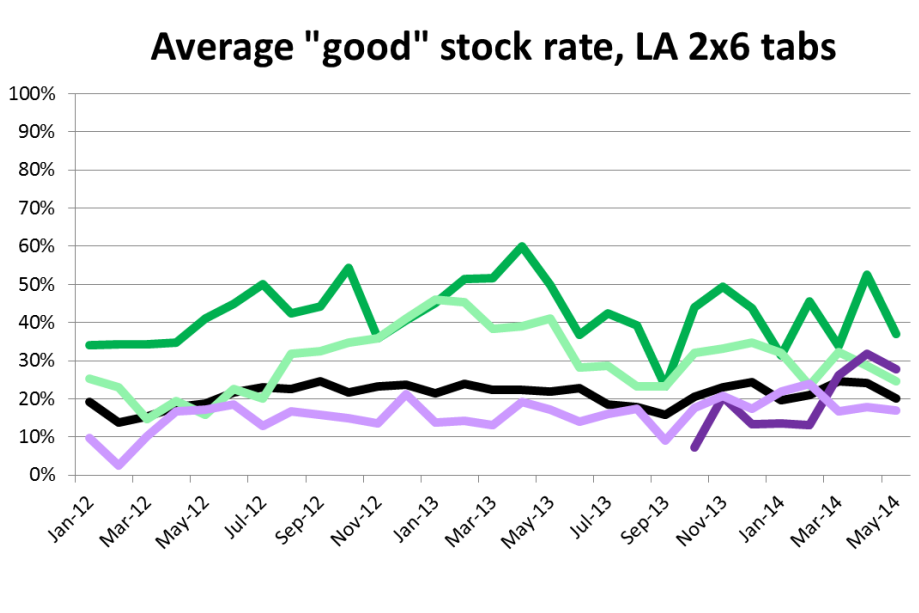


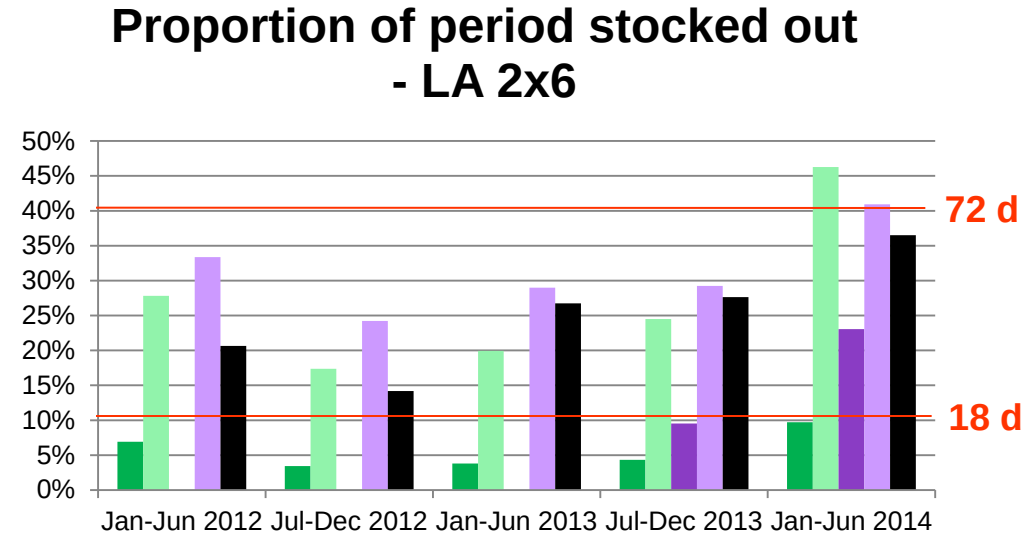


- In stock rates are highest for original districts
- Good stock rates are lower for all products, but still highest for original districts
- HSAs in most districts stocked out between **18-72 days** in 6 month period

HSA Product Availability: LA 2x6







- In stock rates are highest for original districts
- Good stock rates are lower for all products, but still highest for original districts
- HSAs in most districts stocked out between **18-72 days** in 6 month period

Explaining In-Stock, Good Stock, Duration of Stockouts

- High in-stock rates but lower “good” stock rates in all districts suggest that when HSAs are resupplied they receive enough quantities to avoid stockouts but are not topped to maximum levels
- It is likely that **HCs are not able to top up to max** due to chronic shortages, but they are prioritizing regular resupply to avoid stockouts
- However, the **duration of stockouts** across most districts (except District A) suggests that when stockouts occur they are **widespread** for all HSAs within a HC and even across the district and are not easily resolved until districts receive the next distribution
- LA distribution is based on HSA numbers from 2010, not reflecting significant expansion recently, District B is particularly affected given its size and the extent to which it was expanded

Benefits of EM on Product Availability

District, HC and HSAs identified a number of benefits that EM has on product availability, even though product availability is still not consistent.

Perceived Benefit	Key Quotation
HPATs create a platform for PA problem-solving	*"Really, theirs is an effect because when meet and discuss, they are able to solve challenges. If they have a stockout, they can prevent it from happening next time." Cluster Supervisor, HC B1, original* *"We don't have stockouts because the meetings help us. If we have a problem there is a protocol we follow. We resolve the issues." HC In-Charge, HC C2, scale up*
cStock makes it easy to report EOs and get products faster	*"The good thing about cStock is that when you see that your products are few you send the emergency order and the system is very fast when you want to order products.." HSA B2.2, original*
Coordination on PA between HC and District	*"Yes, because it strengthens the coordination between the HPAT and DPAT team that helps keep enough product." HSA Supervisor HC D1, scale up*
Improved visibility as to when HSAs need products	*"Yes, a very big difference. Before, we were just working; it was business as usual. We weren't sure if the village clinics were doing their work. With cStock, everyone is active; everyone knows that HSAs have to report, that they need products." IMCI Coordinator, District C, scale up*
Better connection to the national supply chain	*"Emm…this time, I can say it's better because all the parties are being involved now. If there's a stockout, it's because there is a national problem." Cluster Supervisor, HC C1, scale up*

HSA Product Availability

Product availability is affected by many factors outside the scope of the EM intervention. The case study points to several factors that influence product availability.

- Change in district drug budget allocation to be centrally controlled has prevented districts from buying products from private wholesalers and limited their ability to respond to stockouts
  - ***"In the past we could get permission from CMS to buy outside, but not now. If CMS doesn't have, the district doesn't have, the health center doesn't have and the HSAs don't have." District PT, District B, original***
- Previously partner supported direct distribution to HSAs; once the partner left the HC staff did not understand that they needed to take responsibility for HSA resupply
  - ***"Before, [Partner] was working on IMCI but it used to deliver drugs differently. So, people are used to that system, so the In-Charges still thought that the HSAs were still getting drugs directly from [Partner] . So, we had to change their attitude and tell them that the drugs they get for their facility are for everyone and should be distributed to HSAs." Deputy IMCI Coordinator District C, scale up***
- Some products supplied through kits are not enough, so HC does not share with HSAs prioritizing their own supply first
  - ***"Why is paracetamol a problem? We are not getting enough. It is coming as a kit so we were prioritizing to give it to HCs so it is used at HCs and not village clinics" IMCI Coordinator, District D, scale up***

National Product Availability is a Risk to EM Sustainability

If availability of CCM products remains unreliable there is a risk that the motivation of HSAs and HC staff to use cStock correctly and routinely, and for HPATs to meet, will be reduced.

- *"I noticed that most of your entries are for reporting, do you mention product availability during the DPAT meetings? This is done verbally because product availability is a chronic problem.* ***Even if I kept talking about the problem it will persist. It is like singing a song even if the song has no message"*** *HSA Supervisor, HC B1, original*

Central MOH recognize that product availability is a challenge to sustaining the EM approach.

- *What about the challenges of EM? Right now,* ***the challenge is the issue of product availability at the HC.*** *In our system, there are a number of supply chain systems. The main one is CMST which is supposed to supply the HCs with all the essential medicines but it wasn't doing that so kits had to be distributed, but that's short-lived. Right now, kits are being distributed.....So, product availability at the HC impacts product availability at the HSA level. We expect to be better after the kits...." Central MOH*
- *"What have been the challenges on EM in terms of DPAT, HPAT, and cStock?.... I can't highlight the challenges,* ***but with the scaling-up in the districts, we saw differences in product availability with medicines in districts where EM was introduced*** *and in those where it was not. There was a lot of demand in places without EM and there was a delay to scale-up in all the districts. We needed to reach other districts in implementing EM in a short period of time." Central MOH*

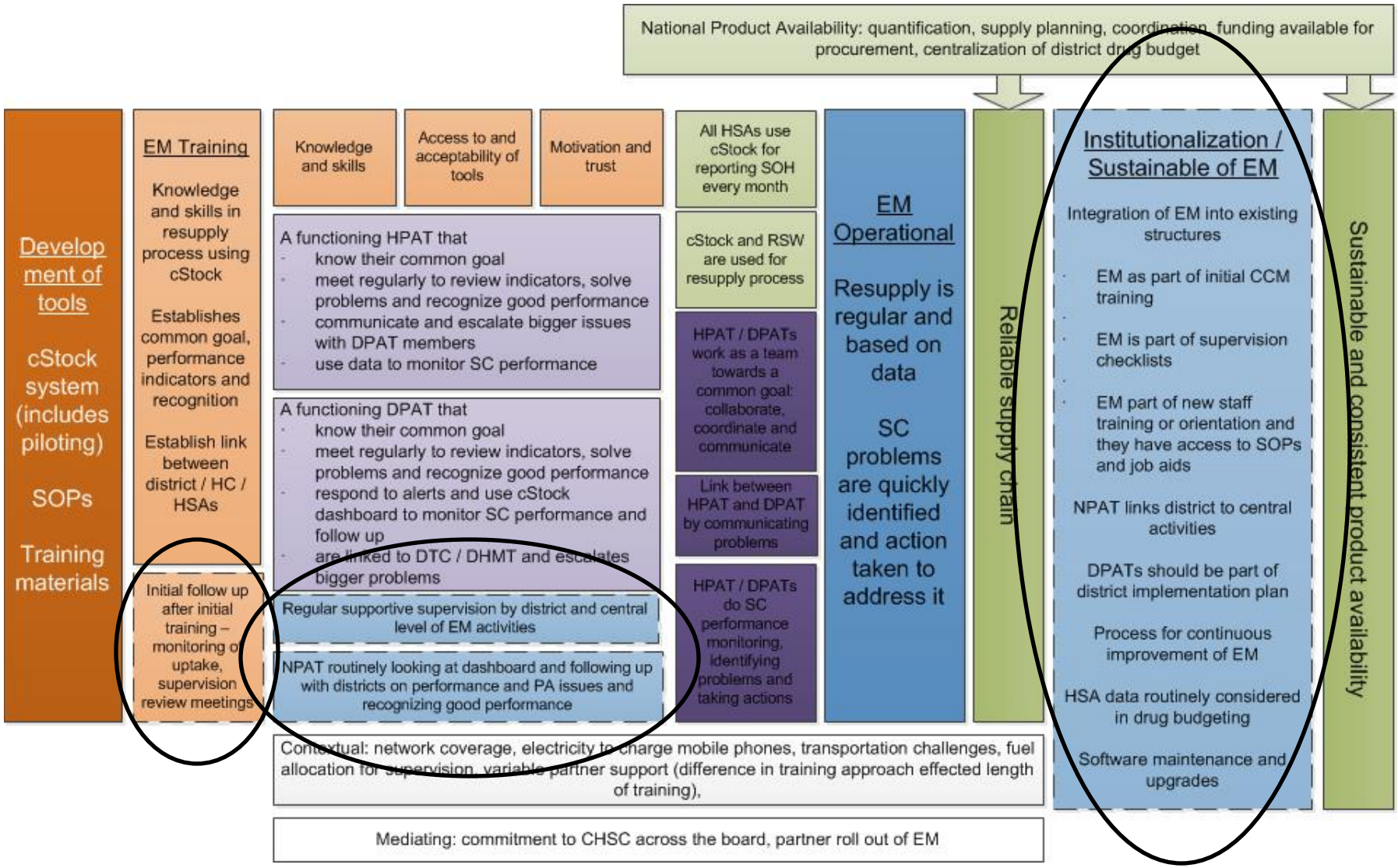
Scaling, Institutionalization and Sustainability

- Achievements in Scaling EM
- Program Theory: Gaps
- Progress Towards Institutionalization
  - Integration into Existing Structures
  - NPAT, DPAT, HPAT meetings
  - Linkages
  - Transitioning Leadership & Coordination
  - cStock: Progressing Towards Scale
- Anticipated Risks

Achievements in Scaling EM

- EM scaled to 28 out of 29 districts in Malawi
- Nearly 3000 out of ~3700 HSAs trained in EM and implementing cStock with consistent reporting rates of 80% or better
- DPATs have been established in all districts, HPAT meetings and DPAT meetings are occurring although not consistently
- cStock data is used for performance monitoring at all levels:
  - RSWs at HC levels
  - Dashboard is accessed and used at district and national level

Program Theory



Integration of EM into Existing Structures, Processes

- ✓ Use of cStock is a standard practice of HSAs and Health Centre and District Staff to report logistics data and **inform HSA resupply**
  - *"I first count the total number of drugs used against cases seen. I send a report on what is left on my drug box, the system acknowledges receipt of the message. Then the order ready message comes on my phone. I go to the facility then collect the drugs then I send a receipt message, then the system acknowledges receipt of my message again. During the mid-month I do send emergency order if my stocks are low." HSA C2.1*
  - ***"After getting a message, I document the information in this one [pointing to the notebook that had the RSWs]. Then, we coordinate with the in-charge to prepack the drugs, then I respond to the orders so that the HSAs can come collect the supplies." HSA Supervisor, HC B2, original***

BUT

- ❖ EM in **new staff orientation** is mostly ad hoc, considered the responsibility of the IMCI Coordinator, and usually learned through on-the-job training.
  - ***"When you have new staff who orients them? If it is the health facility in-charge I orient him and advise him to liaise with the senior HSA of his facility to get on the job training; if they are more than 5 we organize a training for 2-3 days." IMCI coordinator, District B, original***
  - ***"If new staff that join, how are they trained? I have to provide them with onsite OJT. So you are responsible to do OJT, what about the in-charge? He too is responsible." IMCI Coordinator, District D, scale up***

NPAT, DPAT, HPAT Meetings Not Yet a Standard Practice

- NPAT, DPAT and HPAT meetings are not happening as routinely as required due to a variety of reasons. The case study shows examples of opportunities to foster meetings as a standard practice, including:
  - Linking HPAT meetings to product pickup
  - Integration of DPAT topics and issues into other existing meetings, reducing logistical barriers to having the meeting

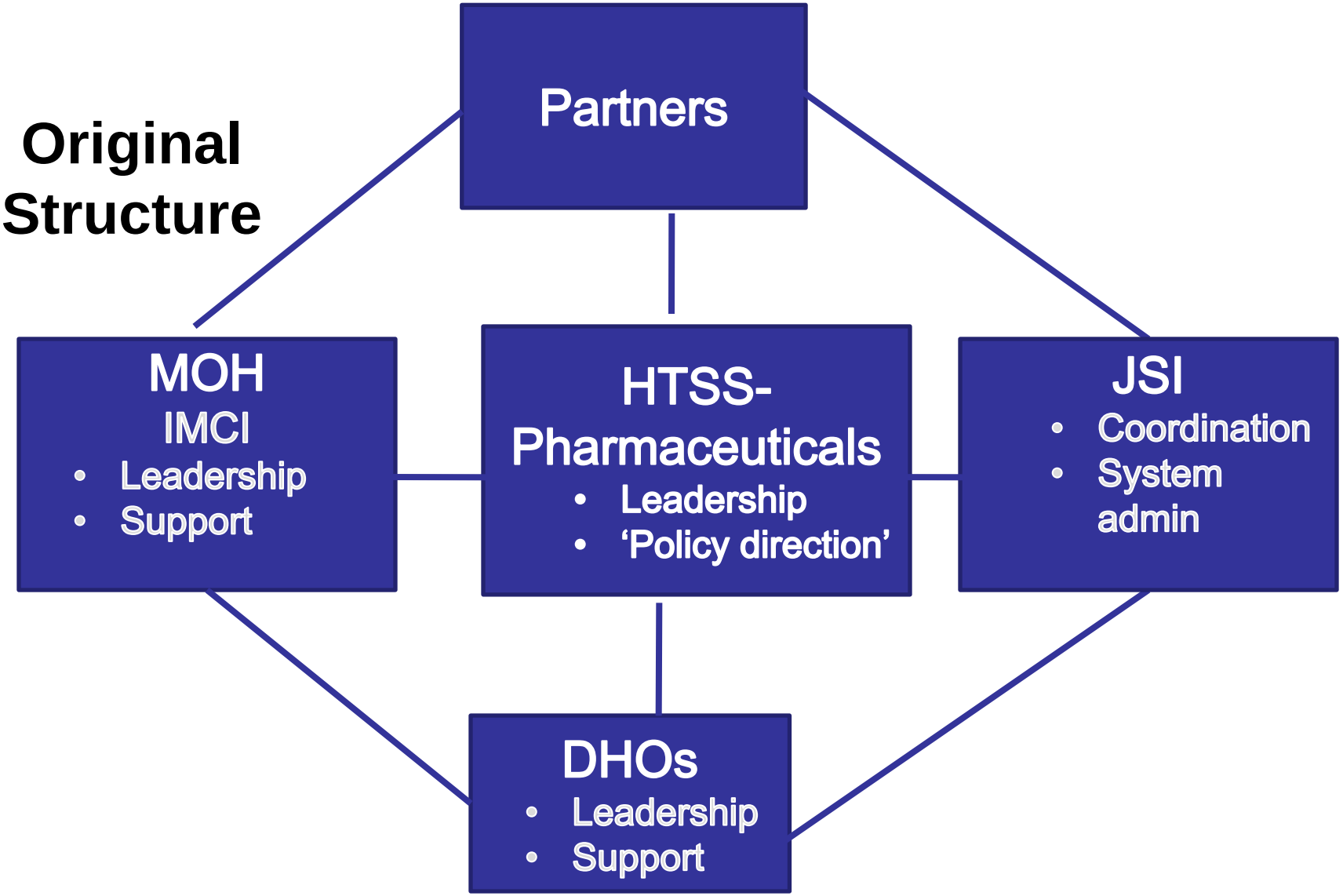
- ***"All the HSAs converge for the meetings. The advantage of meeting is that other HSAs who don't do CCM are also there, and we can address several issues at once. Instead of having two meetings, we do it all at once. Cluster Supervisor, HC A1, original***
- ***"The DHO has overall review meetings—that is, meeting for all programs, not just cStock. So I remember one meeting where we talked about cStock. It was mentioned but we talked about other programs too." Cluster Supervisor, HC B1, original***

DPATs linked to District Management & Planning

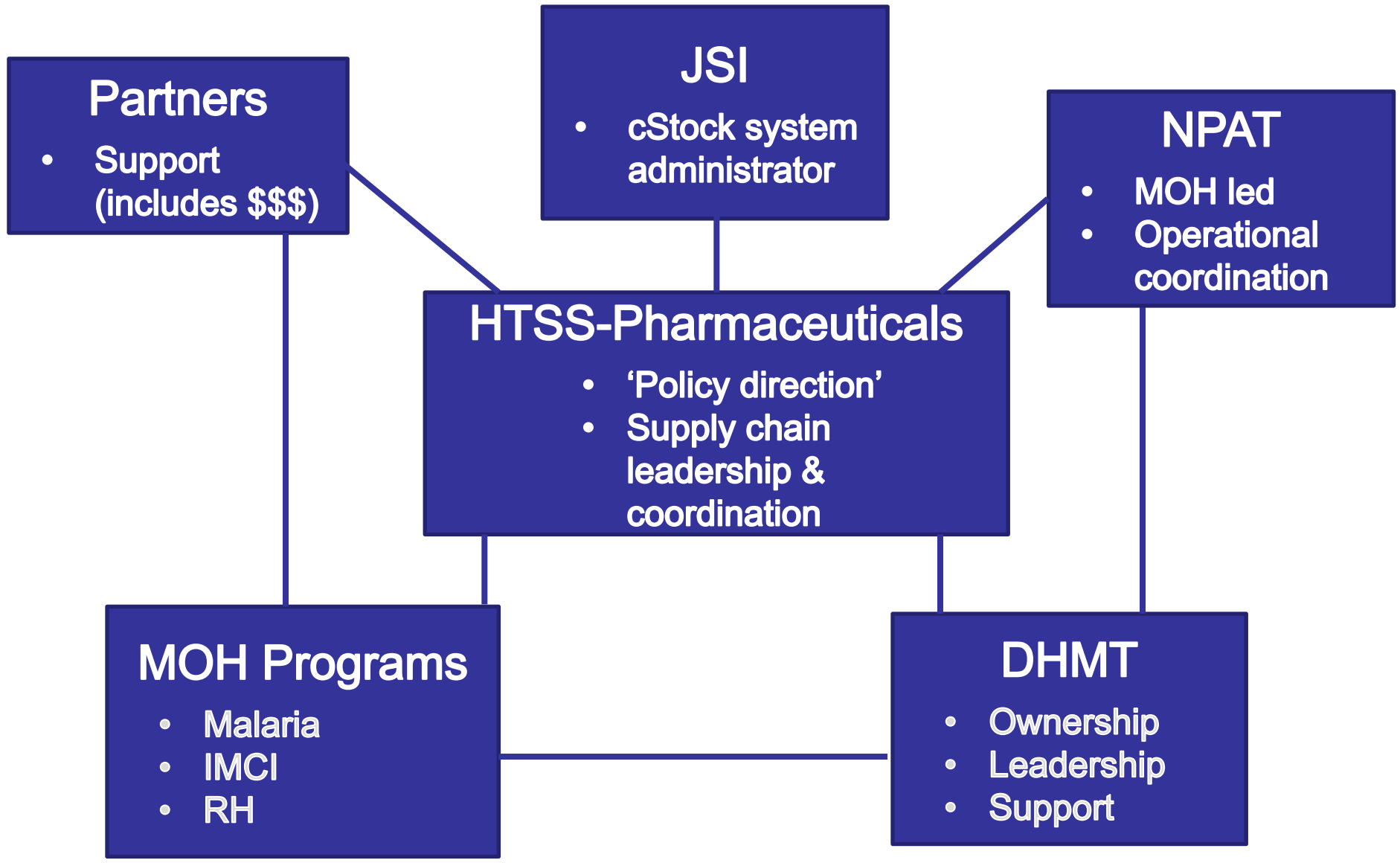
- ✓ In one district links have been developed between DPATs and DTC/DHMT, demonstrating an opportunity for other districts to improve the districts' ability to respond to stockouts
  - ***"When I want to have data or back up for the DTC (Drugs Therapeutic Committee) I can get it from the dashboard. I now have data to present at the meeting. The only problem now is that the district doesn't have budget, but I can use the dashboard data to show what is needed." Pharmacy Technician, District B, original***
  - ***"We use DPAT to influence DHMT and other partners to assist us. For example last year we registered 72 HSAs on the system but they were having problems with reporting so we presented this to decision makers funds were released for training in order to improve district indicators because we always strive to be number one in the country. The DHO at one time asked me to give him my password so that he could access cStock and when he saw that some of the products are not available he made a decision to look for funds so that we can procure those products and that is why we include the DMO in DPAT meetings" IMCI Coordinator, District B, original***

Transitioning Leadership & Coordination

Original Structure



Post Project Structure



cStock: Progressing Beyond Scale

- Running Costs
  - Monthly telco short code fees (TNM, Airtel) covered by RMNCH grant, managed by JSI
  - SMS costs to be paid for RMNCH, but potential for TNM to waive all SMS costs for 3 years
  - Long term reduction in SMS costs to be explored via USSD messaging, supported by IWG
- Server & Hosting Costs
  - VM Racks, cloud hosting service, paid for by Save the Children
- Software maintenance
  - Continue with existing IT vendor, paid for by RMNCH
- System Administrator
  - Position to be funded under RMNCH grant
- Potential for GFATM to continue supporting costs after RMNCH funding ends

Anticipated Risks

- HTSS Staffing Challenges
  - Leadership and coordination for community health supply chain
  - Adequate support for NPAT, so that NPAT can connect effectively to DPATs, HPATs
- National Product Availability
  - Insufficient products in the system, potential to undermine cStock and DPATs
  - Ensuring that national quantification includes forecasting and supply planning for community level requirements
- Funding for cStock
  - GFATM funding yet to be confirmed
  - Ensuring funding beyond end of RMNCH and GFATM support

Recommendations
&
Key Lessons

Recommendations: HPATs/DPATs

1. Aligning HPAT meetings with product collection may maximize regularity
2. HPAT performance monitoring can be done and is being done with RSW alone
3. Ensure performance plan included on first page of management diary for HCs
4. Cluster based DPAT meetings should not be a substitute for quarterly DPAT meetings
5. Set realistic expectations about the kinds of issues DPAT can resolve, to ensure that HPATs will continue
6. Ensure Cluster Supervisors play the role of linking HPATs, DPATs, by understanding and addressing bottlenecks

Recommendations: Institutionalization

1. EM should be integrated into existing structures
   - EM as part of initial CCM training
   - EM is part of supervision checklists
   - EM part of new staff training or orientation and they have access to SOPs and job aids
2. NPAT must meet regularly and routinely provide support and feedback to DPATs to help solve their challenges
3. DPATs must be part of district implementation plan
4. HSA data from cStock should be routinely considered in quantification and drug budgeting
5. cStock software must continue to be maintained and upgraded

Key Lessons for Sustainability

1. Continue to develop and strengthen EM ownership at all levels through sharing information regularly, building awareness of EM benefits, and strengthening use of cStock data to support programs and districts

2. Enable monitoring and follow up, the key to sustaining excellence

3. Develop and nurture leaders and champions at all levels to drive process and progress

4. Keep learning and seek opportunities for continuous improvement

5. Recognize and encourage implementation level driven success

6. Anticipate and manage change proactively and effectively


Thank You
Questions?
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