



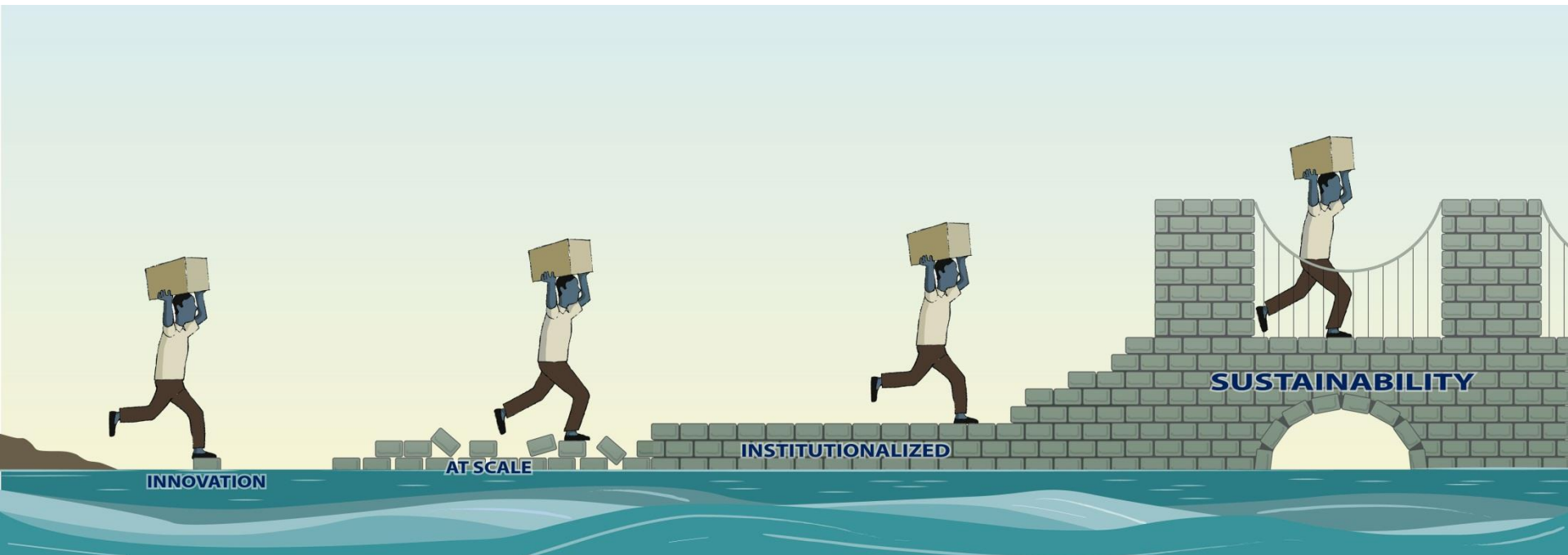
cStock:
A simple, affordable
mHealth solution for
improving visibility of
community health
logistics data

Megan Noel
Monitoring & Evaluation Advisor





SC4CCM is a learning project that seeks to identify **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.



Malawi Overview



Country Context

- Health Surveillance Assistants (CHWs) introduced in 1970s for health promotion and sanitation activities
- CHWs are paid cadre of MOH
- CCM was initiated in Malawi in 2008, CHWs in hard to reach areas provide CCM
- There are currently over 3000 village clinics
- CHWs can manage up to 19 products for CCM, FP and HIV Testing

Baseline Findings - 2010

- Only 27% of CHWs had all CCM products* needed in stock DOV
- 43% of CHWs reported they submit a report containing logistics data to HCs
- Only 13% of HCs reported CHW data separately from their own data to districts
- 94% of HSAs surveyed had a mobile phone, 85% had network coverage at least sometimes

*cotrimoxazole, LA1x6 and/or LA2x6, ORS

Part of Solution:

SMS-based system to manage reporting and resupply process: **cStock**



cStock: Data and Product Flow

District, Zonal
and Central staff
access HSA
logistics data via
dashboard



Health Center
supplies the HSA
based on SMS
message



HSA sends SMS
with SOH each
month



Product Flow
↓
Data Flow

The database calculates - MOS
and resupply quantities,
reporting rates, number and
duration of stock outs, displays
on **dashboard**

District Product Availability Teams

In addition to cStock, SC4CCM introduced District Product Availability Teams (DPATs) that use the increased data visibility to improve performance

- DPATs have proven to be an important **complement to cStock.**
- DPATs continuously **“demand” updated data** that cStock “supplies,” thereby reinforcing the importance of the data and motivating CHWs to continue reporting.

Enhanced Management (EM)

DPAT/HPAT Meetings

- Quarterly District Meetings with District staff and CHW supervisors
- Monthly HC Meetings with HC and CHWs
- 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





2013 Midline Results

Malawi Midline Sample (Baseline)

	EPT	EM	NI	Total
	Machinga, Nkhatabay, Mulanje	Nkhotakota, Nsanje, Kasungu	Zomba, Ntchisi, Salima, Mzimba North	
District	3 (3)	3 (3)	4 (4)	10 (10)
HC	25 (26)	23 (25)	28 (26)	76 (77)
HSAs	78 (85)	81 (80)	90 (85)	249 (249)

Focus Group Discussion (FGD) Sampling

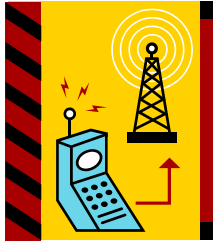
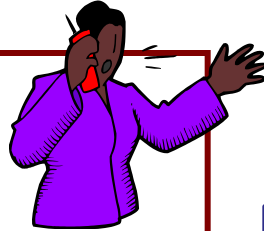
Two FGDs of 6-10 people per intervention district, from 3-4 HCs outside the LIAT sample: 1) HSAs (2 male/female per HC);

2) HC staff handling CCM products (HSA Supervisors, Drug Store In-Charge, HC In-Charge)



cStock: Environmental Viability; User-friendliness & Acceptance

99% of HSAs and HC staff have mobile phones



81% HSA and **78%** HC staff have network coverage at work all the time, (**100%** at least sometimes)

80% HSAs have access to a phone charger all the time and **10%** at least sometimes

Few HSAs (**24%**) reported challenges

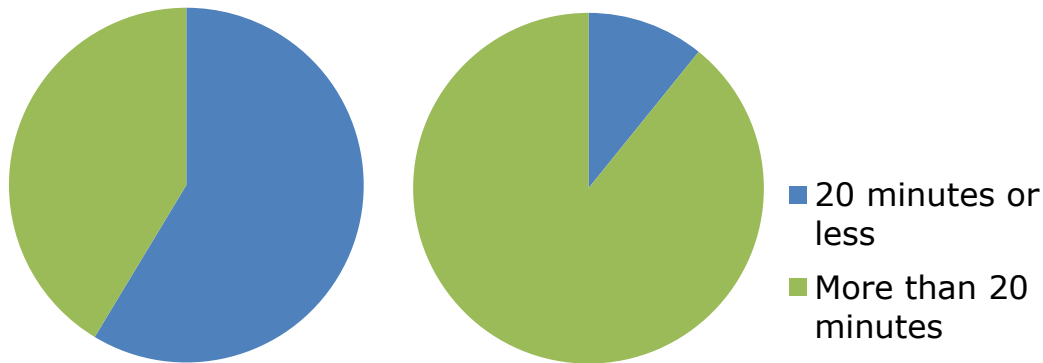
- 7% didn't always have access to phone charger
- 6% reported network not always available
- 3% cited error messages
- 1% mentioned not being able to send messages with Airtel because of no credit.

FGDs: we walk long distances to charge our phones. (Nkhotakota)



cStock: Efficiency

Time taken to **prepare** report
cStock Paper



Time taken to prepare and **submit** cStock report

FGDs: "... as for cStock , the report goes the fastest and gets me the supplies I need in time, whilst the paper form can take 3 days, cStock does not." (HSAs, Kasungu)

"It is within 5min we are done with the report." (HSAs, KK)

99% respondents found cStock saved them time in **collecting** products

FGDs: "the travel time has been reduced because we are only forced to travel when our products are ready" (HSAs, Nkhotakota)

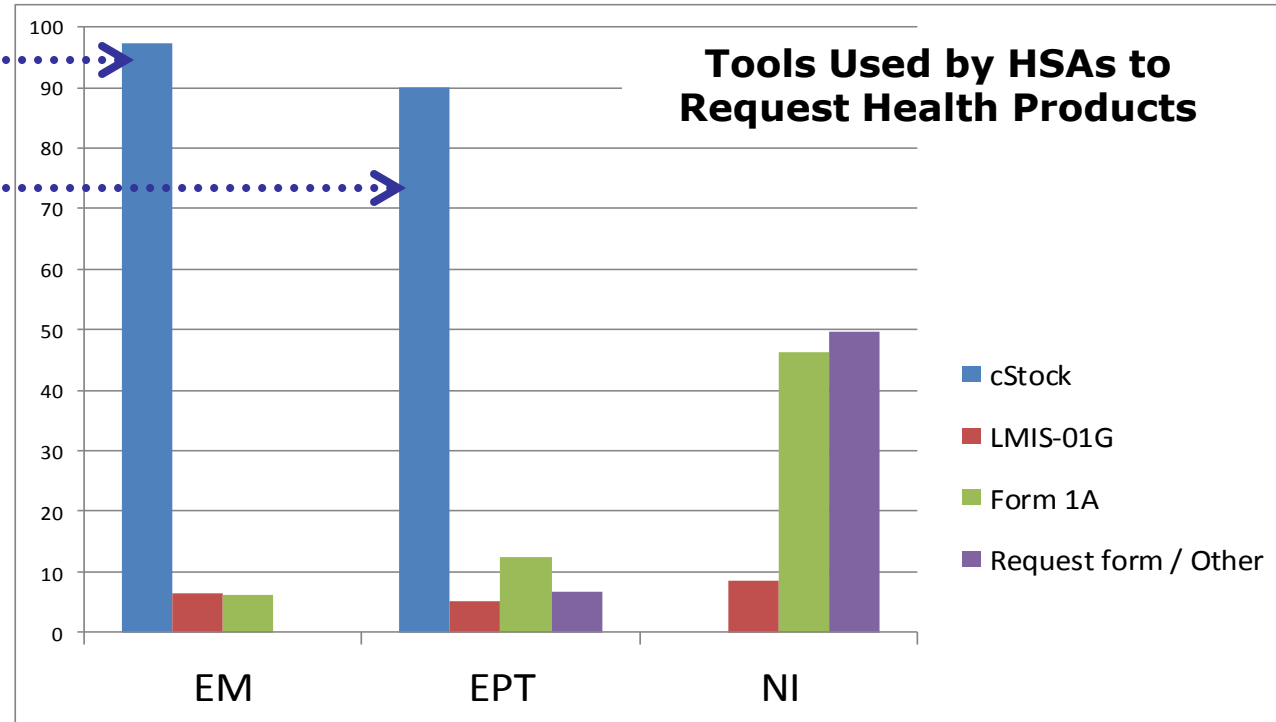
cStock has saved HSAs time in **preparing** orders/requests compared to paper forms, in **submitting** requests, and in **collecting** products



cStock: Role in Resupply

cStock has become **primary tool for requesting resupply from HC**

- Request includes reporting partial logistics data (SOH, receipts)
- Less consistency in comparison districts in forms used to request products



cStock has not replaced paper logistics reporting form, **100%** of HSAs submit Form 1A, which contains logistics data

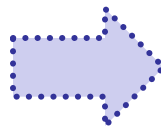
91% Drug Store in Charges use cStock to determine how much to resupply HSAs

cStock: Communications Flow



Reported frequency districts access dashboard (n=6)

	EM	EPT
Once/mo	-	2
1-2 x /week	2	1
3-5 x/ week	1	-



Majority of districts (5) report that cStock website takes **1 minute or less** to load

All (6) respond not being discouraged from using cStock because of page loading time

Benefits of cStock dashboard

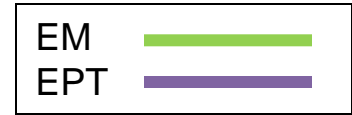
- Provides data for coordination***
- Provides data for planning**
- Cheaper, fastest way of delivering information*

District IMCI Coordinators in EM received training in the dashboard, and as a result appear to use cStock for coordination and planning

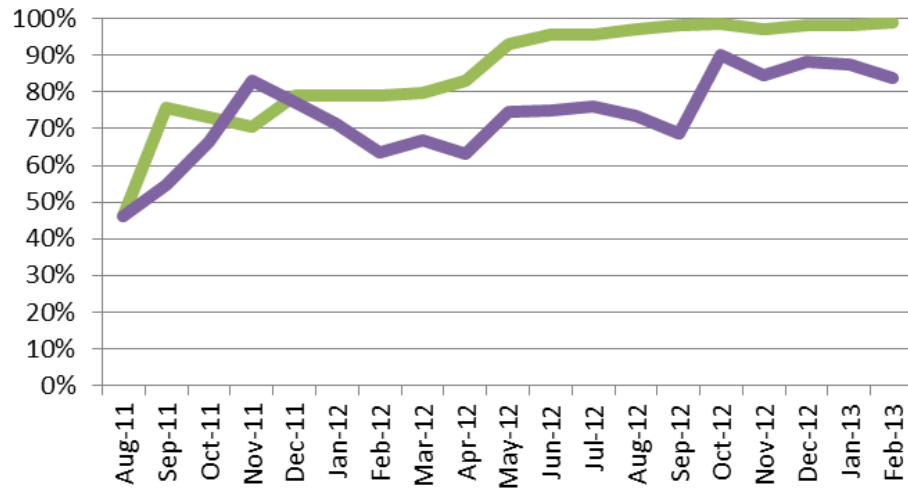


Reporting Rates

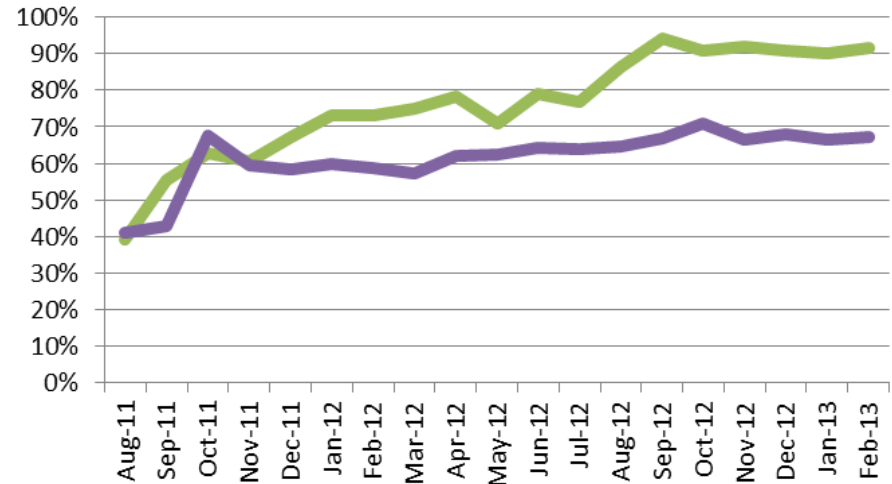
Since October 2012 reporting rates have consistently been **above 80%** for all districts (vs. 43% at baseline). Challenges with data transmission do not seem to be affecting reporting rates.



Reporting Rate

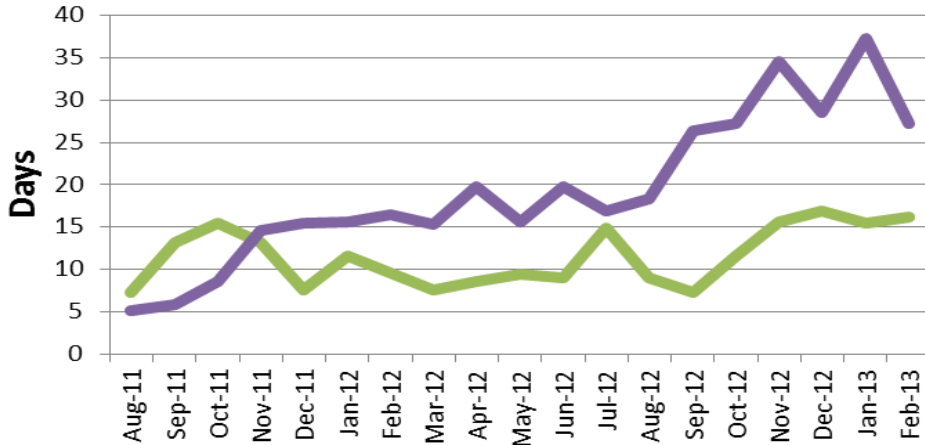


Reporting Completeness



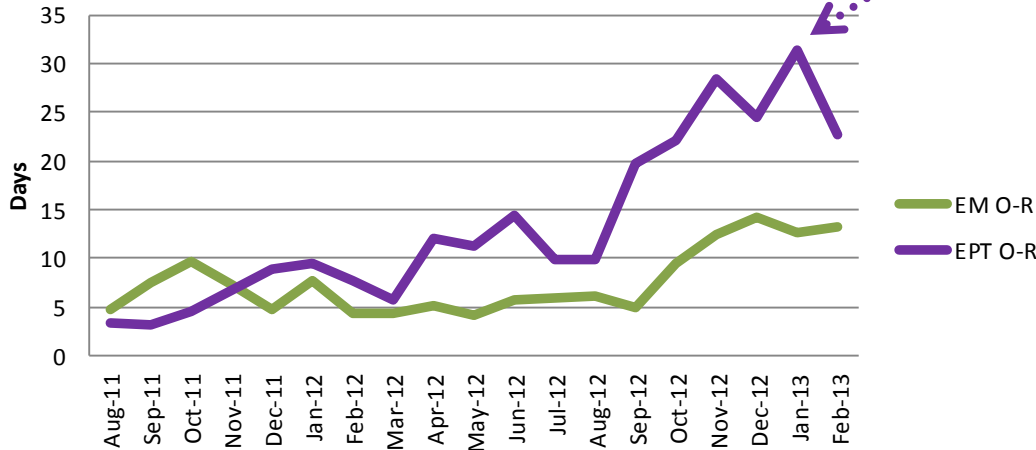
Lead Time

Average Total Lead Time



On average HC's in EM group took **7.6 days** to respond after a request and the EPT group took **13.5 days**.

Order-Order Ready



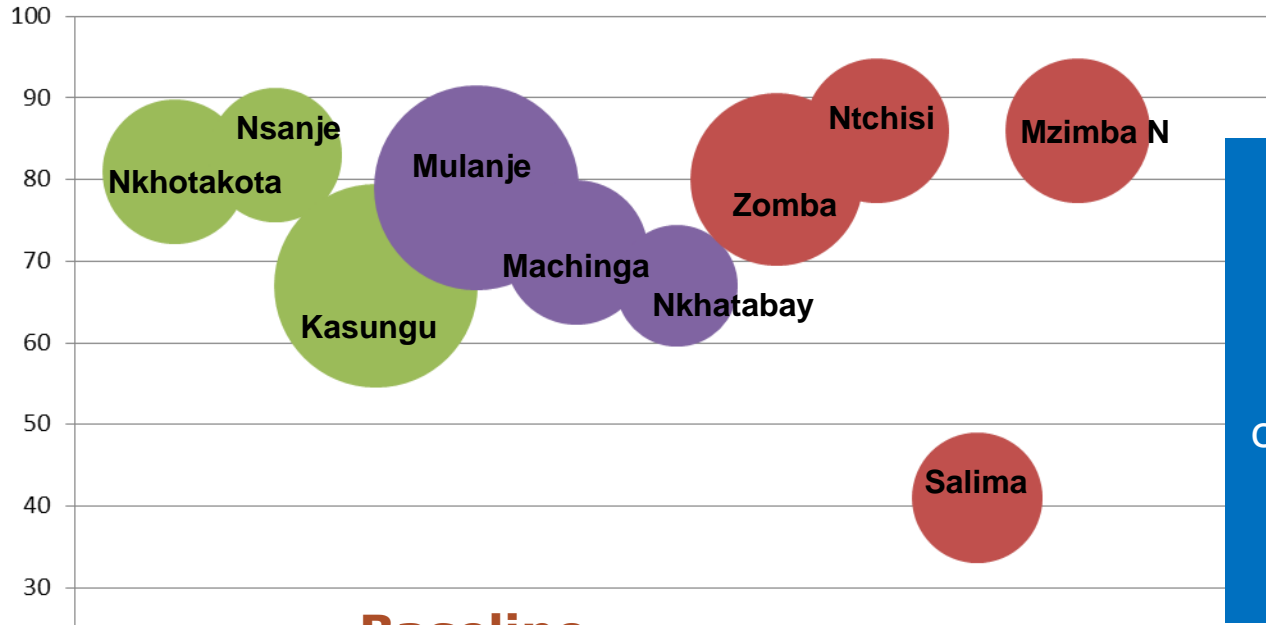
HCs in EPT districts in recent months have taken up to **30 days** to respond

Greatest contributor to long lead time in EPT is "order to order ready" period (this is how long HC takes to check stock, pack and send order ready message so that HSA can come collect)



% HSAs with 3 Key Drugs in Stock on DOV

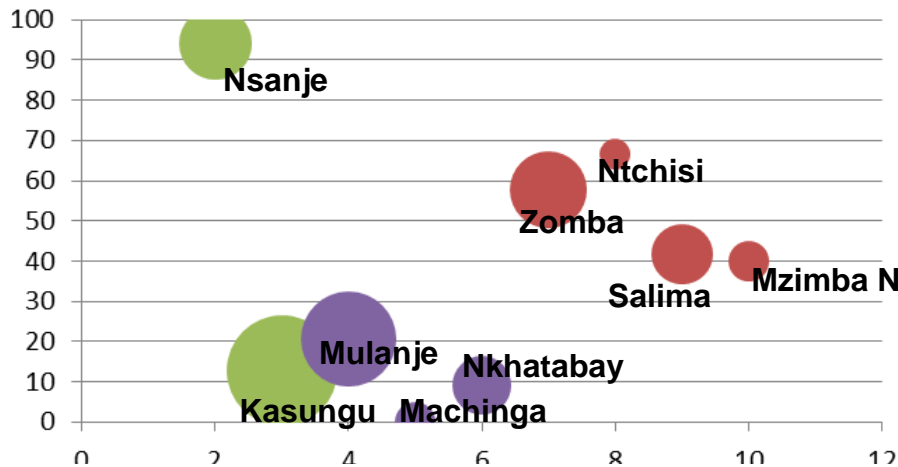
Midline



Product availability increased overall in ALL districts

HSAs in districts using cStock and DPATs had **14% fewer stock outs or low stocks** than other districts on day of visit

Baseline



N.B. No HSAs in Nkhotakota managed health products at baseline

cotrimoxazole, LA 1x6, LA 2x6, ORS



Conclusions

- **cStock** has improved community logistics data visibility, saved time, and is well understood and liked by users
- **DPATs** work hand in hand with **cStock** to improve SC practices & processes, by facilitating teamwork, better performance monitoring, problem solving, action planning, and decision making
- **Enhanced Management** helped to contribute to a significant increase in CCM product availability between BL and ML in Malawi

cStock has proven to be an affordable and effective way to improve data visibility: an important step in paving the way for supply chain integration.





Thank You!
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