



# **Global Health** Supply Chain Summit

## ABSTRACT # 22

[TRACK 9]

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## Making Access to Life Saving Commodities a Possibility for Remote, Hard-to-Reach Nomadic Communities

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# Introduction

- inSupply Health: Who we are
- Context
- The solution
  - What is the cStock approach ?
  - Methods in designing cStock Application
  - How to use cStock Application
- Challenges experienced while implementing cStock approach
- cStock Achievements
- Conclusion

# inSupply Health Limited

## Our mission

Transforming lives by co-creating innovations and sustainable solutions for health

## Our Vision

Our vision is for communities to set health priorities and collaboratively design solutions for health challenges, shaping their own healthy futures

## Our Value add

- Global perspective, localized
- Empathy at the core
- The process is innovation



# SCALE Project

inSupply implemented SCALE in four ASAL counties to address inequity in access to health commodities in 4 ASAL counties.



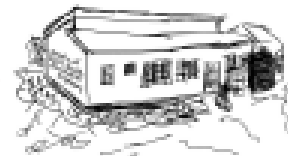
# Challenges in the ASAL Counties

- Unreliable and absence of supply chain procedures and processes for resupply of commodities to CHVs
- Nomadic nature of the communities:
  - No structured way for resupply during migration seasons
  - Likely to experience stock outs if they are not near their linked health facilities
- Other ASAL community challenges
  - Poor health seeking behavior
  - Low literacy levels
  - Vast distances between health facilities
  - Inadequate human resources to serve the communities

# cStock Approach

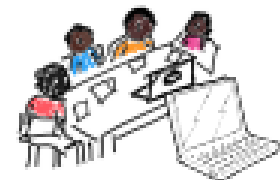
## What is the cStock Approach?

- cStock is a supply chain strengthening approach for community health supply chain.
- CHVs are able to manage their health commodities using a combination of manual based tools and cStock, a mobile based reporting and resupply tool.
- The approach was first implemented in Siaya County



CHV report stock data with a mobile phone, confirms the receipt (closing the loop)

cStock receives data and automatically generates a resupply request that is sent to the health facility



IMPACT Teams meet regularly to review dashboards and make action plans to address supply chain challenges

User friendly dashboards display relevant, aggregated and timely community logistics indicators

# Human Centered Design-HCD

1

## HCD Insights, Prototyping, Iteration

User placed at the center of our design process. First by understanding the problem space and then presenting and evaluating solution(s). Four prototypes developed and evaluated to identify final design.

2

## cStock System Requirement & Development

Based on HCD, system design decisions, requirements are documented and development undertaken to revise cStock.

3

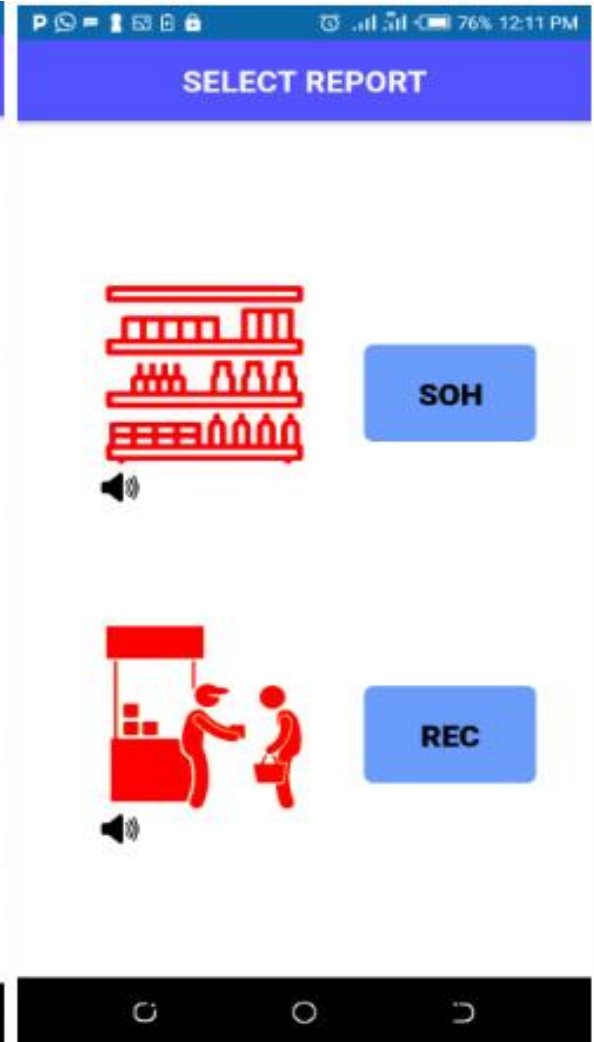
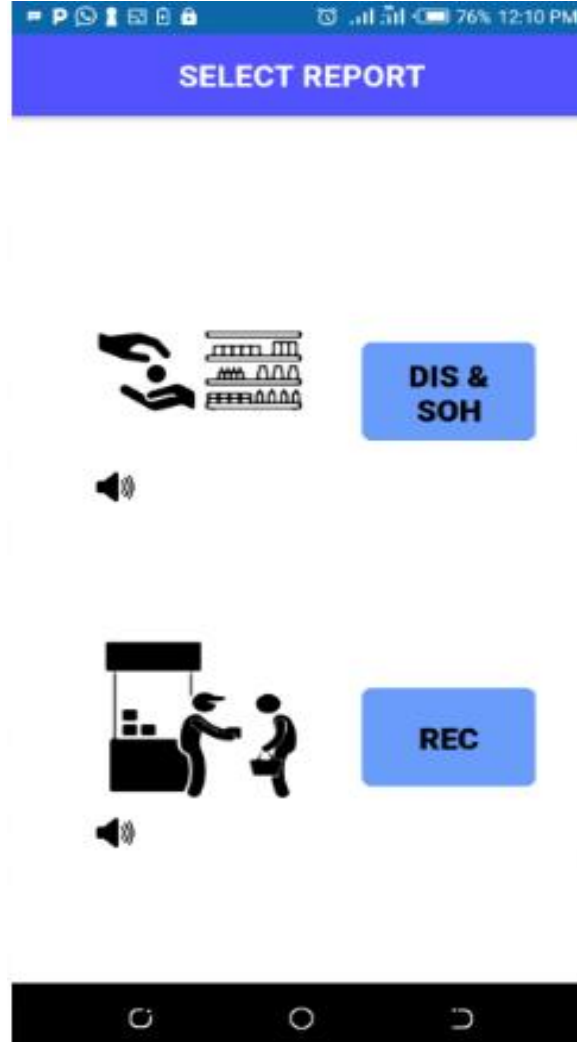
## Phased Rollout of IMPACT Teams

Implementation begins with IMPACT teams at County and Subcounty levels to establish a culture of supply chain data use for decision making, using data from KHIS2 and Indicator Tracking Tools

**The HCD process prioritized the perspective and user journey of nomadic CHVs and their communities, who provided key insights to inform the design of the supply chain and adapt cStock**

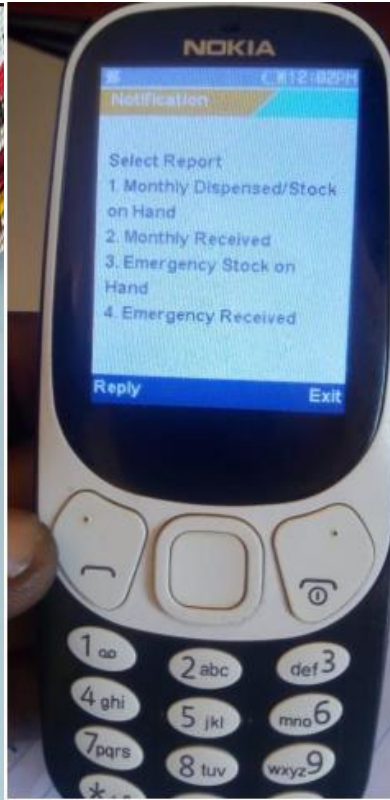


# Android Application for CHVs



# Feature Phone -USSD

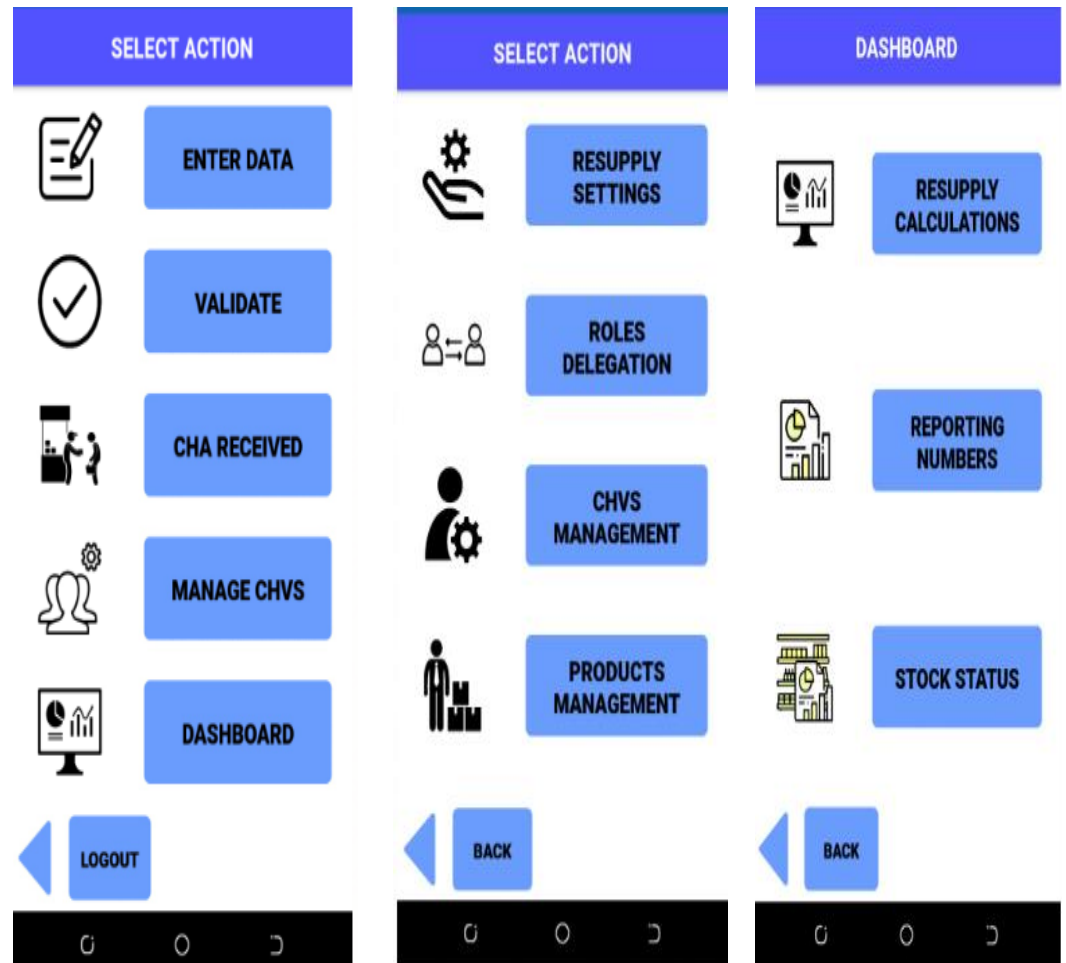
CHV entering data from inventory control card to her phone during reporting period.



# CHA Portal: Support for low literacy

The CHA Portal was designed so that CHAs could support CHVs in data entry with:

- **Validation points** for reviewing quality of reports
- **User Management** for adding and editing CHV details
- **User-friendly dashboard** for performance tracking
- **Delegation** to support CHVs who can't report
- CHAs reporting receipts



# How does cStock-PaperEMR work?



**Lolopul fills out the paper form**



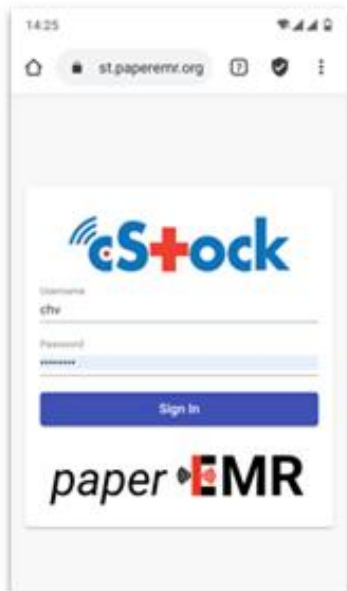
**Lolopul takes a picture of the form using any phone**



**Lolopul's supervisor receives her stock data, uses it to supply**

# How does cStock-PaperEMR work?

**1. Go to the website**  
*On any phone with browser and camera*



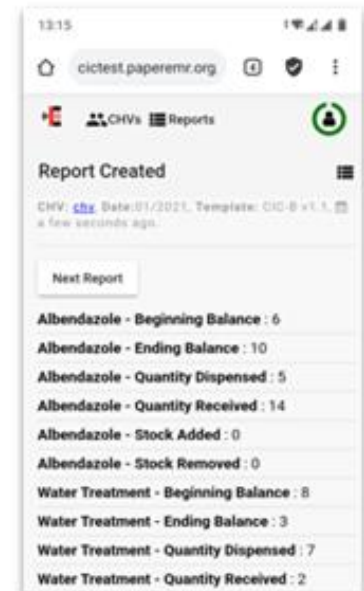
**2. Take a picture**



**3. Review data capture**



**4. Data sync to cloud**  
*"App" works offline; syncs when online*



# Key indicators

- **Reporting rates - Stock on Hand/Stock dispensed (SOH/ dispensed).** The percent of CHVs that reported SOH/distributed & Receipt figures per month per county.
- **Resupply: Receipts & emergency reports.** Total units resupplied to CHVs, per county per product.
- **Average Monthly Consumption (AMC):** The average units distributed each month by all CHVs reporting, per county per product.
- **Stock status monitoring.** cStock app enables monitoring of *months of stock* for each commodity ,for each commodity reported on the app.

# CHA learning sessions

- **Description** - Is a one day meeting held quarterly per county to support the CHAs in implementing Community Health Strategy.
- **Objectives** - meeting brings together CHAs, pharmacists and community strategy focal persons from county and subcounty levels to discuss and resolve challenges faced, share best practices, recognise best performance and develop action plans to improve performance.



# Reporting rates, Oct 20-Oct 21

Reporting rates for SOH/dispensed : ALL counties overall reporting rate within the last 1 year is above 90%

1,031

CHVs  
expected  
to report

445

Samburu

407

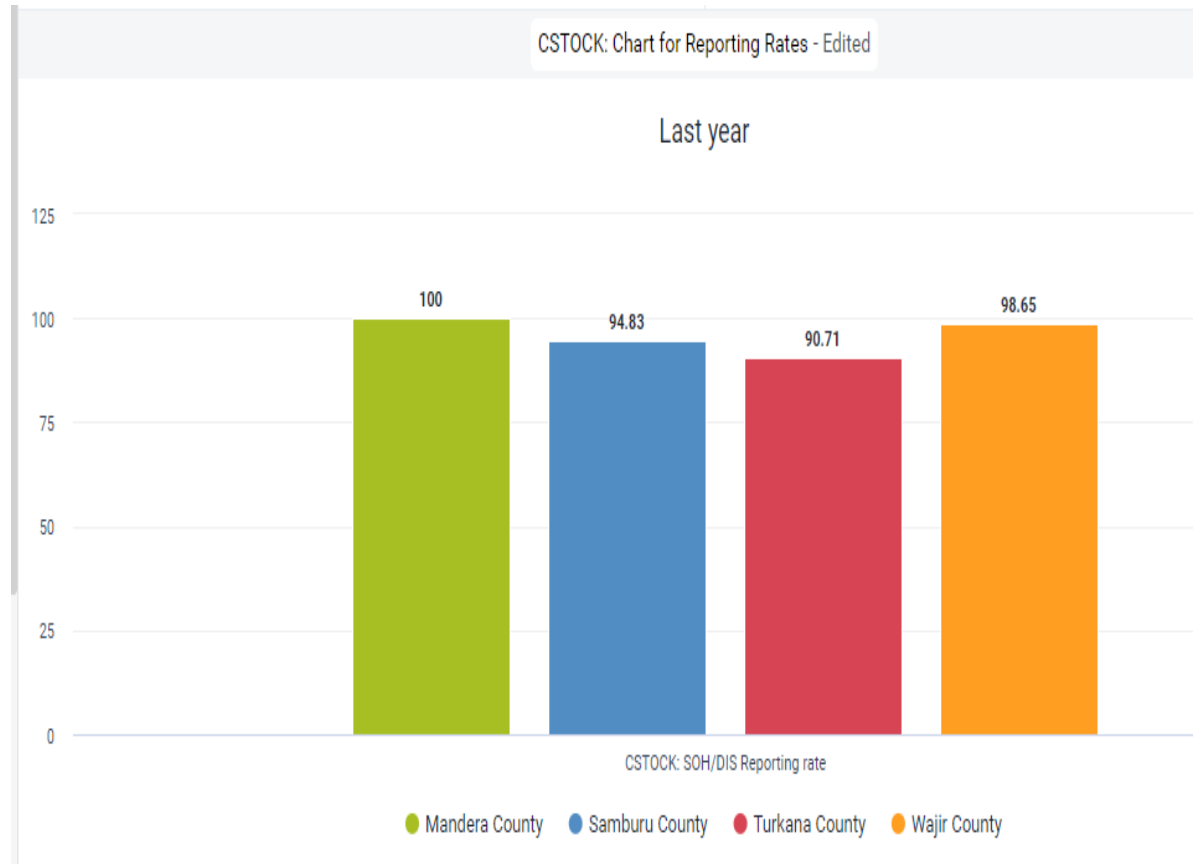
Turkana

108

Wajir

71

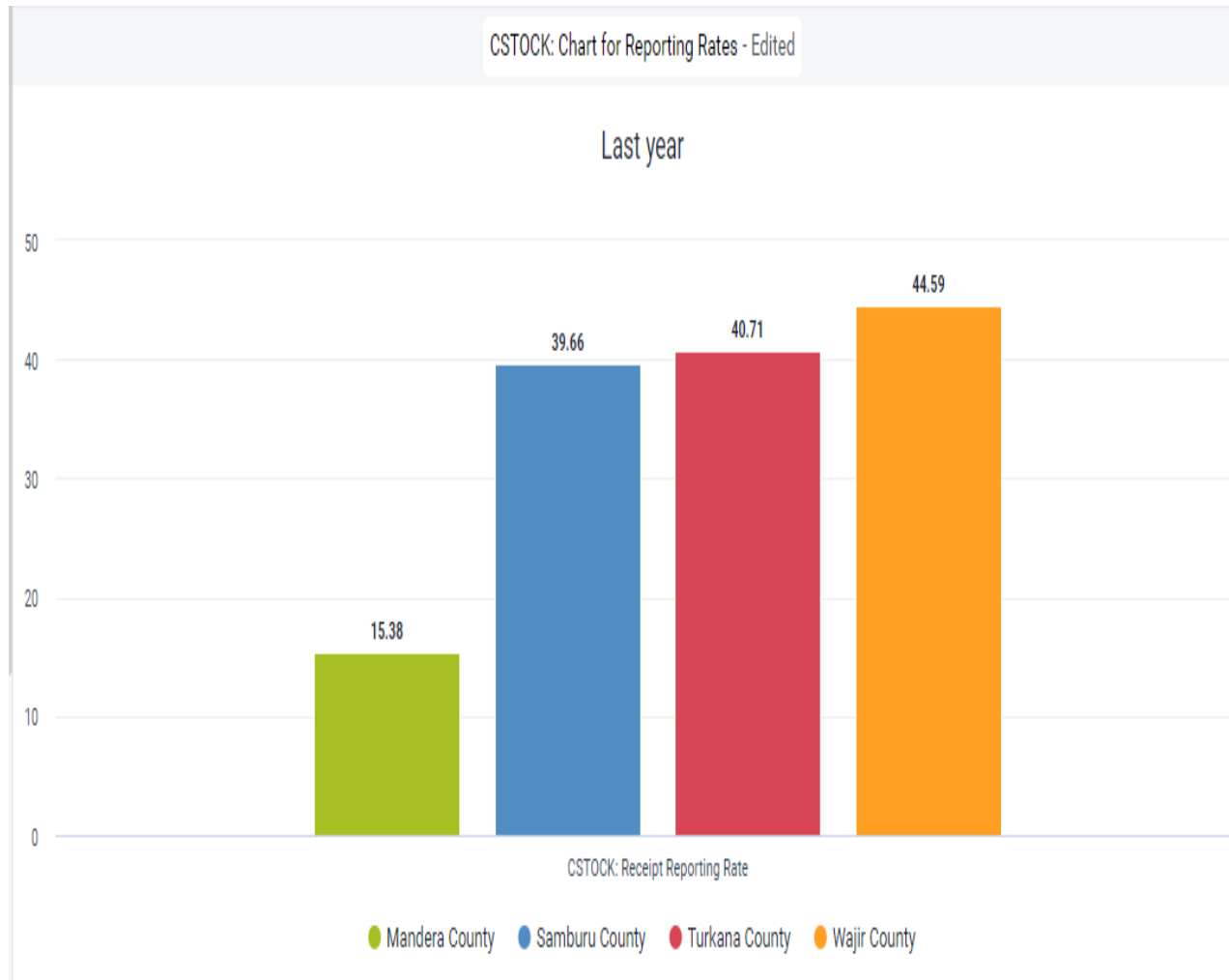
Mandera





# Reporting rates, Oct 20-Oct 21

**Reporting rates for commodities receipt:**  
**Overall**, there is an improvement in reporting for commodities received which was hardly captured before



# Reporting Rates Significance

**Stock On Hand / Dispensed & Receipts** - monthly reporting for this indicators has increased over time giving proof of:

**Easy forecasting & quantification of commodities required at the community level**

**Improved data quality by CHVs with support from the CHAs and cStock app**

**Efficient Commodity management by CHVs**

**Easy Resupply of commodities to the CHVs since the app calculates resupply quantities for all for all CHVs**

**cStock app detects and flags out Stockouts informing decision makers of appropriate actions to take**

# Commodity Health Stock Status, Sep 2021

**71%**  
Average Reporting Rates  
SOH/Dispensed

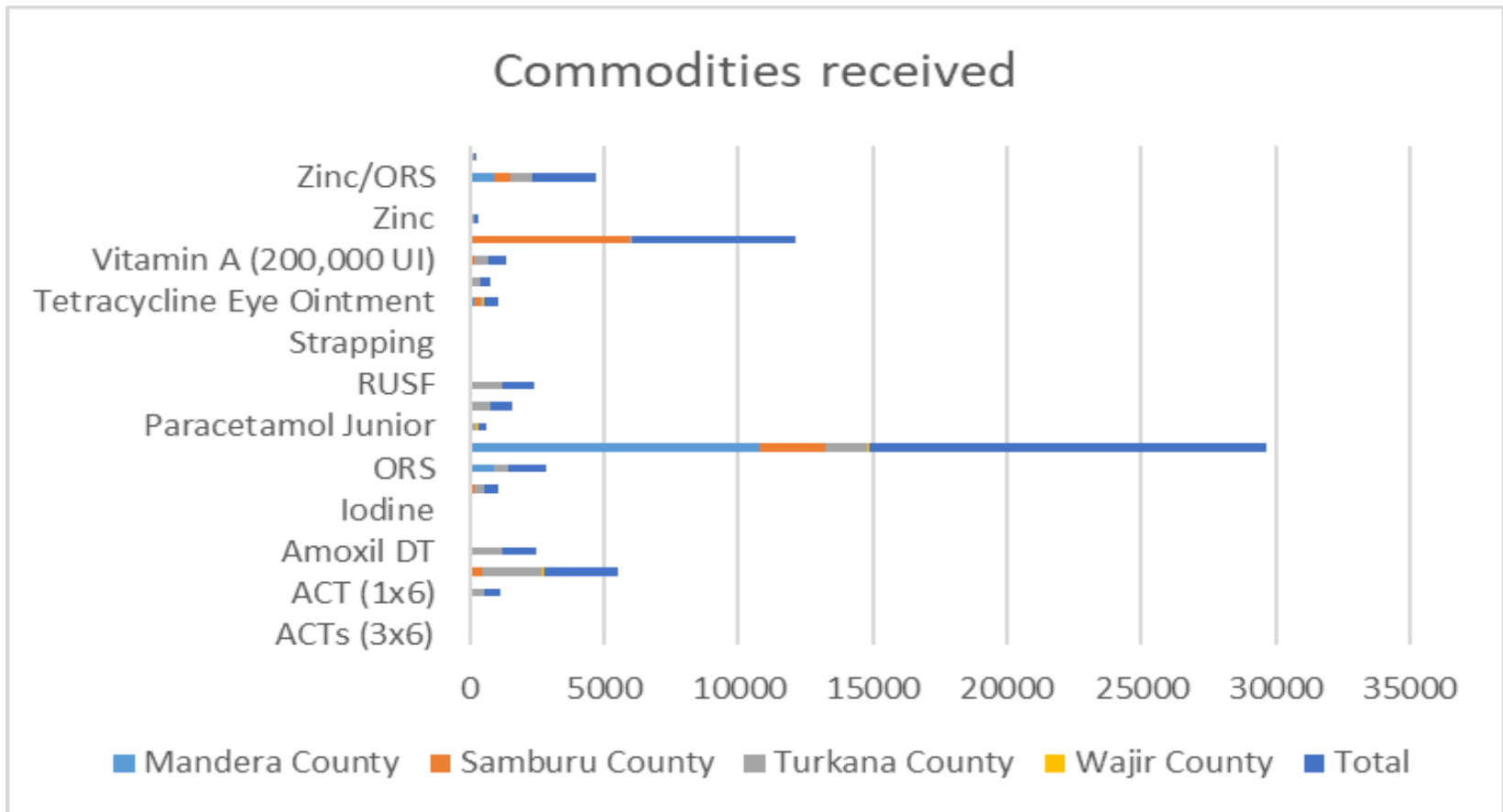
Community stock levels      Linked facility stock levels



CSTOCK: Commodity	Stock on Hand	Average Monthly Consumption	Months of Stock
ACT (1x6)	477	455	1.0
ACT (2x6)	188	262	0.7
ACTs (3x6)	59	35	1.7
ACTs (4x6)	8	33	0.2
Albendazole/Dewormers	12,063	5,056	2.4
Amoxil DT	153	204	0.8
Bandage	462	87	5.3
DMPA-SC	1	11	0.1
Iodine	65	37	1.7
Male Condoms	543	1,408	0.4
ORS	23,518	2,902	8.1
Paracetamol	206,906	44,302	4.7
Paracetamol Junior	214,009	31,394	6.8
Pregnancy Determination Kit	0	11	0.0
RDTs (Malaria Test Kit)	1,462	711	2.1
RUSF	80	945	0.1
RUTF	0	220	0.0
Strapping	28	17	1.6
Surgical Gloves	2,427	752	3.2
Tetracycline Eye Ointment	2,949	929	3.2
Vitamin A (100,000 UI)	67	395	0.2
Vitamin A (200,000 UI)	627	971	0.6
Water Treatment	1,450	7,041	0.2
Zinc	3,472	2,704	1.3
Zinc Junior	948	264	3.6

# Commodities Received, Oct 2021

The order fill rates to resupply all commodities is based on the monthly data submitted by CHVs



# Challenges

- Frequent stock outs of commodities in linked facilities that should resupply the CHVs
- cStock app glitches
- Drop out of CHVs and CHAs who were trained on using the cStock app
- Low literacy levels of some CHVs which eventually led to CHAs submitting reports on CHVs behalf
- Late report submission by CHVs prompting the CHA to follow up on the CHVs to report

# cStock Achievements

- Designed supply chain model/s that consider the cultural and geographical barriers in the nomadic communities.
- The cStock data has been linked to the national system, Kenya Health Information System database, and is thus accessible to stakeholders within the MOH for monitoring and decision making for community health supply chains.
- More confidence by health facilities in resupplying commodities to CHVs since they are guided by available data and calculations in cStock.
- Save the Children, an implementing partner, has taken up the cStock approach to manage and monitor supply of commodities they issue to CHVs.

# Conclusions

- cStock approach has increased data visibility and use in resupply process at community level enabling the county governments factor in purchase and supply CHV kits to the CHVs in their counties through their linked facilities
- Integration of cStock reporting to the KHIS will enable the approach to be scaled up and used by CHVs in other counties in Kenya. This will enable the country to achieve Primary Health Care goals of enabling each citizen to take charge at improving their own health at the community level