

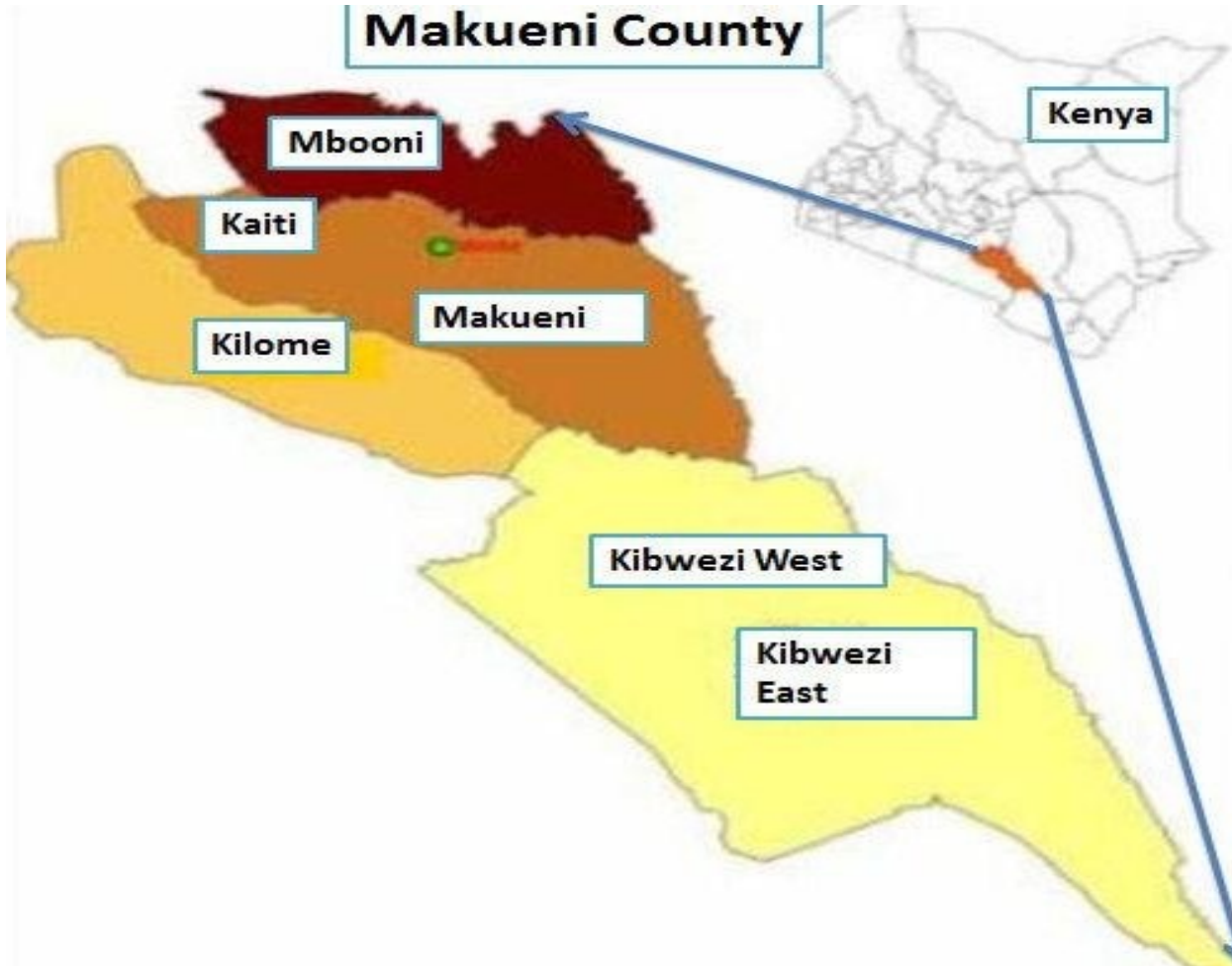
22ND
ICASA
INTERNATIONAL CONFERENCE
ON AIDS AND STIs IN AFRICA
4 - 9 December 2023
Rainbow Towers, Harare, Zimbabwe

Strengthening inventory management and stock visibility of HIV supply at the last mile: achievements, challenges, and lessons from Makueni County, Kenya

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Pharmacist



Background: Map of Makueni County



Key statistics

Population; 949,298 (KNBS,2019)

Size; 8,000Km²

PLHIV; 24,176

AYP (15-24yrs); 179,381 (Account for 42% of new infections)

Adult HIV prevalence: 3.2%

Key Populations

- Female sex workers (FSW); 2,743
- MSM : 2177

No of health facilities; 236

ART Sites; 73 (KHIS, 2019)

Background: Situation analysis



Past challenges in supply chain management of ARVs and program items in Makueni County included:

- Lack of end-to-end supply chain visibility
- Poor forecasting and quantification
- Poor utilization of stock management tools
- Poor reporting rates and delayed reports.
- Expiries of vital commodities

Strategy/Methodology: Piloting a Stock Visibility System (SvS)



In April 2022, the **Afya Ugavi** Activity, a USAID implementing partner providing health supply chain systems strengthening support in Kenya, partnered with the **Department of Health, County government of Makueni**, to pilot an outsourced last mile distribution and stock visibility system dubbed- SVS (Stock visibility System).



USAID
FROM THE AMERICAN PEOPLE



A one week data collection exercise was conducted between 24th -28th April 2022 in 120 facilities within Makueni county to pick out the main supply chain challenges experienced at the different levels of care. Stock verification and onboarding of 22 facilities



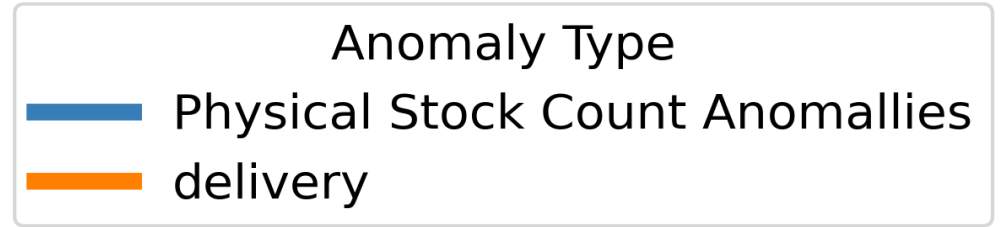
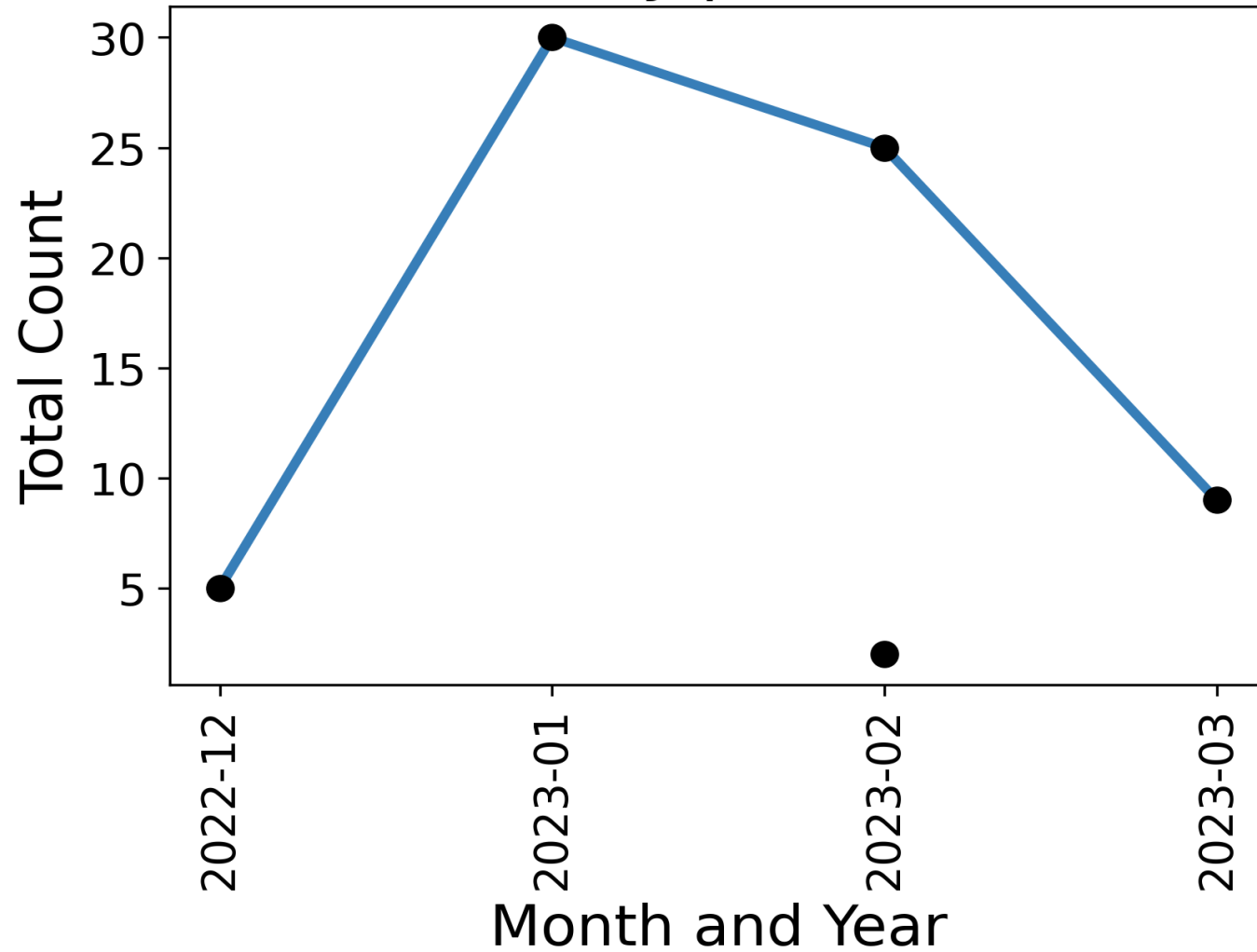
Methodology: Key Findings during Onboarding Process



- Un-updated stock cards
- Unusable commodities i.e. damaged, expired, phased out regimens
- Large quantities of commodities with near 6 months to expiry
- Discrepancies between physical stock and bin card quantities
- Lack of verification of received commodities
- Overstocked, understocked and stocked out commodities
- Poor documentation-documentation on requisition and issue vouchers (S11 forms).

Title

Anomaly per month



Key Supply Chain Indicators to be addressed



- Central warehouse availability
- Adoption rate
- Anomalies rate
- Verified facility stock rate
- Stock delivered
- Products at risk
- Stock in transit
- Stocks expiring in 6 months

SvS Journey Experience: screenshots



10:56 69% 10:57 69% 10:54 69% 10:58 69%

SVS SVS SVS

Main Menu

Please select the action you would like to perform:

Last synced:
2023-10-13 15:41:01

- Facility Stock Verification
Verify stock levels for stock at your facility
- Receive Verification
Verify and receive stock delivered to your facility
- View Records
View historic records
- Facility Details
View your facility details
- Exit
Close the application

Last Sync Date/Time

Mon Oct 23 2023 10:56:26 GMT+0300
(East Africa Time)

Stock Recording Method

Select the method that you would like to use to record your stock levels:

- Scan Barcode
Scan the item barcode by holding the camera over the shipper pack barcode
- Single stock item
Select a specific medicine from the stock list
- Back

An app update is available. [Update](#) [Later](#)

Facility: Matiliku Sub County Hospital

Deliveries

- 00000000550937 | Delivery date: March 11 2023
6:06 AM | Boxes: 1
- 00000000625577 | Delivery date: May 30 2023
5:21 PM | Boxes: 1
- 8006348839 | Delivery date: June 21 2023 3:00 AM
| Boxes: 17
- 00000000636759 | Delivery date: July 23 2023
1:57 AM | Boxes: 3

Stock Receipts

- 8006348839 | Delivery date: June 21 2023 3:00 AM
| Boxes: 17
- 00000000636759 | Delivery date: July 23 2023
1:57 AM | Boxes: 3

Back

Choose an option

Search

- Family Planning - Contraceptives
- HIV - Antivirals & Antiretrovirals
- HIV - LAB-DBS
- HIV - LAB-EID
- HIV - LAB-PPE
- HIV - LAB-Viral Load
- HIV - Test Kits
- Malaria - Anti-Malarials
- Malaria - Test Kits
- Malaria - Vector Control Agents

SvS Journey Experience: screenshots



10:59 69% 11:19 66%

Select Stock Item

Select a stock item to update stock levels for from the dropdown list below:

TLD 90s

> Proceed to Physical Stock

> Proceed to Transactional Stock

< Back

Stock Update Details

Facility: Matiliku Sub County Hospital

Stock Item: TLD 90s Antivirals & Antiretrovirals

Update date/time: February 3 2023 4:35 PM

Current level: 357

Expiry date: September 30 2024

Stock received:

Stock lost: 0

Stock Issued: 0

Stock Transferred: 0

BATCHES

Batch #	Expiry Date	Quantity
21132911	September 30 2024	0
3144547	November 30 2024	0

11:05 68%

Anomaly Details

Stock item: PM04TEN007 | TLD 90s

Anomaly reason: Bin card description error

Tap to take a photo.

SET THE PRIORITY FOR THIS ANOMALY:

No value selected

COMMENTS HERE:

Comments here:

> Done

< Back

11:04 68%

Anomalies

Stock item: PM04TEN007 | TLD 90s

Identified anomalies:

Bin card description error

CHOOSE STOCK UPDATE MISMATCH

Over-captured

PHYSICAL STOCK UPDATE MISMATCH QUANTITY: 335

SET THE PRIORITY FOR THIS ANOMALY:

No value selected

COMMENTS ON THE QUANTITY MISMATCH

Comments on the quantity mismatch

> Done

< Back

SvS Journey Experience: screenshots



11:06 68%

< SVS >

Stock Transactions

Stock item:
PM04TEN007 | TLD 90s

ISSUED QTY: *
The quantity of stock issued

INTER-FACILITY TRANSFER QTY: *
The quantity of stock transferred to another fa

INTRA-FACILITY TRANSFER QTY: *
The quantity of stock transferred within the sar

LOST QTY: *
The quantity of stock missing or lost in the facil

AVERAGE MONTHLY CONSUMPTION: *
Enter the average monthly consumption

> Update

> Anomalies

< Back

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Title ; SvS Dashboard

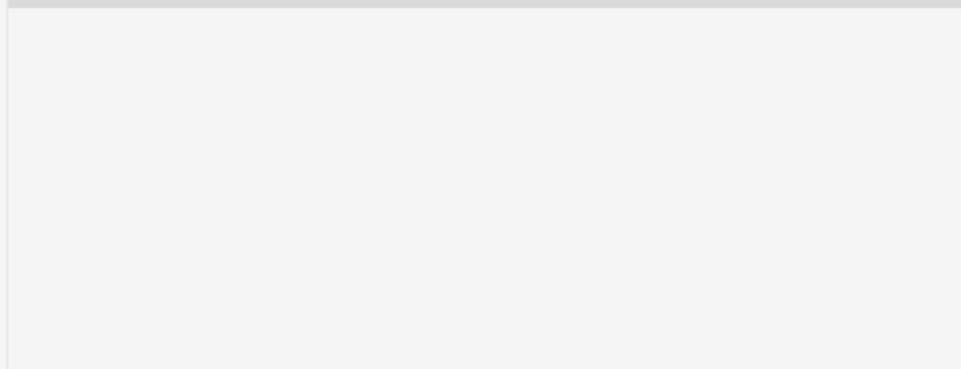


TASKS DASHBOARD

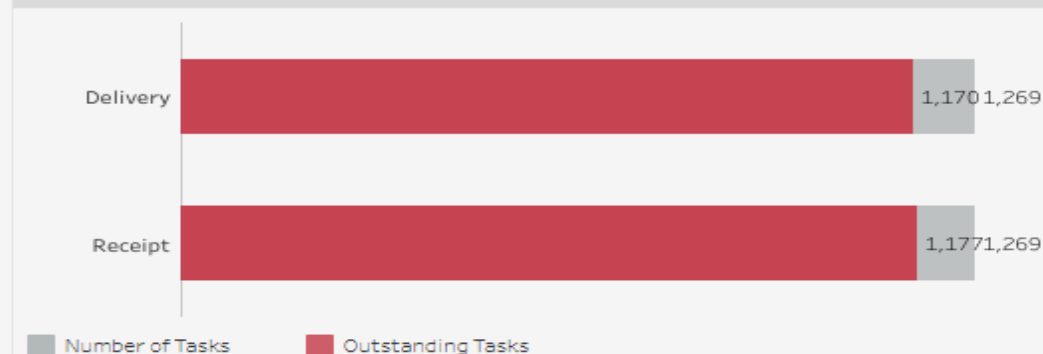
NATIONAL TASK RATE



OUTSTANDING TASKS BY SUB COUNTY



OUTSTANDING TASKS BY TASK TYPE



UNDERLYING DATA

Delivery Note	County	Subcounty	Ward	Facility	Task Type	Priority	Date Expected	Status
8005835057	Makueni	Kaiti	Kilungu	Kikoko Mission Hospital	Delivery	medium	26 Oct 22	pending
					Receipt	medium	26 Oct 22	pending
8005835058	Makueni	Kaiti	Kilungu	Kilungu Sub County Hospital	Delivery	medium	26 Oct 22	completed
					Receipt	medium	26 Oct 22	completed
8005835061	Makueni	Kibwezi West	Emali/Mulala	Emali model health Centre	Delivery	medium	26 Oct 22	pending
					Receipt	medium	26 Oct 22	pending
8005835062	Makueni	Kibwezi West	Makindu	Makindu Sub County Hospital	Delivery	medium	26 Oct 22	completed
					Receipt	medium	26 Oct 22	completed
8005835064	Makueni	Makueni	Wote	Makueni County Referral Hospital	Delivery	medium	26 Oct 22	completed
					Receipt	medium	26 Oct 22	completed

- Home
- Reports
- Adoption
- End to End
- Anomalies
- Tasks
- Facilities
- Verification
- Receipts

FILTERS & INFORMATION

Task Expected
 Aug 22 06 Oct 23

Sub County
 Makueni

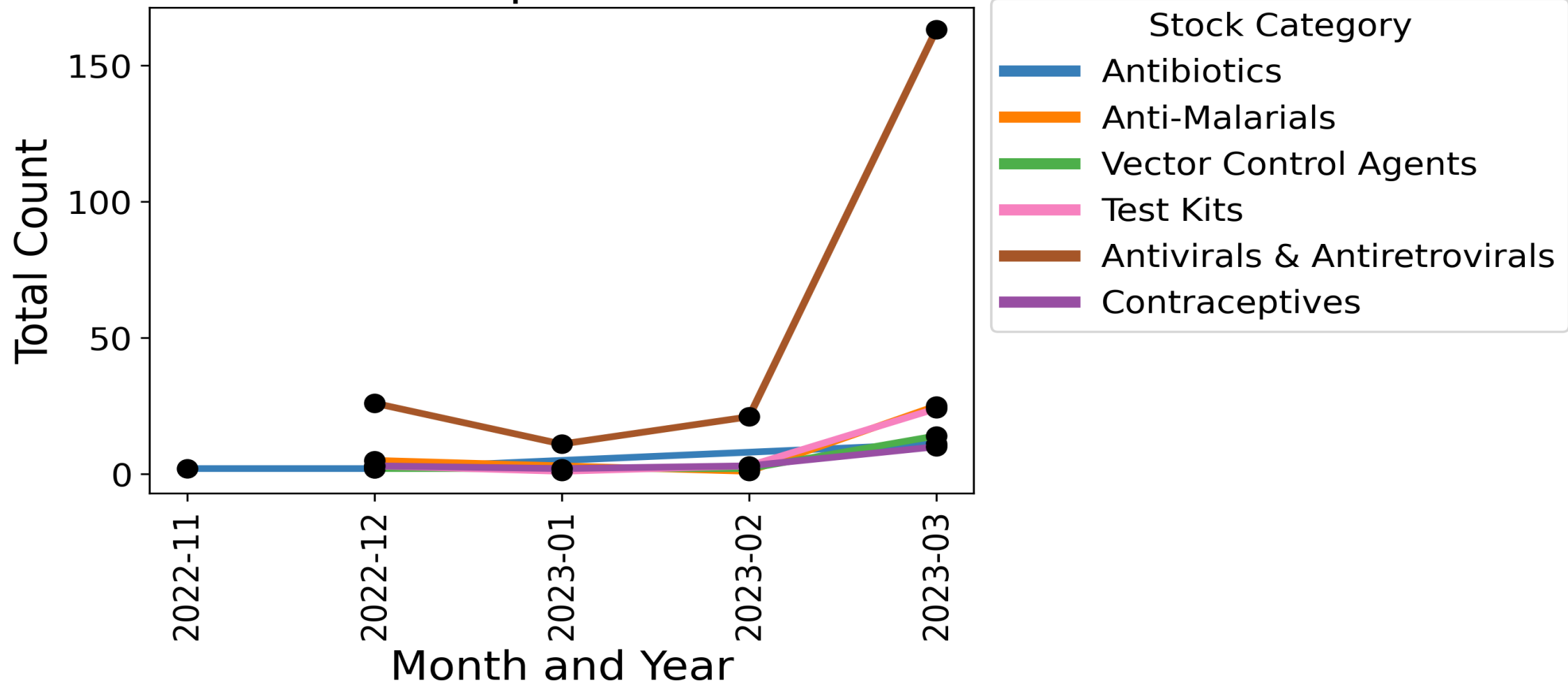
1. Impact on forecasting and ordering of ARVs

The county was able to plan better and only order what was needed since there was end-to-end visibility of available commodities in all pilot sites.

SCPs were able to mop up excess commodities identified during the mapping phase and re-distribute to facilities that lacked or had higher volumes.

Subsequently **ordering** was purely based on the forecasting reports

Stock per month

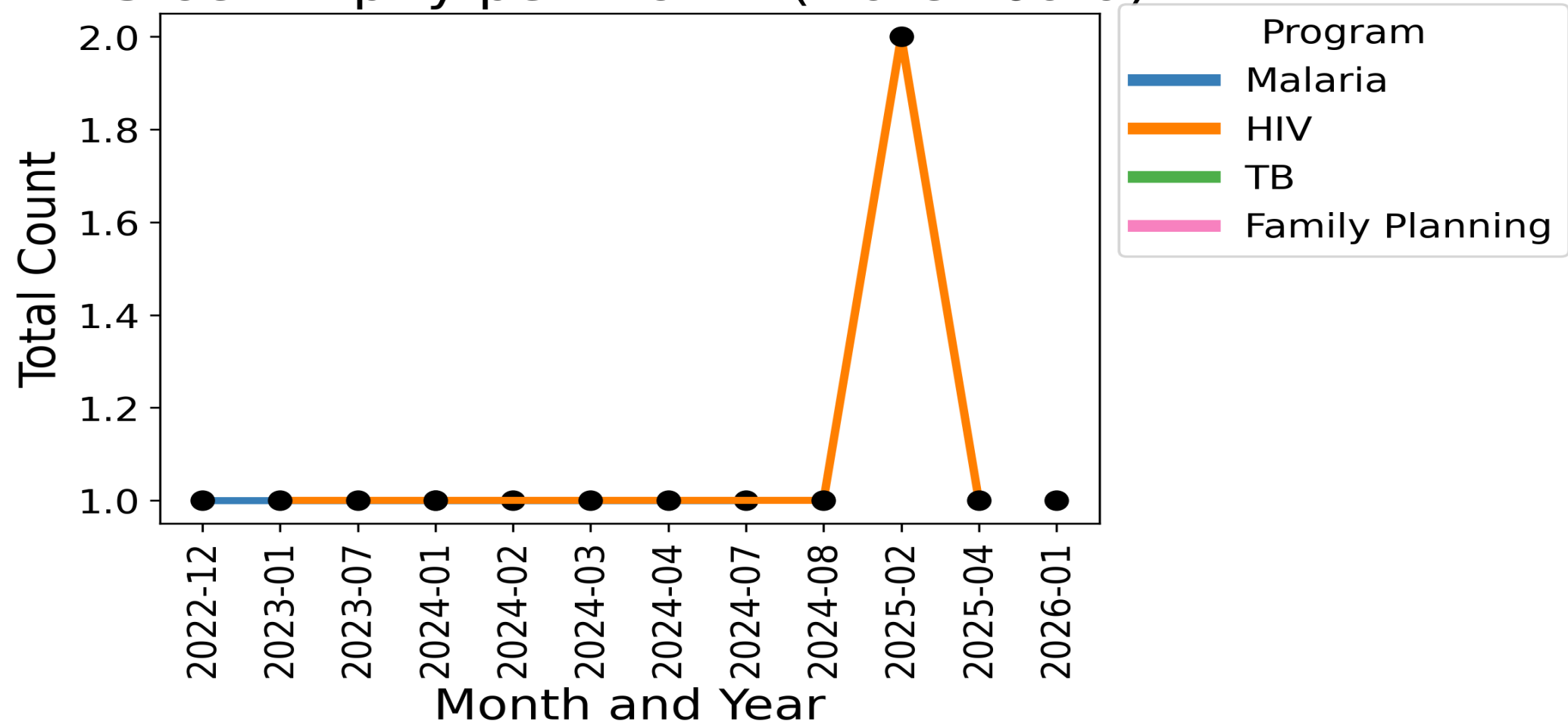


2. Impact on reduction of expiries

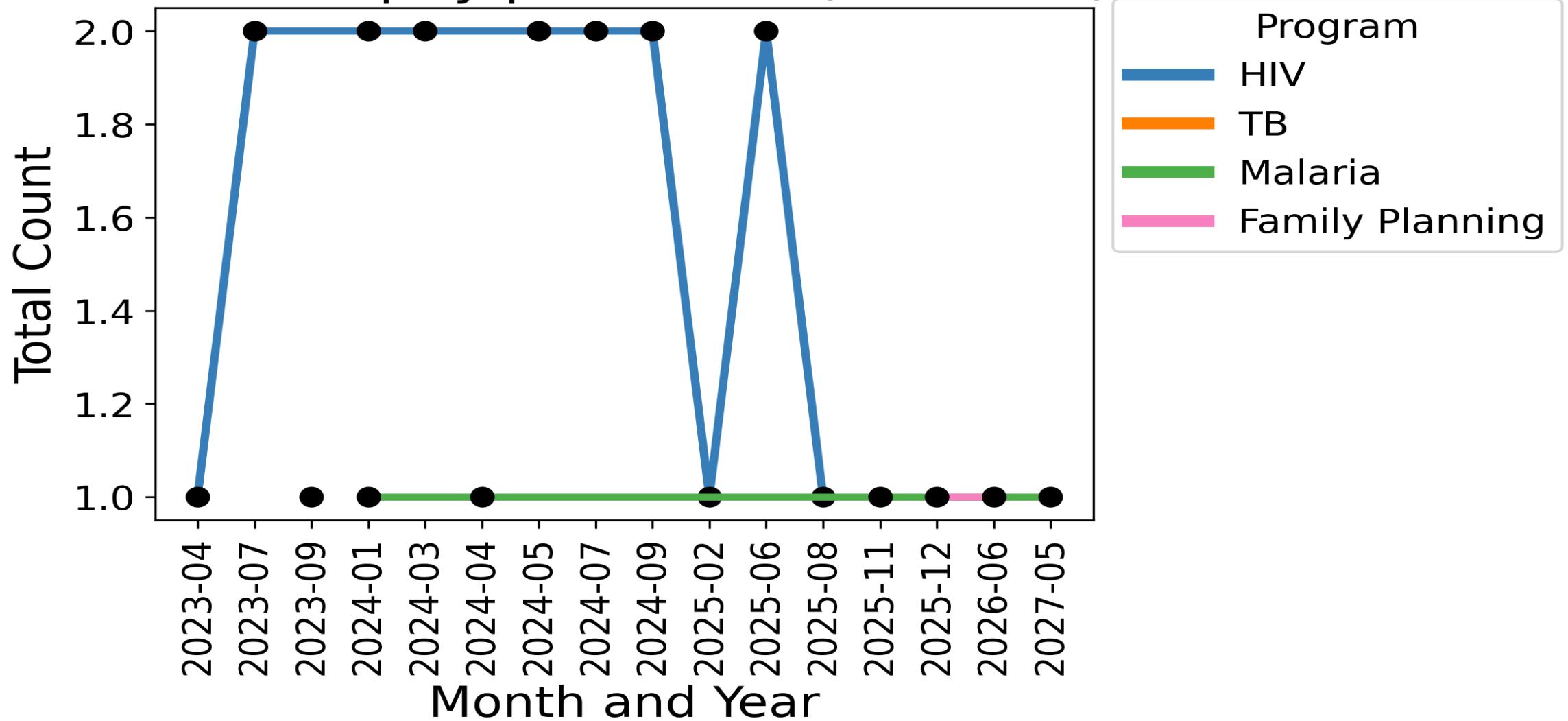
Prior to the rollout of the app, there were rampant expiries, especially on the HIV rapid test kits (RTKs).

After the rollout, a drastic drop in expiries was reported, up to 50%

Stock Expiry per month (March data)



Stock Expiry per month (Dec data)



3. Stockouts

There was a remarkable reduction in the stock-out rates of tracer commodities.

TLD stock out rates decreased from 24% to 3%, HIV RTKs decreased from 53% to 48% as attributed to the enhanced efficiency.

The commodity manager was empowered by reliable consumption data while making allocations hence ease in rationalising orders based on consumption and stocks on hand

4. Reporting rates and utilisation of reporting tools

There was a remarkable increase in reporting rates on the Ministry of Health's Facility Consumption Data Report, from 95.9% to 98.6% due to ease of reporting.

Bi-monthly stock verification meant that on the 15th and the last day of the month HIV commodity data was readily available on the app for reporting eliminating the need for manual paperwork.

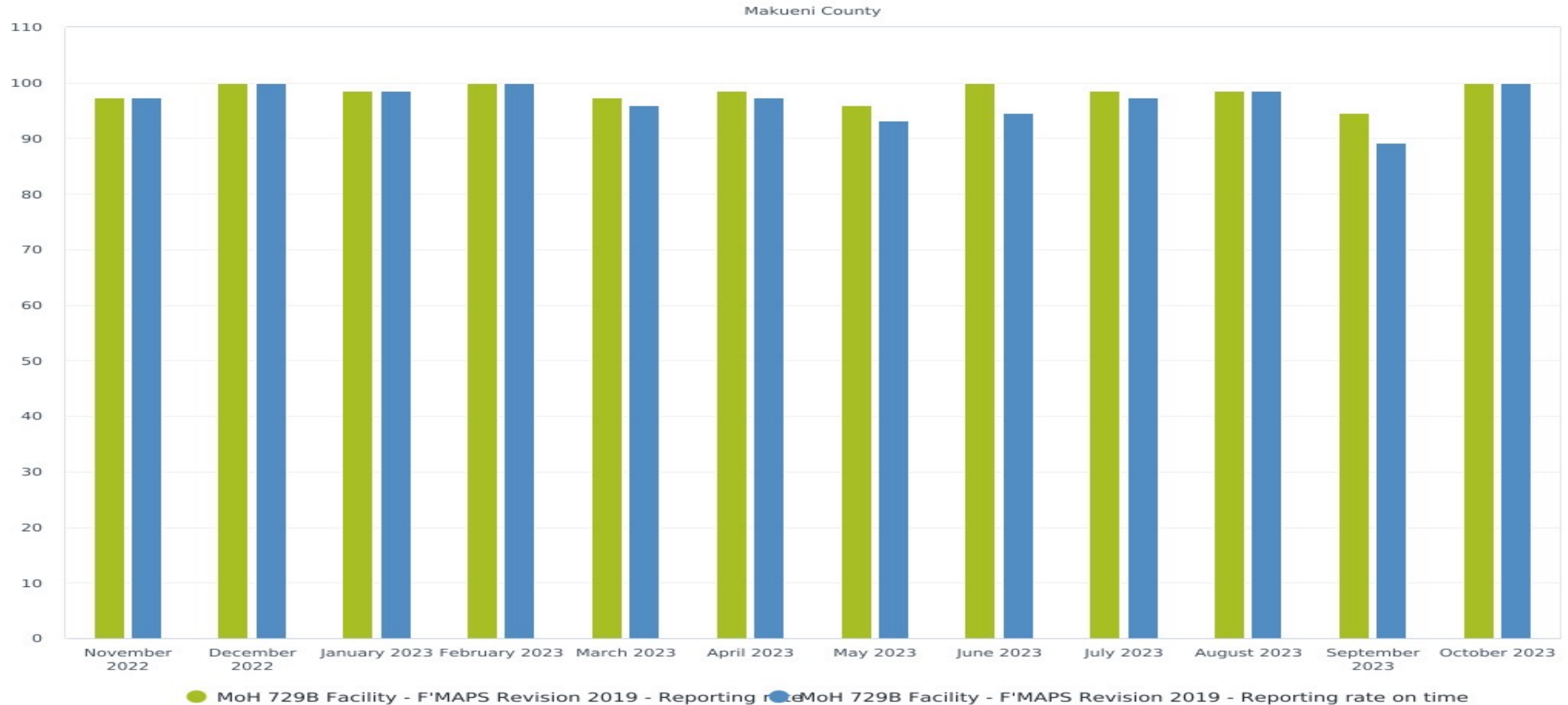
This makes it a 'top of mind' report as it is by far the easiest report to generate for a healthcare worker who is supposed to prepare upwards of ten reports by the 5th day of each month.

Source: *Dhis 2019*

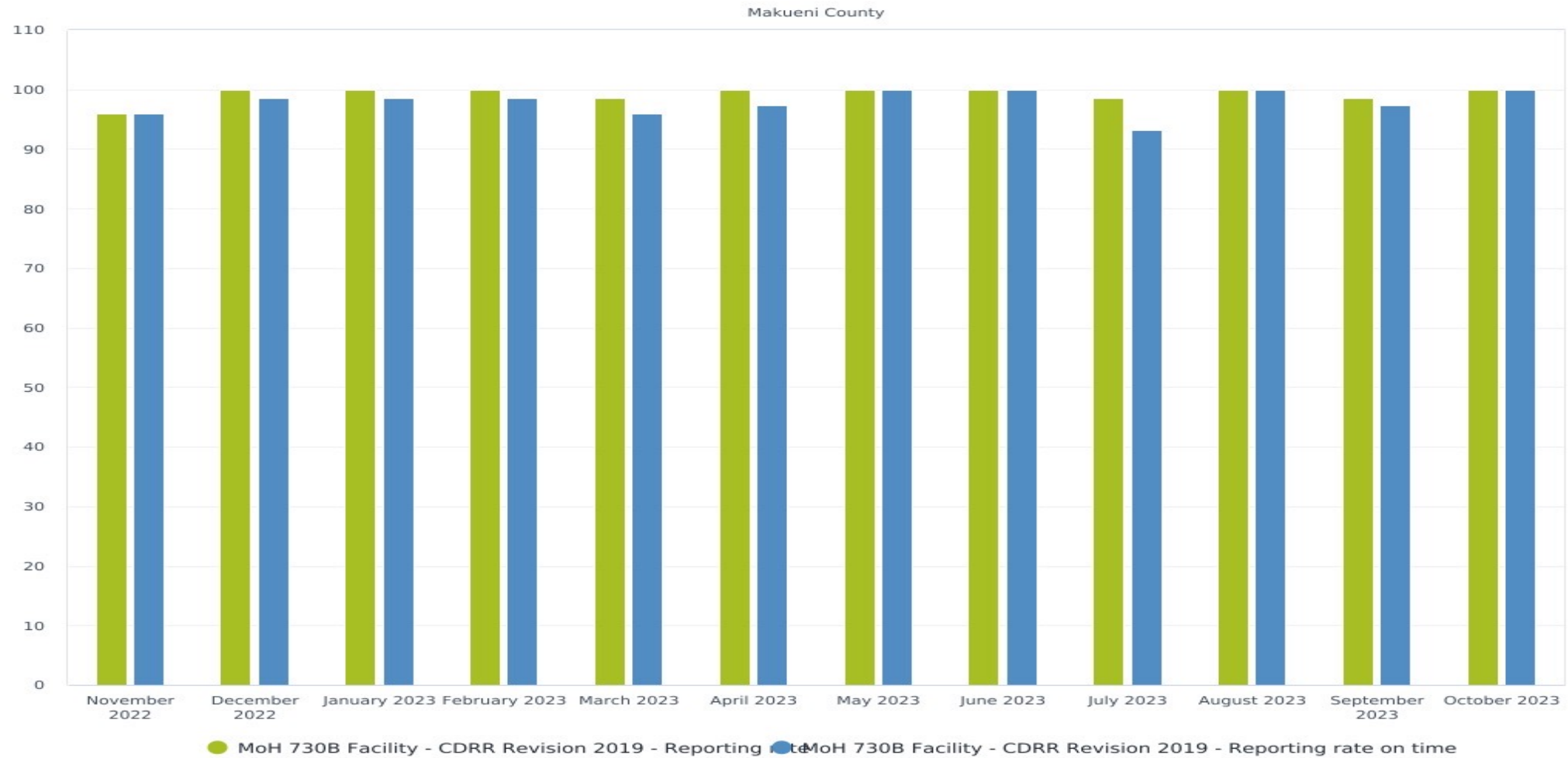
Makueni HPT Reporting Rates

Makueni County									
Data / Period	November 2022	December 2022	January 2023	February 2023	March 2023	April 2023	May 2023	June 2023	July 2023
MOH 643_FCDRR Revision 2019 - Reporting rate	22.1	46.5	48.8	55.5	94.6	92.6	97.7	95	95.7
MOH 647 Facility Tracer Health Products and Technology (HPT) Data...	99.6	98.4	98	99.2	98.4	95.2	99.2	95.2	97.2
MoH 729B Facility - F'MAPS Revision 2019 - Reporting rate	97.3	100	98.6	100	97.3	98.6	95.9	100	98.6
MoH 730B Facility - CDRR Revision 2019 - Reporting rate	95.9	100	100	100	98.6	100	100	100	98.6
MOH 734 F-CDRR for Nutrition Commodities Revision 2019 - Reportin...	25	27.4	77.4	64.4	64.4	80.8	78.8	66.3	83.2
MOH 747A_Facility Contraceptives Consumption Report and Request...	99.7	100	99	100	100	99	100	100	99.7
MOH 743 Malaria Commodities Form Rev 2020 - Reporting rate	99.6	98.9	98.1	99.6	98.5	99.6	100	99.6	100
TB_FCDRR Revision 2017 - Reporting rate	84.1	88.5	94.7	95.2	87	91.3	95.7	89.4	78.8

Facility Monthly ARV Patient Summary (MoH 729B F-MAPS)-Service data



Facility Consumption Data Report & Request (MoH 730B)



Challenges



1. Lack of stable internet connectivity in some facilities – making real-time reporting a challenge
2. Difficult terrain hindering distribution to some facilities especially during the rainy season
3. Staff turnover especially in the dispensaries

Lessons Learned



- The SVS app and dashboard is a useful tool that assists with end-to-end stock visibility, quick analysis, and assisting in making informed decisions to manage ARVs and other program commodities at all levels of care
- The dashboard provided an easy way to calculate the commodity fill rates after a given supply cycle, the stocking levels for various commodities, the expiry dates, and the inventory costs can be calculated if need be
- A robust supply chain system is key in ensuring continuity of care and ensuring better clinical outcomes. With the pilot period coming to an end in June, the key take home is the stock visibility system is a cost effective and sustainable way of enhancing end to end visibility in the HIV supply chain
- Buy-in from the top leadership is essential for ownership and sustainability

Thank You

