



**Global Health**  
Supply Chain Summit

**ABSTRACT 75**

TRACK 7

Nov 30, 2022

**2022**

**Dakar, Senegal**



**Global Health**  
Supply Chain Summit

# Introduction

## Using Decentralized Drug Distribution from Private Pharmacies, to reach HIV treatment goals in Mozambique



Supporting registering the dispensed ARVs

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**PEPFAR**  
U.S. President's Emergency Plan for AIDS Relief



Dakar, Senegal, November 30, 2022





# Context and motivation

As treatment has made HIV a chronic, life-long disease, the demands on health systems and procurement and supply chain systems that provide antiretrovirals (ARVs) have become substantial, resulting in crowded health care facilities and other strains on the health care system. Numerous innovations have emerged to address the urgent need to provide millions of people with on-going access to ARVs, including multi-month dispensing (MMD) and decentralized distribution of ARVs through the private and public sectors.



Overloaded Health Facilities, with the pharmacy being the main bottle neck



# Context and motivation



Demand creation activities

In Mozambique, where approximately 13% of adults are HIV positive, clients typically receive their ARVs through hospital pharmacies and at other public health facilities, which are often overloaded and congested. Private pharmacies, on the other hand, exist in many communities and typically are open on weekends and in the evenings.



# Methodology and work timeline

## ■ Collaboration:

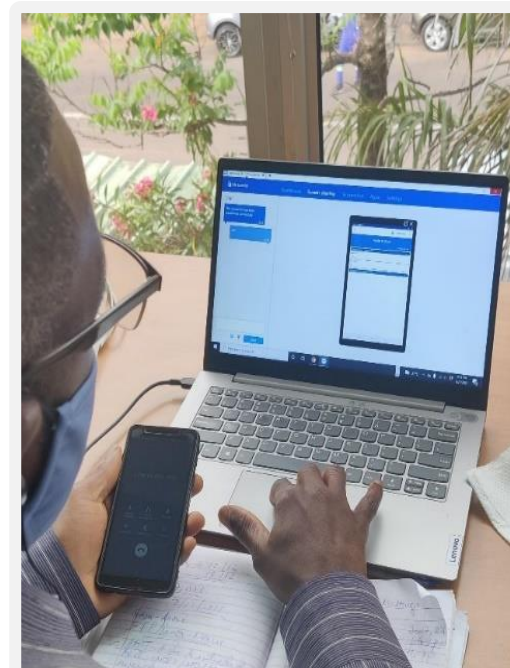
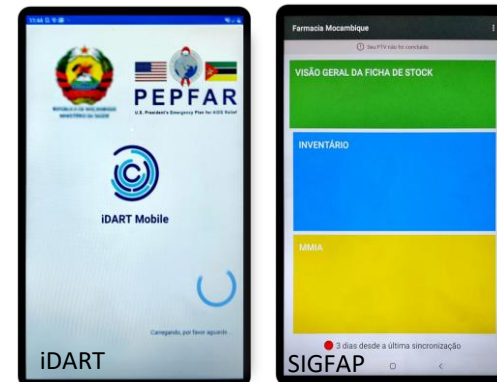
- GHSC-PSM worked with EPIC, FGH and Implementing Partners (CCS, Ariel Glaser, Elizabeth Glaser, ECHO & ICAP)
- Partnered with government through the Ministry of Health (MoH) and private sector

## ■ Timeline:

- 2019 - pilot in Maputo City at 4 semi-private pharmacies (FARMAC) and 6 health facilities (using manual system) by CCS
- 2021 – expanded to a total of 74 private pharmacies (targeted 77) and patients from 39 health facilities
- 2022 - Follow up to monitor implementation processes

## ■ Used web-based Information systems (e.g., tablets)

- ✓ Patient dispensing tracking system (iDART)
- ✓ Stocks management – Visibility/accountability/security (SIGFAP)



Virtual support to private pharmacies system





# Approach

- Created provincial technical working group led by pharmacists to support implementation of the strategy
- Provided technician on-job-training at HFs and PPs
- Reinforced the key message for patients
  - Consent to being involved in model
  - Being on ART in the first line with TDF/3TC/DTG
  - Have Viral Load < 1000 copies/or undetectable
- Demand creation activities
  - Differentiated Models of Services focused on DD
  - Addressing the advantages of picking up ARVs at the PP
  - Listening and discussing patients' fears and doubts
- Provided iDART mobile and SIGFAP training for PPs
- Identified, analyze and correct problems
- Follow up and stock reconciliation: developed a monthly report to support replenishing decision making to PP



Training the PP staff



# PP readiness to receive patients

- ✓ **Completeness of Referral:** Ensure that all referred patients from HFs are on the iDART mobile at the PP (daily/weekly data triangulation)
- ✓ **Availability of equipment:** scale, blood pressure device, table & chairs
- ✓ **Medicines availability** and good storage conditions (ARVs)
- ✓ **On-the-job training/refresher:**
  - 1) ARVs dispensing service package
  - 2) Use of electronic systems: iDART mobile and SIGFAP





# DDD service package

## Service package includes but is not limited to:

- ✓ Blood pressure screening
- ✓ Weight, height (body mass index)
- ✓ Questionnaire on adherence to ARVs, measured by medication count
- ✓ Pregnancy screening
- ✓ Adverse drug reactions monitoring
- ✓ TB screening questions
- ✓ General health status check before dispensing medicines



Pharmaceutical Technician at private pharmacy in Inhambane Province provides service package to patient



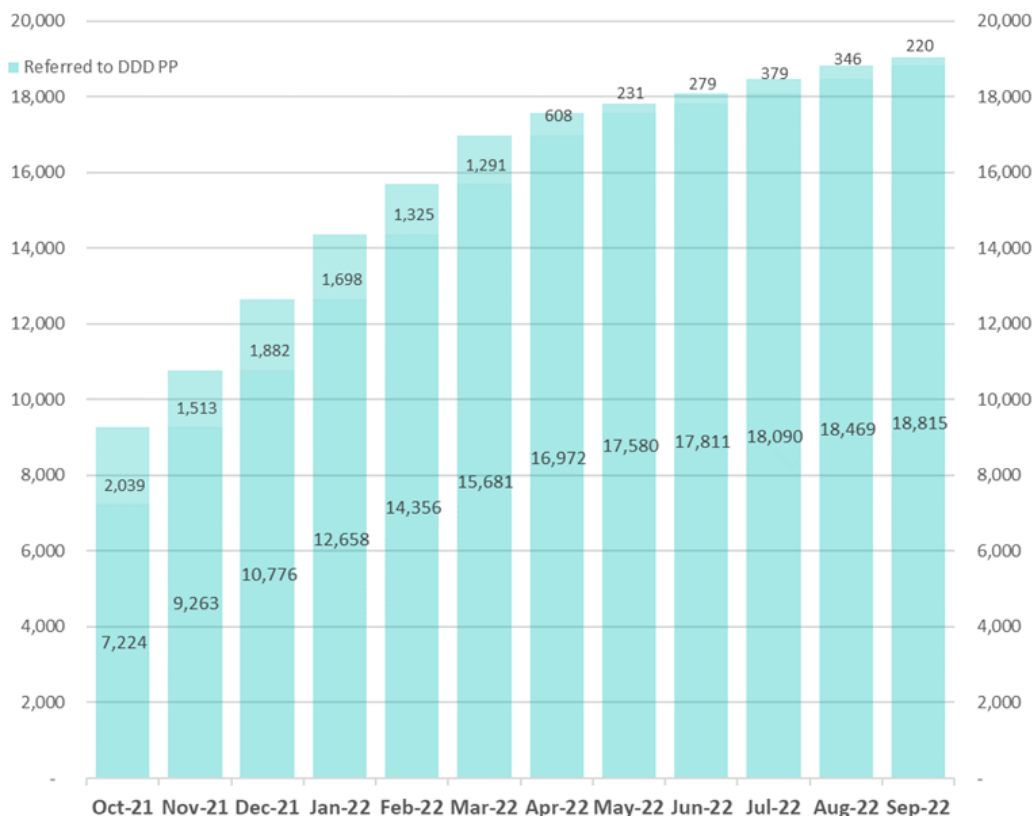


# Patients picking up ARVs at private pharmacies

From pilot in 2019 to September 2022, a cumulative 19,035 patients enrolled in the Model\*

- The latest data indicate that an average of 315 patients per month have been decentralized to the PPs during the past three months (3<sup>rd</sup> Qtr 2022)
- Trends in the past 2 quarters shows a reduction of enrolled patients.
- Many of the Health Facilities currently on the DDD PP pilot, started to implement the 6 months dispensing.

Patients enrolled on Decentralized Drug Distribution at PP

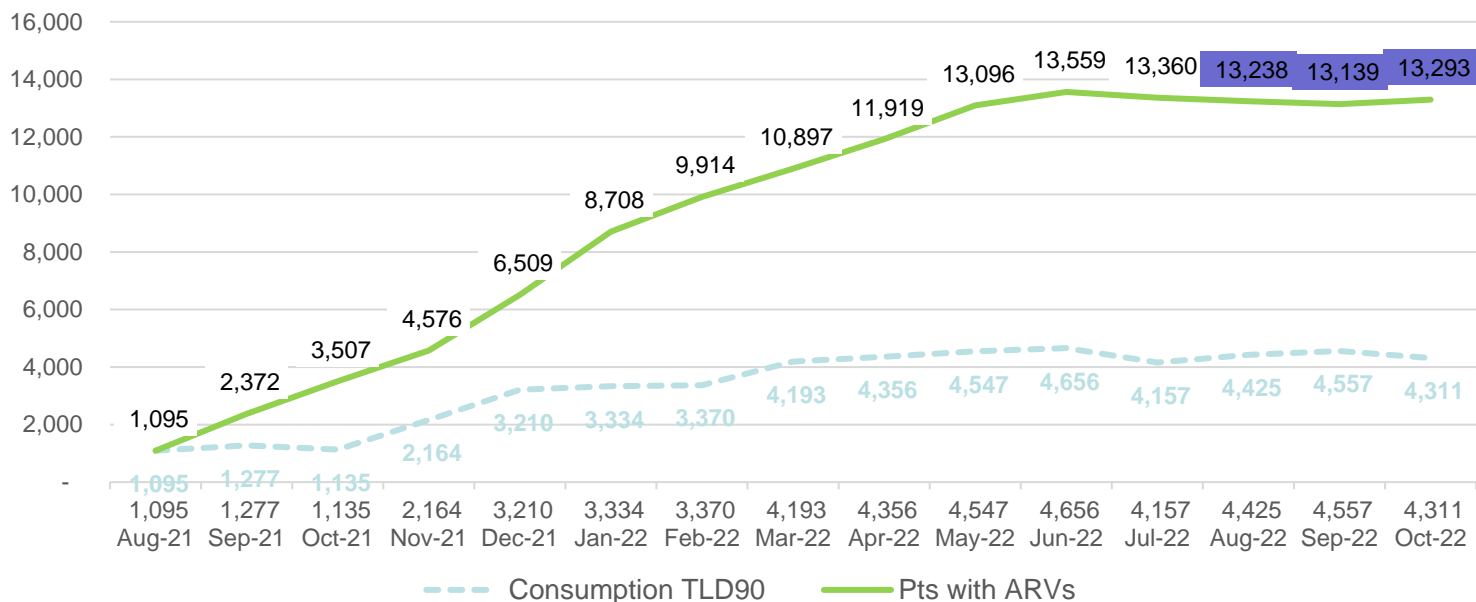


	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
Newly enrolled on DDD PP	2,039	1,513	1,882	1,698	1,325	1,291	608	231	279	379	346	220
Referred to DDD PP	7,224	9,263	10,776	12,658	14,356	15,681	16,972	17,580	17,811	18,090	18,469	18,815
<b>Total</b>	<b>9,263</b>	<b>10,776</b>	<b>12,658</b>	<b>14,356</b>	<b>15,681</b>	<b>16,972</b>	<b>17,580</b>	<b>17,811</b>	<b>18,090</b>	<b>18,469</b>	<b>18,815</b>	<b>19,035</b>



# ARV pickup at private pharmacies

DDD- Private Pharmacies



## DDD at Private Pharmacies

- TLD90 consumption provided by SIGFAP - **4,311 packs dispensed** during October 2022
- The dispensing represents over **13,293 patients** picked up TLD90 at PPs in the last 3 months

## Weekend Pickup of ARVs in 2022 - for patient convenience

Row Labels	Jan	Feb	Mar	Apr	May	June	July	August	Sept	Oct	Nov	Avg 2022
Week Day	89.02%	87.63%	92.47%	91.75%	93.24%	93.77%	94.32%	97.16%	90.88%	93.85%	95.60%	<b>92.8%</b>
Week End	10.98%	12.37%	7.53%	8.25%	6.76%	6.23%	5.68%	2.84%	9.12%	6.15%	4.40%	<b>7.2%</b>



# Daily stock data monitoring

- ARVs from DPM (warehouse) to the Private Pharmacies –
- SIMAM => SIGFAP

## SIGFAP – PP

OpenLMIS Sistema de Informação de Gestão Logística nas Unidades Sanitárias  
on local environment

Página principal Relatórios Administração

Controlo da Ficha de stock  
08S18WI TDF 300mg/3TC 300mg/DTG 50mg (TLD 90)  
Unidade Sanitária : Farmácia Magoanine Distrito : DPM

Deste período | Últimos 3 Períodos | Últimos 12 Períodos

Os dados apresentados podem incluir informações incompletas do mês em curso

Data do movimento	Origem/destino do movimento	Número de Documento	Entradas	Ajustes
5 Ago 2021	Provincia (DPM)	10337/21	484	
4 Ago 2021	stock.movement.DART			
3 Ago 2021	stock.movement.DART			
2 Ago 2021	stock.movement.DART			

## SIMAM - DPM

Ficha de Stock  
Ministério da Saúde  
DPM MAPUTO CIDADE

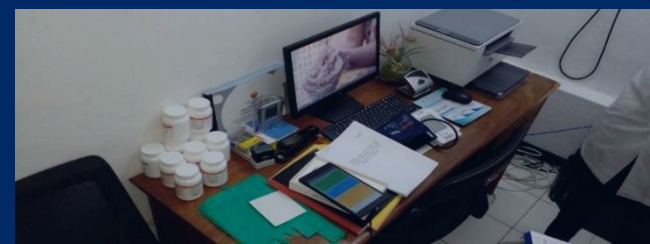
08S18WI

Data	Cliente	Tipo de Movimento	Quantidade	Existência	Transacção	Mov	Documento
09-Aug-21	Centro de Saude de Bagamoio	Distribuição	1,548	5,454	Saida	10364	08/21 ARV
09-Aug-21	Centro de Saude de Malhargaleine	Distribuição	1,792	7,002	Saida	10361	08/21 ARV
09-Aug-21	Centro de Saude 1 de Junho	Distribuição	2,603	8,794	Saida	10359	08/21 ARV
06-Aug-21	Farmac Universal	Distribuição	223	11,397	Saida	10352	08/21 ARV
06-Aug-21	Farmac Moçambique	Distribuição	59	11,620	Saida	10353	08/21 ARV
06-Aug-21	Centro de Saude do Porto	Distribuição	1,523	11,679	Saida	10354	08/21 ARV
06-Aug-21	Centro de Saude do Alto-Mae	Distribuição	1,008	13,202	Saida	10350	08/21 ARV
05-Aug-21	Hospital Geral de Chamaculo	Distribuição	1,834	14,210	Saida	10346	08/21 ARV
05-Aug-21	Centro de Saude do Xipamanine	Distribuição	1,291	16,044	Saida	10344	08/21 ARV
05-Aug-21	Hospital Geral Jose Macamo	Distribuição	82	17,335	Saida	10338	08/21 ARV
04-Aug-21	Centro de Saude Jose Macamo	Distribuição	500	17,417	Saida	10340	08/21 ARV
04-Aug-21	Farmac de Magoanine	Distribuição	484	7,917	Saida	10337	08/21 ARV
04-Aug-21	Centro de Saude de Albazine	Distribuição	559	18,401	Saida	10335	08/21 ARV
04-Aug-21	Posto de Saude dos Pescadores	Distribuição	89	18,960	Saida	10333	08/21 ARV
04-Aug-21	Posto de Saude Muchina	Distribuição	15	19,049	Saida	10331	08/21 ARV
04-Aug-21	Hospital Geral de Mavalane	Distribuição	704	19,064	Saida	10325	ARV 08/2021
03-Aug-21	Centro de Saude da Catembe	Distribuição	631	19,768	Saida	10317	08/21 ARV
03-Aug-21	Centro de Saude Mutsekwa	Distribuição	64	20,399	Saida	10319	08/21 ARV
30-Jul-21	DPM MAPUTO CIDADE	Inventário	0	20,463	Inventário	10310	





# Daily stock data monitoring



**Provincia**

Search

- Select all
- Maputo Cidade
- Maputo Província
- Província de Cabo Delgado
- Província de Gaza
- Província de Inhambane
- Província de Manica
- Província de Nampula
- Província de Niassa
- Província de Sofala
- Província de Tete
- Província de Zambezia

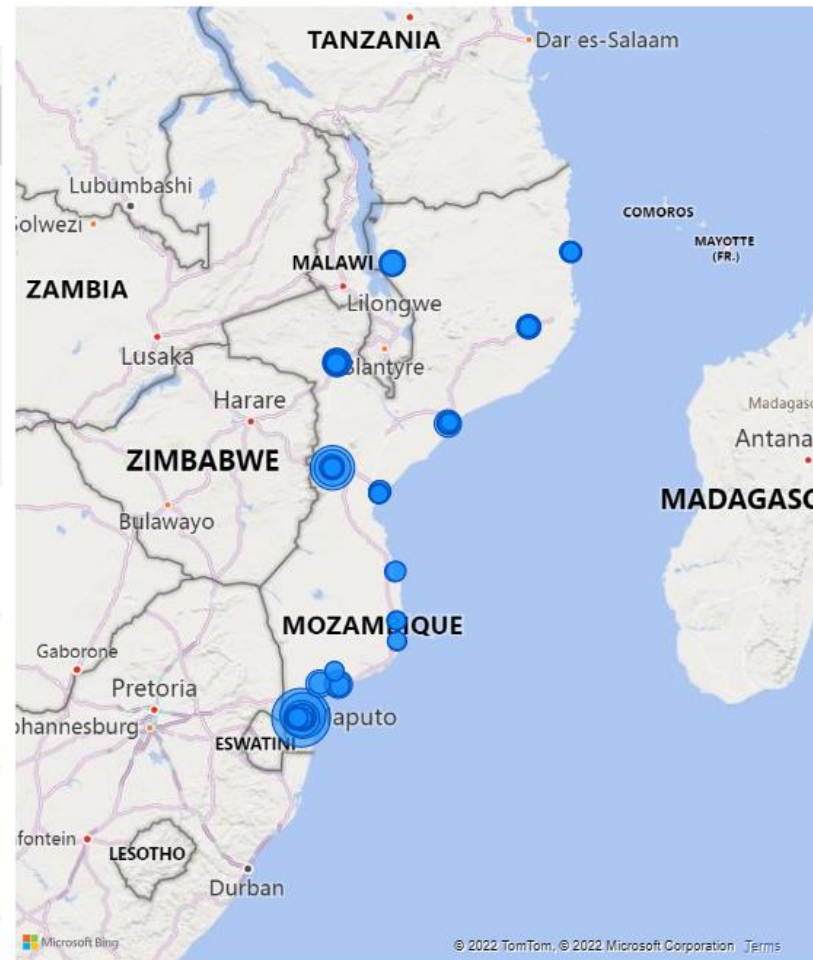
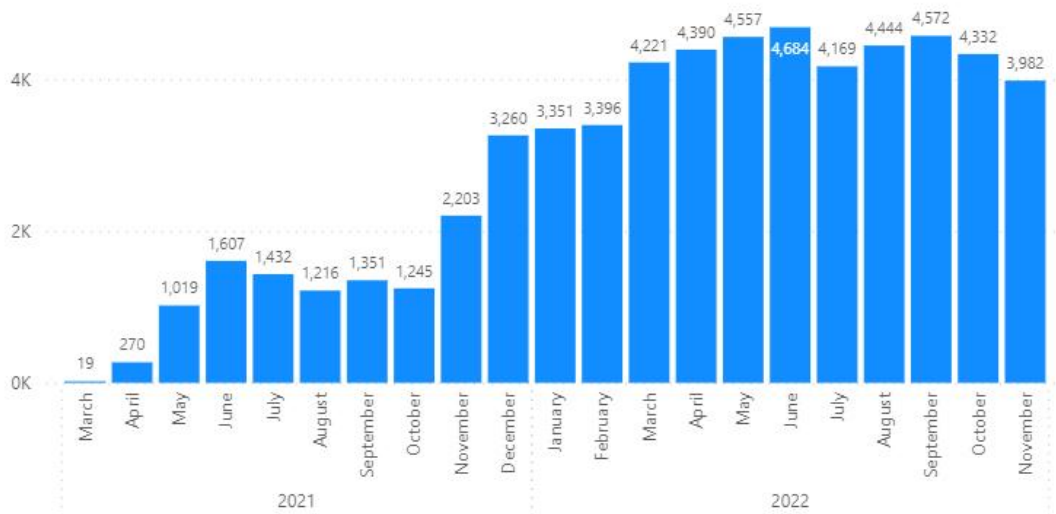
**Farmácia**

Search

- Select all
- Farmácia 786
- Farmácia Abudala
- Farmácia Alpha-Omega
- Farmácia Aquimussa
- Farmácia Artur-3
- Farmácia Aveleira
- Farmácia Bem-Estar
- Farmácia Benção
- Farmácia BE-Saúde
- Farmácia Billa
- Farmácia Central
- Farmácia Central-Lda
- Farmácia Chaheco -786

**Último stock Reportado**

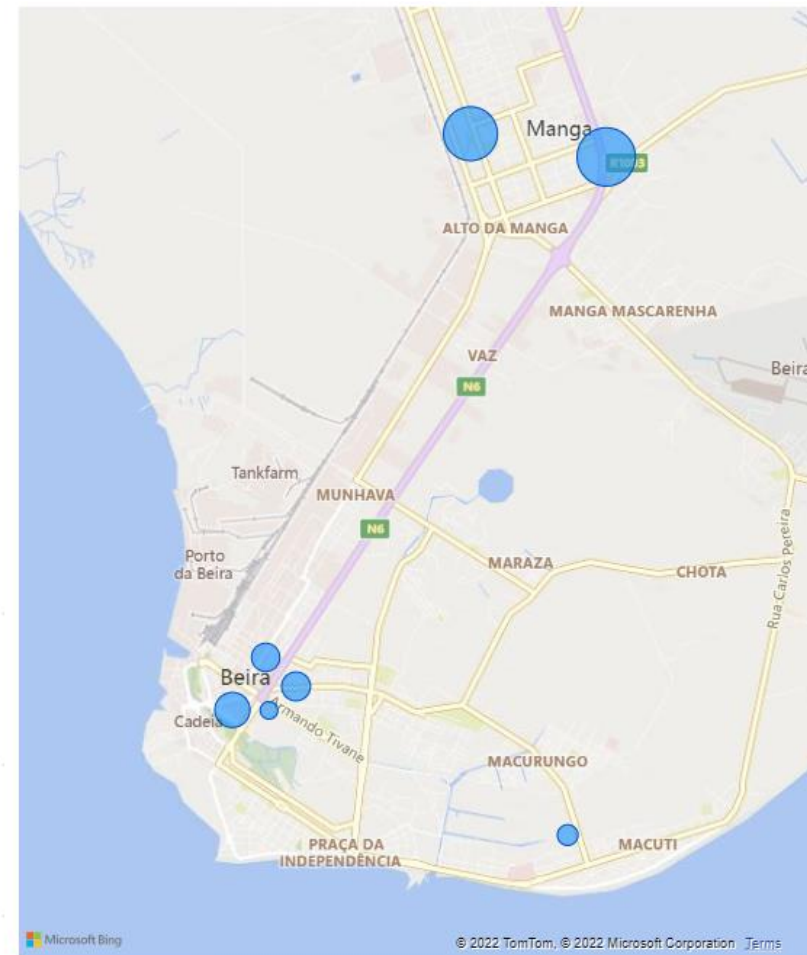
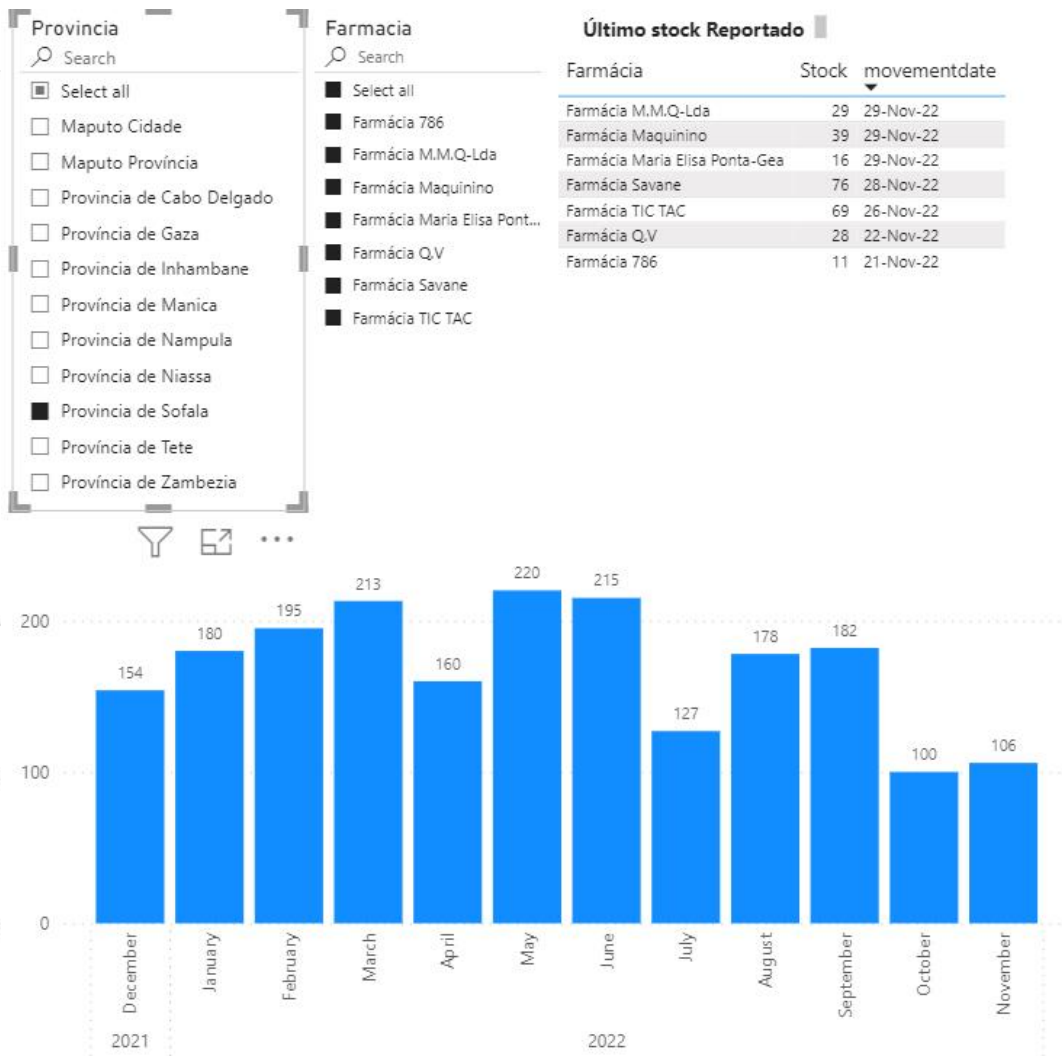
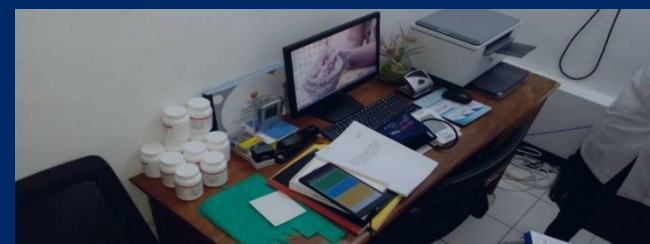
Farmácia	Stock	movementdate
Farmácia Central-Lda	110	29-Nov-22
Farmácia Fátima-Lda	345	29-Nov-22
Farmácia Hanhane	177	29-Nov-22
Farmácia M.M.Q-Lda	29	29-Nov-22
Farmácia Maquinino	39	29-Nov-22
Farmácia Maria Elisa Ponta-Gea	16	29-Nov-22
Farmácia Milagre	158	29-Nov-22
Farmácia Muzinga	171	29-Nov-22
Farmácia Nova	48	29-Nov-22
Farmácia Parque-SA	22	29-Nov-22
Farmácia Tropical	187	29-Nov-22
Farmácia Ukumi	14	29-Nov-22
Farmácia Central	489	28-Nov-22
Farmácia Contente-Lda.	101	28-Nov-22
Farmácia Daren	28	28-Nov-22
Farmácia EucaliptoI	52	28-Nov-22



[Run flow](#) Update dataset



# Daily stock data monitoring



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[Run flow](#) [Update dataset](#)



# DDD challenges

- Buy in from MoH
    - Lengthy approval process
    - ARV management process and stocks transactions visibility
    - System costs - diverting investment from MoH
  - Demand creation at Health Facilities
  - Private Pharmacies staff turn over
  - Implementing teams being affected by COVID-19
  - Sustainability beyond partner support
- The new client identification and devolvement trends have continued to decrease over the recent months as attention has moved towards 6MMD rollout thus reducing demand creation.



Supervision with the PP staff





# DDD challenges continued

- Some patients not found on patient tracking system due to synchronization of the HF with the central server.
- Great mobility of technical staff in private pharmacies
- Private pharmacies closed due to business related reasons
- Location of some selected private pharmacies further away from the HF



Training the PP staff

- Patients ask for more Private Pharmacies available near their HF or in the neighborhoods of their homes
- Delays or missing the patient referral to private pharmacy in the electronic system, by the technicians at the HF, causing patients not to be found when need to pick up ARVs.



# Conclusions / Recommendations

## **Critical success factors to consider when adopting, adapting or scaling up similar models or different settings**

1. Government ownership and leadership
2. Multi-stakeholder engagement/ collaboration – need for strong partnerships
3. Stakeholder and resource mapping
4. Governance structure, information sharing and transparency (TWG)
5. Integrated electronic information systems for patients and medicines visibility
6. Ability to triangulate patient and stock transactions information
7. Continuous training, monitoring, learning and improvement
8. System scalability and sustainability.



# Acronyms

1. **ANARME:** National Medicines Regulation Agency
2. **ARIEL:** Ariel Glaser Pediatric AIDS Foundation
3. **CCS :** Health Collaboration Center
4. **CMAM:** Center for Drugs and Medical Supplies
5. **DD:** Decentralized Distribution
6. **DDD PP:** Decentralized Drug Distribution through Private Pharmacies
7. **DPM:** Provincial Pharmaceutical Warehouse
8. **ECHO:** Efficiencies for Clinical HIV/AIDS Outcomes
9. **EGPAF:** Elizabeth Glaser Pediatric AIDS Foundation
10. **EPIC:** Meeting Targets and Mainstreaming Epidemic Control
11. **HF:** Health Facility
12. **FGH:** Friends for Global Health
13. **ICAP:** International Center for AIDS Care and Treatment Program, Columbia University
14. **iDART:** Intelligent Dispensing of Antiretroviral Treatment
15. **IP:** Implementation Partners
16. **MoH:** Ministry of Health
17. **PP:** Private Pharmacy
18. **SIGFAP:** Logistics Management System for Private Pharmacies
19. **SIMAM:** Information System for medicines and Medical Materials.





# Thank You



DDD PP TWG: USAID, CDC, EpiC, FGH, Ariel, GHSC-PSM and partners from MoH at provincial level, supporting PP in Maputo province, April 2022.



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