Leaving no Patient Behind: Use of Health Facility-level Granular Logistics Data to Drive Program Performance and Improve Patients Experience

Donald Yanogo, USAID/Burkina Faso
Simplice Kamdem, USAID/West Africa

HEALTH SYSTEMS STRENGTHENING **ACCELERATOR**

Context

This paper discusses the issue of health equity is fragile environment like that of Burkina Faso recently. Health equity means ensuring that everyone has a fair and just opportunity attain their level of health. Effective supply chain management plays an important role in equitable access to health services. No health program will be able to achieve its goals unless there is a robust supply chain systems which allows for uninterrupted availability of life saving health commodities.

The overall HIV response happened in the context described as follows:

- PEPFAR support HIV services delivery in 31 sites spread across five health regions of the y health regions across the country
- As of end of FY22, there were 38,000 patients on ART
- 1/3 of public health facilities inaccessible due to violence
- Fire incident in Central medical stores lost important stock of HIV commodities including ARVs and VL reagents
- End-to-end visibility of supply chain data challenged by the inability of system to generate routine logistics data to inform decision making
- Low performance on viral load coverage, important volume of specimen awaiting to be analyzed
- High variability of performance across the PEPFAR supported-sites
- How to ensure continues availability of HIV services to People living with HIV
- Unstable political and security environment
  - Political instability over the last two years
  - Protracted conflict; and growing security concerns with violent extremism attacks in many regions
  - Increasing number of Internally Displaced Populations (IDPs). Reports indicates 2.1M IDPs as of end April 2023.
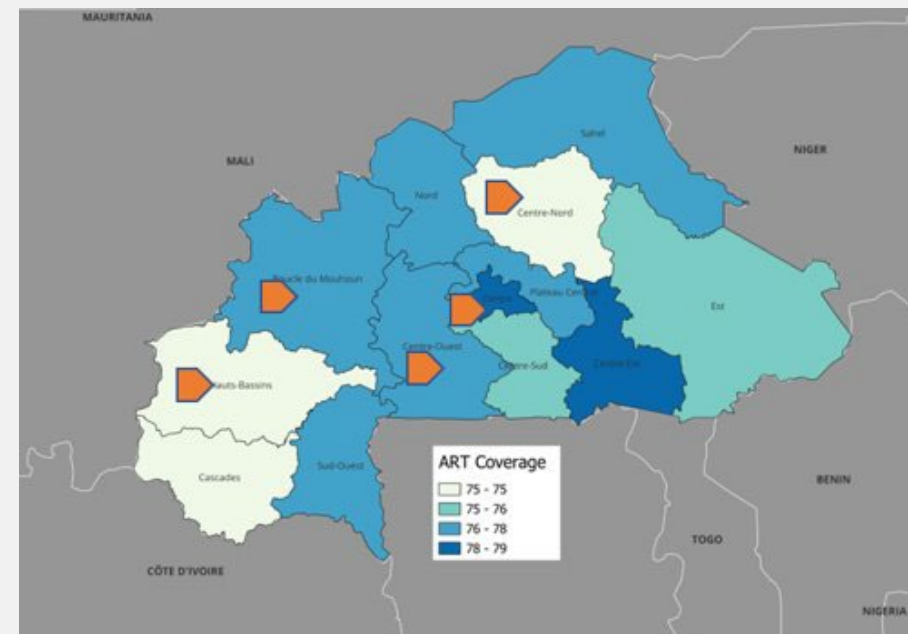
The fragile political and security environment in Burkina Faso makes it difficult to ensure health equity for the population, especially for those leaving in zones affected by the conflicts, and internal displaced populations.

This paper describes how USAID collaborated with other stakeholders to ensure continuity of services for the people living with HIV/AIDS. More specifically, this paper discusses the important contribution of effective logistics data management to address the last-mile logistics issues across the countries including areas with difficult access.

Activity Description

The focus of these efforts was on ensuring continuous site-level availability of essentials HIV commodities, to improve quality of services in the PEPFAR-supported sited across Burkina Faso, irrespective of the facilities where the patients seek the HIV services. The intervention aimed at improving the following indicators in each of the health facilities supported by the PEPFAR Program:
- Multi-month dispensing (MMD) of antiretroviral – an aspect of differentiated service delivery that provide patients with either 3 or 6 month of mediations and eliminate de need for monthly facility visits.
- Viral Load Coverage – recommended measure of antiretroviral therapy efficacy which indicates adherence and the risk of transmitting HIV

Availability of ARVs and Viral load reagents is a key factors of success to achieve goals set around those to indicators.

The approach prioritized use of routine logistics data to inform corrective actions and tailored support to health facilities. For example, the use of routine data visualization helped identified the sites with specifics needs such as capacity issues; stock-outs; communication issues or reporting issues. The strategy consisted on using site level-data to identify the sites with most pressing needs. Health facilities located in the conflict-affected areas showed greater need for assistance.

USAID facilitated creation of a working group that would meek every two weeks to review data, analyze data and recommends actions to address the gaps. The Working group was composed of staff from National Health Control Program, USAID implementing partners (#EAWA; GHSC-TA FTO), USAID, and the Global Fund.
One key assumption considered is that, there is a high variance of performance of health facilities receiving USAID support; and that the nature and magnitude of challenges varied from one facility to another.

The Theory of change used was the following:
  IF the visibility of site-level logistics data
    + IF the data is analyzed carefully to identify the gaps
      + IF the logistics to sites is adequately tailored to address the gaps identified through the data analysis
        THEN, the programmatic outcomes will be improved is all health facilities, and patients with h

As part of the support to the National AIDS control program, USAID worked with the stakeholders to improve last mile logistic management. Through this intervention, USAID sought improving coordination among stakeholders.
The working group
- developed a simple template to collect logistic data for each health facility (see sample below)
- Met regularly to analyze data and trends
- Took corrective actions based on data
- Decision on correctives actions to address gaps
  - Replenishing stocks levels
  - Organize emergency re-supply
  - Transfer of stocks between health facilities
  - Prioritize visits to sites
  - Etc...

#	Facility Name	Patients on ART	Patients receiving TLD	% Patients receiving TLD	Multi-month Dispensing (MMD) Coverage < 3 mo.	3-6 mo.	6+ mo.
1	CHU Bogodogo	2,273	2,018	88.78%	1.7%	12.0%	86.4%
2	CHU/CDG	668	518	77.54%	0.7%	25.9%	73.4%
3	CM Alavi	1,779	1,700	95.56%	2.9%	6.9%	90.2%
4	CM Oasis	2,998	2,932	97.80%	4.0%	28.9%	67.2%
5	Yerelon+	925	924	99.89%	9.6%	15.5%	74.9%
6	CM Samandin	1,490	1,476	99.06%	2.2%	6.6%	91.2%
7	CM Vie Positive	1,554	1,523	98.01%	1.9%	2.7%	95.4%
8	CMA Pissy	5,851	5,667	96.86%	0.4%	4.5%	95.1%
9	CMA Kossodo	1,764	1764	100.00%	2.5%	21.3%	76.2%
10	CMA Paul VI	2,007	1971	98.21%	0.0%	2.8%	97.2%
11	DS Koudougou	1,368	1345	98.32%	2.5%	40.4%	57.1%
12	CM Réo	931	1036	111%	1.9%	41.0%	57.2%
13	CMA Houndé	830	817	98.43%	2.6%	29.1%	68.4%
14	CM Espoir et Vie	1,530	1,497	97.84%	2.2%	14.1%	83.7%
15	HDJ	4,329	3,933	90.85%	2.8%	22.9%	74.3%
16	CM REVS+	1,665	1,621	97.36%	1.6%	9.8%	88.6%
17	CM Yérélon	524	511	97.52%	6.0%	29.1%	64.9%

| #	Facility Name	Patients on ART	Patients receiving TLD	% Patients receiving TLD	Multi-month Dispensing (MMD) Coverage < 3 mo.	3-6 mo.	6+ mo.
18	CMU Dédougou	611	594	97.22%	0.0%	1.3%	98.7%
19	CHR Dédougou	804	794	98.76%	0.7%	6.9%	92.4%
20	CMA Boromo	647	627	96.91%	1.6%	13.0%	85.4%
21	CMA Toma	761	733	96.32%	0.1%	0.0%	99.9%
22	CMA Tougan	346	298	86.13%	0.0%	2.9%	97.1%
23	CMA Solenzo	384	371	96.61%	0.5%	42.1%	57.4%
24	CMA Nouna	646	630	97.52%	0.8%	0.8%	98.4%
25	CMU Kaya	809	792	97.90%	1.4%	23.0%	75.7%
26	CHR Kaya	482	425	88.17%	2.0%	6.0%	92.0%
27	CMA Boussouma	358	339	94.69%	0.0%	7.2%	92.8%
28	CMA Kongoussi	479	467	97.49%	0.5%	8.7%	90.8%
29	CMD Bam	196	190	96.94%	3.9%	0.0%	96.1%
30	CMA Boulsa	343	323	94.17%	1.3%	4.8%	93.9%
31	CMA Tougouri	243	234	96.30%	1.2%	2.1%	95.0%
	All Sites	39,595	38,070	96.15%	1.9%	14.6%	83.4%

Activity Impact

The intervention described in this paper focuses on ensuring availabilities of health commodities as the services delivery points, as a ways to contribute to equity in health.

This is an illustration of how a high performing supply chain function can improve health outcomes.

PEPFAR's emergency support post fire-incident at central medical store has been instrumental in maintaining commodity security in the country
Supply Chain Data visibility as a tool to improve program performance
- using site-specific data to prioritize and focus supply chain technical assistance to sites
- **Weekly data analysis and data triangulation** of Viral Load (VL) logistics data and Viral load service data.
  - Viral Load logistic data include: # specimens in backlog; average weekly throughput; Stock of VL reagents;
- Led to **reduction of specimen backlog** and **increased VL coverage.**

The chart below is an except of the supply chain dashboard which shows the trends of VL logistics data over time.
It highlights the benefits of continuous monitoring of logistics data and its impact on the VL service delivery.

VL samples processing trend at CHU Bogodogo
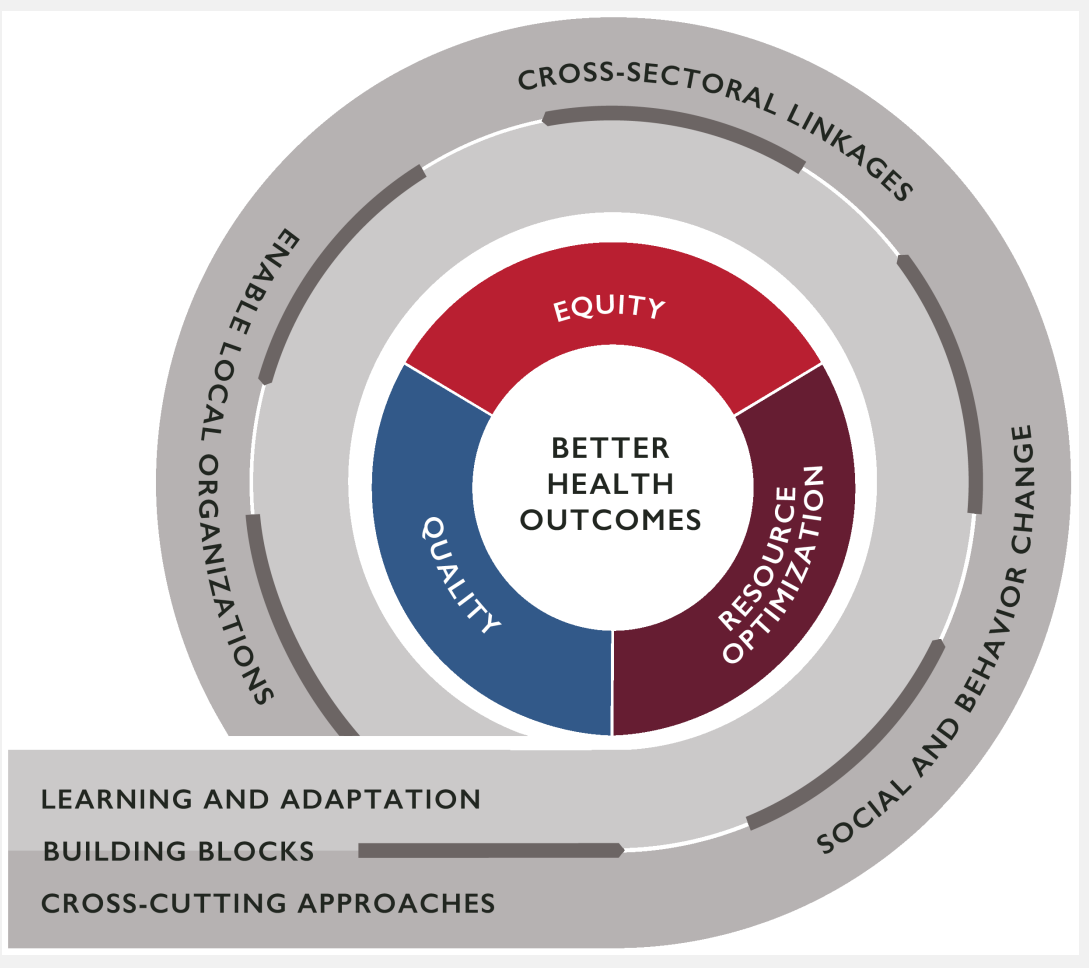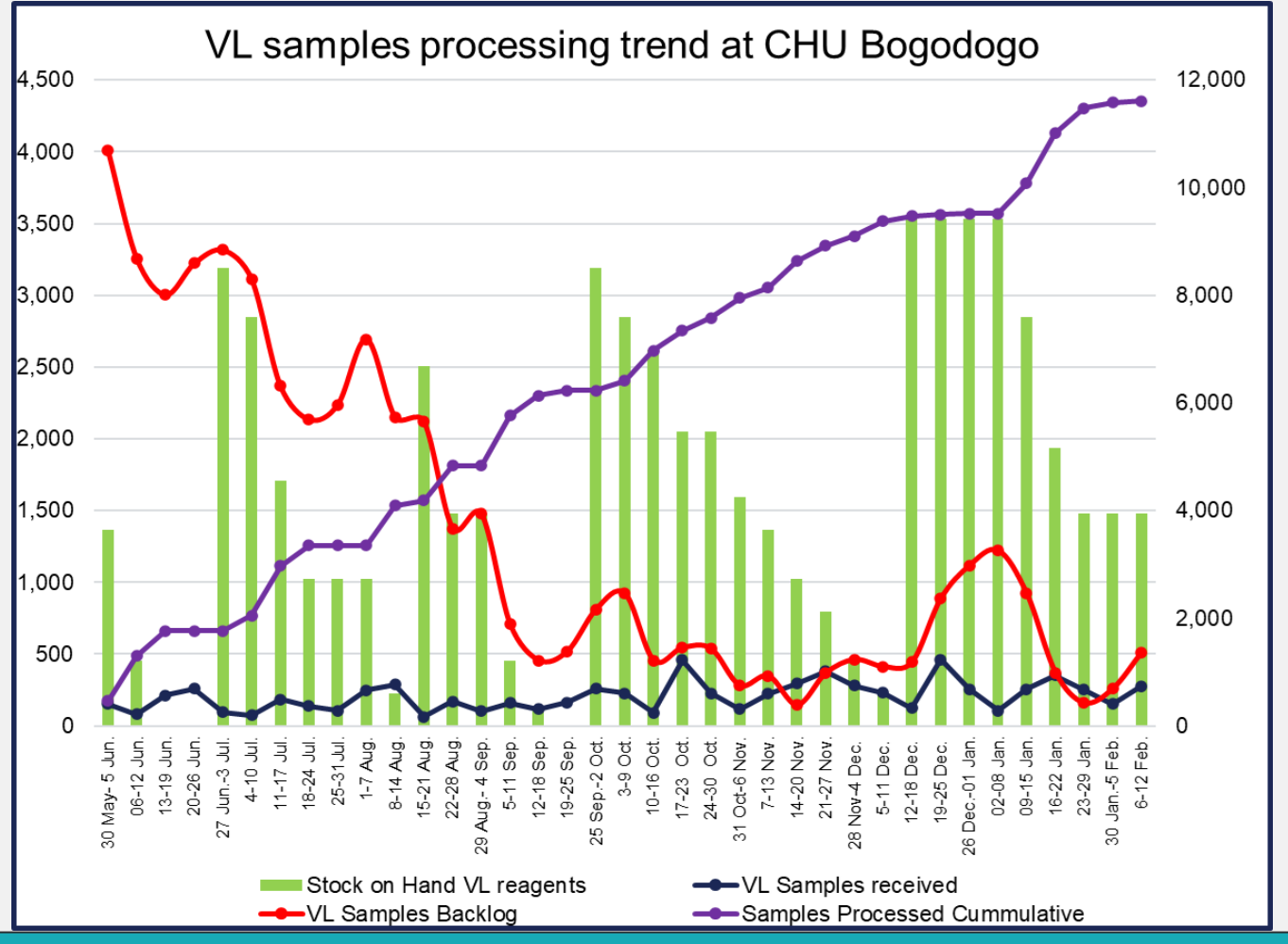
Evidence

This interventions had a significant contribution on the clients experience

- Multi-month dispensing (MMD) of antiretroviral:
  - Sustained coverage at 97%
  - With more than 80 % on 6MMD refills schedule. This indicates that the clients can now visit health facility only twice a year.
- Increased Viral Load Coverage (VLC):
  - The VLC coverage jumped from 34% to 50%.
  - This indicates that half of the clients have their viral load documented. This is the result of a combination of improved clinical services and better logistics performance, with increased availability of VL reagents.

Trends in MMD and Viral Load Coverage
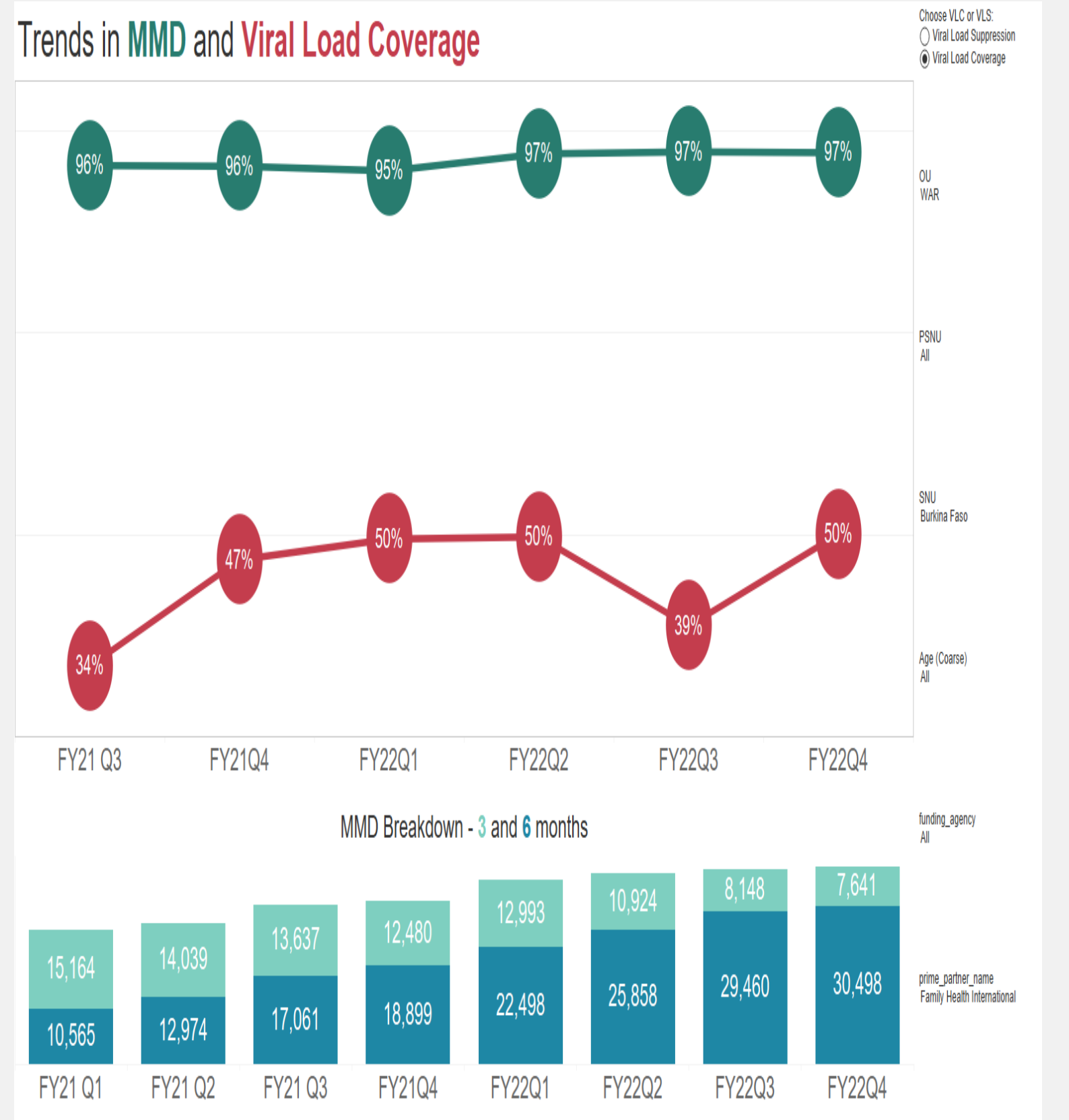
Facilitators

The facilitators of this success include:
- Effective communication among stakeholders is key to success
- Partnership with stake holders
- Committed staff within institution
- Leadership at national and subnational level
- Coordination and leveraging of synergies

Challenges

- Accessibility to facilities in conflict prone area – regular call-in to collect and discuss data
- Access to quality data -- data triangulation (comparing logistics data with service data)
- Keeping the workforce motivated
- The inability to visit all sites and provide feedback on the analysis which is done on the data provided

Lessons Learned

- In our experience, a high-performing supply chain system function cans boost resilience, enhance quality of care and increase satisfaction of service providers.
- The pursuit of health equity is a bigger struggle in the fragile political and security environment;
- The cost of running effective supply chain systems increased significantly for zones with difficulty of access due to insecurity
- The availability of quality logistics data is critical to ensure health equity – No logistics data, no commodities.
- Insecure environment caused additional stress on the health systems