

Viral Load Scale-up Experience in Uganda

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2013 WHO ART Monitoring Guidelines: How prepared was Uganda?

GUIDELINES



CONSOLIDATED GUIDELINES ON
**THE USE OF
ANTIRETROVIRAL DRUGS
FOR TREATING AND
PREVENTING HIV INFECTION**

RECOMMENDATIONS FOR A PUBLIC HEALTH APPROACH

JUNE 2013

Uganda was among the first countries to adopt the 2013 ART Guidelines including VL for routine ART monitoring



**ADDENDUM TO
THE NATIONAL
ANTIRETROVIRAL TREATMENT
GUIDELINES**

DECEMBER 2013

However, there was no MOH-owned capacity for public sector VL testing

But, the exemplary success of the EID program was vivid!

Case for Implementing Public Sector VL Testing in Uganda

Ability to Leverage Existing EID System

- If Uganda uses DBS samples for VL, the country can leverage the same systems that have allowed EID to reach high access numbers through a consolidated, MOH-run laboratory and sample transport network

Access to Competitive Test Price

- Abbott and Roche, the two major RNA-PCR conventional platform vendors, placed machines at CPHL for public sector VL, on a reagent rental arrangement at competitive pricing

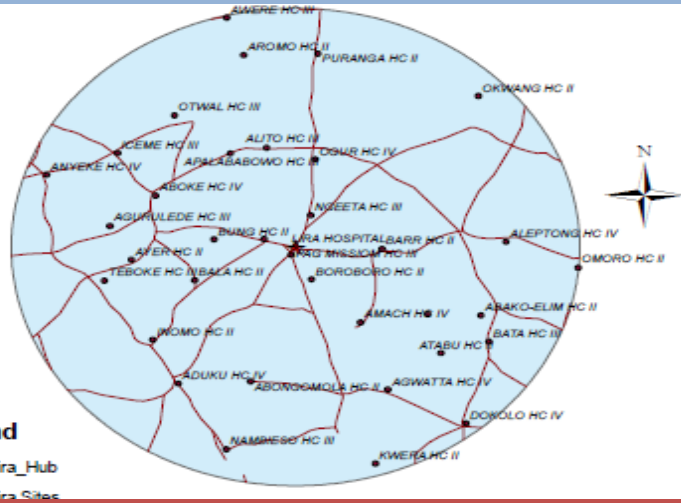
Improved Clinical Outcomes

- Uganda having one of the oldest ART programs in the world, it was high time to improve patient monitoring through VL

Based on the above, Uganda took a decision to expand VL access for all ART patients for treatment monitoring through a centralized testing model as the backbone, complemented by point of care when they become available

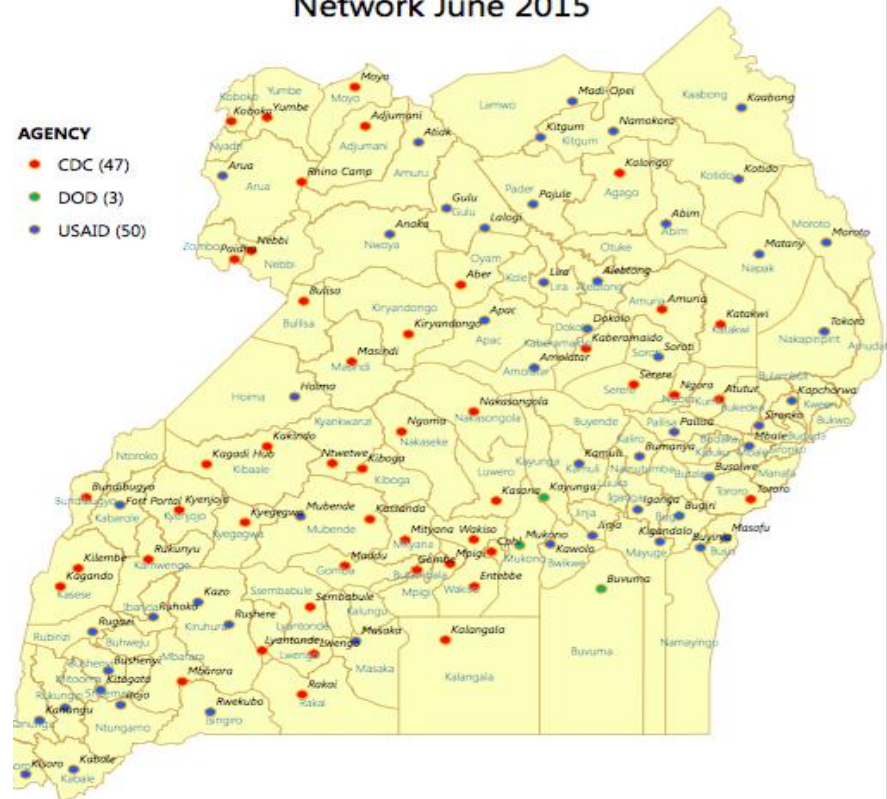
The Hub-based National Specimens and Result Transportation Network

Structure of the hub network



Map showing current Hub Distribution

National Specimen Referral and Transportation Network June 2015



The bike and rider given to each hub



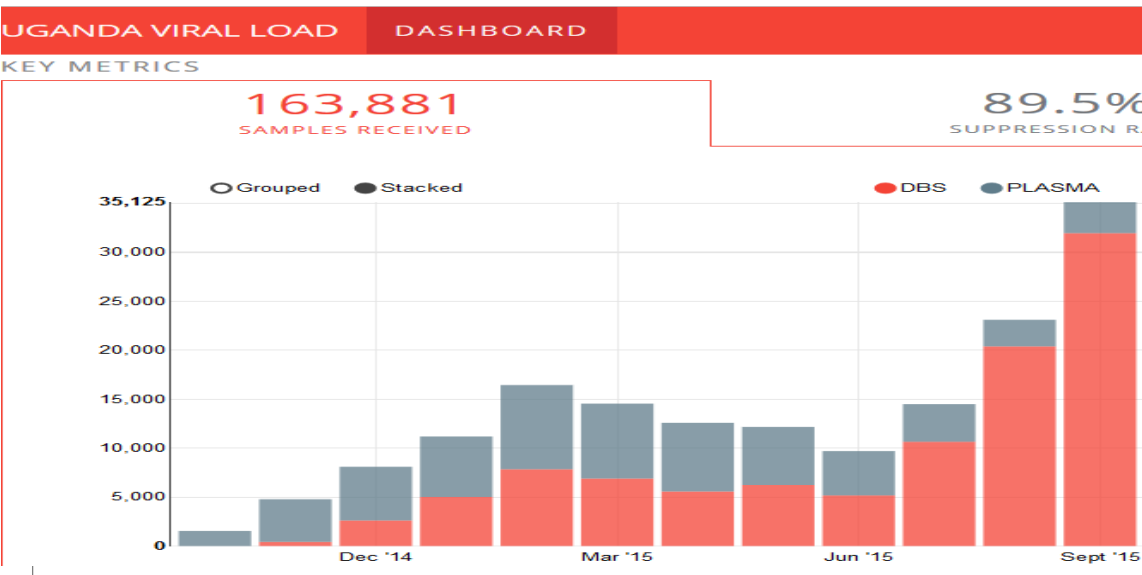
- Map of Uganda with the total 100 functional hubs, reaching over 2800 health facilities which is over 80% of national coverage.

LISM System was built to support high throughput testing at the central lab

The screenshot shows a web browser window displaying the 'Viral Load' dashboard. The browser's address bar shows the URL '192.168.0.43/dashboard/welcome/'. The page header includes the text 'MINISTRY OF HEALTH, THE REPUBLIC OF UGANDA' and a welcome message for 'sewysisaac@yahoo.co.uk'. The main content area features a navigation menu with icons and labels for 'Samples', 'Verify Samples', 'Worksheets', 'Generate Forms', 'Results', and 'Reports'. Below the navigation menu, there is an 'UPDATES' section with a yellow highlight indicating 'Samples in Database (Total): 37,098'. The interface is designed with a red and white color scheme and includes a search bar and a 'Find' button.

- Web based with capacity to support a robust industrial-like high throughput
- Logistics management, inventory and Dashboard features under development
- <http://vldash.cphluganda.org>.

Progress to date



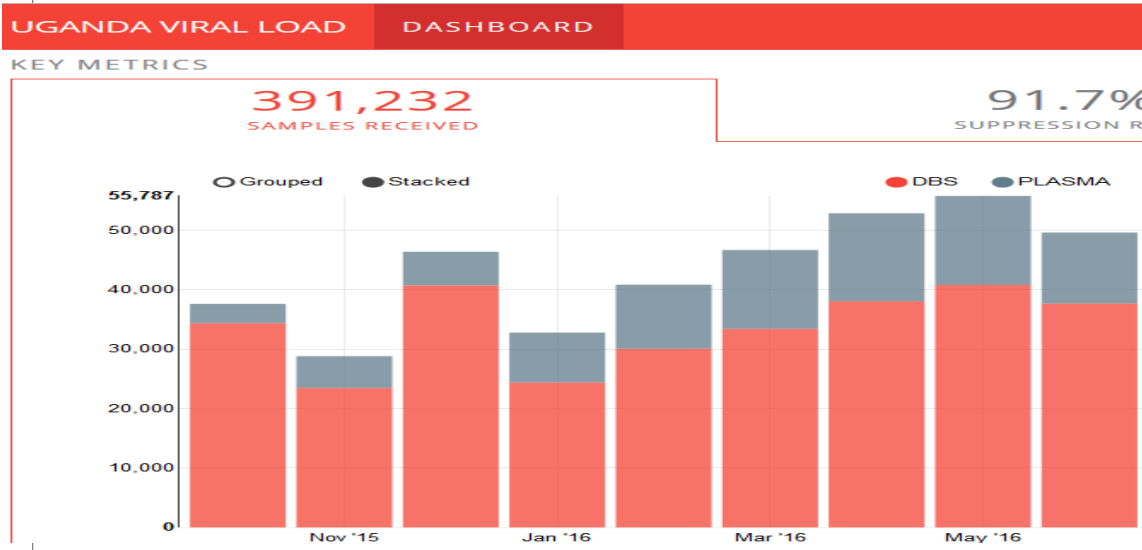
VL testing begun 2014 with a target of 200,000 tests in the 1st year (Oct'14 to Sept'15).

The program achieved 81% of that target reaching:

972 facilities

81 Districts

61 Hubs submitting samples



Yr 2 target: was 400,000 samples but was doubled to **800,000**.

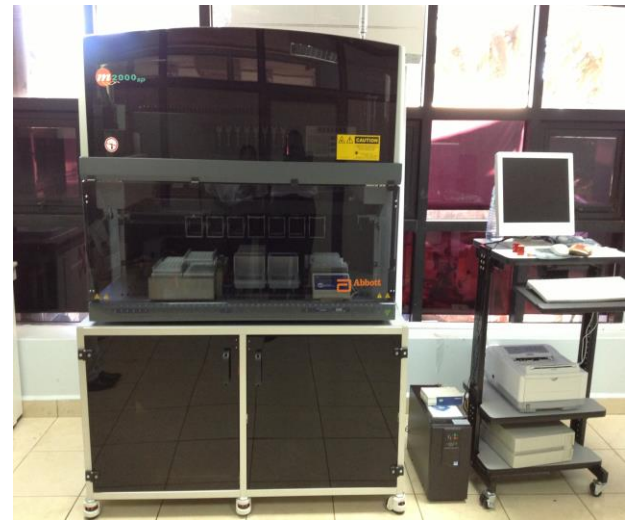
So far **391,232** samples have been received in Yr 2 (Oct 2015 to-date)

From: **1462** facilities, **112** districts
100 hubs.

Projecting to reach **~650,000** by September which is about 80%.

Yr 3 the target is **1,200,000** samples

The Laboratory Capacity at CPHL/NHLS is over 1,200,000 tests a year



6 Abbott M2000sp/M2000rt are already placed



5 Roche CAP-CTM already placed, 1 Cobas 8800 on the way

- Uganda has enjoyed a lot of support from our in country PEPFAR team especially in the area of diagnostics.
- They have just completed the construction of our permanent home the NHLS.
- A bill to make NHLS semi autonomous has just been approved by cabinet, and is currently at the floor of parliament.

A dashboard developed for routine program monitoring;

Samples received, Suppression and Rejection rates, that can be filtered by time, district, hub, and age category

UGANDA VIRAL LOAD

DASHBOARD

Data last updated at 20:02:14 on 07/07/2016

FILTERS: Aug '14 - Jun '16 reset all

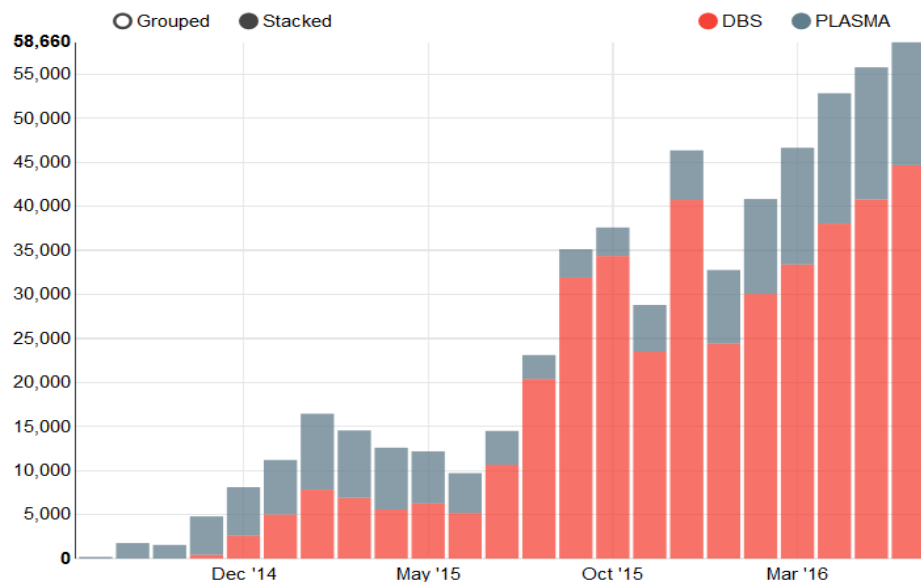
Aug '14 Jun '16 DISTRICTS HUBS AGE GROUP

KEY METRICS

566,135
SAMPLES RECEIVED

91.0%
SUPPRESSION RATE

4.9%
REJECTION RATE



Show 10 rows

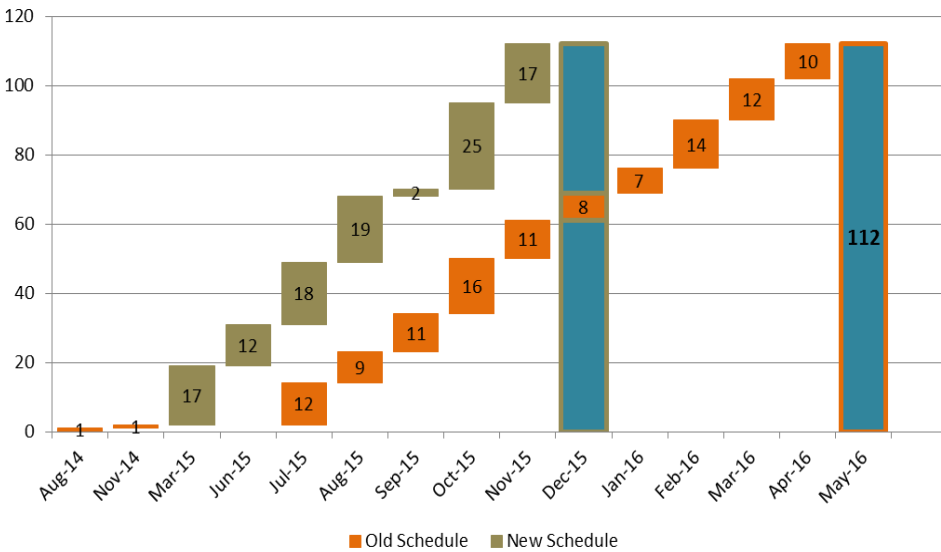
DISTRICTS FACILITIES

Search:

District	Samples Received	DBS (%)	Samples Tested
	51	74.5 %	50
Abim	497	100.0 %	470
Adjumani	898	98.2 %	858
Agago	2,981	100.0 %	2,658
Alebtong	2,223	100.0 %	2,085
Amolatar	1,678	100.0 %	1,483
Amudat	54	100.0 %	51
Amuria	982	100.0 %	922
Amuru	1,369	99.9 %	1,228
Apac	3,719	100.0 %	3,199

<http://vldash.cphluganda.org/>

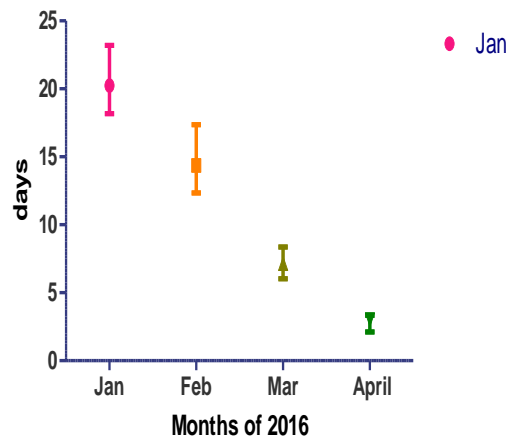
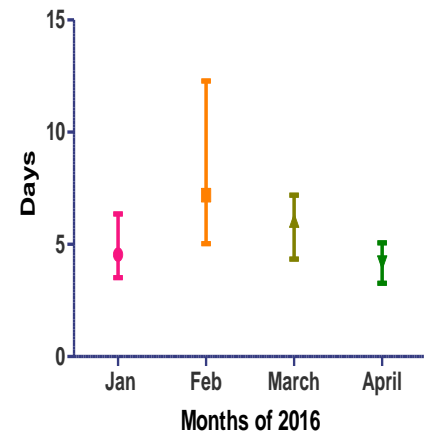
Challenges; Volume forecast and reagent planning



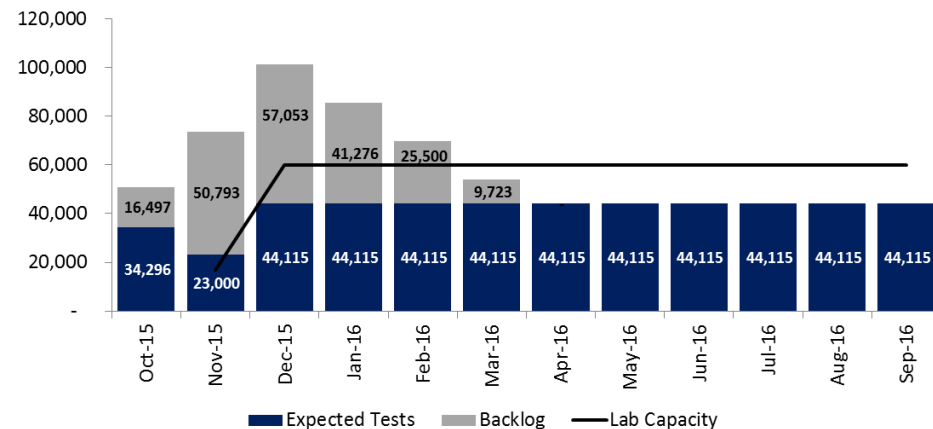
- We suffered reagent shortage in last week September to third week November
- 41,000 backlog want accumulated as a result
- Lab is operated 24hrs and engaging backup lab at Mildmay Uganda to overcome backlog by end of first week March 2017
- A logistics committee for elaborate forecasting and procurement coordination was put in place to prevent future stock out

Plasma Lab TAT

DBS Lab TAT



Backlog clearing projection



Challenges: Human Resource

- Currently volunteers contribute 2/3 of the human resource
- High rate of human resource turnover is costly and time wasting

Process	Workload per day	Annual volumes	Man power demand	Available personnel	Gap
Sample Reception	600	809000	5	0	5
Data entry	200	809000	16	4	12
Sample approval	300	809000	10	1	9
Lab testing	186	809000	17	9	8
Results Printing	2,500	809000	1	1	0
Results QC, packaging and dispatch	500	809000	6	0	6
Data Q/C			2	0	2

- However, this is being discussed with PEPFAR.
- The NHLS bill when approved will provide a more sustainable solution



Acknowledgements



THE REPUBLIC OF UGANDA
MINISTRY OF HEALTH

