Technical Area Essential Approaches: New Innovations with Viral Load (VL)

A Four-Step Overview of Laboratory African Regional Collaborative (LARC)

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Health Systems and Program Integration Team

ILB Program Review

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LARC's Background

STEP 1: Identify VL Health Systems issues needing improvement

- Improvements have been made in VL testing, yet utilization of VL tests has not been fully realized in patient management
- Are laboratory professionals and clinicians effectively functioning as a team or in silo approaches?
- To what extent is "Task-Sharing" – *process whereby mid-level healthcare professionals – (e.g., nurses, midwives, clinical officers) safely provide clinical services and procedures otherwise restricted to higher level cadres* – understood by laboratorians?
- To what extent are these mid-level professionals – the vast majority prescribing ART – fully aware of the importance of VL testing and ensuring these tests are:
  - appropriately requested; or
  - specimens appropriately collected; or that
  - VL test results are used in patient management

LARC's Operational Framework:

❑LARC's goal:

- achieve and maintain HIV VL suppression by improving the uptake of VL testing through **improved institutional capacity and inter-cadre functioning**, communication, and collaboration

❑LARC's specific objective:

- **advance the understanding and utilization of HIV laboratory diagnostics and address facility-level system-level barriers** through training in health systems techniques (e.g. , Business Process Mapping (BPM), Capability Maturity Matrix (CMM), and Continuous Quality Improvement (CQI) and **integration and dissemination of best practices** for scaling up VL

❑LARC's activity from July 2016 through August 2017:

- Engage local teams of laboratorians and nurses in six countries
- Initiate facility-based VL interventions
- Provide hands on health systems training through site visits and regionally convened "Learning Sessions"
- Measure impact

LARC projects:

- Included the original six high priority countries for Viral Load scale-up

- Emphasized “bottoms-up” approach to problem identification – versus providing “top down” solutions

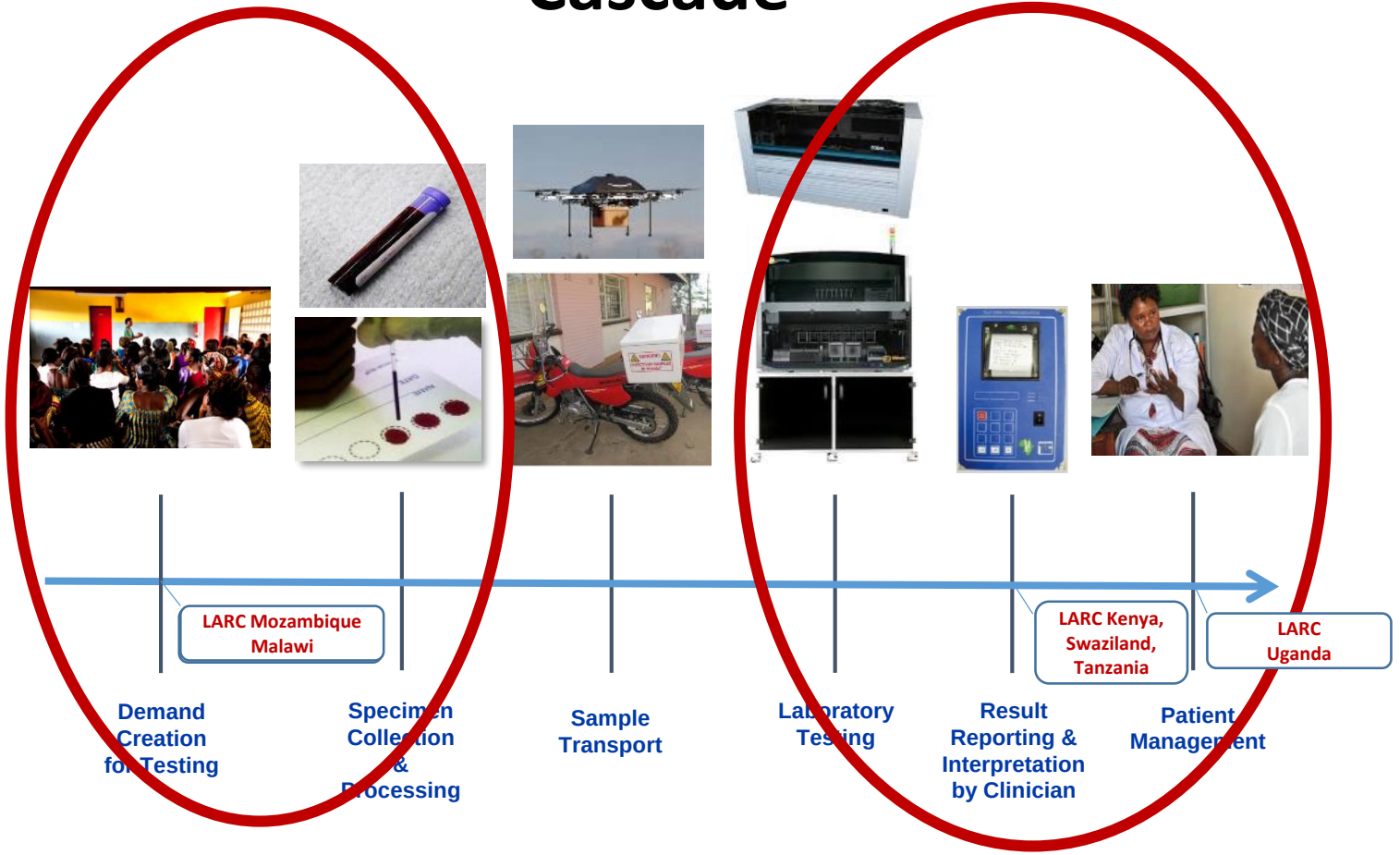
- HOP funding provided resources to project teams to meet and implement their chosen intervention

Step 2:

Introducing

Country-led VL Innovations

LARC's Targeted Areas in the Viral Load Cascade



Creating demand for VL Testing: Malawi Team

Old Process

ART Clerk	• Check In Process • Measurements (Vitals)
Clinician or ART Clerk	• Health Talk
ART Nurse	• Assessment • ARV Drugs
HIV Counselor	• Collect Specimen, if eligible • DBS

Current Process

EC or ART Clerk	• Check In Process • VLPR Form
EC	• Health Talk • Determine eligibility for VL • Escort Patient for sample collection
HDA	• Specimen Collection, if eligible • DBS
ART Nurse	• Assessment • ARV Drugs

Creating demand for VL Testing: Mozambique Team

Intervention – Patient & Provider Education

Clinicians trained	June 2016	July 2016	Sept 2016	Jan 2017
Director de hospital	1			
MCH nurses		5		
Clinicians (3) MCH nurses(5), Child at risk clinic nurses (2), Social support (2), Lab (2)			12	
Clinicos de consulta, SMI, APSS, Lab, digitadores, peer educators				45

Mozambique Peer Educators provide VL Patient Education

Key Messages

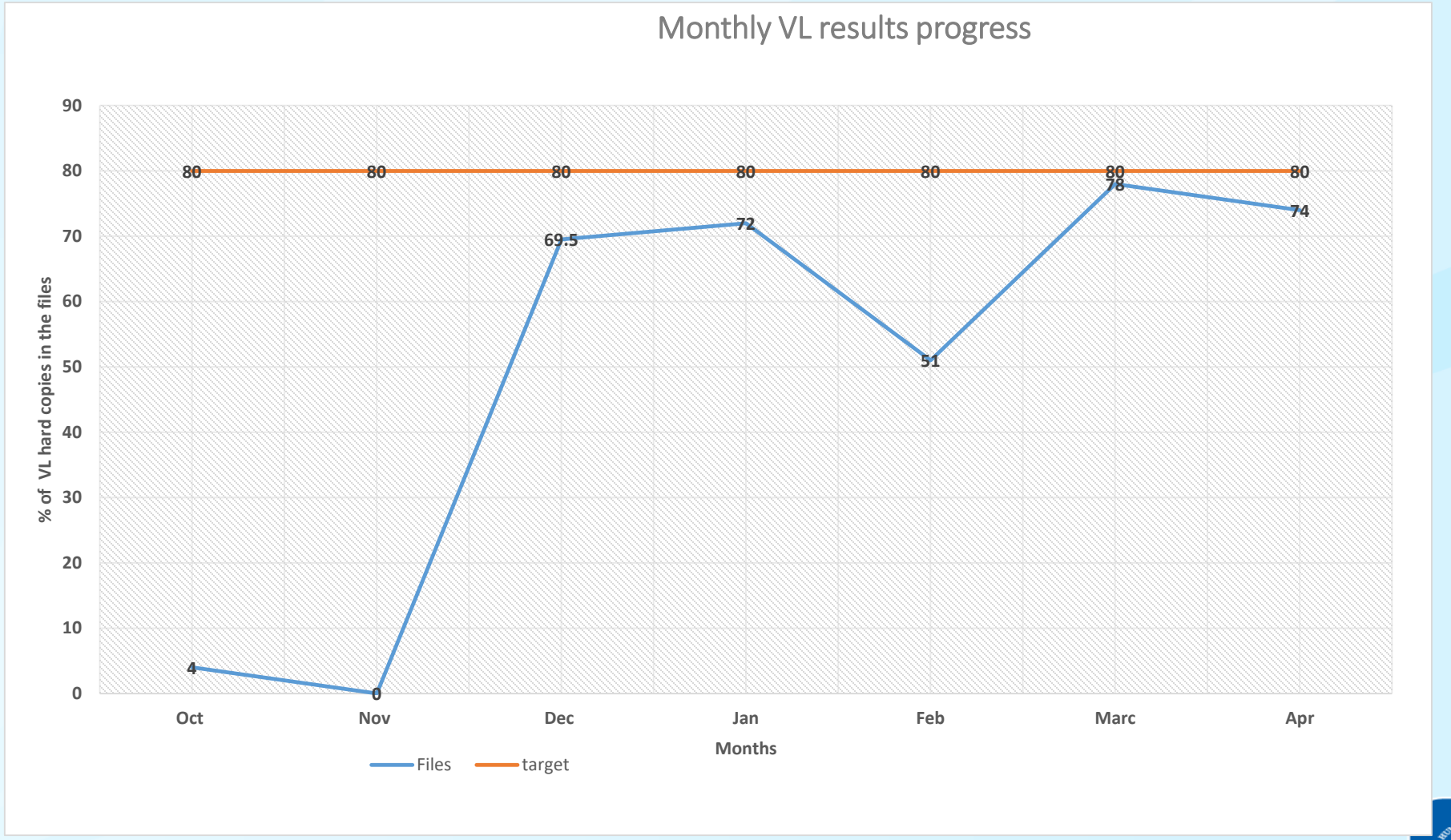
- What is a VL test?
- Who is eligible to get a VL test?
- How do you request a VL test at your next consultation?

Kenya's Project with Results Reporting & Patient Management

LARC's Kenya's Planning Process at the Homa Bay Country Referral Hospital

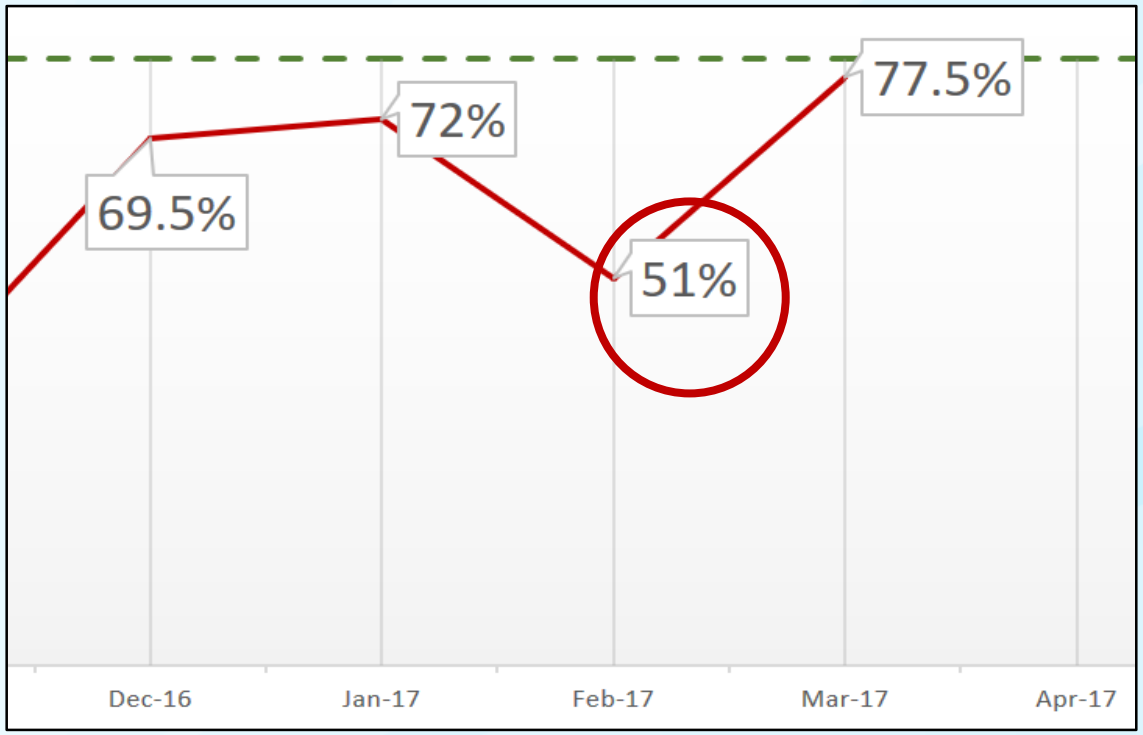
<u>Diagnosing the problem:</u>
No accountability for tracking/filing current VL test results

Tracking percentages of charts with current VL test filed



Control Plan-1

Define | Measure | Analyze | Improve | **Control**



Controlling Outcomes

Drop in VL result in Feb. 2017, due to closure of health functions resulting from nationwide medical strike

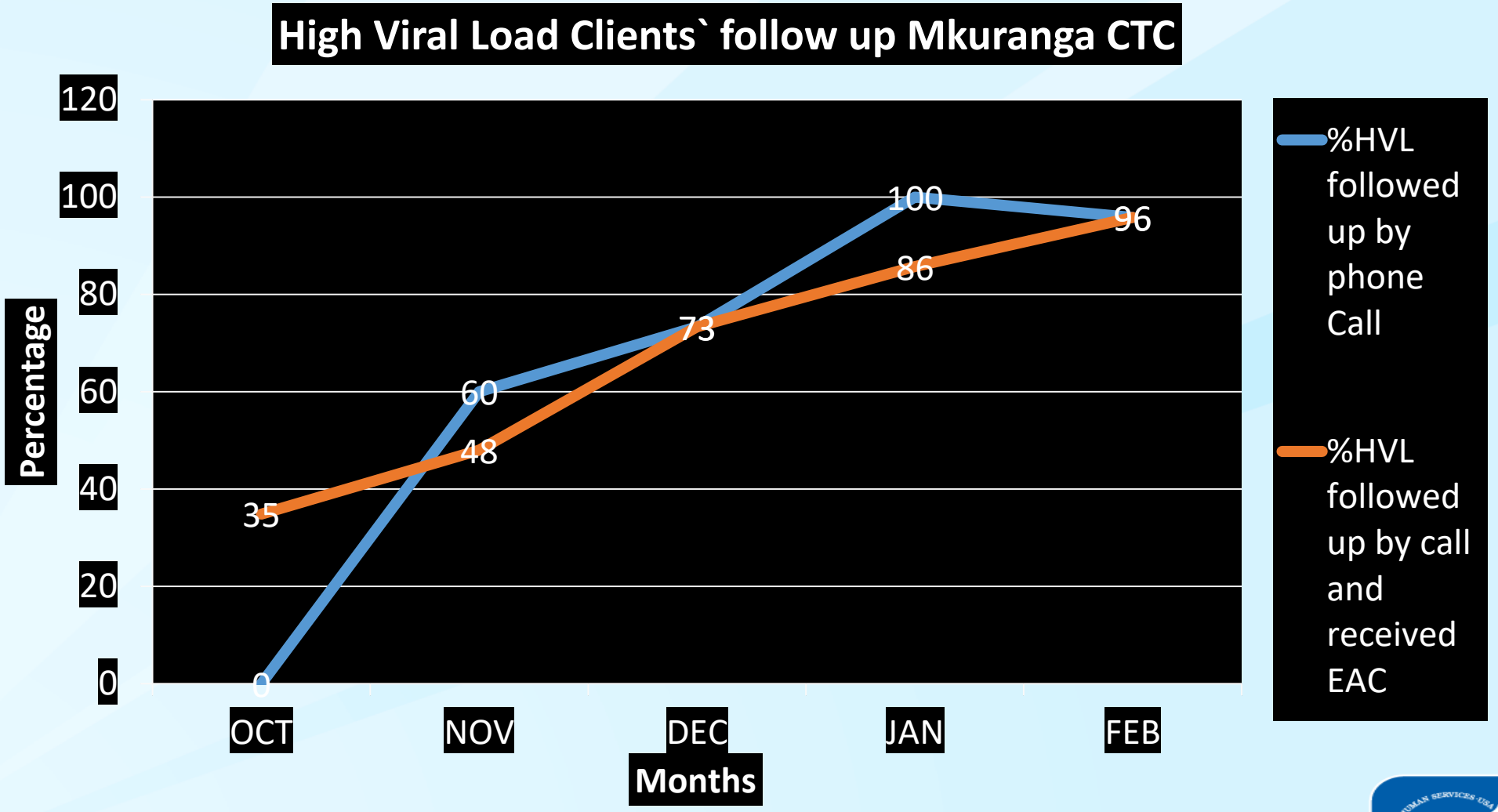
Constant monitoring and improvement is needed for maintaining quality of service

LARC Swaziland

What are we trying to accomplish?	How will we know if a change is an improvement?	What change will we make that will result in an improvement?
Overarching Goal: Improve the care & management for patients with high HIV viral load, specifically addressing the result reporting/clinician interpretation step of the viral load cascade.	**AIM Statement** Increase the percentage of high viral load patients with documented appointment and timely clinical follow-up from 12% to 80% by 30 April 2017. **Metric:** **Numerator** – # of patients who met the high VL follow-up criteria. **Denominator** – All patients with high VL.	**Your Intervention** High viral load results log with actions to be carried out within 2 days once the HVL result has been identified (**results review by clinician, calling of patient to set up appointment for adherence counseling**).

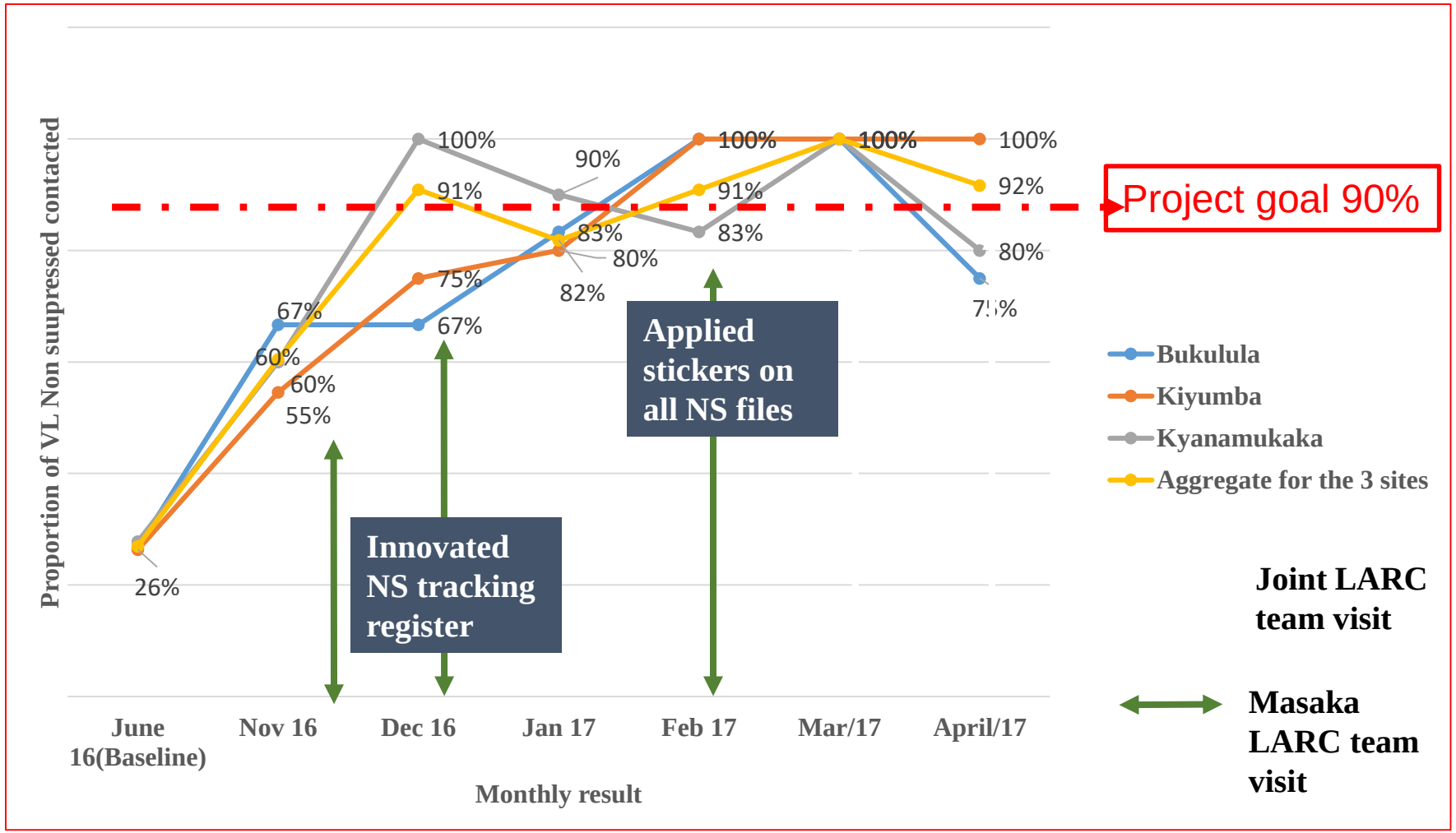
LARC Tanzania's Innovation with Results Reporting

LARC Tanzania's Intervention with Results Reporting



LARC Uganda: Results Reporting for 1 lab hub and 3 referring facilities

Proportion of VL non suppressed who are contacted within one week of VL results receipt at HF



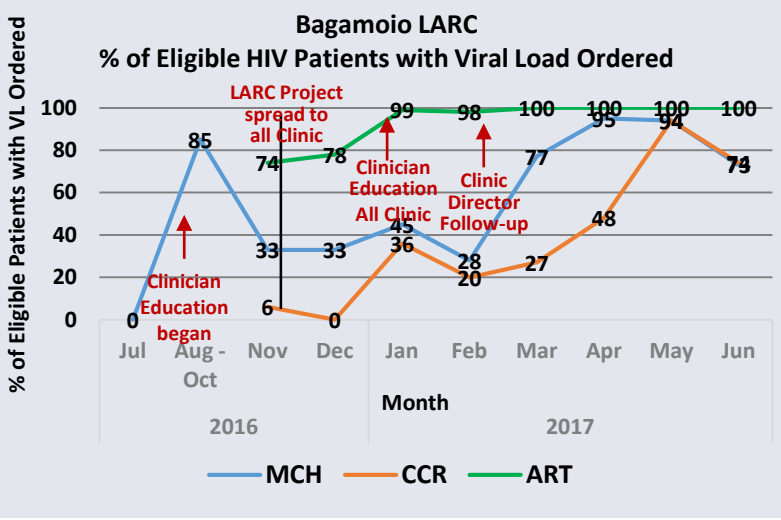
Step 3:

Measuring Impact

of Country-led Innovations

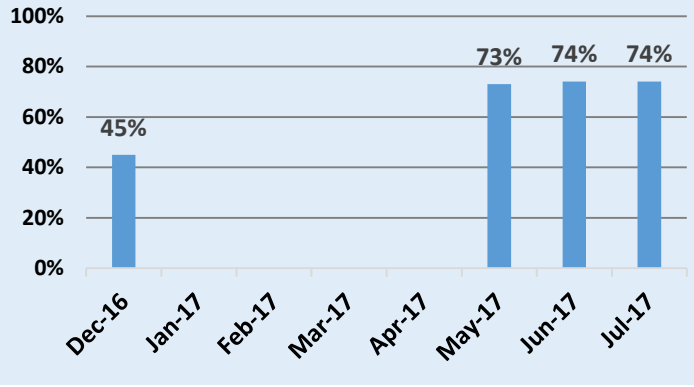
Mozambique

To increase the percentage of viral load samples collected from eligible patients from **45%** (Jul 2016) to **80%** by Aug 2017



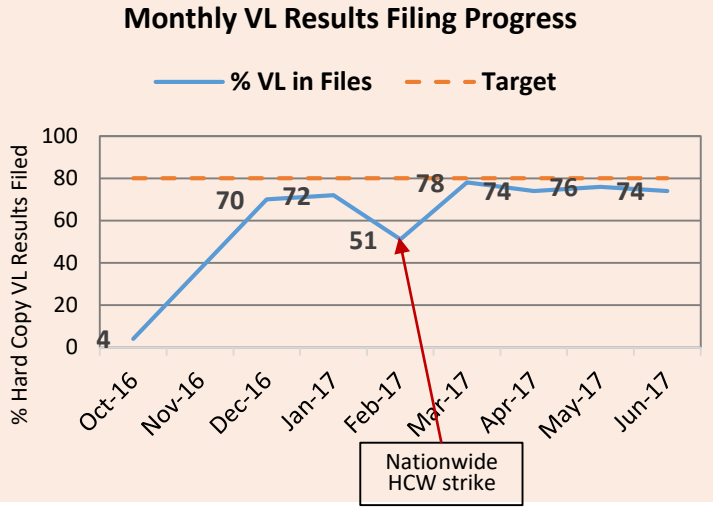
Malawi

To increase the percentage of viral load tests ordered for eligible patients from **0%** (July 2016) to **80%** by June 2017 in CPN, CCR, and ARV clinics



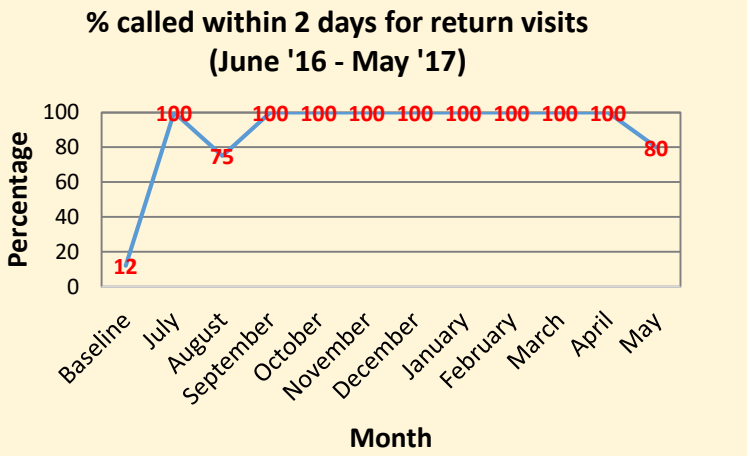
Kenya

To increase the percentage of patients with viral load results placed in their files from **4%** (October 2016) to **80%** by June 2017



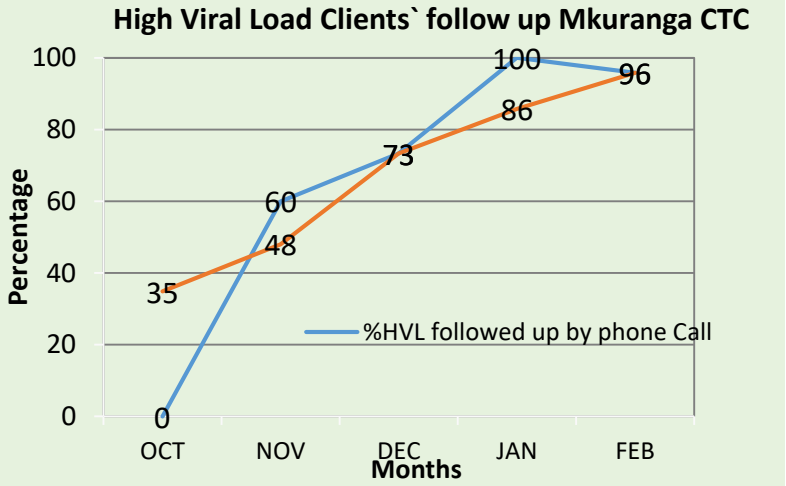
Swaziland

To increase the percentage of high viral load patients with documented timely follow-up from **12%** (average from Dec'15 to June '16) to **80%** by June 2017



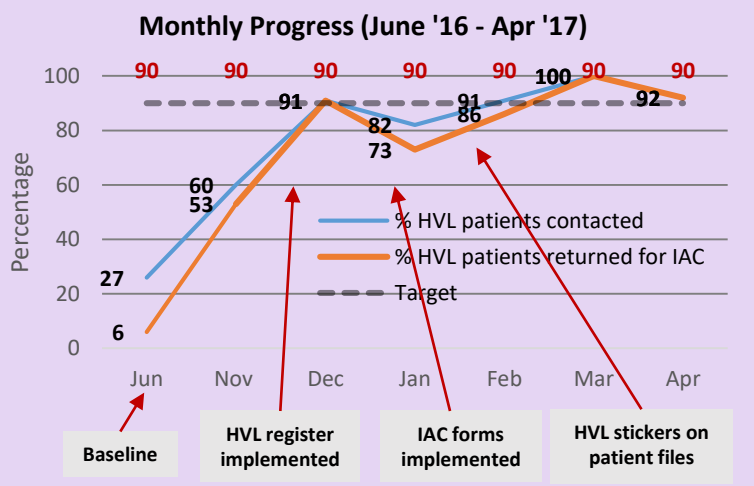
Tanzania

To increase the percentage of high VL patients with a documented return visit from **35%** (Oct 2016) to **100%** by June 2017



Uganda

To increase the percentage of high VL patients 1) contacted ≤ 1 week after results receipt from **27%** to **90%**, and 2) initiated with IAC ≤ 1 month from **6%** to **90%** between June 2016 and June 2017



Kenya: Results Reporting

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
☐ Results are not received in a timely manner at the clinic from the laboratory ☐ Results are not recorded in the client's chart in a timely manner ☐ No standard operating procedures for results reporting and documenting results in the client's chart **AUG 2016**	☐ Results are occasionally received in a timely manner by the clinic from the laboratory ☐ Results are occasionally recorded in the client's chart in a timely manner but often not returned to clients ☐ Standard operating procedures for results reporting and documenting results in the client's chart are in development	☐ Results are regularly received by the clinic in a timely manner from the laboratory ☐ Results are regularly recorded in the client's chart in a timely manner and returned to the client regularly ☐ Results reporting and chart documentation standard operating procedures are established and implemented across the organization	☐ Organization reviews routinely collected program data to measure performance in relation to standard operating procedures and national guidelines for results reporting ☐ Clinic ensures a facility-based person is accountable for timely recording of VL results in client charts and notification of clients with VL>1000 to return to clinic prior to scheduled appointment **FEB 2017**	☐ Organization uses rigorous evaluation procedures and findings to demonstrate effectiveness and improve the process for results reporting

Malawi: Demand Creation

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
☐ Clinicians unaware of access to viral load testing and have not been educated on its role in ART monitoring ☐ Community leaders/CSOs unaware of access to viral load testing and have not been educated on its role in ART monitoring ☐ Clients unaware of access to viral load testing and have not been educated on its role in ART monitoring ☐ No standard operating procedures for viral load testing and education **AUGUST/NOVEMBER**	☐ Increased awareness of VL testing in clinicians, however minimal information is shared with clients ☐ Clinicians occasionally order viral load testing for clients ☐ Community leaders/CSOs have an increased awareness of viral load testing and its role in ART monitoring ☐ Clients have an increased awareness of viral load testing and its role in ART monitoring ☐ Standard operating procedures for viral load testing and education are in development	☐ Clinicians routinely educate clients about viral load testing and its benefits ☐ Clinicians routinely order viral load testing in-line with national guidelines ☐ Community leaders/CSOs play an active role in educating their community about knowing their viral load status ☐ Clients are aware of and actively seek viral load testing ☐ Viral load testing and education standard operating procedures are established and implemented across the organization	☐ Organization reviews routinely collected program data to measure performance in relation to standard operating procedures and national guidelines for clinician use of viral load testing and education of clients ☐ All stakeholders (e.g., clinicians, client groups, community leaders, etc.) play active role in community education about VL testing and promote campaigns for all individuals to know their VL **MAY 2017**	☐ Organization uses rigorous evaluation procedures and findings to demonstrate effectiveness and improve the process of demand creation for viral load testing

Mozambique: Demand Creation for Testing

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
☐ Clinicians unaware of access to viral load testing and have not been educated on its role in ART monitoring ☐ Community leaders/CSOs unaware of access to viral load testing and have not been educated on its role in ART monitoring ☐ Clients unaware of access to viral load testing and have not been educated on its role in ART monitoring ☐ No standard operating procedures for viral load testing and education **AUGUST 2016**	☐ Increased awareness of VL testing in clinicians however minimal information is shared with clients ☐ Clinicians occasionally order viral load testing for clients ☐ Community leaders/CSOs have an increased awareness of viral load testing and its role in ART monitoring ☐ Clients have an increased awareness of viral load testing and its role in ART monitoring ☐ Standard operating procedures for viral load testing and education are in development **NOVEMBER 2016**	☐ Clinicians routinely educate clients about viral load testing and its benefits ☐ Clinicians routinely order viral load testing in-line with national guidelines ☐ Community leaders/CSOs play an active role in educating their community about knowing their viral load status ☐ Clients are aware of and actively seek viral load testing ☐ Viral load testing and education standard operating procedures are established and implemented across the organization **MAY 2017**	☐ Organization reviews routinely collected program data to measure performance in relation to standard operating procedures and national guidelines for clinician use of viral load testing and education of clients ☐ All stakeholders (e.g., clinicians, client groups, community leaders, etc.) play active role in community education about VL testing and promote campaigns for all individuals to know their VL	☐ Organization uses rigorous evaluation procedures and findings to demonstrate effectiveness and improve the process of demand creation for viral load testing

Swaziland: Results Interpretation/Clinic Management

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
☐ Viral load results are difficult to read and interpret and requires laboratory assistance ☐ Clinicians are not properly trained to interpret viral load results ☐ Clinicians are uncomfortable integrating viral load results into ART care ☐ Clients do not understand their viral load results ☐ Clinicians have no backup person to call to discuss difficult cases or clients who require 2nd line treatment ☐ No standard operating procedures for result interpretation and client management	☐ Viral load results are occasionally readable and interpretable and requires minimal laboratory assistance ☐ Increased awareness of result interpretation by clinicians ☐ Few clinicians are comfortable integrating viral load results into ART care ☐ Clients have a limited understanding of their viral load results ☐ Intermittent availability of consultation for 2nd line treatment ☐ Standard operating procedures for result interpretation and client management are in development **AUGUST 2016**	☐ Viral load results are consistently readable and interpretable by clinicians ☐ Clinicians are adequately trained in viral load result interpretation ☐ Clinicians regularly discuss VL results with clients ☐ Clients understand their viral load results and can repeat their understanding back to the clinician ☐ Standardized system in which all providers have a designated POC/referral system in place to consult for management of VL results and switch to 2nd line ☐ Result interpretation and client management standard operating procedures are established and implemented across the organization **NOVEMBER 2016**	☐ Organization reviews routinely collected program data to measure performance in relation to standard operating procedures and national guidelines for client management ☐ All stakeholders (e.g., clinicians, personnel, clients, etc.) play active role in client management and their viral load ☐ Clinic has ability to identify missed opportunities for ensuring VL results are integrated with client management **MAY 2017**	☐ Organization uses rigorous evaluation procedures and findings to demonstrate effectiveness and improve the process of client management

Tanzania: Results Reporting

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
☐ Results are not received in a timely manner at the clinic from the laboratory ☐ Results are not recorded in the client's chart in a timely manner ☐ No standard operating procedures for results reporting and documenting results in the client's chart **AUGUST 2016**	☐ Results are occasionally received in a timely manner by the clinic from the laboratory ☐ Results are occasionally recorded in the client's chart in a timely manner but often not returned to clients ☐ Standard operating procedures for results reporting and documenting results in the client's chart are in development **NOVEMBER 2016**	☐ Results are regularly received by the clinic in a timely manner from the laboratory ☐ Results are regularly recorded in the client's chart in a timely manner and returned to the client regularly ☐ Results reporting and chart documentation standard operating procedures are established and implemented across the organization **NOVEMBER 2016**	☐ Organization reviews routinely collected program data to measure performance in relation to standard operating procedures and national guidelines for results reporting ☐ Clinic ensures a facility-based person is accountable for timely recording of VL results in client charts and notification of clients with VL>1000 to return to clinic prior to scheduled appointment **NOVEMBER 2017**	☐ Organization uses rigorous evaluation procedures and findings to demonstrate effectiveness and improve the process for results reporting

Uganda: Results Interpretation & Client Management

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
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STEP 4:

Adapting Innovations to Scale and Diminished Budget

Plans for LARC 2.0

- Develop a LARC curriculum that introduces key Health Systems approaches
- Launch the LARC curriculum with national hands-on training in two countries committed to VL scale-up activity
- Disseminate curriculum using distance learning approaches for remaining countries

Quality Improvement Methodologies

OVERARCHING	DEFINE	MEASURE	ANALYZE	IMPROVE	CONTROL
Problem Solving Project Management: • Project File • Learning Boards • Meeting Facilitation • Action Plan • Communication Plan Change Management Teams Lean: • 5S • Physical Layout • Visual Management Value Stream Mapping Six Sigma	Stakeholder Identification/ Analysis **Process Mapping** SIPOC Project Outline (Charter) • Problem Statement (15 Words) • Aim Statement Voice of the Customer (VOC) Critical to Quality Elevator Speech	**Metric Use for Improvement** Measurement Selection Data Collection Plan Data Collection Tools - Check Sheets Data Display – Histograms / Run Charts	Root Cause Analysis (RCA) 5 Whys Cause & Effect Diagram (Fishbone) Pareto Diagram Spaghetti Diagram Run Charts/ Control Charts	Brainstorming Affinity Diagram Impact-Effort Grid **Plan-Do-Check-Act (PDCA)** Standard Work Future State Map Failure Modes and Effects Analysis (FMEA)	Project Owner Transfer Control Plan Result Communication: • Final Report • Storyboard • Presentation Celebration of Success

KEY: Master; Use Skillfully; Acquire Familiarity

LARC Champions

Talent wins games, but teamwork and intelligence wins championships

- Michael Jordan