

Using Informatics Tools for Viral Load scale-up

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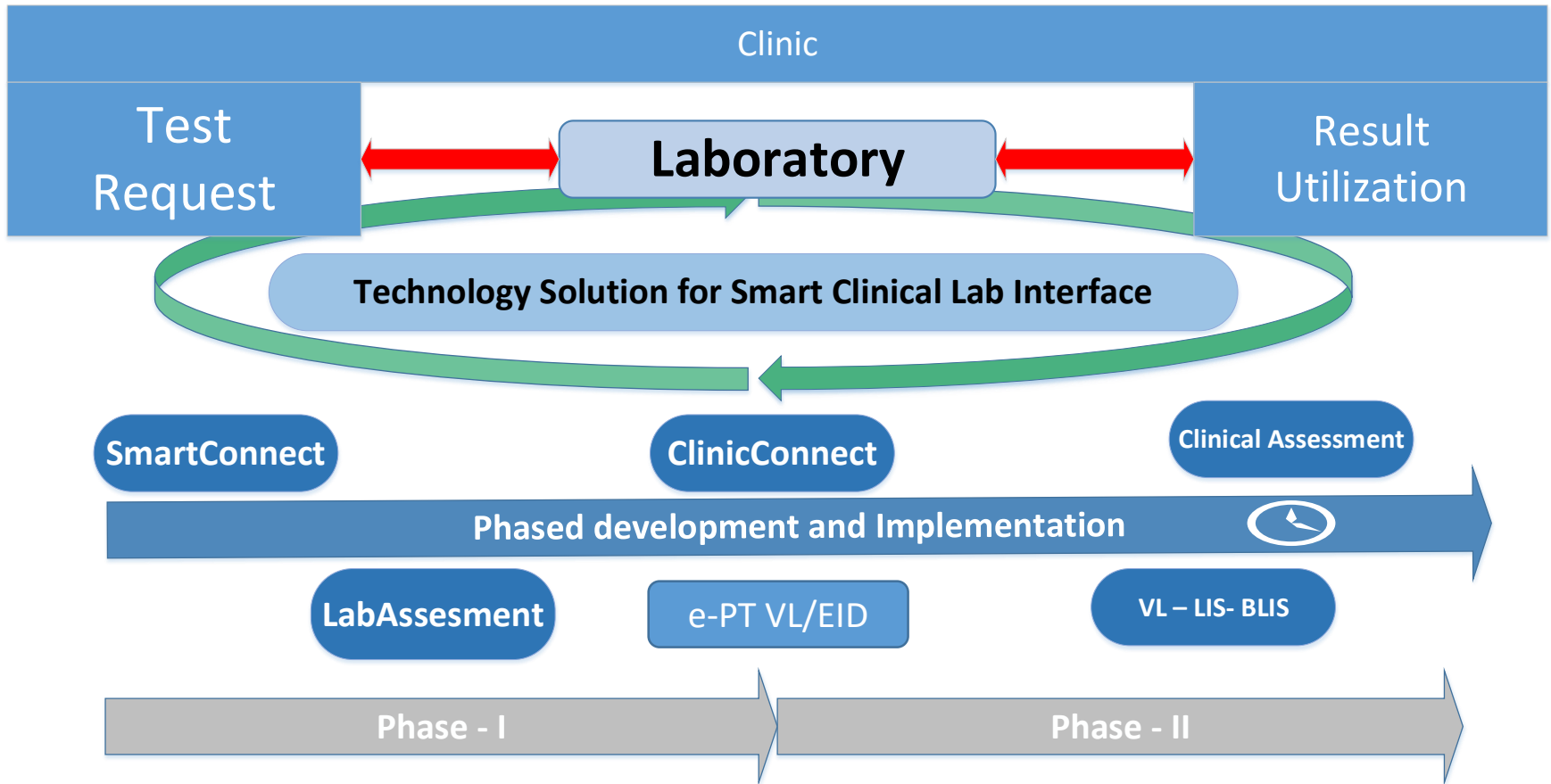
VL Scale-up and Testing Volume

- Rapid VL Scale-up

Kenya 2017 - 1,220,000 will be expected on treatment

- Managing these data on paper base system
- Managing ART patient on paper based system for next 30 years

Improving Lab-Clinical Interface – Last 90



Under development

SmartConnect Connecting Lab, Clinic, and Program Manager



<http://www.vlsmartconnect.com/>

Answering questions such as:

- Are there particular sites which have particularly poor rates of virologic suppression?
- Do virologic suppression rates vary by regimen?
- As a measure of quality of viral load services, what percent of samples collected are rejected due to improper or insufficient collection? What percent of samples collected are rejected due to incomplete/incorrectly filled out requisition forms?
- What percent of pregnant or breastfeeding women on ART are virologically suppressed?
- Are there sample backlogs at a given VL test site? Are there any reagent shortages in a given VL test site?
- Are there differences in VL suppression rates between plasma and DBS samples?
- Are there any delays on specific sites/routes during sample transport?
- Are there any specific causes of sample rejections at VL labs?
- Are there large numbers of tests being re-ordered due to rejected samples?

Under
Testing

PT Program for VL/EID

- Web based data management tool for VL/EID PT program.
- Currently testing for ILB VL/EID process.
- <https://ept.vlsmartconnect.com/>

The screenshot displays the e-PT web interface. At the top, there are navigation links for "Request for PT Enrollment" and "Participant Log". The main header features the "e-PT" logo and the text "Test Instance For Viral Load And Early Infant Diagnosis PT Schemes". Below this, a blue banner contains the title "Viral Load DTS PT Program" and a detailed diagram of the specimen collection process. The diagram shows five DTS specimens and one vial of PBS. The instructions are: "Open one tube at a time, add 1.1 mL of PBS, Cap tube, vortex 10 sec." followed by "Perform testing immediately or store 2-8°C for 24 hrs or -15°C or colder for up to one week". An image of a laboratory instrument is shown at the bottom of the diagram.

PT Request for PT Enrollment Participant Log

e-PT
Test Instance For Viral Load And Early Infant Diagnosis PT Schemes

Viral Load DTS PT Program

5 DTS specimens One vial of PBS

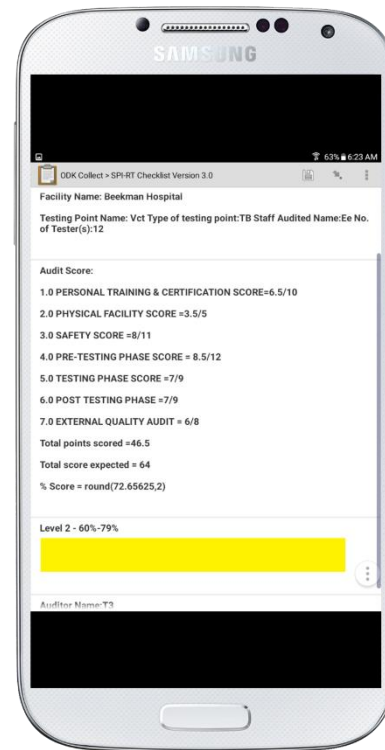
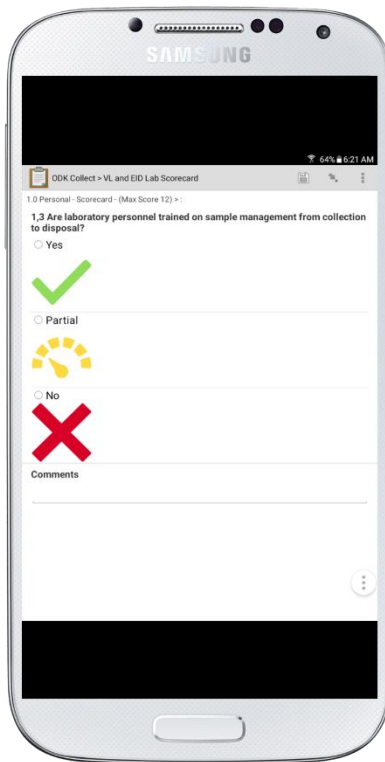
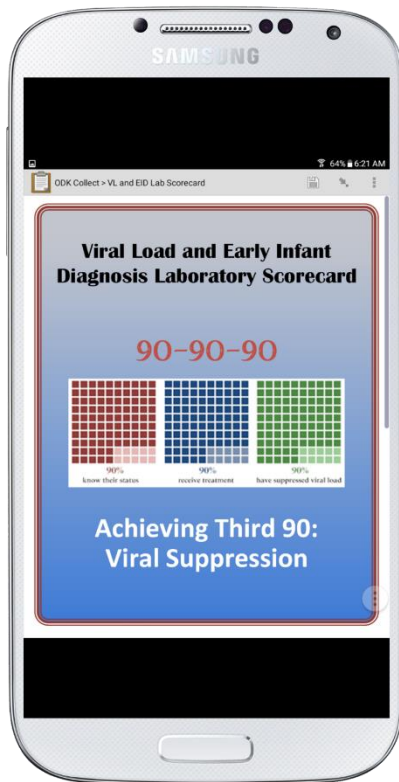
Open one tube at a time, add 1.1 mL of PBS, Cap tube, vortex 10 sec.

Perform testing immediately
or store 2-8°C for 24 hrs or -15°C or
colder for up to one week

Under
Implementation

VL/EID Lab Scorecard Continuous Quality Improvement

- Using Tablet to assess Laboratory to support VL & EID



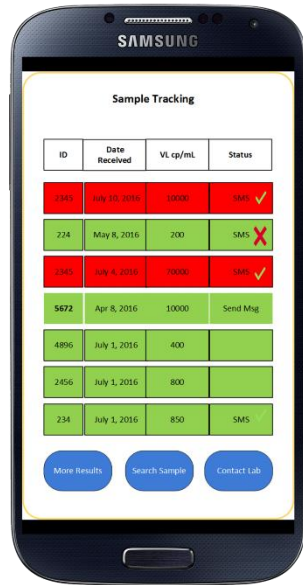
VL/EID Score Card

- Tested in Cameroon
- Currently testing check list in Tanzania in three VL Labs.
- Update checklist based on feedback and modify tablet checklist
- Tablet checklist will be available for use by end of this month

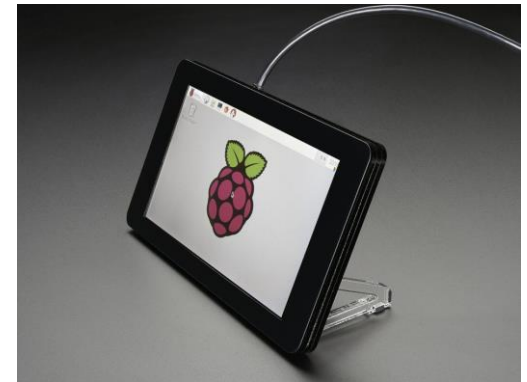
ClinicConnect Reaching Patients

Design Phase

Using Mobile Phones



Using Raspberry pi Computer costing \$35



Under
Testing

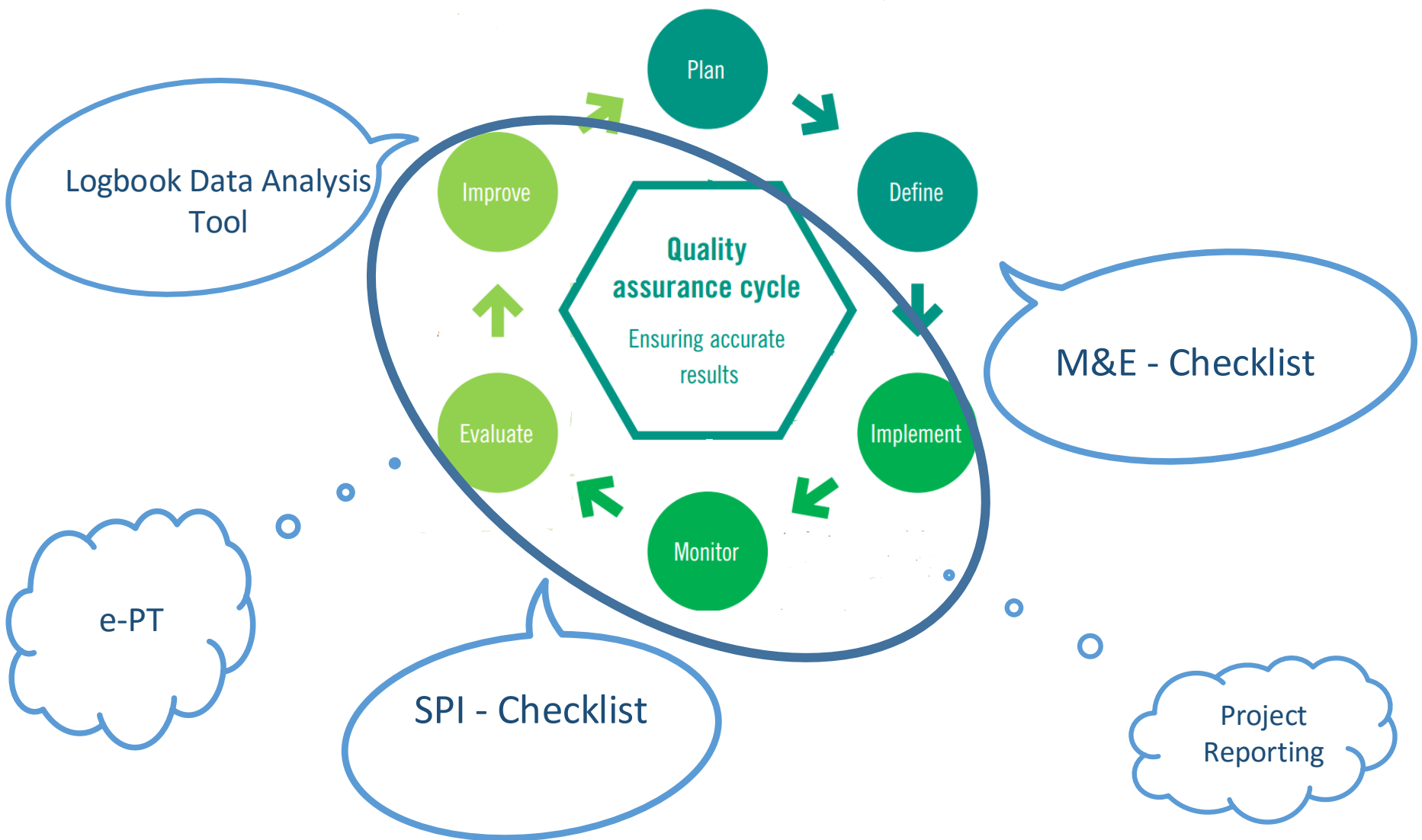
Affordable LIS for VL

- Implement simplified sample management system for VL Laboratory
- Enhance BLIS (Basic Laboratory Information System) to support VL testing
- Instrument Automation and linking BLIS with EMR for result reporting
- Creating interface with SmartConnect and ClinicConnect for lab clinic interface.

Tools for Clinical Assessment

- Develop tools to support clinical assessment for VL Scale up
- Develop Dashboard for analysis of assessment and assist in corrective action
- Provide programmatic support to identify bottleneck in viral suppression

Other e-Tools for Laboratory - RTQII

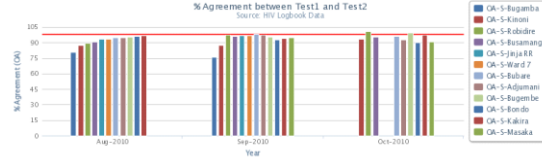
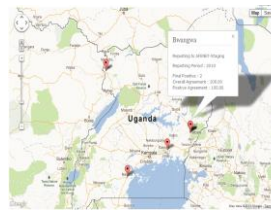


Completing Quality Cycle – First 90

Implemented

- Cameroon
- Malawi
- Tanzania
- Zambia
- Ethiopia ?
- Kenya
- Uganda
- Jamaica
- South Africa
- Cambodia
- Nigeria

Country	Year	Lab	Testing Method	Ref. Lab	Agreement %	Agreement Range	Agreement Min	Agreement Max
Cameroon	2010	Bamenda	UPT	HIV-1	100	100	100	100
					100	100	100	100
					100	100	100	100
					100	100	100	100
Cameroon	2011	Bamenda	UPT	HIV-1	100	100	100	100
					100	100	100	100
					100	100	100	100
					100	100	100	100
Cameroon	2012	Bamenda	UPT	HIV-1	100	100	100	100
					100	100	100	100
					100	100	100	100
					100	100	100	100



HIV Rapid Test Quality Improvement Initiative
System to report RTQII indicator



RTQII - Indicator Reporting

Between 2014 and 2012, over 120 million HIV-1 tests were provided with PEPFAR support using HIV rapid tests (RT). Working towards the elimination of new HIV infections under PEPFAR's *Combating HIV Infection Strategy*, will require increasing access to and quality of HIV-1 testing and implementing efforts to ensure the accuracy of HIV testing in support of these efforts. The Laboratory, HIV and PACT Teams collectively proposed an HIV Rapid Testing Quality Improvement Initiative (RTQII), which has been approved by Ambassador Healy. The RTQII aims to ensure the quality of HIV-1 rapid testing and expand upon current country HIV-1 rapid testing quality improvement work.

The RTQII is comprised of the following key action areas:

ODK Collect > Fill Blank Form

Finished scanning. All forms loaded.

RTQII Lab-Site Assessment

Version: 1
Added on Sun, Aug 17, 2014 at 13:12

SPI – POCT Checklist

Version: 1
Added on Sun, Aug 17, 2014 at 13:12

ODK Collect > RTQII...

Site background information

3.3 Proficiency Testing and QC using DTS > 3.3.1 feedback of PT program provided by the reference laboratory or PT provider?

Does not exist
 Initiated
 Being implemented
 Completed
 Comments

3.1.2 Are there QA logbooks and other QA measures (i.e. quality control, proficiency testing, etc.) in place for rapid testing?

Yes
 Partial
 No

3.2 Are there QA logbooks and other QA measures (i.e. quality control, proficiency testing, etc.) in place for rapid testing?

Alere Determine™ HIV-1/2
 Uni-Gold™ HIV
 Other

SPI-POCT

Register as a PT Participant | Participant Login

- Using plastic pipette, add 7 drops of buffer to each tube
- Tap the tubes to mix well
- Leave tubes standing upright at room temperature overnight.
- The next day, tap tubes, mix and test according to national algorithm
- Record the results on the results submission form or ePT website

WELCOME TO [ePT] PROGRAM!

PUBLICATIONS
 Handbook for improving HIV labwork and



