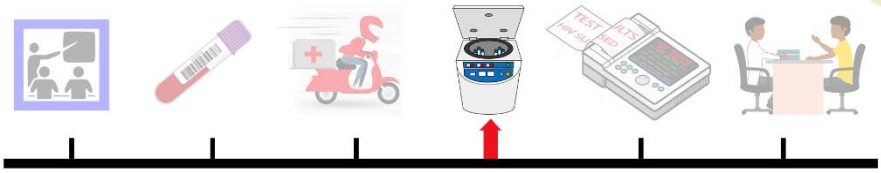
LabCoP QUARTERLY

African Society for Laboratory Medicine
May 2018
Volume 1, Issue 1



The Laboratory Systems Strengthening Community of Practice (LabCoP) project is a new initiative supporting knowledge 'co-creation' and exchange to accelerate the scale up of viral load testing for improved patient management. LabCoP is funded by the Bill & Melinda Gates Foundation and convened by the African Society for Laboratory Medicine (ASLM). It receives scientific and technical support from ICAP at Columbia University and Project ECHO™ (Extension for Community Healthcare Outcomes), at the University of New Mexico. LabCoP was launched in October 2017 in Addis Ababa, during the regional viral load meeting organized by the United States Centers for Disease Control and Prevention (CDC) under the President's Emergency Program for AIDS Relief (PEPFAR). It seeks membership from African countries and promotes multidisciplinary discussion to identify best practices along the viral load testing cascade from demand creation to result utilization.

To date, 11 countries have joined LabCoP including the Democratic Republic of Congo, Ethiopia, Kenya, Malawi, Sierra Leone, South Africa, South Sudan, Tanzania, Uganda, Zambia and Zimbabwe. Eight countries have established a multidisciplinary team composed of 8 to 10 persons from clinical services, laboratories, civil society (e.g., individuals with HIV, associations of people living with HIV, community leaders) and implementing partners. Country teams come together monthly during virtual Zoom sessions based on the ECHO model™, to share best practices (tools, algorithms, guidelines, strategies and policies) needed to scale up viral load testing and to strengthen the underlying laboratory systems.

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The virtual LabCoP sessions feature a brief didactic presentation by a subject matter expert, followed by 'case-based learning' through online videoconferencing discussions. The first LabCoP session took place in January 2018, and sessions have convened every month thereafter, gathering 168 experts. The first themes discussed included the implementation of sample referral systems for centralized viral load testing and the optimisation of the laboratory network for maximal viral load testing.

It is anticipated that better ideas identified through LabCoP sessions will promote the adoption of best practices and accelerate the scale up of HIV viral load testing for improved clinical management. In addition, LabCoP will organize face-to-face meetings and individual country follow up to further facilitate the adoption of best practices.

April LabCoP ECHO Session Summary

Topic: Laboratory capacity utilization for optimal viral load testing coverage – country experiences

Presenters:
Nadine Abiola – The Democratic Republic of Congo
Nancy Bowen – Kenya
Grace Kushemererwa – Uganda
Nora Vere – Zimbabwe
Kabuje Anyelwisye – Tanzania

Moderator: Dr Legese A. Mekuria, ASLM
Subject Matter Expert (SME): Isaac Ssewanyana, Ministry of Health Uganda

The Democratic Republic of Congo (DRC), Kenya, Uganda and Zimbabwe presented their current viral load testing equipment capacity, based on manufacturers' recommendations for eight-hour and 24-hour shifts of their respective viral load testing platforms. Countries calculated their percentage of capacity utilization for both eight-hour and 24-hour shifts, based on test volumes for the last year.

The data presented showed that massive testing capacity is available in these countries and, in most cases, is grossly underutilized. In Uganda, testing capacity is outmatched at an eight-hour shift (153%). Consequently, the country uses the equipment at a 24-hour capacity at 60.9%. The rest of the countries use their laboratory capacity at eight-hour shifts with Zimbabwe tapping out at 70%, followed by Kenya at 56.3%, Tanzania at 33.2%, and DRC at only 8.9%.

The optimized testing system of Uganda is based on a super-centralized laboratory that contains all the equipment for the country's viral load testing capacity. In contrast, the other countries organize viral load testing through several smaller laboratories working under different administrations, managements and regulations. Reportedly, this fragmented organization complicates communications between testing facilities and the overall program coordination.

Common challenges identified by country teams included:

- Lack of trained workforce in all aspects of laboratory service delivery
- Suboptimal use of equipment related to low test demand; poor equipment maintenance and stock out of reagents and commodities
- Poor test result utilization related to long turn-around times for test results, lack of integrated laboratory information management system with delayed result returns
- Overall inefficiencies caused by the disconnect between increasing pressure and demand for more viral load testing laboratories, over-reliance on partner support with minimal government investment, and poor coordination among different testing laboratories

Take home messages:

- Creating a robust sample-referral network that connects laboratories with health facilities is an effective way to optimize existing viral load testing capacity. This option should be prioritized before setting up more laboratories or placing more equipment.
- Establishing a centralized coordination framework under the authority of the Ministry of Health or national public health laboratories enables joint logistics planning, data sharing, equipment maintenance planning and back up. This intervention has the potential to improve the functionality of laboratory networks for viral load testing.
- According to strategies formulated by multidisciplinary teams of laboratory and clinical experts, laboratory testing capacity and contributions to patient care can be further optimized through increased test demand and adequate utilization of test results.

Please click the YouTube link below to access the LabCoP ECHO session held in April 2018.
https://www.youtube.com/watch?v=EHR3mer57u4&feature=youtu.be

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LabCoP at WHO Meetings

Mr Charles Kiyaga (ASLM) recently participated in two important WHO meetings concerning the scale up of viral load testing.

The first was a World Health Organization (WHO) Regional Office for Africa workshop on Laboratory Systems and the Fast Track Targets for West and Central African countries, which took place 24-27 April 2018 in Saly, Senegal. Twenty-six countries attended the meeting and shared updates about on their HIV early infant diagnosis and viral load programs. The presentations highlighted many laboratory system challenges preventing the achievement of the 90-90-90 goals in these particular countries that benefit less from donor funding. Sierra Leone, which had been provided technical assistance by ASLM through Global Fund funding, reported better viral load scale-up outcomes.

The utility of the LabCoP was largely acknowledged by WHO, country representatives and stakeholders, as a way to facilitate the identification and dissemination of best practices supporting the scale up of viral load testing. Setting up a French-speaking ECHO platform for LabCoP to reach out to most of the countries in West and Central Africa was identified as an urgent priority.

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The second meeting was a WHO technical meeting in Geneva, Switzerland, on HIV Testing Prophylaxis and Treatment in infants, which took place 30 April-1 May 2018. The meeting discussed several changes to early infant diagnosis guidelines. The Global Fund recognized the key role ASLM can play in providing technical assistance to countries such as Northern Sudan and Liberia, in support of their laboratory systems to scale up viral load testing.

EXPERT ADVICE: Nancy Bowen

Nancy Bowen, head of Kenya's National HIV Reference Laboratory, sat down with ASLM to share some of Kenya's viral load successes and best practices.

ASLM: Tell us about Kenya's viral load testing history.

Nancy Bowen: Viral load testing started in 2008 with one research laboratory. By 2012 more labs supported viral load testing and the new problem of sample referral arose. We only had 4 testing labs in the country, and the shift from targeted to routine testing in 2013 further overwhelmed the testing network, exposing the country's lack of capacity – turn-around time increased to more than 60 days. The country's Viral Load Technical Working Group had to ask, 'What can we do to meet these demands? Are there alternative sample types we can use instead of plasma to improve access in hard to reach facilities that have no capacity to separate plasma?'. At that time, plasma was the only sample type in use. Though plasma is the gold standard sample type, use is limited to sites with the capacity to separate and store plasma, in urban areas. With new evidence that dried blood spot (DBS) samples could be used in settings such as ours, we apportioned some labs in hard-to-reach sites and remote regions to use plasma, and others to use both plasma and DBS. Currently, 10 testing laboratories are distributed across the country, with a total of 38 testing platforms with testing capacity of 1 441 152 viral load tests annually, centrally distributed to serve all the country by sample referral networks. This has led to meeting the demand with an improved average turn-around time of 10 working days.

ASLM: What are some of the best practices Kenya implements for viral load testing?

Nancy Bowen: The first is remote logging of patient details at their respective health facilities, geared towards reducing turn-around time and improving data quality. We have also introduced "Viral Load Champions", at the national and facility level. They monitor and coordinate testing at their respective level. Through the Viral Load Technical Working Group, we monitor testing laboratory quality indicators through quarterly meetings, where each laboratory presents data on their turn-around times, rejection rates, equipment downtime, reagents and commodity levels, and challenges. In addition, the 10 testing laboratories find a platform to share their best practices and innovations and further strengthen the laboratory-clinic interface within the viral load program. Bi-annually, we perform viral load data quality assurance and have adopted innovative technologies such as SMS notification, online result query and email to hasten the relay of viral load results. The late entry of South-to-South collaboration has also provided us with a unique opportunity to learn from other countries' experiences and challenges to better our program. So far, Kenya has shared its experience with other countries, and in return, has received immeasurable input and suggestions for improvement.

ASLM: Can you describe some of the challenges limiting access to viral load testing in Kenya?

Nancy Bowen: We have different types of couriers, which diminishes the efficiency of the sample referral. We would prefer to have one reliable transport system, which can cover everywhere. In addition, decentralizing the health system from the national to county level has resulted in a new push for counties to have their own viral load testing labs. Centralized testing is more efficient. The sustainability of the Kenyan testing program is compromised by over-relying on partner support for human resources, equipment, and reagents.

ASLM: How is the LabCoP program helping to address some of Kenya's viral load testing challenges?

Nancy Bowen: Through the ECHO teleconference sessions, LabCoP enables us to exchange ideas and best practices with other countries. We are really learning a lot and have improved cohesiveness and comparability between countries. Since we became part of LabCoP, we've received requests from other countries to learn some of our best practices. We hope that this trend will continue.

UPCOMING EVENTS

Check out these upcoming training and networking opportunities from around the world.

IAS2018 - Amsterdam, Netherlands, 23-27 July 2018
The International AIDS Conference is the largest conference on any global health issue in the world. First convened during the peak of the AIDS epidemic in 1985, it continues to provide a unique forum for the intersection of science, advocacy, and human rights. Each conference is an opportunity to strengthen policies and programmes that ensure an evidence-based response to the epidemic. The 22nd International AIDS Conference (AIDS 2018) will be hosted in Amsterdam, Netherlands 23-27 July 2018. ASLM will host a coffee and cake reception for LabCoP country teams and oversight committee. For more information, or to register visit http://www.AIDS2018.org/

ASLM2018 - Abuja, Nigeria, 10-13 December 2018.
ASLM2018 is the fourth biennial international conference of the African Society for Laboratory Medicine (ASLM). ASLM2018 aims to serve as a platform for the international laboratory medicine community to share best practices, acquire knowledge and debate innovative approaches for combatting global health threats. ASLM2018 is scheduled to be held at the Transcorp Hilton. For more information or to register for ASLM2018 visit http://ASLM2018.org/

Looking Ahead:
LabCoP's first face-to-face meeting will take place in Uganda in October 2018. Location and dates to be announced soon.

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