LabCoP QUARTERLY

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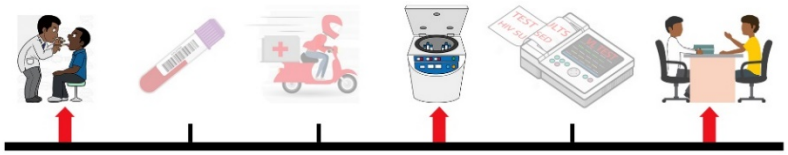

Viral load cascade topics in this Issue of LabCoP Quarterly

ASLM LabCoP WhatsApp Platform: Real-time Sharing of Country Experiences

During its 16 months of implementation, the LabCoP WhatsApp platform has become a popular way for the community to communicate. The LabCoP WhatsApp group includes 211 participants who exchange ideas and best practices. Members use the platform to stay connected between ECHO sessions and quickly find answers to practical issues.

The latest discussion was about finding ways to conduct renal function analysis for HIV patients living in remote areas. Some of the solutions proposed (seen in figure 1) were to:

- Based on the Uganda model, use a sample transportation system and conduct the biochemistry tests at a hub laboratory with the appropriate capacity, taking into account the challenge of accessibility to a continuous supply of reagents and need to quickly process specimen
- Send the patient to the hub to ensure that sample is tested within 40 minutes
- Implement a point-of-care biochemistry analyser (Piccolo and i-STAT)
- Operate on solar batteries and validate against Sysmex

Previous exchanges included:

- Recommendations on the best algorithm and viral load (VL) threshold to monitor antiretroviral therapy with critical contributions from Dr Lara Vojnov at WHO
- Best practices to track unsuppressed patients using VL registers with guidance from Dr Ritu Pati at the International Laboratory Branch of the US CDC
- Implementing digital Intensive Adherence Counselling with insightful contributions from the South African LabCoP members
- Bringing waste management to the attention of donors when buying commodities with contributions from Mireille Kalou, CDC-Haiti

Collectively, this further disseminates ideas and best practices to scale up VL testing and strengthen laboratory system functions. The WhatsApp messages are screened by the LabCoP Management team to feed into the recipes that constitute the LabCoP Cookbook of best practices.

To join the WhatsApp platform, click here.

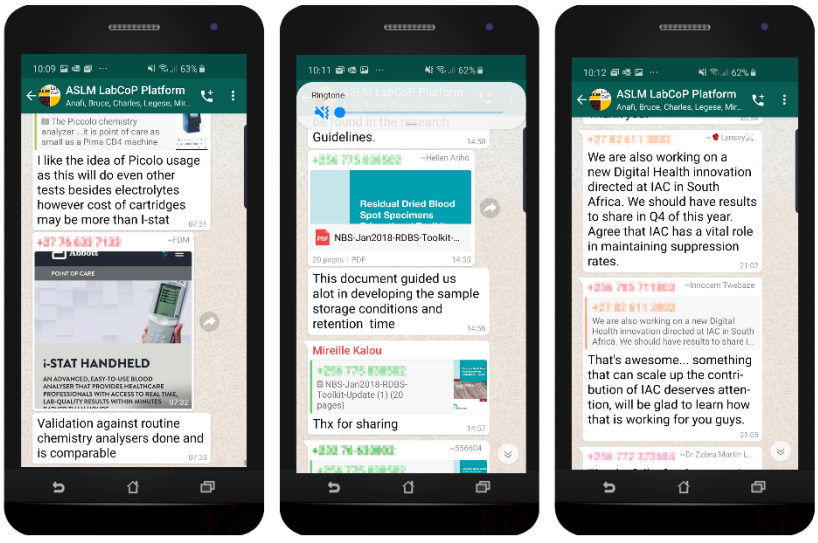

Figure 1: Screenshots of LabCoP WhatsApp member exchanges.

2019 Q1 LabCoP ECHO SESSIONS

Lessons to Consider

In the first quarter of 2019, LabCoP continued to deliver high-quality ECHO sessions, covering several components of the viral load (VL) testing cascade and underlying cross-cutting issues. Below are some highlights and lessons learnt from the vibrant discussions.

In January, Dr Ritu Shrivastava, Coordinator for Public-Private Partnerships (PPP) at the US Centers for Disease Control and Prevention discussed innovative PPPs for global laboratory system strengthening to accelerate epidemic control. One such PPP is Siemens Healthineers' 'Stronger Together', which focusses on the first of UNITAID's 90-90-90 targets to produce competent testers to improve accuracy of results. PEPFAR-Becton Dickinson's 'Labs for Life' strengthens laboratory systems to improve access to treatment. Another PPP with Roche Diagnostics caters to improved access to early infant diagnosis (EID) and VL monitoring to measure the impact of prevention of mother-to-child transmission and antiretroviral treatment (ART) success. Important steps for successfully establishing PPPs include evidence-based prioritisation of areas of intervention, identifying suitable partners and securing buy-in from all necessary stakeholders. You can watch the recorded session here.

In February, Dr Lara Vojnov, Diagnostics Advisor at WHO, presented critical considerations for monitoring treatment in the era of optimised antiretroviral drug formulations and scale-up of VL testing. She explained that maintaining the 1,000 copies/ml definition of treatment failure (using both dried blood spots and plasma) is recommended. First, it is compatible with the use of dried blood spot samples and point-of-care (POC) testing technologies. Second, it is still above the low-level viremia indicated for use of dolutegravir. Third, it is lower than the 1,700 copies/ml at which disease progression is demonstrated to be unlikely. Countries are encouraged to apply the VL testing algorithm as outlined within the 2016 WHO Consolidated Guidelines updated in 2017 until WHO releases another update. You can watch the recorded session here.

In March, Jeff Lemaire, Diagnostic Advisor at Elizabeth Glaser Pediatric AIDS Foundation, discussed practical considerations for implementing POC testing for EID. The benefits of implementing POC include more return of results to caregivers, improved turn-around times for return of results, and more and faster ART initiation of infants living with HIV. Practical considerations for successful implementation of POC for EID include leadership, governance and planning; careful site and product selection; site supervision; post-market surveillance of *in vitro* diagnostics; and ensuring the continuity of the supply chain and management of waste. In addition, providing intensive training to healthcare workers is vital to managing quality compliance of all phases of POC EID testing, as well as service and maintenance of the testing platforms. You can watch the recorded session here.

In April, Jason Williams, Senior Laboratory Advisor for the United States Agency for International Development, discussed laboratory network optimisation in support of HIV VL and EID testing scale-up. To address the challenges of universal health coverage, global health security and HIV public health outcomes, pooling of resources is required and laboratory services must be approached through a network perspective. The cornerstone of maximum-coverage, cost-effective laboratory network optimisation is the availability of updated, geo-located information on laboratory capacity. Collected data can be analysed to determine where can services be cost-effectively upgraded, the shortest sample-transport routes, optimal coverage of testing demand and opportunities for testing integration. Multiple testing platforms complicate optimisation, which underscores standardisation of testing instruments, and engaging Ministries of Health and national public health laboratories is important to ensure success. Optimisation is a continuous process, so strong political buy-in is necessary to ensure the availability of long-term resources. You can watch the recorded session here.

'The benefits of implementing POC include more return of results to caregivers, improved turn-around times for return of results, and more and faster ART initiation of infants living with HIV.'

Waste Management Series

LabCoP Assists Partners in Advancing their Waste Management Agenda in Support of Viral Load Scale Up

In the first quarter of 2019, LabCoP sessions complemented partners' efforts to scale up viral load (VL) testing by launching an ECHO session training series about waste management related to VL and early infant diagnosis (EID) testing in collaboration with the US Centers for Disease Control and Prevention (CDC). CDC has been searching for the best strategy to reach out to countries and effectively improve waste management.

Using the LabCoP platform, a series of six separate webinars based on the World Health Organization waste management guidance and enriched with CDC experience have been delivered to an average of 100 participants per session from 23 countries (including the 11 LabCoP country teams) and 41 organisations. The training is completed by 'homework' whereby countries are guided to assess waste management systems and practices in their respective countries and come up with proposed interventions.

During the first three webinars, held between March and May, participants were informed of the current status of baseline practices for waste management at the country level, educated on content details from the WHO Healthcare Waste Management Blue Book, and oriented to the draft checklist for waste management in VL and EID testing laboratories and associated healthcare facilities.

The latest version of the checklist includes input from several organisation within the Integrated Diagnostic Consortium.[1] The checklist is intended for use by Site Managers or Safety Officers and will be piloted in Kenya, Malawi, Ethiopia, Eswatini and Zimbabwe between June and September 2019. Synergising their resources, the Pan-African Consortium, which includes ASLM, Institut de Recherche en Santé, de Surveillance Epidémiologique et de Formation, and the Africa Centres for Disease Control and Prevention, with funding from the Presidents Emergency Plan for AIDS Relief and the Global Fund will collaborate with CDC's International Laboratory Branch to demonstrate improvements in waste management processes in at least three countries.

Slide from March Waste Management ECHO session

'Between March and May, participants were informed of the current status of baseline practices for waste management at the country level and educated on content details from the WHO Healthcare Waste Management Blue Book .'

These collaborations around the improvement of waste management processes illustrate the added value of LabCoP in disseminating and supporting the adoption of best practices developed by partners. Moving forward, CDC and ASLM's strategy to advance waste management best practices will align more closely with the Integrated Diagnostics Consortium work plan that includes elements of country-level needs assessments, development of guidance, trainings, dissemination of information and knowledge sharing, and engagement of manufacturers.

Slide from April Waste Management ECHO session

[1] The Integrated Diagnostics Consortium (IDC) brings together diagnostics procurers, technical partners, implementers and countries to discuss ways to improve the supply and use of diagnostic health products. IDC members include the African Society for Laboratory Medicine, Clinton Health Access Initiative, Elizabeth Glaser Pediatric AIDS Foundation, FIND, USAID Global Health Supply Chain Program, Global Fund to Fight AIDS, Tuberculosis and Malaria, ICAP at Columbia University, Médecins Sans Frontières, Office of the US Global AIDS Coordinator and Health Diplomacy, United States Centers for Disease Control and Prevention, United States Agency for International Development, Solthis, Stop TB Partnership, United Nations Development Programme, United Nations International Children's Emergency Fund, Unitaid, and the World Health Organisation.

The Viral Load Testing Cascade and the LabCoP Theory of Action

Scaling up viral load (VL) testing to reach the third 90 of the UNAIDS 90-90-90 targets by 2020 requires a holistic approach, addressing each step of the VL testing continuum from the demand for the test for all eligible patients to the utilisation of test results. Bottlenecks and inefficiencies along the VL testing cascade are related to gaps in the underlying laboratory systems, such as sample transportation systems and workforce or supply chain management. Improving VL scale up at the facility level is important; however, systemic issues limiting the impact of VL testing on the third 90, also need to be addressed at the national level, through the involvement of stakeholders from different sectors, ministries and disciplines.

The diagram in figure 2 depicts the VL testing continuum, how it contributes to better patient management, how it relates to the underlying laboratory systems and how it involves national stakeholders.

Embracing this intricate context, LabCoP aims to help improve laboratory system functions and accelerate the scale of VL for improved patient management, according to the theory of action in figure 3.

Since its inception, LabCoP has worked with 11 countries to assess critical gaps along the VL testing cascade and the underlying laboratory systems at the national level. These results contributed to the evidence-based prioritisation of most critical challenges needing intensified capacity building through:

1. The creation and dissemination of knowledge, and the adoption of context-specific best practices for quality improvement (QI) through South-to-South exchanges within a multidisciplinary Community of Practice

2. Interventions embedded in national action plans, and effectively linked to existing funding schemes [Presidents Emergency Plan for AIDS Relief (PEPFAR) country operational plans (COP) of Global Fund (GF) funding mechanisms] and available opportunities for technical assistance.

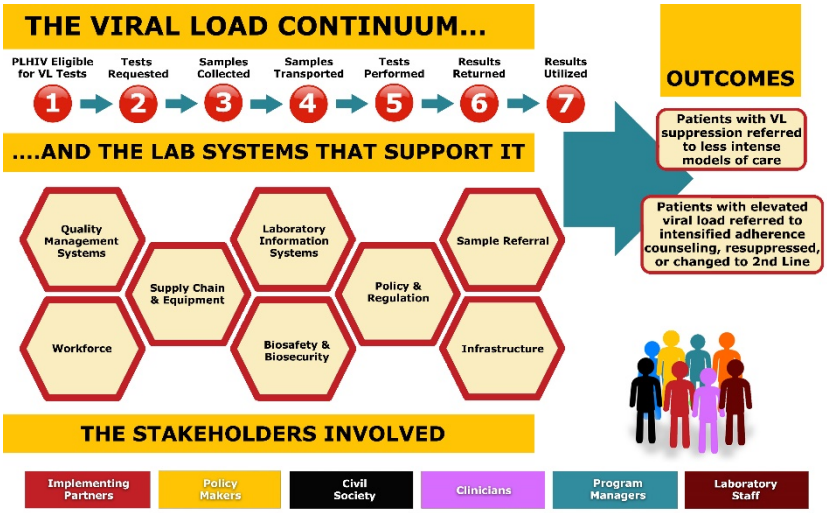

Figure 2: VL Continuum

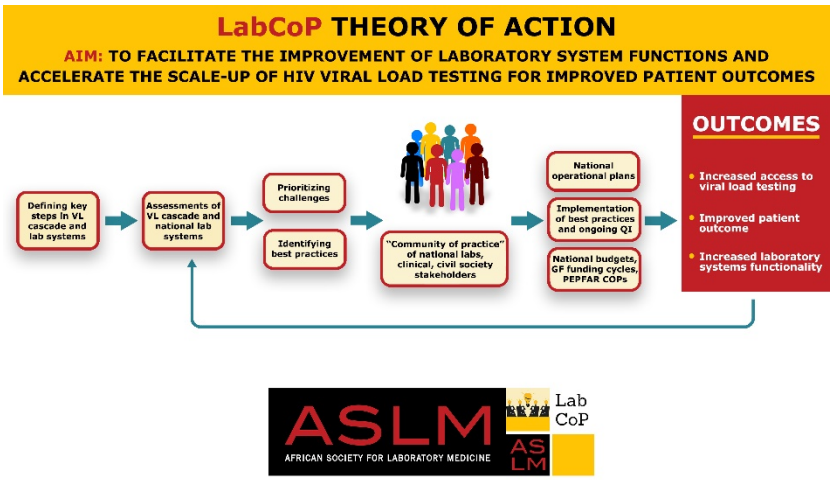

Figure 3: Theory of Action

Increasing context-specific resources, knowledge and capacity to scale-up VL testing at the national level, is anticipated to contribute to improved patients' outcomes, towards the achievement of the third 90 and to sustainable improvement of laboratory system functions towards the goals of universal health coverage and international health regulations.

EXPERT ADVICE:

Recently ASLM sat down with select LabCoP Oversight Committee members, Trevor Peter, Scientific Director of Diagnostics of the Clinton Health Access Initiative; Lara Vojnov, Diagnostics Advisor of HIV and Hepatitis with the World Health Organization; and Solange Baptiste, Executive Director of International Treatment Preparedness Coalition to discuss LabCoP's impact.

Trevor Peter

Lara Vojnov

Solange Baptiste

ASLM: How is LabCoP helping to strengthen the laboratory systems of member countries?

Trevor: It's that basic sharing of ideas which is so important right now, because we are at a frontier of breaking new ground all the time. I think it gives people confidence, particularly if they share an idea and they get validation of that idea, and they feel that they can go ahead and try it out.
Solange: I really appreciate the multi-country approach, and therefore you're able, as a laboratorian, to understand the challenges and best practices in other countries, how they are overcoming them.
Lara: The WhatsApp group has been really helpful in allowing countries and partners to have relatively informal conversations about some of the challenges, to be able to share some of the documents across them.
Solange: And I really appreciate the cookbook, which shows how a particular issue is resolved or addressed, and you get a very salient recipe for how things can be addressed broadly, and that can be adapted for your particular context.
Lara: And I think a key piece is looking at the ASLM website. They have a list of tools there, and they continue to build that list of resources, to become a go-to system for countries to access a plethora of information all on one website.

ASLM: What improvements have you seen over the past year?

Lara: In the past, the Lab Director in a given country may not have been speaking directly to the Lab Director in a neighboring country. Between all of these different mechanisms, LabCoP has really been able to bring countries and personnel together in a direct fashion, so that they don't necessarily need a middleman. And that's allowed some of these relationships to blossom into more informal conversations, where they can swap ideas, and swap some of the challenges and solutions that have been developed.
Trevor: The level of participation has definitely grown, and I think the quality has improved. I think the community is becoming comfortable with each other and I think the ability to pass the microphone around and having different groups present and take the lead on different topics is an important component that I've seen as well.

ASLM: Why do you value the LabCoP project? What makes it a project that's worth continuing?

Trevor: It's the only one of its kind, and it's much needed. How do you reach across a continent of over 50 countries? You've got to have a mechanism to do it remotely, so we're leveraging the best technology to set up these forums and communicating over large geographies, and it's functioning well.

Solange: It's something that I take the time to invest in because it is multi-sectoral. It was really valuable for me to be in Kampala and hear how lab technicians think, what challenges they're facing. Their whole bubble is very different from where communities and recipients of care exist, so I value that cross-fertilisation.

ASLM: What words of encouragement would you give to some of the country teams who may not be as far along on their scale up of viral load testing as others?

Lara: All countries have to go through the challenges of adjusting policies, putting together guidance, putting together best practices, trying and failing at new things. So, ideally continuing country-to-country conversations will alleviate yourself from having to manage and endure some of the challenges that other countries have already faced, and may help expedite your scale-up process in a much shorter time.
Trevor: I think the fact that they're out there doing this work and coming together, presenting and talking about it is incredible. Having them share their experiences and achievements is important because even small details can make a big impact. A lab may seem mundane to some people, but in reality, it has a huge impact on people's lives, because the outcome or result of any one test usually leads to a clinical decision.

'Continuing country-to-country conversations will alleviate yourself from having to manage and endure some of the challenges other that other countries have already faced.'

WHAT's NEW AT LabCoP

The Missed Potential of CD4 and VL Testing Article
A few LabCoP Committee Oversight members contributed to an insightful paper published in Plos about the missed potential of CD4 and viral load testing to improve clinical outcomes for people living with HIV in lower-resource settings. Read the article here.

Cookbook Recipe
The LabCoP team has just release the 2nd recipe of the LabCoP Cookbook: Test Result Utilisation. This recipe includes considerations and best practices that can help your team improve viral load test result utilisation for patient management, and achieve better clinical and public health outcomes among people living with HIV. View the Test Result Utilisation and Sample Transport System recipes here.

LabCoP Resources
See the latest LabCoP resources, including ECHO session presentations, waste management and public-private partnership training material and videos here.

LOOKING AHEAD

LabCoP's next Face-to-Face meeting will be held in Addis Ababa at the African Union headquarters from 15-17 October 2019. LabCoP country teams and stakeholders will meet to take stock of what has been achieved through LabCoP during the 1st phase of the project, which concludes on 30 September 2019. The stakeholders will provide a glimpse of what is to come in the 2nd phase. Please save the dates for that crucial meeting.

The August ECHO session will focus on laboratory network optimisation with presentations by subject matter experts from the Chemonics GHSC-PSM project. Stay tuned for more information.

www.aslm.org/labcop/