

## Côte d'Ivoire and Gabon Undergo Self-assessment

From 20-23 June 2022, the medical laboratory systems self-assessment workshop was held in the conference room of Hotel Limaniya Golf in Abidjan, Côte d'Ivoire. The participating laboratories self-assessed the scale-up of the HIV viral load test. In attendance were the LabCoP management team, the main directorates in charge of medical biology laboratories (DGS; DAP; LNSP; IPCI; AIRP; NPSP; PNLS; PNLT; PNLP); and partners that support the laboratory system (the United States Centres for Disease Control and Prevention (US CDC), the US CDC Division of Global Health Protection (DGHP) and the US President's Emergency Plan for AIDS Relief (PEPFAR)).



Working session (self-assessment workshop) in Abidjan, Côte d'Ivoire



Visit from the health authorities: the Director General of Health and the LabCoP team

The workshop's objective was to assess the national laboratory systems that support the voluntary counselling and testing (VLT)-HIV cascade to identify the strengths and weaknesses of the overall laboratory system in Côte d'Ivoire.



Family photo after the opening ceremony (self-evaluation workshop)

During the visit, the LabCoP team presented the purpose and objectives of the LabCoP project to the Ivorian Director General of Health (DGS). They also requested his support in integrating the country into the LabCoP. The team also visited the National Public Health Laboratory (LNSP) to understand its role within the laboratory network.

The Ivorian country team identified critical challenges in their HIV test cascade, including insufficiency of the sample transport system, frequent shortage of testing commodities, and the long turnaround time for results. However, the strengths identified included having a data information circuit, organisations that support people living with HIV, and a national differentiated care strategy. These best practices could be enhanced and shared during the upcoming Extension for Community Healthcare Outcomes (ECHO) sessions.

The LabCoP will support the country team in developing and validating a fundable work plan to scale-up viral load tests based on the assessment results. Then, the country team will use the validated work plan to advocate for partners and stakeholders.



Visit at the LNSP : exchange between lab staff and Dr Collins Otieno

Like the Côte d'Ivoire medical laboratory systems self-assessment workshop, the Gabon LabCoP country team assessed the Gabon medical laboratories systems and networks and scale-up of viral load tests from 23-25 August 2022.

This self-assessment workshop is the second step in implementing LabCoP in Gabon. The first step was establishing a national multidisciplinary team after gaining acceptance from the Gabon ministry of health that will implement LabCoP activities.



First Day Workshop Session Self-Evaluation

The Director General of Health, the National Public Health Laboratory (LNSP), the University Hospital of Libreville, the Lambaréné Medical Research Centre (CERMEL), the PNLT, the HIV/AIDS Program, the Central Analysis Laboratory, the BIFOUN Medical Health Centre, the Directorate General of the Military Health Service, and the technical and financial partners who support the laboratory system, the World Health Organization, the Gabonese Red Cross and the LabCoP management team attended the three-day workshop.



Visit of LNSP from left to right Dr Krytina (ASLM), Dr Mintsa (DG of LNSP) KI-ZERBO Charles (ASLM/LabCoP) Mrs M'Pirah (Team Lead) Mrs Cylva (LNSP quality manager)

The country team used [the ASLM HIV viral load testing cascade self-assessment scorecard](#) and the World Health Organisation's early infant diagnosis (WHO VL/EID) tool to identify five critical challenges to the scale-up of T/HIV in Gabon.

The challenges included: establishing a sample collection and transport system; developing a national laboratory input supply strategy; establishing a national quality control system; elaborating the national laboratories policy; and organising the data management system of the network of public and private VL laboratories



Family photo of workshop participants Self-evaluation

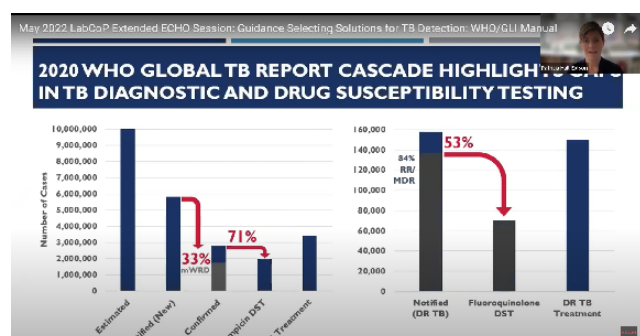
The LabCoP will support the country team in developing a work plan based on the identified challenges. Then, the country team will implement the work plan to improve the function and quality of care provided by the laboratory systems while building on identified strengths, including increasing demand for result use and enrolling in external quality assessment. Hopefully, improvements will be shared during the upcoming LabCoP ECHO sessions.



Presentation of the laboratory's system and network by the Director of LNSP during the Self-Assessment

# ECHO Sessions Summary: April to June 2022

ECHO sessions between April and June focused heavily on tuberculosis (TB) diagnostics, including a series commemorating the World TB Day. The sessions also highlighted technologies that are simplifying processes in activities such as diagnostic assay verification, the Rapid Test Continuous Quality Improvement (RTCQI) initiative, human papillomavirus screening, and the implementation of electronic return of results to health workers and recipients of care. Finally, one session focused on the role of lay workers to advance diagnostics at the community level.



Slide from Patricia Hall-Eidson's (ILB US CDC) presentation shows continued gaps in patient access to essential TB testing services

The TB testing landscape is rapidly expanding, providing more options for patient-centred testing strategies. The recent Manual for Selection of Molecular WHO-recommended Rapid Diagnostic Tests (mWRD) for Detection of TB and Drug-resistant TB suggests that TB test selection and associated network analyses should be guided by setting specific patient and programmatic needs. The guide advises on considerations for key elements such as test performance costs, procurement and supply chain, and infrastructure and human resource requirements for selecting mWRD for specific settings. View the session [here](#).

The TB series also highlighted the role of diagnostic network optimisation to achieve global targets for Mycobacterium tuberculosis (MTB) disease elimination, including new testing options to strategically complement the existing near-patient capabilities by considering the geographic area, the volume of testing required, and multi-disease testing needs to improve programmatic results and facilitate TB eradication. View the session [here](#).

Evaluation studies in South Africa on how the Xpert MTB/XDR assay addresses gaps in the current drug-resistant tuberculosis (DR-TB) diagnostic pathway demonstrated it to be a suitable assay for detecting resistance to isoniazid, fluoroquinolones and second-line injectable drugs. To address existing challenges such as low rates of follow-on drug-susceptibility testing and treatment initiation, novel approaches to expand testing and ensure appropriate treatment initiation for undiagnosed and untreated patients are still required. View the session [here](#).

With the introduction of new diagnostics, e.g., TB diagnostics as exemplified above, expertise in conducting and performing

the required analyses for assay verification is scarce, even at the reference laboratory level in many settings in Africa. To address this critical gap in quality management systems, a public-private partnership between Roche and the United States Centers for Disease Control and Prevention, in collaboration with ASLM, developed the Assay Verification Tool, now available free on [ASLM's Resources Centre](#). This tool simplifies the analyses for verifications, validations, and other laboratory evaluations. Learn more about the tool in the recorded session [here](#).

“While much effort has been made on patient diagnostics, the utilisation of test results remains a significant gap in many countries.”

For example, progressive LabCoP annual country self-assessment reports continue to show the inability to track patients with high viral load and to determine if these patients eventually receive enhanced adherence counselling, switch to a second-line ART regimen, and finally achieve viral suppression. Implementation of short message service (SMS) for electronic results return directly to health facilities and/or to patients has shown to be promising in some countries. The June ECHO session highlighted the positive outcome and key lessons learned from a pilot program in Zimbabwe in which there was a near 10-fold reduction in turn-around time to result delivery to patients (see Fig 1). Watch more of the session [here](#).

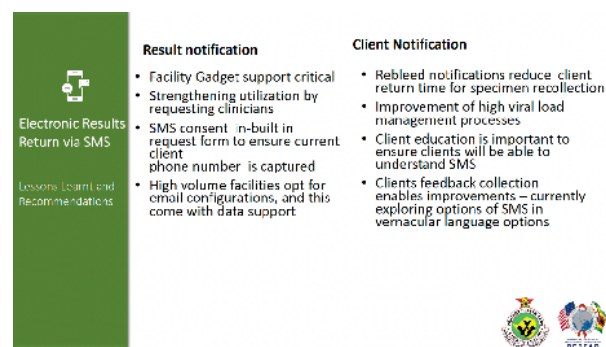


Fig 1: Some lessons learnt from the implementation of SMS electronic results delivery in Zimbabwe

To address the shortfall in the laboratory workforce, lay workers have been engaged to support testing services, especially for diagnostics at decentralised health facilities, where patients initially seek healthcare support. However, this practice has not been adopted to scale, primarily due to barriers such as a lack of explicit national policies promoting task shifting and integration of lay cadres into human resource structures in national programs. In addition, in some cases, laboratory professional regulatory councils, associations, and laboratory technicians have resisted the endorsement of task shifting for specific point-of-care tests. Learn more by watching the session [here](#).

## Piloting the Integration Assessment Scorecard in LabCoP Countries

The recent [Lancet Commission Report](#) highlighted gaps in access to diagnostics, with only 47% having access globally. Integrated diagnostics, a LabCoP priority, may address this access gap.

A previous assessment of seven LabCoP countries in 2021 revealed that some countries had piloted integrated laboratory services and could be reference points for other countries. However, there was no standardised way to measure diagnostic integration's success in improving access and health outcomes. A framework is thus necessary to guide countries in considering essential elements for successfully integrating testing services to improve access and health outcomes.



The Tanzania MoH team in Dodoma reviewed integration efforts through the application of the integration assessment tool

ASLM LabCoP, in collaboration with its partners, developed an integration assessment scorecard to help countries identify gaps in the critical components of diagnostic integration and develop solutions to improve clinical and public health outcomes. The scorecard is based on the capability maturation model and covers four core capabilities: preparation and planning, network capacity, support systems, and data use in decision-making. Under these are ten components, including policies and guidelines, governance and coordination, network capacity and configuration, workforce, reporting, and others. The scorecard scores from 0 to 5, assigning each component the lowest score for any two to three indicators within that component.

During the last quarter, the LabCoP piloted the scorecard in five LabCoP countries: Zambia, South Africa, Eswatini, Zimbabwe, and Tanzania. The exercise aimed to determine the scorecard's ease of use and practicability. Each country's ministry of health's focal person convened a group of stakeholders who answered the questions by ASLM assessors. The stakeholders were mainly from the ministry of health laboratory directorate or equivalent, representatives from the public health department, civil societies, implementing partners, and others. The stakeholders appreciated the scorecard as a means of identifying areas of improvement for the successful integration of laboratory services. For example, a Zimbabwean stakeholder remarked that 'the tool is an eye opener on the need to look at the integration of laboratory services from the perspective of the patient'. Another from South Africa said that much work has gone into developing this tool to cover all aspects of integration of laboratory services.



Zambian stakeholders participate in an assessment of the county's readiness for integration of lab services

Following successful piloting, the next step is to refine the scorecard and use it to analyse the landscape of diagnostic integration readiness of the 18 LabCoP countries. The gaps identified can then be fed into national workplans for funding requests. Countries can then translate the diagnostic integration needs into diagnostic network optimisation-use cases.

## Expert Experience



ASLM recently sat down with Dr Muwonga Jérémie Masidi, LabCoP Team Lead for the Democratic Republic of the Congo, to discuss their initiative to evaluate rapid diagnostic tests (RDT) and diagnostic algorithms for HIV infection.

**ASLM:** Dr Masidi, you were part of the Democratic Republic of the Congo team that recently completed Phase 2 of an evaluation of RDTs and diagnostic algorithms for HIV infection. Can you explain what the impetus was for the launch of the initiative?

**Dr Masidi:** The World Health Organization (WHO) has issued standards and guidelines to ensure the reliability of diagnostic test results, including the use of a three-test algorithm to confirm positive results. Also, the tests used in the algorithm in a country must have been evaluated under local conditions and must be periodically evaluated thereafter. In the Democratic Republic of the Congo, the last evaluation was carried out in 2015, after which one of the tests in the algorithm in use stopped being manufactured. Hence, a new evaluation was needed to update the algorithm.

**ASLM:** What were the goals in Phase 1, and how did Phase 2 differ?

**Dr Masidi:** The goal of Phase 1 was to determine the performance of the tests, including the sensitivity, specificity, and negative and positive predictive values, and to detect possible cross-reactivities between the different tests that can be retained in the algorithm. This was done by experienced technicians in the laboratory using a well-qualified panel. In Phase 2, we verified the practicability and possible challenges of implementing the selected algorithm in the field, with a view to readjusting or developing guidelines to facilitate the work of providers in the field.

**ASLM:** Is the evaluation being applied to other diagnostics beyond HIV-related RDTs? Can you tell us more?

**Dr Masidi:** Yes, the assessment is also being applied to tests other than those for the diagnosis of HIV. Indeed, tests such as those used in malaria diagnosis are being evaluated for the same reasons that I mentioned above.

**ASLM:** Why is this initiative so vital?

**Dr Masidi:** This work is vital because it makes it possible to guarantee the reliability of test results by minimising possible errors and false results that may be related to the low performance of the tests, the algorithm, or the challenges encountered by the providers in conducting the tests. Such errors have harmful consequences for people, the community, the health system in general, and the laboratory system in particular.

**ASLM:** What were some of the challenges encountered in conducting this evaluation and what would be your advice for countries that would like to conduct a similar evaluation?

**Dr Masidi:** This work is not routine and had to be done in a limited time. It was necessary to choose sites with a large volume of work, thus constituting an overload of work for the system and the service providers. This required training the staff, informing and sensitising care providers and decision-makers at different levels about the merits of the work, and mobilising all the necessary resources to carry

**ASLM:** How has LabCoP been a helpful partner in this work?

**Dr Masidi:** LabCoP has assisted us technically with advice and shared experiences from colleagues in other countries, as well as in the mobilisation of certain partners who financially supported the activity, especially [Global Health System Solutions \(GHSS\)](#). Despite COVID-19-related challenges, LabCoP, the United States Centers for Disease Control and Prevention, and the WHO provided us with a list of WHO-prequalified tests that could be obtained over time. They helped us correct the SOPs for the tests, analyse the laboratory data, and classify the tests to be retained in the algorithm according to their performance and characteristics (principle, antigenic preparations, etc.).

**ASLM:** What are the next priorities of the Democratic Republic of the Congo LabCoP team to further strengthen laboratory systems for HIV-related testing and the diagnostics of priority diseases in

**Dr Masidi:** Together with the actors of the Democratic Republic of the Congo health system, we have to implement and popularise the final algorithm throughout the country and implement the third phase of the evaluation, which involves the continuous monitoring of the performance of the tests and the algorithm. The experience gained will be used to improve the diagnosis of other diseases, including COVID-19, malaria, tuberculosis, and any

ASLM appreciates Dr Masidi's time and contributions to the LabCoP community. For more information about the process of verifying HIV tests see the World Health Organization's Toolkit to Optimize HIV Testing Algorithms guidance [here](#).

# What's New

## LabCoP Launches the New DNO Sub-CoP

The Diagnostic Network Optimisation (DNO) sub-community of practice (CoP) is a collaboration between ASLM and the [Foundation for Innovative Diagnostics \(FIND\)](#) and aims to bring together countries and stakeholders to share challenges, solutions and best practices on optimising national diagnostic networks. DNO is a geospatial data analytics approach that informs interventions needed to achieve disease goals and health equity and enables prioritisation of high impact investments to support effective laboratory networks. Learn more about LabCoP's new [DNO Sub-CoP](#) and the [DNO Theory of Action](#), on ASLM's website.

## New Sub Communities of Practice Web Pages

The LabCoP Sub-Communities of Practice now have their own web pages! See what each has to offer participating country teams and helpful resources related to each. Visit the Waste Management Sub-CoP page [here!](#) Visit the Monitoring & Evaluation Sub-CoP page [here!](#) Visit the Diagnostic Network Optimisation Sub-CoP page [here!](#)

## Welcoming the Congo-Brazzaville Team to LabCoP

The LabCoP Mgt Team is pleased to announce that Congo-Brazzaville is the 19th country team to join the LabCoP family! The team is led by Dr Nkodia Loumouamou Marie Yvonne of Direction Generale des Soins et Services de Sante. They will perform their first self-assessment in the coming weeks and will join us at LabCoP's 6th Annual Meeting. Please join us in welcoming Congo-Brazzaville to the team. Bienvenue, équipe Congo-Brazzaville!

## New PEPFAR Strategic Direction

U.S. Global AIDS Coordinator and Special Representative for Health Diplomacy Ambassador at Large, Dr John Nkengasong, has announced the new PEPFAR Strategic Direction based on insights from his stakeholder listening sessions. The goal is to position PEPFAR on the path to end the HIV/AIDS pandemic as a public health threat by 2030 and sustainably strengthen public health systems through the PEPFAR platform, in partnership with communities and countries. Learn more [here](#).



# Looking Ahead

## Laboratory Director's Forum Meeting at LabCoP's 6th Annual Meeting

In September, ASLM announced the launch of the Laboratory Directors' Forum (LabDF) in partnership with Africa CDC. The LabDF will provide African leaders in lab services from 55 African Union Member States space and infrastructure to develop a unified voice to shape agendas, define priorities, and harness individual countries' strengths, capabilities and successes to further build laboratory capacity on the continent. On 14 October, following LabCoP's 6th Annual Meeting, ASLM has organised a session of the LabDF with the goal of identifying new avenues, strategies and partnerships to improve the quality and effectiveness of the African laboratory system and diagnostic network. Participating lab directors will receive more information via email. Learn more about the LabDF [here](#).

## Save the Date for ASLM2023

ASLM's biennial conference returns to Cape Town, South Africa 12-15 December 2023. ASLM2023 offers the opportunity to hear from world renowned experts on infectious disease control and public health from Africa and across the globe. It is the perfect opportunity to showcase your research and network with other medical laboratory experts and public health leaders. Stay tuned for more info about abstracts and registration. See you at ASLM2023!



<https://aslm.org/what-we-do/labcop/>