

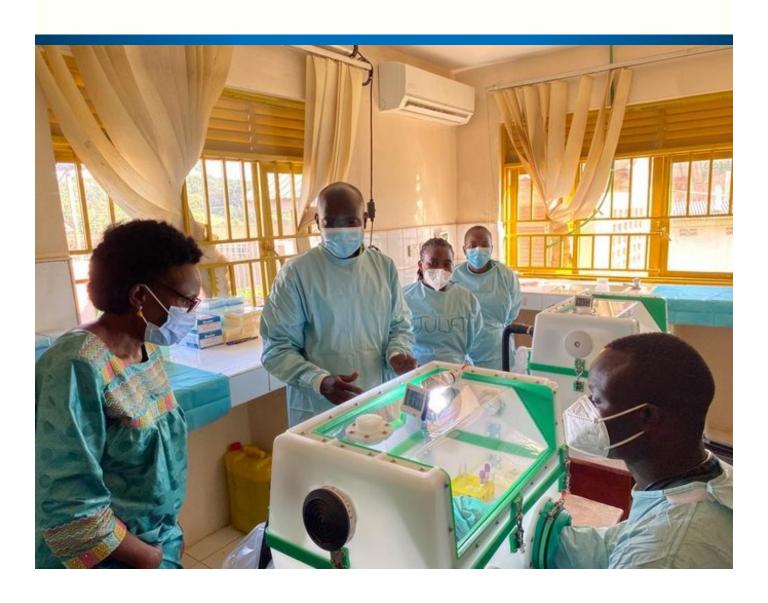
LAB DIGEST

06TH MAY, 2024

ISSUE 1 / 2024

MOBILE LABORATORIES IN UGANDA:

A Catalyst for Public Health Advancement



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 How Mobile
 Labs have
 revolutionized
 disease
 surveillance in
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EDITOR'S NOTES

We are delighted to bring you the first edition of the Lab Digest.

In this April edition, we are excited to bring you the remarkable journey and progress of the Mobile Laboratories that are changing the landscape of Public Health Laboratories, diagnostics and disease surveillance in Uganda.

Uganda has been at the forefront of innovative approaches to combatting public health challenges. Among these groundbreaking initiatives, mobile laboratories have emerged as a transformative tool in the nation's healthcare landscape. These portable units, equipped with state-of-the-art diagnostic technology, are revolutionizing disease surveillance, research, and emergency response efforts across the country.

This edition highlights NHLDS journey of the deployment of mobile laboratories and how they represent a pivotal shift in Uganda's healthcare infrastructure.

As Uganda continues to prioritize investment in healthcare infrastructure and innovation,

the expansion of mobile laboratory

the expansion of mobile laboratory capabilities holds immense promise for improving public health outcomes nationwide.

We therefore commend Uganda's and the EAC Secretariat's pioneering efforts in harnessing the power of mobile laboratories. By championing this innovative approach, Uganda is not only safeguarding the health and well-being of its citizens but also setting a compelling example for other nations striving to overcome healthcare challenges in resource-constrained settings.

We hope you enjoy this edition and as we look to the future, we hope you find this edition engaging and enlightening. Send feedback on kageredianah@cphl.go.ug or communication@cphl.go.ug we are glad to hear from you.

Sincerely, The Lab Digest Editorial Team Kagere Dianah Senior Public Relations Officer

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- 4. Fredrick Nsubuga
- 5. Godfrey Pimundu



Remarks from ED/ Commissioner

I take this opportunity to welcome everyone reading the Lab Digest Volume 1 2024.

The Lab Digest comes as a fundamental initiative of the department of National Health Laboratory and Diagnostic Services (NHLDS), Ministry of Health (MOH), aimed at creating awareness to all stakeholders on health laboratory and diagnostic services in Uganda.

This is in alignment with transparency and accountability, one of the key institutional principles and values stipulated in the National Health Laboratory Policy II (NHLP II). But also in fulfilment of major objectives 6 and 8 of the same policy;

- To improve utilization of laboratory services through improved demand creation, community engagements...
 and
- To increase access to highly specialized health laboratory testing so as to reduce referral of patients and specimens outside Uganda not to mention other objectives.

The laboratory department over time has made strides in achieving its objectives despite the challenges and has made signif-

icant achievements. This particular version of the Lab Digest puts more focus on the achievement of setting up mobile laboratories, one of the great innovations put forward overtime to improve efficiency and effectiveness, which have not only been the spotlight for early detection and management of the deadly pandemics and outbreaks that include Covid 19 and Sudan Ebolavirus among others, but also enhanced overall testing capacity and preparedness at sub-national levels.

Improved Turn-around-Time for management of outbreaks like Ebola Virus Disease, safe working environment, and super specialized human resource based at the remotest areas are a few of the key highlights of this innovation.

This version will expound more on the contribution of these mobile labs towards attainment of the NHLDS vision of quality laboratory services available and accessible to all people in Uganda, the MoH strategic direction as well as the country's Vision 2040, of ensuring a productive population that effectively contributes to socio-economic

growth of the country. The subsequent versions will tackle other areas of the health laboratory and diagnostics sector. I thank the technical and the editorial teams for putting this comprehensive work together, and once again welcome you to read more about the strides the NHLDS has made with the mobile labs and where we are going.

For God and my Country,

Dr. Susan Nabadda Commissioner Health Services-NHLDS – MoH / Chief Government Pathologist



HOW MOBILE LABORATORIES HAVE REVOLUTIONALISED DISEASE SURVEILLANCE IN UGANDA



Kampala:

According to the World Health Organization, Uganda records the highest number of outbreaks on the continent, with over seven (7) per year. This is attributed to its vulnerability nature with notable high risk factors including; highest refugee hosting country, porous borders, anthropogenic factors like deforestation, feeding on wild birds which are reservoirs for some

of these viruses, lying within the Filovirus, Meningitis, Zikka, Yellow fever belts of tropical Africa among others. With such a high frequency of outbreaks, it's therefore crucial for Uganda to prioritize robust disease surveillance, rapid response mechanisms, and proactive public health measures to protect its population.

The Ministry of Health, through the Department of National Health Laboratory and Diagnostic Services (NHLDS), has initiated and integrated the Mobile Laboratories into its' Public health emergency management mechanism, which has demonstrated efficacy and is now poised for expansion.

In this edition of the Lab Digest, we delve into the operations of the Mobile Laboratories, achievements, challenges and opportunities for growth.





The Hon Minister of Health – Dr Aceng Ruth Ocero, inspects and gets assurance from one of the Mobile labs deployed in Mubende end of Sept 2022 just before flagging off the team to start testing in the just concluded Ebola sudanvirus outbreak.



Minister of Health, Director General Health Services, Commissioner NHLDS, RDC Mubende and other dignitaries take a group photo with the Mobile lab team in Mubende.

mobile laboratory is a ful-Aly equipped facility housed within a vehicle or portable unit that can be transported to various locations. It contains all the necessary equipment and resources for conducting scientific experiments, research, or diagnostic testing outside of traditional laboratory settings. Mobile laboratories are particularly useful in remote or underserved areas where access to permanent laboratory infrastructure is limited. They can be deployed for a variety of purposes, including disease surveillance. environmental monitoring, forensic analysis, and emergency response during natural disasters or disease outbreaks.

According to Pimundu Godfrey, the NHLDS Mobile Laboratory Coordinator, Uganda has four operational mobile Laboratories with the number expected to increase by the end of 2024.



"Government deploved first mobile laboratory on 20th May, 2020 in Tororo to respond to the urgent need to screen and test at the border posts at the peak of the COVID -19 pandemic. This lab is still stationed at Tororo Hospital to date. The Second Mobile Laboratory was deployed on 1st June, 2020 at Adjumani Hospital in West Nile. This was deployed to test Truck drivers for Covid-19 in order to decongest Elegu POE and other Points of Entry in Northern and North-Western Uganda not forgetting the large refugee populations in these regions of the country as well." Says Godfrey.

To date, these mobile laboratories have been split into 2 more stations that are helping to respond to more outbreaks and do better disease surveillance work.

"These mobile laboratories are big and can be expanded or shrunk according to the type of disease or nature of work. We split one and deployed a part in Mubende on 28th September 2022 to respond to the Sudan ebolavirus disease outbreak and was decommissioned on 15th March 2023 following the end of the Ebola outbreak, in order to be used elsewhere. The same Mobile lab was deployed at Mutukula POE following the Marburg outbreak threat from the Kagera region of Tanzania in March 2023", Godfrey explains.



It should be noted that Uganda was declared Ebola free on 11th January, 2023 by the World Health Organization. This was hugely attributed to the responsive and proactive laboratory and diagnostic services from NHLDS and the Uganda Virus Research Institute. Laboratory services continue to play a pivotal role in early disease detection and surveillance, enabling prompt and efficient responses while minimizing the impact on citizens' lives, well-being, and productivity.

In the past 5 years, Uganda has had and successfully contained many outbreaks including COVID-19 and Ebola-Sudan where we now all know that the Mobile labs did a tremendous work. Some of the key achievements for the Mobile laboratories in Uganda are listed below;

1. Covid-19 response

Following the deployment of the two Mobile laboratories at Tororo and Adjumnai in May 2020 and June 2020 respectively, the Mobile laboratories immediately embarked on robust testing for Covid-19 targeting unique populations of truck drivers at Points of entries of Malaba, Busia, Elegu and others, testing Refugee populations, prisoners among others. Below were some of the critical achievements realized in due course:

- No of samples tested to date is well above 190,000
- Turn Around Time (TAT) for Covid-19 tests were lowered to 6-8hrs
- Huge number of Truck oper-

- ators tested eased tensions at POEs as congestion was brewing political pressure
- A large number of Refugees were tested and treated, a remarkable achievement such a vulnerable population
- Other unique communities like that of Prisoners, Frontline Health Workers and the large community populations were also adequately tested as the disease spread
- About 40 medical laboratory scientists across the country were trained to operate this Mobile laboratory infrastructure, yet another good capacity building initiative in the laboratory pillar

2. Ebola Sudan-virus disease response:

On 20th September 2022, Uganda declared the 7th outbreak of Ebola virus disease (EVD) caused by the Sudan Ebola strain following the confirmation of a case admitted at Mubende Regional Referral Hospital. Upon confirmation, the Government of Uganda immediately activated the national incident management system to initiate response activities including deployment of the mobile laboratory.

- From 28th September 2022 to 11th March 2023, deployed in Mubende
- Tested 3,382 samples at the Ebola outbreak epicenter
- Up to 73 positives cases confirmed by the Mobile lab out of the 142 positives nationally confirmed
- Turnaround time (TAT) was average of 6 hours as opposed to the much longer

- TAT when samples are transported to Entebbe.
- No laboratory personnel infections were registered.

3. Ongoing Surveillance (capacity has been built outside the National reference lab to do surveillance for):

- a) Viral Hemorrhagic Fever surveillance(VHFs)
- Filo viruses (Ebola and Marburg)
- Rift Valley Fever Virus
- Crimean Congo Hemorrhagic Fever new cases
- b) Covid-19 surveillance and testing ongoing at:
- Mobile lab in Tororo
- Mobile lab in Adjumani
- CERSL-Wandegeya laboratory.

4. Mutukula deployment

Following the Marburg- outbreak threat from Tanzania a Mobile lab was deployed in Mutukula:

- Date: 26th March 2023 to 25 June 2023
- Tested 9 samples suspected VHFs at Mutukula Port Health where the Mobile lab was deployed
- Turnaround Time (TAT) average 6 hours
- All samples tested negative

"We have seen and tested the potential of mobile laboratories that has enabled us achieve this level of success. In future we need more mobile laboratories in Uganda because the country is big. We need about 10 mobile labora-



tories equipped and distributed across the different regions in Uganda to bring the services nearer to the samples. This also ensures that turnaround time drops, results are more instant and enhances capacity to test bigger and better parameters like genomics, drug resistance to mention but a few", adds Godfrey.

In 2023, Uganda received a state-of-the-art mobile laboratory that can run both bacteriological and virological samples at the point of care at the 2023 Russia-Africa Summit. Another mobile laboratory was received from the EU-IGAD COVID 19 Response program. With this latest addition, Uganda now boasts offour (we already had 2 form East Africa community) type 3 mobile laboratory trucks within its laboratory sector.

"By end of 2024, we will have another truck mounted mobile laboratory from the East African Community Laboratory Network that will be focusing on anti-microbial resistance. It will move across the country in areas of interest or low coverage on AMR testing", Godfrey proudly adds.

NHLDS mobile laboratory team in partnership with other countries of Germany, Uganda, Greece, Austria are in discussion to design and pilot what is called the "Green mobile Laboratory". Unlike the old versions, the green laboratories integrate climate change mitigation and environmental protection.

"Uganda and another Europe-



an country will pilot the green mobile laboratory before it is scaled to other countries. The nature of the green mobile lab, it does not emit bad gases when using equipment or running a generator to run the equipment. The options are adopting solar instead of electricity or other forms, reduce water use, and treat waste by digestion by chemicals than burning among other environmentally friendly innovations. The aim is to ensure the Laboratory sector contributes to a green environment," Godfrev adds.

However, the achievements have not been without challenges;

To date, Uganda has only 40 staff trained on operation of mobile laboratories across the county. This calls for capacity building in order to have a a vast team of experts to run the mobile laboratories in case of outbreaks or emergencies. Additionally, as a new initiative, there is lack of regulatory/operation frame-

work for mobile labs that covers, deployment, decommissioning, Quality Management Systems & Bio Safety and Bio Security of mobile labs.

The use, maintenance and other logistics for the Mobile laboratories infrastructure require a meaningful budget to sustain all the Mobile laboratories and realize the achievements that we see.

What the future of Mobile Laboratories looks like:

NHLDS anticipates to expand the scope and operations of mobile labs beyond their initial service;

1. Expand scope beyond molecular diagnostics of VHFs to cover other diagnostic assays; ELISA assays for VHFs, ELISA bacterial etiologies (Brucella), Anthrax detection and many others that the open system can handle



- 2. Regular field training/simulation exercises for competence, confidence building and preparedness
- 3. Develop a policy/ regulatory framework that covers operations, deployment & decommissioning of Mobile Labs.
- 4. Deploy Whole Genomic Sequencing in Mobile Laboratories to facilitate pathogen discovery, understand transmission and help in control of diseases

What experts say:



"The mobile laboratory is very critical in the containment of several diseases and outbreaks because with the mobile laboratory, a testing facility is set up at the point of outbreaks thereby limiting the spread as much as possible and be valuable to the patients and population in the remote areas, near border crossings and the most vulnerable populations in order to receive better medical services" Hon Margaret Muhanga – State Minister for Health for Primary Health care



"Experts from developed countries are coming to Uganda to understand how we managed COVID-19 to that level that we did not lose many people with a fragile health care system; we lost the least number of people globally.

I also thank the Laboratory fraternity for taking the bold stand to set up a mobile laboratory in Mubende during the Ebola outbreak, we became the first country to undertake such action towards a dangerous pathogen that saw us contain the virus in just 10 weeks that has taken other countries two years to manage. This also shows that CPHL has the capacity to handle samples that were previously taken to Atlanta.

I therefore urge our Parliamentarians to advocate more funds to the laboratory sector to reduce dependence on donors," **Dr. Diana Atwine- Permanent Secretary MoH.**



We have a greater need for access to these mobile laboratory trucks as a sector. We request that at least one mobile laboratory is made available for each of the 16 medical regions across Uganda (Regional Referral Hospitals and develop both human and technical resources to efficiently operate and manage these mobile laboratory trucks to ensure full utilization", Patrick Ogwok- NHLDS Quality Assurance Director.



PICTORIAL





L-R: Tony and Godfrey stand in front of one of the mobile lab truck during the World malaria Day in Kibuku.



Community members line up to be tested by the mobile lab team in Kibuku.



Deputy Speaker of Parliament Rt. Hon. Thomas Tayebwa after inspecting the mobile lab during the World malaria day in Kibuku.



NHLDS staff conduct tests inside the mobile Lab.



Global Fund CEO Mr. Peter Sands inspects the mobile lab at NHLDS during his visit to Uganda on 1st May, 2024.



Mobile Lab trucks parked at Kibuku Primary school ready to serve the community during the world malaria day.

NEWS HIGHLIGHTS

NHLDS HOSTS THE GLOBAL FUND EXECUTIVE DIRECTOR



2 nd May, 2024: NHLDS hosted the Global Fund Executive Director Mr. Peter Sands to assess the impact of Global Fund investment in the health sector. He toured the reference Laboratories at NHLDS and thereafter held a high level meeting chaired by the minister for Health Dr. Jane Ruth Aceng.

Dr. Susan Nabadda, the NHLDS Commissioner requested to submit the three specific asks the department wanted the GF to prioritize including;

Expansion of the National Calibration Center to

increase its scope that would enable it service the whole country and the region.

- the National Reference
 Laboratory beyond TB,
 Malaria and HIV to support Non communicable
 disease, Antimicrobial resistance, nutrition
 , Reproductive health
 and neglected tropical
 disesase and become a
 regional centre for pandemic preparedness.
- Expand the Laboratory scope, infrastructure and human resource needs and support the NRL to become the regional cen-

ter of Excellence in Africa for malaria.

In his brief remarks Mr. Sands informed his hosts that he was happy to be in Uganda. He added that he was so much interested in discussions on malaria owing to Uganda's location in the tropics, HIV/AIDs due to Uganda's leading progress in combating the pandemic in Africa as well as TB.

From here Mr. Sands joined the team in Kibuku for the commemoration of the International day against malaria.

Launch of the National Laboratory Guidelines for Preparedness and Response to Public Health Emergencies.



The Ministry of Health I has launched the National Laboratory Guidelines for Preparedness and Response to Public Health Emergencies. Developed by the National Health Laboratory and Diagnostic Services (NHLDS) with support from the Center for Disease Control, Uganda, these guidelines aim to enhance Uganda's health service provision.

Dr. Charles Olaro, Director of Curative Services, presid-

ed over the launch and commended the team for their efforts in advancing public health in Uganda and Dr. Allan Muruta the Commissiner of Intregrated Epidemeology and Survellaince - Ministry of Health.

The guidelines aim at enhancing the national capacity for detection, prevention, and response to the ever emerging and re-emerging public health events/ emergencies, support the incident management teams

during outbreaks and outline tasks for the different stakeholders during response.

The Guidelines also aim at providing guidance to enable prevention, early detection of and rapid response to infectious disease threats that can cause Public health emergencies.







NHLDS hosts the National Aids Control Program.



"The Lab tests and research in HIV/AIDS have enabled us to obtain information for strategic planning in the prevention and treatments of HIV/AIDS epidemic in Uganda. We now look forward to working together to address emerging challenges like drug resistance, tracing new infections as well as HPV screening among women living positively with HIV/AIDS," Dr. Kirungi STD/ACD program.

The Commissioner NHLDS Dr. Susan Nabadda and

top management team at NHLDS hosted the Ministry of Health National AIDS Control Program (STD/ACP) team led by Assistant Commissioner Dr. Robert Mutumba. The team visited NHLDS as part of the collaborative efforts the two entities bring to HIV/AIDS epidemic response in Uganda.

The MoH STD/ACP team comprised of Dr. Robert Mutumba, Dr. Wilford Kirungi, Dr. Tumwesigye Patrick, and Lordwin Kasambula.

The team toured NHLDS's state-of-the-art Laboratories and National Calibration center led by Lab Director Dr. Isaac Ssewanyana before meeting with the top and senior management team to discuss the HIV/AIDS related services offered at NHLDS.

In his remarks, Dr. Mutumba appreciated NHLDS for the tremendous work the laboratory and diagnostic sector has done towards HIV/AIDS prevention and treatment in Uganda.



"Testing is the entry point for individuals into the HIV/AIDS program and continues to play a critical role. I am happy to learn that we are now moving towards identifying the unknown HIV patients which requires energy and innovation as we progress towards 95:95:95 epidemic control targets," Dr. Mutumba.

He also commended NHLDS for the integration of services to include priority NCDS like diabetes and cervical cancer. It was at this point that he highlighted that the 36% cervical cancer positivity rate is

an alarm to increase cancer screening in Uganda.

"The high positivity rates are an alarm to ensure that all women eligible for cervical cancer screening are tested and treated," emphasized Dr. Mutumba.

On his part, Dr. Kirungi congratulated the NHLDS team for the great work and the growth the lab and diagnostic sector has undergone over the years. He added that testing, surveillance, and treatment monitoring done by the lab sector have greatly contributed to the success of the Aids program in Uganda.

The AIDS Control Program is implementing Phase-V that aims at taking the national AIDS and STD response towards the attainment of United Nations' Sustainable Development Goals 3.3 of ending the HIV/AIDS epidemic as a public health threat by 2030 through a comprehensive package of prevention, detection, and treatment services.

NHLDS and Bill & Melinda Gates Foundation Team Discuss Micro Nutrient Surveillance Program in Uganda.



NHLDS hosted the Team from Bill & Melinda Gates Foundation to discuss the Micro Nutrient surveillance program to be undertaken by MoH Uganda- Department of National Health Laboratory and Diagnostic Services (NHLDS) in partnership with the MoH Community Health Department (Nutrition Division), Uganda National Bureau of Stan-

dards (UNBS) and Makerere University College of Sciences (Department of Bio chemistry). The program which is in its early stages of implementation was launched in April 2023 that will see NHLDS venture into Uganda's nutrition sector with an ambitious program to integrate micronutrient testing in public health laboratories.

"This is our new baby at CPHL. Uganda has been actively implementing food fortification and supplementation to combat nutritional deficiencies within the country. However, we have lacked the mechanisms and capacity to assess the impact of these interventions and identify regions suffering from nutritional deficiencies.

Therefore, at CPHL, we are utilizing catalytic funding from the Bill & Melinda Gates Program and other nutri-Foundation through Micronutrient Forum to establish the capability to conduct micronutrient evaluations.

This will enable us to support the National Nutrition tion initiatives by measuring their impact and identifying at-risk communities. We are working in collaboration

with IGAD Nutrition Surveillance, supported by USAID, and Uganda is now seen as the country to lead and support the region," Dr. Isaac Ssewanyana.





Supra National TB Reference Laboratory Regional Steering Committee meeting.



National TB Reference Laboratory, a reference laboratory under the Department of national health laboratory and diagnostic Services, also serving as the Supra National TB Reference Laboratory participated in



the Regional TB Laboratory Steering Committee meeting in Nairobi- Kenya. The meeting focused on improving collaborations, information sharing and capacity building to support effective public health response and preparedness within the Region.

The meeting was co-chaired by the Commissioner NHLDS Dr. Susan Nabadda who is also the chair of the Laboratory Directors of Africa Forum.

The Uganda National Tu-

berculosis Reference received the Supra national TB refence status by WHO WHO in April 2013, making it the first Supranational reference laboratory (SRL) in East Africa, and Sub-Saharan Africa to achieve this status.

Kenya National Accreditation Services Visits Uganda's National TB Reference Laboratory.

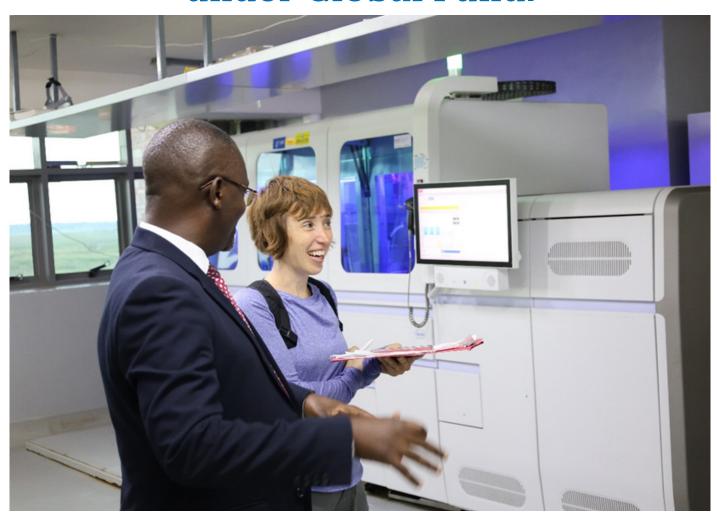


The National TB Reference Laboratory (NTRL) recently hosted Mr. Martin Chesire, President of the Kenya National Accreditation Services (KENAS), and his team for a courtesy visit to the Supra National Laboratory in Uganda. This visit underscores the critical

need for accreditation and regional cooperation in advancing public health standards and services.

During the visit, discussions focused on enhancing laboratory accreditation processes and fostering stronger regional collaboration to improve disease surveillance and response capabilities across East Africa. The engagement highlights the importance of unified efforts in addressing public health challenges and ensuring high-quality laboratory practices.

NHLDS Show cases its Achievements under Global Fund.



1 st May, 2024: The National Health Laboratory and Diagnostics Services (NHLDS) welcomed the Global Fund Communications team, led by Elise Walter, to document the Department's achievements over the years resulting from Global Fund investments. The visit aimed to showcase some of the significant milestones attained.

The team's itinerary included a visit to the Wakiso Epi-

center in Temangalo and the Wakiso Health Center IV, where they were given a firsthand demonstration of the National Sample and Results Transport Network. This demonstration provided the team with insight into how the system operates to support the laboratory sector effectively.

Following this, the team proceeded to the offices of the National Water and Sewerage Corporation in Bugolobi, where they observed the laboratory's waste water-based surveillance in action.

The team then visited the NHLDS headquarters, where they were treated to an extensive tour of the Calibration Center and the National Reference Laboratories.

Nanopore Sequencing Workshop.



The Nanopore Sequencing Workshop, facilitated by The Digital One Health Lab from the University of Edinburgh and hosted by NHLDS, took place on the 26th and 27th of February, 2024 at the NHLDS office in Butabika.

Participants engaged in both laboratory and theoretical data and bioinformatics analysis sessions. Dr. Susan Nabadda, Commissioner of NHLDS, inaugurated the training alongside NHLDS Top Management, including Lab Director Dr. Isaac Ssewanyana.

"This workshop signifies a crucial step forward in enhancing our capacity for One Health Digital Surveillance efforts. The goal of this workshop is to equip participants with the necessary skills to contribute effectively to One Health Digital Surveillance initiatives," Dr. Susan Nabadda.

The workshop covered various aspects of DNA analysis, including DNA extraction

from bacterial cultures, Nanopore sequencing library preparation, sequencing techniques, and whole-genome sequence bioinformatics analysis.

The workshop's primary objective was to train and bolster the capacity for One Health Digital Surveillance initiatives. It aligns with the donation of Nanopore equipment and consumables aimed at enhancing in-country capacity across various Ministries, Departments, and Agencies









Genomics Pathogen surveillance Dashboard workshop.



NHLDS conducted a five day workshop in Jinja to develop monitoring indicators for Genomics Pathogen surveillance dashboard. The training was supported under Stellar Project –Global fund, Ministry of Health. The workshop was attended by NHLDS staff from Genomics, ICT and M&E departments.

"Uganda has made strides to strengthen genomic surveillance capacities for SARS- CoV-2 and other pathogens with pandemic and epidemic potential, however, efforts are needed to strengthen, stabilize and sustain this powerful technology; building national capacity shall support establishing a robust genomic surveillance system. Therefore, designing a dashboard and defining indicators for routine pathogen genomic surveillance of public importance shall be a powerful tool in shaping policies in the management

of diseases and outbreak investigations", Say Alisen Ayitewala the Genomics Lab manager..

The workshop aimed at designing user requirement specifications for the National Pathogen Genomic Surveillance Dashboard and Defining epidemiological indicators that shall be monitored by the National Pathogen Genomic Surveillance Dashboard

Genomic surveillance is

transforming public health action by providing a deeper understanding of pathogens, their evolution and circulation. Used with clinical, epidemiological and other multisource data, genomic data for pathogens with pandemic and epidemic potential inform risk assessments, the development of vaccines, therapeutics, diagnostic assays, and decisions on public health and social measures.



It has been highly documented that, the Laboratory services globally and especially in the African region, are lagging behind in the attempt to provide an efficient Health Package to the population served. And in this. Tuberculosis laboratory services are amongst the least attended to. So, because of this challenge, WHO established a network of Supranational TB Reference Laboratories (SRL), with a sole aim of the identified SRL being able to

provide the highly needed technical assistance to other Laboratories performing TB diagnosis and especially the National TB Reference Laboratories (NTRL).

The Uganda National TB Reference Laboratory has established different training programs as a mechanism of providing technical expertise to other laboratory staff from within and outside the country. Different countries across Africa routinely send their laboratory

staff to SRL/NTRL- Uganda for the various training module offered at the facility. The trainings offered at the NTRL include: FM and ZN microscopy, LJ and MGIT culture, 1st and 2nd line LJ DST, 1st and 2nd line MGIT DST, 1st and 2nd line LPA, genexpert, preparation of Laboratory PTs, quality management system, Biosafety, Laboratory information system, Laboratory management among others.

NHLDS Pioneers two fellows for the Uganda Public Health Fellowship program – Laboratory Leadership Track.



Minister Muhanga with the fellows, their mentors and other government officials.

The Ministry of Health launched the Uganda Public Health Fellowship program in 2023, specifically focusing on the Laboratory Leadership Track. The pioneering cohort of the fellowship program consists of five fellows, two of whom are from the National Health Laboratory and Diagnostic

Services Department; Annet Martha Nankya from Uganda Virus Research Institute, Anthony Kiyimba from National Health Laboratory and Diagnostic Services-MOH, Priscilla Atim from Infectious Diseases Institute-Uganda, Shem Mwebaza from Mild May Uganda, and Leah Naluwaga Bali-

runo from National Health Laboratory and Diagnostic Services-MOH.

The Laboratory Leadership Program is a comprehensive two-year, in-service training fellowship. During this period, participants dedicate their efforts to enhancing their competencies in various aspects of laboratory leadership. These aspects include lab-based surveillance, lab quality management systems, policy and management, as well as outbreak investigation and coordination.

Specifically tailored for laboratory professionals, lab scientists, and lab technologists, the Lab Leadership Track Fellowship aims to equip them with vital leadership skills to effectively manage laboratory health systems.

The program was conceived through a collaborative effort between the Ministry of Health and the Global Laboratory Leadership Program, with a primary goal of enhancing the capacity of laboratory professionals in handling emerging and re-emerging diseases.

This program offers a valuable post-graduate oppor-

tunity, enabling fellows to acquire technical and managerial skills essential for senior management roles within public health laboratory complex systems. Successful participants are awarded a prestigious post-graduate certificate upon completion, signifying their readiness to take on significant responsibilities in the field of public health laboratory management.

Meet the two fellows from NHLDS.

Leah Naluwagga Baliruno

1. Who is Leah?

I am a Laboratory Technologist working at NHLDS, under the EID/ Viral Load department from 2015 to present. I hold a Bachelor's degree in Biomedical Laboratory Technology, as well as a Master of Science degree in International Infectious Disease Management, both from Makerere University. By God's grace, I was

accepted as a Fellow for the Uganda Public Health Fellowship Programme under the Laboratory Leadership track on merit.

2. What are your aspirations in this fellowship and beyond?

My career objective is to translate scientific knowledge into lasting impact in the health sector and beyond, bridge the gaps between science and policy and strengthen laboratory



capacity and tackle health challenges through multidisciplinary and trans-disciplinary approaches.

3. How has been the first 5 months of your placement at NHLDS?

The fellowship is part-time, where the fellows continue to work at their respective workplaces. During the past 6 months, I can say I have learnt a lot. I have been able to work and learn with my

host site mentor Dr. Harriet Nakigozi and other mentors, the M&E Manager and the department while working on a short-term project which focused on evaluating sample receipt turnaround time for Kigezi Region, which was expanded to include 8 other regions, and subsequently, a continuous quality improvement project was derived for the Kigezi region. This has been very instrumental in guiding me on how to make

sense of the data generated by the laboratory, and how to use it for evaluation and continual programme improvement.

4. What has been your proudest moment?

Presenting at the launch of the Global Laboratory Leadership Programme in Uganda was a great moment and a testament to how far we, as the laboratory have come.

Anthony Kiyimba



• Who is Anthony?

Anthony Kiyimba is a laboratory scientist working with the National Health Laboratories and Diagnos-

tic Services -Ministry of Health, Uganda. He has a Master of Science degree in Immunology and Clinical Microbiology from Makerere University with vast experience and training in advanced laboratory diagnosis of infectious disease especially TB, Malaria and HIV. He also has experience in establishing and maintaining laboratory quality management systems, Laboratory Safety and Biosecurity with desire to extend quality laboratory services to the common person.

• Aspirations in the fellowship and beyond

I look forward to further developing my leadership knowledge through acquiring competence skills in laboratory systems and infrastructure, leadership, laboratory based-disease surveillance and outbreak investigation, laboratory policies, program management and communication. I intend to contribute to strengthening the laboratory systems in Uganda and the region through building resilient quality and management structures to support laboratory disease surveillance and outbreak investigations.

How has been the first5 months of the fellowship?

The first 5 months of the fellowship have offered me an opportunity to extend critical laboratory technical expertise and service to community on behalf of

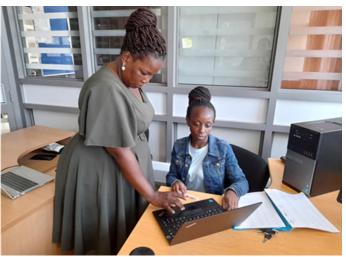
Ministry of Health. This has been through the field deployments to support, coordinate and build capacity at regional and district laboratories especially during Anthrax outbreak investigation in Ibanda district, Cholera outbreak in Buvuma, Cassava Cyanide poisoning in Kasese, Rabies outbreak in Masaka and the recent suspected food poisoning at Nakanyonyi Secondary School in Mukono.

• What has been your proudest moment during the fellowship?

I successfully coordinated the laboratory investigation of suspected cassava cyanide poisoning in Kasese in collaboration with the Government analytical laboratory, police and ministry of health emergency response team. It was also my pleasure to be an editor for the Uganda National epidemiological bulletin in quarter

one of this year. Also publishing an article in the new vision advocating for the fast tracking of the establishment of mobile laboratories was another happy moments most especially now that government has started procurement of the advanced mobile laboratories.





L-R: Dr. Harriet Nakigozi conducting the didactic session of Laboratory Leadership fellows on Continual Improvement strategies in May 2023 at UPHFP premises as Kim Lewis from GLL and APHL is observing the session. On the other hand (R) Dr Harriet is offering guidance or mentorship to Leah Naluwagga on her continuous improvement project at NHLDS -MOH Premises. Butabika.



UPHFP-LLP fellows and staff (Mentors).

NHLDS BIDS FAREWEL TO DR. CHRISTINA MWANGI



NHLDS family held a farewell dinner in honor of Dr. Christina Mwangi who is retiring as the CDC Laboratory Branch Chief for Uganda. The diner held at Mestil hotel was hosted by the Director General of Health services Dr. Henry Mwebesa. Dr. Christina is honored for her distinguished service and regional milestones of Africa's Champion of Laboratory medicine.

Community Outreach through Health Camps.

In the first quarter of the I vear, the National Health Laboratory and Diagnostic Services (NHLDS), through its Community Health Engagement Department, conducted two significant camps. Supporthealth ed by the Buganda Kingdom and other partners, the first camp took place at Bulange Mengo, attracting thousands who accessed free testing services for TB, sickle cell disease, cancer, malaria, and HIV/AIDS. The event was officiated by

Buganda Premier, Owek. Charles Peter Mayiga, and Prince Jjunju.

During his address, Owek. Mayiga urged the community to avoid self-medication, a major cause of antimicrobial resistance in Uganda. He also emphasized the importance of regular health testing and timely treatment.

Following the success in Bulange Mengo, the team continued to Katakwi for a two-day event as part of the International Women's Day celebrations, presided over by Vice President Hon. Jessica Alupo.

Below are pictorial highlights from both health camps.

Bulange:









Katakwi:





SPOT LIGHT OF THE MONTH



eet Tony Muyigi. Tony is a laboratory Technologist. an infectious disease specialist and Disease Surveillance and Outbreak Response cal Officer. He is a Laboratory Manager at the National Health Laboratory and Diagnostics Services (NHLDS). Tony is in charge of the effective laboratory surveillance and response to public health threats and This involves the outbreaks. development, planning and implementation of laboratory activities that can detect and respond to outbreaks in a timely and effective manner.

Over the years, he has been at the forefront of response to major disease outbreaks: Marburg, Cholera, RVF, and Anthrax among others. During the Covid-19 Pandemic and the 2022 Sudan c19 in Tororo General Hospital and Ebola Diagnosis at the Epicenter in Mubende using the Mobile laboratory.

Tony believes his strength lies in building capacity among health care workers through training, mentorship and supervision. In the mobile laboratory space, he has supported the training of a pool of over 60 laboratory staff in the operation of the mobile laboratory, Biosafety and biosecurity, field response procedure, quality management and sample management.

His passion is protecting public health by preventing and controlling the spread of infectious diseases.

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