



Laboratory Infrastructure to enhance access to diagnostic services country-wide

Message from the Permanent Secretary, Ministry of Health **DR. ASUMAN LUKWAGO**

The 10th Ordinary Meeting of the East African Community Multi-Sectoral Council of Ministers of Health was held from 13th – 16th October 2014, at the EAC Headquarters in Arusha. The Republic of Uganda was represented by the Honorable Minister of Health Dr. Elioda Tumwesigye. At the meeting, the status of implementation of Ebola Virus Disease (EVD) preparedness and response interventions at regional and national level were reviewed. The delegates also:

1. Approved the EAC Regional Ebola Emergency Preparedness and Response Plan of Action and directed the EAC Secretariat to mobilize USD 750,000 from the EAC reserve fund to support implementation.
2. Approved the “East African Community Integrated

Disease Surveillance Network (EAIDSNet)” as the regional focal point (Hub) for the “African Union Network of Infectious Diseases (the AUNIDS)”.

3. Approved the establishment of an EAC Regional Emergency Preparedness and Response Task Force on Ebola Virus Disease and other communicable diseases in the EAC.
4. Directed the EAC Secretariat to facilitate harmonization of the Standard Operating Procedures (SOPs) and Guidelines for screening passengers across the borders and international ports of entry in the EAC in line with IHR (2005).
5. Directed the EAC Secretariat to convene a regional meeting of experts within ten days to provide technical guidance on



models to address the existing logistical, human resource and infrastructural challenges of implementing regional and national level epidemic preparedness and response actions.

6. Urged partner states and directed the EAC Secretariat to implement the recommendations of the meeting of the EAC Partner States National Civil Aviation Authorities (NCAAs) and National Airport Authorities (NAAs) held in Entebbe, Uganda on 21st August 2014.
7. Urged partner states and relevant



Inside this Issue:

Message from the Permanent Secretary, Ministry of Health, Dr Asuman Lukwago:

1

Message from the Director General of Health Services, Dr. Jane Ruth Aceng:

2

EAPHLN Satellite Laboratory Highlights: Mbale Regional Referral Hospital:

3

Uganda holds table-top simulation for handling of Ebola Virus Disease:

5

Laboratories kick-start Performance Based Financing for accreditation in 2014:

7

EAPHLN addresses compliance with Laboratory Internal Audits based on ISO15189

8



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partner states' institutions to implement resolutions of the EAC Regional High Level Multi-Sectoral Ministerial meeting on emergency preparedness and response to Ebola Virus Disease (EVD) held in Nairobi, Kenya on 17th September 2014.

8. Partner States committed to contribute assorted teams of medical experts, health workers and funds to support Ebola Virus Disease Containment in West Africa.

As disease outbreaks continue to threaten the lives, health and productivity of the populations in Uganda, infrastructure for the health sector in Uganda is undergoing rapid transformation. This infrastructure will enhance the quality, access, effectiveness and efficiency of service delivery to the catchments.

The Government of Uganda, cognizant of the global and international response to these epidemics is working in concert with our development partners like the World Bank, to construct and refurbish several hospitals across the country (by the Uganda Health Systems Strengthening Project).

Laboratory services have not been left unattended to either. These are also gradually improving to enhance their capacity to timely confirm etiology of ailments and other diseases (diagnosis) as well as support treatment and care for numerous diseases amongst the population.

The World Bank, through the East African Public Health Laboratory Networking Project (EAPHLN), is supporting the Government of Uganda to construct key laboratories at selected satellite sites. These include the National Tuberculosis

Reference Laboratory (NTRL) in Butabika where ongoing civil works are close to the forty percent mark.

Civil works at the Mbale Regional Referral Hospital Laboratory are expected to commence in early 2015. The EAPHLN is also addressing other key issues in the laboratories that include the setting of and adherence to laboratory standards; establishing laboratory quality management systems; laboratory based epidemic preparedness and response; staff training and many others that are documented in this bulletin.

We look forward to continued collaboration with the World Bank and the East Central and Southern Africa Health Community (ECSA-HC). We are grateful for the partnerships that we have with other countries in Sub-Saharan Africa and especially those that are currently utilizing the services of our Supranational Reference Laboratory for Tuberculosis at Wandegaya.

Merry Christmas and Happy New Year to you all.

For God and my country. ■



Uganda's mobile health system to be used for regional disease surveillance

Message from the Director General of Health Services

DR. JANE RUTH ACENG

On the 11th of November, 2014, Uganda was declared free of Marburg hemorrhagic Fever (Marburg HF) by the Ministry of Health. The declaration came after completion of the 42 days of the Post-Marburg Surveillance countdown period





stipulated by the World Health Organization.

Allow me to reiterate that the Ministry of Health is committed to ensuring the lives, health and productivity of all Ugandans. This commitment translates into concerted efforts to combat communicable and non-communicable diseases' events and outbreaks.

In 2011, Uganda developed a robust mobile telephone-based system for disease surveillance and early warning known as mTrac. Mtrac was designed for the purposes of real time data collection, verification, accountability and analysis of aggregate data as well as community engagement for the improvement of health care service delivery. Uganda's neighbors in the East African region will be able to benefit from surveillance and laboratory information from the mTrac through a new regional mobile-based system known as eEAIDSNet.

The eEAIDSNet is a joint collaboration between the Ministry of Health (through the EAPHLNP) and the East, Central and Southern Africa Health Community (ECSA-HC). The eEAIDSNet will greatly enhance the response to epidemics and outbreaks within the East African region by quickly relaying messages of a critical nature across the participating member states. This will simplify the process of mounting a joint response to contain any outbreak.

This eEAIDSNet collaboration will go a long way in protecting the communities in Uganda specifically and those in the wider east, central and southern regions of Africa.

It is with such good news that I wish you a safe and healthy festive season and a productive new year.

For God and my country. ■

EAPHLN Satellite Laboratory Highlights: Mbale Regional Referral Hospital

By Okidi Henry, Principal Laboratory Technologist / Head of Clinical Laboratories Mbale Regional Referral Hospital/ Regional Laboratory Coordinator - Eastern

Mbale Regional Referral Hospital is one of the six satellite sites supported by the World Bank-funded EAPHLN Project in Uganda. The EAPHLN support is targeted toward strengthening quality access, efficiency and effectiveness of laboratory services at Mbale Regional Referral Hospital.

Specifically, this support is directed towards:

- Enhancing laboratory based surveillance and response to epidemic-prone disease outbreaks.
- Training and capacity building of health workers and laboratory workforce.
- Establishing and sustaining the laboratory quality management system (LQMS).
- Conducting joint operational research activities.
- Supporting monitoring and evaluation of delivery of laboratory services in the catchment area.
- Supporting the use relevant information and communication technologies in the laboratory.

Some of the major activities that have been implemented so far:

- Responding to disease outbreaks (surveillance), for example, cholera, and the cross-borders investigation conducted in May 2012.
- Surveillance of multi drug resistant Tuberculosis in Bugisu and Sebei region of Uganda.
- Training and capacity building of health workers and laboratory workforce in research methodologies and data management for operational research.
- Establishing and sustaining the Laboratory Quality Management System towards accreditation using the SLMTA and SLIPTA approaches.
- Monitoring and evaluating the progress of implementing quality improvement activities and plans in the laboratory.
- Installation of computers, printers, modems and laboratory information system in the laboratory.
- Support supervision of peripheral site laboratories to the 14 districts in the Bugisu and Sebei region of Uganda.)
- Management review meetings with District Laboratory Focal Persons & District Disease Surveillance Officers.

Administrative achievements made through EAPHLN at Mbale RRH:

- The management of Mbale Regional Referral Hospital, using the Hospital Master Plan of 2010 - 2030, identified a suitable location for the construction of the proposed new laboratory. A ground breaking ceremony will be held early next year (2015).





- EAPHLN trained a resident mentor who in turn supported the establishment and sustaining of the LQMS.
- The hospital hosted an EAPHLN training workshop in bio-safety and bio-risk management comprising thirty laboratory personnel.
- EAPHLN supported the cross border outbreak investigations with Busia District (Kenya) for Cholera and other communicable diseases in 2012 and 2014.
- EAPHLN provided facilitation and funding for support supervision and on-job training of peripheral site laboratory personnel around Mbale on several thematic areas which included sample packaging and shipment for epidemic prone diseases.
- The EAPHLN also deployed Gene-Xpert technology for surveillance of Multi Drug Resistant Tuberculosis (MDR-TB).
- Mbale Regional Referral Hospital participated in the regional peer assessment by ASLM trained assessors from the project using the WHO AFRO SLIPTA checklists based on ISO 15189.
- EAPHLN supported laboratory management to implement quality improvement projects and

activities (QIPs) in accordance with site-specific work plans and budgets.

- The laboratory management was enabled to develop its own work plan from external and internal audits that identified non-conformities. The non-conformities translated into QIPs for continuous quality improvement.
- Deployed hardware and software for ICT, hence creating an enabling environment for better computing and data management in the laboratory.

Key lessons learned so far include:

- The generation of satellite site-specific work of plans and activities within the specified budgetary allocation and time frames is very important.
- The development and deployment of site-specific normative documents and policies for the laboratory, such as the quality and bio-safety manuals and the clinician's handbook promotes ownership of the quality of services being offered at the facility. However, sustained effort and commitment is required to establish gains registered.
- Conducting internal audits and following up on the root-cause analysis, reviewing recommendations made and performing corrective actions cognizant of the non-conformities boosts morale of the laboratory staff significantly over time. ■



The Hospital Director Dr. Wanume Benon, (2nd from left) Mr. Bwonyo Patrick Quality Officer (3rd from left), Mr. Okidi Henry-Lab Manager (2nd from right) and Mr. Sisye David- Safety Officer (Right) sharing a light moment after a Laboratory Quality Management System Improvement Meeting.





Uganda holds table-top simulation for handling of Ebola Virus Disease

By Martin Matu, ECSA-HC Laboratory Specialist and Dr. Adatu Francis, Assistant Commissioner, National Disease Control, MOH

Early in the month of October this year, at the Rwizi Arch Hotel in Mbarara District in Western Uganda, the East, Central and Southern Africa Health Community (ECSA-HC), the East African Community (EAC) and the Ministry of Health of the Republic of Uganda (through the EAPHLNP) convened a cross-border meeting between the bordering districts of the Republic of Rwanda, the Republic of Uganda and the United Republic of Tanzania.

These cross-border meetings were accompanied by a table-top simulation training in order to prepare the respective border districts in the Republic of Rwanda, Republic of Uganda, Republic of Burundi, Republic of Kenya, the Democratic Republic of Congo (North and South Kivu) and the United Republic of Tanzania for handling the Ebola Virus Disease (EVD) Outbreak.

The simulation exercise was facilitated by experts from the Food and Agriculture Organization of the United Nations (UNFAO) and the Department of Veterinary Services, University of Nairobi.

The exercise was conducted to assess the level of emergency preparedness and response capacity for Ebola and Viral Haemorrhagic Fevers (VHFs) outbreak in the EAC Partner States and North & South Kivu provinces of the Democratic Republic of Congo (DRC).

In addition, the exercise would be used to identify gaps so as to strengthen the surveillance and response system within the region.

What were the objectives of the simulation?

The specific objectives of the table top simulation exercise were to;

Assess the level of preparedness and ability to detect VHF and contain a VHF outbreak at the cross-border areas;

Raise awareness of the roles, responsibilities and immediate emergency response actions of the participants in surveillance, laboratory testing, confirmation and risk communication;

Test application of best practices of the 'One Health' approach; Strengthen partnerships and the

emergency response capacity of the participants;

Test the efficacy of the preparedness tools, for example, World Health Organization guidelines, selected standard operating procedures and contingency plans of the participating organizations and to;

Test the coordination of emergency response at sub-national, national and regional levels.

How was the simulation performed?

The table-top simulation contained three scenarios with different levels of complexities beginning with simple to more complex moves and table-top demonstration of donning and doffing personal protective equipment (PPEs).

The first scenario contained three moves (from simple regular clinical case to confirmation of initial cases of Ebola). The second scenario contained two moves (increase in Ebola cases from contacts requiring improved clinical support and communications to the communities) and the third scenario contained





Clockwise: Participants demonstrate how to use personal protective equipment (PPE). **Above:** participants in a brainstorming session



three moves (cases requiring establishment of burial teams to final control and outbreak control).

The moves assessed the responses of various stakeholders involved in outbreak management including disease surveillance and the laboratory (diagnostics); case management (clinical staff); risk management; coordination (policy makers and heads of programs) and supportive services (communication, immigration; security officials etc). The different stakeholders were expected to develop response actions appropriate for their functional areas and to coordinate, as would be necessary, with other groups.

This methodology proved to be effective in identifying response actions and providing participants with an opportunity to develop command, control and coordination of their action plans necessary for a meaningful response to an Ebola outbreak within their countries. It also identified gaps in the systems that would need to be addressed to improve the response systems and processes.

Following discussions during the exercise, several recommendations were made to enhance preparedness for EVD and communicable diseases of public health concerns in the participating states. Some of the recommendations included the following:

1. Enhance sharing, publication and dissemination of surveillance information between neighboring districts, regions and counties within countries and across the borders in the EAC region;
2. Establish communication inventory by exchanging personal and official contacts with each individual (mobile and email) to enhance free cross-border communication amongst participants and other officials on health matters;
3. Strengthen local community-based surveillance system to ensure early detection and rapid prevention, control and responses to communicable diseases in the region;
4. Develop and/or finalize national and regional contingency emergency preparedness and response plans on Ebola Virus Disease (EVD) and other highly communicable diseases of International Public Health Concern (IPHC) and update them regularly through simulations and other experiences;
5. Advocate for in-country and regional emergency outbreak response fund that is readily/easily accessible during outbreaks of various highly communicable diseases of International Public Health Concern (IPHC);



6. Plan and conduct regular tabletop drills and field simulation exercises (semi-functional and fully functional) for Ebola Virus Disease (EVD) and other highly communicable diseases of International Public Health Concern (IPHC) at cross-border zones.

Doing this would improve the skills and confidence of the frontline health workers and Rapid Response Teams (RRTs) within and between the respective districts and countries.

The District Medical Officers of Health/Directors of Health Services and the District Health Management Teams (DHMTs) should take this up and ensure it is implemented within their respective districts in each country.





Participants also agreed to;

1. Create an archive website portal for Ebola Virus Disease (EVD) and other highly communicable diseases of International Public Health Concern (IPHC) and populate it with Standard Operating Procedures (SOPs) and various national and international guidelines;
2. Establish isolation facilities at regional, national and sub-national levels in each Country for Ebola Virus Disease (EVD) and other highly communicable diseases of International Public Health Concern (IPHC);
3. The EAC Secretariat in coordination with the EAC Partner States and various stakeholders and international collaborating development partners will facilitate the establishment and operationalization of a mechanism for joint use of public health laboratories within EAC region.

The laboratories would be used for specialized testing of Ebola Virus Disease (EVD) and other highly communicable diseases of International Public Health Concern (IPHC) by all the EAC Partner States and the neighboring countries such as the Democratic Republic of Congo, Ethiopia, Somalia and South Sudan in order to facilitate rapid confirmation and response to outbreaks.

4. The EAC partner states and the Democratic Republic of Congo should establish cross-border zones and committees to convene and conduct cross-border zone meetings in the gazetted districts and to address issues of common interest in disease surveillance and outbreaks management;

The simulation exercise was considered very successful by the participants, evaluators and observers. The participants' evaluation report was positive regarding processes and outcomes. The participants were also grateful for the hospitality from the Ugandan hosts. ■

Laboratories kickstart Performance-Based Financing for accreditation in 2014

By Dr. Simeon Kalyesubula-Kibuuka, M & E Specialist, MOH

Performance Based Financing (PBF) is an alternative health care financing strategy which offers health facilities the resources and incentives that they need to deliver quality services efficiently. In line with this, the East Africa Public Health Laboratory Networking Project (EAPHLNP) in liaison with the Ministry of Health are implementing this PBF system towards laboratory accreditation at the six EAPHLNP project sites.

PBF focuses on twelve laboratory quality management system essentials (QSEs) which are critical for a laboratory working towards accreditation. These are: Document and Records, Management Reviews, Organization and Personnel, Client Management and Customer Service, Equipment, Internal Audit, Purchasing and Inventory, Process Control and Internal/ External Quality Assessment, Information Management, Corrective Action, Occurrence/Incident Management and Process Improvement, Facilities and Safety

In August 2014, The Director General, Health Services (DGHS) assented to the Operational Manual that provides the operational guidance, processes, and procedures for all components of implementing PBF for Laboratory Accreditation in Uganda. This manual is guiding to ensure standardized, consistent, and transparent accountability during implementation of PBF for laboratory accreditation.

The table below shows the baseline results from five of the six sites implementing PBF for laboratory accreditation in Uganda:

Site	Absolute score	Percent	Stars	Remarks
Arua	172	66.6	2	Site needs to urgently fix management documentation to raise above 2 stars
Lacor-Gulu	152	58.9	1	This site has set the stage for greater heights in subsequent assessments.
Mbale	199	77.1	3	Addressing management reviews will take this site towards accreditation
Mbarara	209	81	3	This site has enormous potential for rising to 5 stars
Mulago	198	77	3	Management reviews and inventory management need urgent and focused attention

The baseline assessment was conducted in October 2014, using a standard WHO/AFRO SLIPTA checklist premised on ISO 15189. The progress of implementing PBF for laboratory accreditation will be reviewed regularly by all stakeholders at national and regional levels under the EAPHLNP.

The satellite sites have been encouraged to draft Work Plans to guide performance of the identified and agreed Quality Improvement Activities and Projects (QIPs) targeting do-able, low-lying but high impact (high scores) issues. ■





EAPHLN addresses compliance with Laboratory Internal Audits based on ISO15189

By Charles Manyonge, Laboratory Mentor (Mbale Regional Referral Hospital)

At the core of the laboratory quality management system (LQMS) lies continuous and never ending improvement (kaizen). This is done by assessing and reporting on the state of compliance, conformity and adherence to established standards and subsequent correction of identified challenges if the need arises.

The laboratory internal audit

component of LQMS has proved to be a persistent challenge in the Ugandan setting on the basis of previously conducted regional peer assessment exercises.

The training and capacity-building technical working group (TCB-TWG) of Uganda's EAPHLN quickly moved to address this poor performance. A harmonized internal audit training was scheduled between the 20th and 25th of July 2014.

The training intended to equip participants with the knowledge and skills needed to assess and report on the compliance and effective implementation of the laboratory quality management system in accordance with ISO 15189 and the WHO AFRO checklist. In addition, it was hoped that the training would be cascaded to develop capacity at peripheral sites using the same materials and mode of training.

The participants, handpicked from all the satellite laboratories, were taught (classroom-style) how to plan, prepare, conduct, report and follow up on an internal audit.

They were also able to articulate the various responsibilities of an internal auditor and the role of internal audit in the maintenance and improvement of management systems, in accordance with ISO 15189:2007.

Practical sessions were characterized by participants getting involved in planning, preparing, gathering evidence, interviewing and sampling of documents from Mulago Hospital which is one of the satellite laboratories under the EAPHLN. Doing this enabled participants to write factual audit reports accompanied by quality improvement projects which would help to improve the effectiveness of the quality management system at Mulago Hospital.

The laboratory mentors conducted follow-up sessions on the lessons learned by participants from their respective sites when they were deployed for mentorship between October and November. The fruits of this training will be known early in 2015 after the fourth regional peer assessment exercise (scheduled for mid-November 2014) has been done.



The EAPHLN family wishes you a **Happy Festive Season** and a **Prosperous New Year 2015**



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