GLOBAL HEALTH SECURITY AGENDA PILOT ASSESSMENT OF UGANDA

FEBRUARY 16 – 20, 2015

Global **Health**
Security Agenda

Global Health Security Agenda

EXECUTIVE SUMMARY
Global Health Security Agenda Pilot Assessment of Uganda
February 16 – 20, 2015

The Global Health Security Agenda (GHSA) was launched in February 2014, and it is an effort by 44 nations, several international organizations, and civil society to accelerate progress toward a world safe and secure from infectious disease threats; to promote global health security as an international priority; and to spur progress toward full implementation of the World Health Organization (WHO) International Health Regulations 2005 (IHR), the World Organization for Animal Health (OIE) Performance of Veterinary Services (PVS) pathway, and other relevant global health security frameworks. In order to encourage progress toward these goals, the "Action Packages" concept was developed to facilitate regional and global collaboration toward specific GHSA objectives and targets. Following the May 2014 GHSA Commitment Development Meeting in Helsinki, Finland countries identified eleven discrete GHSA Action Packages, which were discussed further at the August 2014 Global Infectious Diseases Meeting in Jakarta. These Action Packages fall under three main titles: Prevent, Detect and Respond.

During the GHSA Summit Next Steps meeting held in September 2014 in Washington DC, five countries volunteered to serve as pilot nations for external evaluation and assessment of GHSA capabilities. Pilot assessments of the two first countries (Georgia and Peru) have already been done, and **Uganda** is now the third country, followed by Portugal and the United Kingdom.

Given its multi-sectoral nature, and the need to liaise with several different ministries and agencies, the Uganda Public Health Emergency Operations Center (PHEOC) was requested to oversee coordination of the planning and implementation of carrying out the GHSA pilot self-assessment in Uganda. The PHEOC team met to review the assessment tool and developed a list of relevant ministries and subject matter experts who could provide the requested information. Two workshops, one in January, and the other in February this year were held in Kampala to gather representatives from the various ministries and agencies. Based on these meetings and process, a completed self-assessment report containing final information was submitted to the external assessment team on February 9th, 2015.

The GHSA Steering Group and Action Package Leaders have developed draft targets and indicators for the GHSA Action Packages, and these targets and indicators serve as the basis for the pilot assessments for these five nations, including Uganda. These assessments focus on targets and indicators and are not intended to assess pilot countries' International Health Regulations (IHR)

implementation status. Assessments are performed in order to determine the status of participating GHSA participating countries for the purpose of identifying the baseline situation and later measuring progress of work implemented in the eleven Action Package areas of significant importance for global health security.

Mission place and time

Kampala, Uganda; February 16 to 20, 2015

Mission team members

Simo Nikkari, Centres for Biothreat Preparedness and Military Medicine, Finland
Wilson Gachari, Division of Health Emergencies and Disaster Risk Management, Ministry of Health, Kenya
Khalid AbuHaimed, Ministry of Health, Kingdom of Saudi Arabia
Trevor Shoemaker, Viral Special Pathogens Branch – Centers for Disease Control and Prevention, United States of America

Mission team external observer

Nadège Leboucq, World Organization for Animal Health (OIE), sub-regional Representation based in Brussels, Belgium

Objectives

In brief, the primary objective was to assess the application of the GHSA Assessment Tool (version December 8, 2014) using information, data and observations on those structures and functions in Uganda, which are included in or relevant for the 11 Action Packages of the GHSA Action Packages document (version adopted in September 26, 2014), in order to make proposals for improving the Assessment Tool.

The secondary objective was to describe structures and functions in Uganda essential in performing communicable disease surveillance and control, to the extent enabling sharing expertise, recommend, and support the application and evaluation of the GHSA Assessment Tool in the Ugandan context.

The assessment was a highly collaborative process between Uganda and the assessment team. The assessment team appreciates all the work and effort of Uganda, its experts, leaders and various organizations involved, as well as the Public Health Emergency Operations Center (PHEOC). After review by Uganda together with the external assessment group, the assessment report will be forwarded to the GHSA Steering Group.

In addition to the two main missions set to us, the assessment team has – by request of the host country – listed potential recommendations to further improve Ugandan Health Security. These recommendations were orally addressed by each assessment team expert at the closing meeting with the Director General of Health Services, Ugandan authorities and experts at the Ministry of

Health and Agriculture in Kampala on February 20, 2015. Furthermore, a document listing the tentative scoring results of the Action Packages was circulated.

Helsinki, March 16th, 2015

Simo Nikkari
Team leader
GHSA pilot assessment team – Uganda

Preparation and Implementation of the Mission

- Setting of the mission strategy and logistics was established by teleconference communication between all stakeholders including the pilot assessment team and host country partners.
- Information packets comprising note-taking tools and report templates were provided to the assessment team by the GHSA organization.
- A thorough self-evaluation as well as supportive electronic documentation was provided to the assessment team from the host nation one week before the in-country assessment, precisely as agreed between the host nation and assessment team.
- A timely and thorough host country self-assessment report was forwarded to the assessment team. The report was supported with documentation on standard operation procedures, drafted and approved bills and plans, and supporting charts and forms.
- All Action Packages were evaluated during the external country assessment week based on presentations, additional supporting documents and specific written narratives as well as numeric scoring by the host country.
- The evaluation scoring was discussed with representatives of Uganda before final scoring performed by the external assessment team.

Limitations and Assumptions

- The specific objectives of the GHSA external assessment pilot projects are to test the validity of the existing GHSA targets and indicators and determine the effectiveness of conducting in-person versus remote assessments. The development of a scalable and external independent assessment process that can be conducted in all GHSA partner countries on a regular basis is the final objective. In this current development and testing phase where the process and the assessment tool, are not yet fully 'mature', the GHSA pilot assessments are likely to lack comprehensiveness.

- Some of the pilot assessment action package definitions, action package targets, measurement indicators and levels of capability are broad and of possible equivocal description that might be misinterpreted by a majority of host countries leading towards over or underrating when undertaking their self-assessment.

- The level of collaboration and coordination between the human and the animal health sectors (One Health agenda) in rating the preventive and control measures is highly relevant to the GHSA assessment deliverable. The assumption that countries will be less inclined to develop and support the veterinary practice and services and lean more towards the human health aspects has to be flagged. Indeed, during the assessment this was a key finding. A recommendation of the assessment group was for future assessments to make a clear link between the GHSA assessment tool and the OIE PVS evaluation tool to ensure the proper contribution of the animal health/veterinary sector to the GHSA (and reciprocally); in particular, the Critical Competences of the OIE PVS evaluation tool relevant to each Action Package (and their indicator) could be listed in the GHSA Assessment tool. The same link should be made with WHO IHR reporting.

- **Government of Uganda Health Care Prospective Focus and GHSA Commitment:**

The official clear statement and introductory information and presentations submitted to the external assessment team reflected that the Ugandan national health system operates based on a defined National Health Policy. This Policy supports the Country's national development plan as well as its international obligations to promote health and socioeconomic development. The policy is translated into a health sector strategy and investment plan that guides the Ugandan overall health care and services activities.

The system serves a 35 million population over 241000 square kilometers and within 112 districts. There is a 3.5 to 5% added un-accountable for and/or unregistered additional population. This in the majority represents Ugandans who live in and or citizens of nearby countries, traders and shared ethnic communities, country visitors, and/or refugees from political nearby countries conflicts. Such added population is significantly affecting the health services activities needs, demands, and resources at the local and national level. It also significantly affects negatively the local and national indicators as most are unregistered and/or unaccounted for, based on the country limited Health Fund based on the GNP percentage which is already below target (8.7% of 15% International Standard).

It was clearly reflected by the submitted documentations and presentations that the targets of the pilot assessment goals, objectives and priorities do strongly intersect with most of Government of Uganda Health Sector Strategic and Investment plan (HSSIP) priorities. This is particularly reflected in the areas of Health Promotion, Environmental Health, Communicable Disease Prevention and Control, and epidemics, its crisis management, disaster preparedness and response.

The documentations also emphasized through the HSSIP plan investment focus parameters that there is a significant intersection with some of the pilot assessment action packages and indicators. This was evident in the investment focus on HR and their development, and the procurement of essential medicines, equipment, supplies, and other commodities. Significant intersection is also noted in the Health Informatics Systems and its role in NHS surveillance support, preventive health and health education, and the multi-sectorial management and coordination.

Such a strong significant strategic intersection clearly indicates that the Government of Uganda is taking a high level decision to make the Global Health Security Agenda (GHSA) priority and a focus aiming to actively contribute to a safe and secured nation and world free from communicable diseases. This strong commitment to mutually support the multiple HSSIP initiatives and programs the nation is taking investment and the GHSA assessment goals, objectives and priorities is proven by the high level representation and the continuous voluntary participation in the GHSA assessment program development. This long-term commitment started from the GHS Demonstration Project March 2013, through the GHSA Launch February 2014, and until this external GHSA Pilot Assessment.

The high level documents clearly stated and defined the nations overall health services activities implementation challenges – mainly lack of adequate funding and inadequacy of human recourses.

The Government of Uganda health authorities, despite all above challenges, have significantly and actively moved forward in its engagement with the GHSA development and implementation of the WHO IHR. The National Health Authorities are moving forward with strengthening and upgrading its health surveillance, Health Information and Data system, and the Public Health Emergency Operation Center as the three pillars of the Global Health Security. They have defined and are gradually developing, implementing and testing the major elements of success to be the ability to prevent, early detect and confirm, and respond to any communicable disease of public health concern. Sustainability by building up capacity, monitoring, tracking, and closing gaps, and seeking all support to overcome the defined challenges is its ongoing and future focus.

The Documentation provided by the Veterinary Services could not evidence a similar documentation level of capability in the animal health sector compared to the human health side. The results of the OIE PVS evaluation show that the level of advancement for most of the PVS Critical Competences is 1 or 2 out of a scale of 5 (=full compliance with OIE standards in terms of quality of Veterinary Services). Overall, the human health sector strides ahead of animal health in all regards. It should, however be pointed out that the OIE PVS evaluation took place in 2007 and many improvements are expected to have been made since, notably benefitting from the PVS Gap exercise conducted in 2011. It is highly recommended that Uganda request an OIE PVS Follow Up mission to measure those improvements. The results of such mission could provide essential information / inputs to the GHSA process at the national level.

Structure of the Assessment

The Pilot GHSA Assessment of Uganda was conducted by:

- High level meetings and discussions with Uganda and its Stakeholder contributing sectors to the National and Global Health Security policy and plan to:

  - Clarify and ensure mutual understanding of the pilot assessment objectives aiming for best engagement with the pilot assessment process
  - Streamline the GHSA Pilot Assessment core mission with all stakeholders' strategy and fiscal standing.
  - Capture the high level perception and understanding of the pilot assessment action packages, indicators and rating tools and reflect their input within the report
  - Discuss and exchange expertise on each action package self-assessment
  - Agree on any strategically valuable modification of the agenda to address specific host country or partners concern that will improve deliverables

- Middle management and operational lead level meetings and discussions with Uganda and its Stakeholder contributing sectors to the National and Global Health Security Health Care activities to:

  - Clarify and ensure mutual understanding of the pilot assessment objectives aiming for best engagement with the pilot assessment process

- o Capture their perception and understanding of the pilot assessment action packages, indicators and rating tools and reflect their input within the report
- o Discuss and exchange expertise on each action package self-assessment to achieve best deliverables

- Front-line and operational staff meetings and discussions with Uganda and its Stakeholder contributing sectors through field visits to specific and randomly selected health care centers and Laboratories to:

  - o Ensure that front-line staff is engaged with the GHSA objectives
  - o Ensure that the self-assessment action package and indicators capacity and capability level is validated
  - o Obtain a concrete picture of the available facilities, infrastructure and other needed front line logistic support
  - o Discuss challenges and gaps to achieve best feasible assessment and recommendations

GHSA Antimicrobial Resistance

(*GHSA Action Package Prevent-1*)

Introduction

Bacteria and other microbes evolve in response to their environment and inevitably develop mechanisms to resist being killed by antimicrobial agents. For many decades, the problem was manageable as the growth of resistance was slow and the pharmaceutical industry continued to create new antibiotics.

Over the past decade, however, this problem has become a crisis. The evolution of antimicrobial resistance (AMR) is occurring at an alarming rate and is outpacing the development of new countermeasures capable of thwarting infections in humans. This situation threatens patient care, economic growth, public health, agriculture, economic security, and national security.

Uganda Level of Capabilities

- AMR surveillance is not in place, is not yet planned for, but the necessity for it is understood and appreciated by the health sector leadership and technical staff;
- Capacity for laboratory testing for AMR activities is very centralized. Only the university hospital laboratory, Central Public Health Laboratory and national TB reference laboratory have continuous capacity to carry out cultures of microbes as a routine. The TB reference laboratory can generate data that is nationally representative;
- Out in the districts, this capacity is either weak or absent;
- A protocol for sentinel AMR surveillance (antiretroviral drugs) has been developed, but is not funded ;
- The usage of antibiotics in the Human Health and Animal Health sectors is not monitored;
- AMR data is used to update the national clinical treatment guidelines (for all diseases, recommended drugs are provided; the drugs can be 'delisted' if evidence of AMR is provided for specific pathogens);
- A key issue is the availability and consistency of supplies for AMR testing (on hand supplies varies between 2 weeks to 6 months worth of testing);
- Limited capacity in the animal health sector (NADDEC laboratory can conduct AMR testing); however, an FAO project recently provided equipment while it is not yet operational; AMR testing may be needed in the near future because of the commercial export of livestock and animal products (demand and financial/economic interest is growing).

Recommendations:

- Data from the other laboratories providing AMR testing should be collated and shared with the health sector using informal channels such as newsletters and meetings, as it does not yet meet the threshold for scientific publication;
- To harmonize AMR protocols, data sharing among laboratories conducting AMR testing or having a central database for reporting AMR data should be established and this made publically available. Coordination of this activity can potentially be done through the PHEOC;

- A nationwide personal identification number (PIN) for patients would help in reconciling AMR results with other surveillance and epidemiological data.

Scoring for Uganda Using the Assessment Tool

- Surveillance plan implementation: **Score - 0**

  o Surveillance has been initiated, including reporting of data to national levels, from at least one major clinical site

- Laboratory testing: **Score - 2**

  o Reference laboratory capable of testing for three WHO priority AMR pathogens using standardized, reliable detection assays and operates as a reference

Assessment Tool

- Under laboratory testing the wording for the capability levels 2,3, and 4 needs revision to provide clarity for the assessor

GHSA Zoonotic Disease

(*GHSA Action Package Prevent-2*)

Introduction

Zoonotic diseases are communicable diseases and microbes spreading between animals and humans. These diseases are caused by bacteria, viruses, parasites, and fungi that are carried by animals, and insect or inanimate vectors may be needed to transfer the microbe. Approximately 75% of recently emerging infectious diseases affecting humans are diseases of animal origin; approximately 60% of all human pathogens are zoonotic.

Uganda Level of Capabilities

- Zoonotic diseases of main concern in Uganda include:
    - Human diseases: VHF (Ebola, Marburg, CCHF, RVF), plague, yellow fever, rabies, tuberculosis, brucellosis, trypanosomiasis;
    - Animal diseases: brucellosis, hydatidosis, salmonellosis, cysticercosis, tuberculosis, HPAI, anthrax, rabies, trypanosomiasis
- A general One Health approach is promoted and already implemented in some fields:
    - An Integrated Disease Surveillance and Response (IDSR) Strategy was adopted as early as 2000;
    - A framework to strengthen one health approach in prevention and management of zoonotic diseases in Uganda was produced in May 2014;
    - A One Health policy is under development;
- There is no MoU between MoH and MAAIF (not legally possible); however, a draft 'collaborative agreement' is under development and joint administrative instructions exist for some diseases;
- Joint programs exist for HPAI (in the past) and rabies;
- Joint Committee/task forces are in place for joint disease management whenever required; they allow the joint management of zoonotic outbreaks on an ad hoc basis (;
- The partnerships between human and animal health exist at the national level but are very weak and barely recognized at the district level;
- Comprehensive weekly, quarterly, annual reports are produced from the human health side at district level (using the electronic DHIS-2 system) + alert system; from the animal health side, there is an immediate notification and a monitoring system in place, notably to meet OIE reporting obligations;
- The inter-operability between the human and animal health surveillance systems is sub-optimal. Zoonotic surveillance systems needs to be reinforced; exchange of zoonotic data needs to be systematized between MoH and MAAIF;
- Specialized training courses on public health are provided to veterinarians in the framework of some donor project (EPT; AFENET, etc.);

Recommendations:

- A Collaborative Agreement among MoH and MAAIF should be signed and a comprehensive multi-sectorial set of operational policies and guidelines that minimize the risk of zoonotic disease emergence and transmission from animals to humans should be developed. This should include surveillance sites that monitor both animal and human zoonotic diseases; a key aspect is the timely reporting of zoonotic events to all parties concerned, for the immediate and adequate implementation of mitigation measures;
- To ensure optimal involvement of the Uganda Wildlife Authority in the surveillance a MoU or Collaborative Agreement between UWA, MoH and MAAIF would improve collaboration and would allow to control pathogens in wildlife at their source or where wild and domestic animal populations come into contact;
- To improve early detection and warning in support of the national One Health agenda, monitoring and surveillance of wildlife health threats should be enhanced;
- Animal-human health collaboration not only at national but also at district and community level in term of prevention, detection and control of zoonoses, should be ensured;
- Joint One Health training programs for human and animal health services should be implemented.

Scoring for Uganda Using the Assessment Tool

- Surveillance systems in place for priority zoonotic diseases/pathogens (in animals):
  Score - 2
  - Country has determined zoonotic diseases of greatest public health concern but does not have animal zoonotic surveillance systems in place

- Veterinarians: **Score - 1**
  - Country has public health trained veterinary staff within the national public health system and in 40-59% of districts

Assessment Tool

- The scoring for capacity for surveillance systems in place has description for score 0 and score 1 being the same
- The part for scoring "veterinarians" should probably read "veterinarians trained in public health"
- The proportion given of 40% and above of veterinarians to be public health trained is so high, no nation in the world would possibly attain that
- This criteria only considers zoonotic surveillance and testing as just a veterinary activity. There are many surveillance programs in Uganda for human infections with zoonotic pathogens, so this should be taken into consideration in the scoring and criteria measures.

GHSA Biosafety and Biosecurity
(*GHSA Action Package Prevent-3*)

Introduction

Working with pathogens in the laboratory is vital to ensuring that the global community possesses a robust set of tools—such as drugs, diagnostics, and vaccines—to counter the ever evolving threat of infectious diseases.

Research with infectious agents is critical for the development and availability of public health and medical tools that are needed to detect, diagnose, recognize, and respond to outbreaks of infectious disease of both natural and deliberate origin. At the same time, the expansion of infrastructure and resources dedicated to work with infectious agents have raised concerns regarding the need to ensure proper biosafety and biosecurity to protect researchers and the community. Biosecurity is important in order to secure infectious agents against those who would deliberately misuse them to harm people, animals, plants, or the environment.

Uganda Level of Capabilities

- The National Biotechnology and Biosafety Bill 2012 is in place;, but focuses mainly of genetically modified organisms;
- A National Biosecurity Plan and Bill are in preparation and will provide a comprehensive biosecurity 'umbrella' for all hazards, for all stages (handling, transport, etc); it will also include provisions on Bioterrorism preparedness;
- A national Biosecurity Manual is also under development by CPHL
- The MoH is the national competent authority for biosecurity and biosafety aspects; however several other partners are collaborating on these issues such as MoD, National Council of Science and Technology, etc.;
- Uganda is a signatory of the BTW Convention and has ratified it;
- Several specialized training events have taken place on Biosecurity and Biosafety over the past years, including training-the-trainers courses (by WHO in 2010); biosecurity and biosafety is also part of the core curriculum for medical doctors, but not harmonized at national level;
- Safety policies in national hospitals and laboratories are in place (SOPs, guidelines, safety manuals, fire drills, etc.), based on WHO guidelines; these documents are periodically reviewed;
- Secured repositories ('theft proof') for pathogens exist (lockers/cabinets; locked refrigerators/freezers; biometric recognition or code access to facilities) at some national laboratories and overall the biosecurity concept has been well adopted at the reference laboratory level. Entrance to the facilities is controlled by security guards. Alarm systems are also in place; this also concerns NADDEC, who recently installed code access doors for manipulation and storage rooms (in addition, the whole compound is fenced with barbed wire);
- SOPs for waste management are also available and implemented;
- Inventory of samples and reagents is carried out at the national reference laboratories;

- Accreditation process (SANAS, ISO) has been obtained in conducted in some laboratories (NTRL);) and being pursued in other laboratories
- Laboratory licensing is mandatory, both for private and public laboratories; different 'levels of licensing' exist, but no specific component for biosafety and security that is consistently applied across licensing bodies;
- The national competent authority for Chemical, Biological, Radioactive and Nuclear (CBRN) matters lies with the Ministry of Foreign Affairs; Uganda has expressed its interest to develop a CBRN Center of Excellence.

Note: the 'whole of government' system was not considered in the self-assessment (focus on human health aspects)

Recommendations:
- There is recent interest / awareness / political willingness for biosecurity and biosafety measures to be put in place; there have been efforts conducted over the past years, but gaps still remain; the new Biosafety Bill should allow further progress on these issues;
- In the process of developing the Biosecurity Bill, all involved parties should be consulted (including Ministry of MAAIF) to have consistent policies and coordinated practices and mandates.

Scoring for Uganda Using the Assessment Tool

- Whole-of-government biosafety and biosecurity system is in place: **Score - 2**
    - Uganda is developing a comprehensive national biosafety and biosecurity system

- Biosafety and biosecurity training and practices: **Score - 1**
    - Country has identified critical gaps in biosafety and biosecurity training and implementation but has not yet implemented comprehensive training or a common training curriculum

Assessment Tool

- For clarity Biosafety & Biosecurity may be separated. Though similar in some aspects, they have wide differences, so the targets should not be measured in the same parameters
- Under the 'whole of government biosafety and biosecurity system is in place' capability level 2 as described should inter-change with capability 1. The way its set out, score 1 suggests a higher capability than score 2.
- Under the "biosafety and biosecurity" training and practices, capability 2 should read that …country has carried out a training needs assessment for health sector in biosafety and…to remove vagueness

GHSA Immunization

(*GHSA Action Package Prevent-4*)

Introduction

Immunization is one of the most successful global health interventions and one of the most cost-effective ways to save lives and prevent disease. Immunizations prevent greater than two-million deaths a year globally.

Uganda Level of Capabilities

- Uganda has a national expanded program on immunization (UNEPI) that covers all 112 districts;
- The Uganda National Expanded Program on Immunization (UNEPI) covers immunizations against Measles, TB, polio, diphtheria, pertussis, tetanus, hepatitis B, *Haemophilus influenza*, pneumococcal pneumonia. Vaccine against Human papillomavirus (cervical cancer) is on trial in 14 of the 112 districts. Rotavirus vaccine is planned for introduction in 2016;
- Targets for coverage for most of the antigens are well above 90%;
- Monitoring vaccine coverage; every 5 years Uganda conducts a survey that determines among other immunization parameters, the proportion of the "fully immunized child". Data from routine immunization coverage is part of the Uganda monthly HMIS reports;
- National EPI systems ensure continuous cold chain as necessary for vaccine delivery throughout the country: Vaccine logisticians are stationed at every district to provide local support. Refrigerator temperatures are recorded twice daily and vaccine fridges use Liquid Petroleum Gas (LPG) because electricity is lacking in some places;
- Reports on vaccine stock outs are routinely prepared. Measles vaccine is one of the key tracer commodities used by the National Medical Stores to track stock outs of health commodities. Stock outs are easily predicted and promptly detected;
- There is an established system of outreach missions to provide immunization in hard to reach areas;
- In January 2015, house to house polio vaccination campaign was performed in Uganda as part of the global polio eradication effort.

Recommendations:
- There is no effective immunization reminder/call back mechanism to identify those who have missed vaccines or need additional doses. This is an important gap since the last national survey on immunization revealed that only 52% of children at 1-year of age were fully immunized. A formal program on immunization reminder/call back tracking can be included in the UNEPI;
- Population based surveys on sero-conversion after immunizations should be performed. These are expensive but can be introduced for e.g. measles to gauge why outbreaks in recent years have affected adults as well.

Scoring for "Country" Using the Assessment Tool

- Vaccine coverage (measles): **Score - 3**
    - 90% of the country's fifteen month old population has received at least one dose of measles containing vaccine, as demonstrated by coverage surveys or administrative data.

- National vaccine access: **Score - 3**
    - Vaccine delivery (maintaining cold chain) is available in 60-79% of districts within the country OR Vaccine delivery (maintaining cold chain) is available in 60-79% of the target population in the country; functional vaccine procurement and forecasting lead to no stock outs at the central level and rare stock outs at the district level.

Assessment Tool

- A change can be considered so that the indicator for measurement of vaccination coverage for the country is switched to "proportion of fully immunized child at 1 year". This is a more simple way to express the target for immunization in a country from a wider perspective and inclusive of requisite antigens.
- National vaccine access has been assessed using indicators that are more about capabilities for distribution of vaccines than about the service being 'available and reachable' to the population at all levels and in all parts of the country. The indicators or the capability need to be changed.
- The tool should differentiate the measurements of stock-outs at the national level vs. stock-outs at the district levels. These, though interdependent, are often independent of each other. National level stock outs may relate to delayed procurement, district/service delivery level stock outs may relate to ineffective distribution mechanisms. The lack of splitting these into two separate measures prevents objective assessment of this capability.

GHSA National Laboratory System
(*GHSA Action Package Detect-1*)

Introduction

Public health laboratories provide essential services including disease and outbreak detection, emergency response, environmental monitoring, and disease surveillance. State and local public health laboratories can serve as a focal point for a national system, through their core functions for human, veterinary and food safety including disease prevention, control, and surveillance; integrated data management; reference and specialized testing; laboratory oversight; emergency response; public health research; training and education; and partnerships and communication.

Uganda Level of Capabilities

- The Uganda national laboratory system is comprised of national reference laboratories (3 primary in Kampala and Entebbe); National/Regional Referral Hospitals, University laboratories, Health Center IV laboratories, Health Center III laboratories, and some private/NGO laboratories labs.
- There are 3 primary national reference laboratories. National TB Reference Lab (NTRL), Central Public Health Laboratories (CPHL, bacterial and some HIV), and Uganda Virus Research Institute (UVRI, viral pathogens); and some bacterial pathogens).
- In addition to the 6 mandatory indicator pathogens in the IHR (Influenza, Polio, HIV, TB, Malaria and Typhoid), the country added four additional pathogens that they consider to be of greatest public health concern. These are brucella, viral hemorrhagic fevers, anthrax and viral hepatitis;
- The country has established functional diagnostics for all their core pathogens except brucella, anthrax and viral hepatitis. Some diagnostics for these exist at as few reference laboratories but their use and availability of reagents is not consistent;
- Some programs appear to be very advanced and well-functioning, like the HIV, VHF and influenza laboratory programs. Diagnostic capabilities for bacterial pathogens do not appear to be well funded and are underdeveloped; with the exception of the plague program at UVRI.
- It was reported that approximately 80% of the population has access to laboratory services for the 10 priority pathogens listed above, but the data or supporting materials to confirm this was not very well documented;
- The following laboratories perform the listed tests routinely:
  - Mulago: clinical specimens, culture and microscopy
    - Microbiology, blood and sputum smear
    - HIV serology
    - TB samples referred to NTRL
    - Brucella serology
    - Malaria RDT, smear
    - Perform some specialized surveillance activities: rotavirus, Hib, pneumococcal
    - Blood culture: salmonella typhi. They can perform microbiology on most common bacterial pathogens
  - CPHL: Malaria RDT, Typhoid, HIV, most basic bacterial culture testing

- o UVRI: Influenza, , HIV, VHFs, Arboviruses, Plague and some Hepatitis testing; polio, measles and rubella as part of UNEPI program
- o NTRL: TB (MDR and XDR)
- o Malaria: rapid tests done routinely countrywide in lower level health centers
- Specimen transport for all clinical samples collected to the central national laboratories from districts is accomplished though a national "hub" system using motorcycle and public bus transport. These "hubs" exists in over 80 of the 112 Ugandan districts;
- For areas that are remote or there is no "hub" system, some districts can access sample transport via air through a missionary-funded airline which provides the service for free. These flights mainly service Karamoja, Gulu and Arua;
- The national "hub" transport system plans to begin using RFID tags on sample shipping boxes to track specimens along route of transport and send automated alerts via SMS and email as these samples pass through designated points along the route from the districts to the national reference laboratories.;
- There is no routine laboratory EQA, but there are some routine laboratory assessments underway using the SLMTA/SLPTA guidelines and checklists. There is no national laboratory quality assessment system in place. These assessments are usually partner driven and conducted;
- The country is beginning district laboratory assessments ;.
- Some national laboratories conduct "lab profiling" (with a GHS component), which mainly focuses on quality issues for lab management, and has begun in some district laboratories and rolling this platform out nationwide are planned;
- Four national laboratories have been accredited by international standards bodies. Three are HIV laboratories (Baylor Uganda, Makerere University-John's Hopkins University, Makerere University Walter Reed, UVRI HIV reference lab), and one is the TB reference laboratory (NTRL);

  Note: the self-assessment was only 'human-health oriented' and did not provide indication on the national veterinary laboratory network in Uganda.

  Recommendations:
- A commitment to strengthening the countries microbiology testing capability would be beneficial;
- The availability of diagnostic tests and capabilities for monitoring of different viral and bacterial pathogens during outbreak investigations should be broadened;
- There should be an expansion of testing capability and the addition of more core pathogens and provision of sustainable reagents for core basic tests in districts and hospital laboratories.
- The National Veterinary Laboratory (NADDEC) should have sufficient capacity and resources to perform the required laboratory analyses for animal diseases – including zoonoses – present in Uganda, especially those targeted by national control programs, but there was a lack of sustainable and consistent ability to test for core veterinary pathogens.
- The OIE PVS laboratory mission planned in June 2015 will be useful to understand the pertinence and viability of the current national veterinary laboratory network and determine the needed resources for its optimal functioning in the national context.

Scoring for Uganda Using the Assessment Tool

- Laboratory testing capacity for 10 core tests for detection of 10 priority diseases: **Score - 3**
  - o National laboratory system is capable of conducting 7 or more of the 10 core tests

- Specimen referral and transport: **Score - 3**
  - o System is in place to transport specimens to national laboratories from at least 80% of districts within the country for advanced diagnostics

- Effective modern point of care and laboratory based diagnostics: **Score - 2**
  - o Tier specific diagnostic testing strategies are documented, but not fully implemented. Country is proficient in classical diagnostic techniques including bacteriology, serology and PCR in select laboratories but has limited referral and confirmatory processes. Country is using point of care diagnostics for HIV, malaria, and at least 1 other priority disease.

Assessment Tool

- There should be additional criteria for diagnostics for animal pathogens and testing capacity, separate from the human capacity.
- The tool was ambiguous if the laboratory system was for veterinary or human health, but it was assumed to be only for human health and laboratory tests. This should be clarified
- Capacity should be assessed for all the country's 10 priority diseases for a score to be made, not just for some of the diseases

GHSA Real-Time Surveillance

(*GHSA Action Package Detect-2/3*)

Introduction

The purpose of real-time surveillance is to advance the safety, security, and resilience of the Nation by leading an integrated bio-surveillance effort that facilitates early warning and situational awareness of biological events.

Uganda Level of Capabilities

- A national reporting system reportable and epidemic prone diseases exists for Uganda.
- The Health Information Management System (HMIS) is the primary electronic system used for health data reporting, including weekly and monthly disease data reports.
- HMIS reports can include epidemic prone, other infectious diseases of public health importance including PHEIC.
- Some notifiable diseases are reported immediately, e.g. suspect VHF.
- Uganda follows WHO IDSR guidelines. These guidelines are communicated regularly at the district level through trainings and printed materials.
- An online electronic system platform called DHIS2 is the underlying system behind HMIS and the new Global Health Security disease reporting system. This system has been shown to be successful in pilot testing.
- An electronic reporting system for GHS priority diseases was established using DHIS2 that allows case based reporting for priority diseases from designated surveillance sites. This system and HMIS for routine disease reporting share the same platform, but are not interconnected yet.
- Uganda performs syndromic surveillance for the following:
  - VHFs (hemorrhagic fever), Acute Febrile Illness (non-malaria), Severe Acute Respiratory Illness (SARI), Acute Flaccid Paralysis (polio).
- The priority pathogens which are reported through GHS electronic surveillance systems are:
  - Ebola, Marburg, Crimean Congo Hemorrhagic Fever, Rift Valley Fever, Plague, Yellow fever, Dengue, Influenza, Chikungunya, O'nyong nyong, TB, HIV (eMTCT), Cholera.
- HMIS weekly reporting for 112 Districts for completeness = 70-80%, timeliness = 70%
- HMIS weekly (passive) reporting includes: epidemic prone, other infectious diseases of public health importance including other PHEICs.
- MTRAC is a mobile-based reporting system used primarily for routine disease surveillance
  - This system is used for electronic reporting of weekly and monthly health data and notifiable diseases
  - Reporting is toll free
- For the DHIS2/GHS reporting system, alerts are sent to DHIS2 system via SMS or direct entry into DHIS2 Internet portal. These alerts are sent to customized user groups based on type of alert (disease specific).
- Epidemiologists for each user group will make follow-up phone call to district that reported alert to verify. If valid alert, samples are collected, case and sample data entered into DHIS2, and sent to national laboratories for testing.

- Laboratory results are uploaded into DHIS2 and alerts are automatically generated to specific user groups.
- DHIS2/HMIS: The facilities report weekly figures via SMS to HMIS/MTRAC system. District biostatistician reviews weekly surveillance summary report data and approved by the district medical officer before being electronically submitted to the national level.
- Periodic data quality assessment is done by the HMIS administrators at the MOH Resource Center.

The MOH is beginning to develop plans for providing all persons residing in Uganda a national medical ID #.

Note: the self-assessment was only 'human-health oriented' and did not provide indication on the national veterinary surveillance system in Uganda. Surveillance of animal diseases including zoonoses, and the way the human health and animal health surveillance systems interconnect are key to the national security agenda.

Recommendations

- Uganda should establish enhanced surveillance for more core IDSR pathogens and integrate them into existing surveillance systems that perform routine and consistent site support and active follow up;
- There should be more core pathogens included into the DHIS2 electronic surveillance mechanism coordinated through the PHEOC. "Syndromes" could also be included to expand the already establish pathogen specific reporting;
- More work is needed to increase the timeliness and completeness of electronic routine HMIS data that's available for analysis to capture potential disease trends occurring in the districts to identify potential PHEIC early and perform investigations. Disease trends or proxy indicators could be analyzed to provide an early warning of a potential outbreak and decrease the response time to these recurring events;
- A robust animal health surveillance system relying on a well distributed Field Veterinary Network for its passive component should be established to capture any animal health event, including zoonotic event, throughout the whole territory;
- The human health and animal health reporting systems should be made inter-operable for a possible coordinated (rapid) response when appropriate.

Scoring for Uganda Using the Assessment Tool

- Syndromic surveillance systems: **Score - 3**
  - Syndromic surveillance system(s) in place to detect three or more core syndromes indicative of public health emergencies

- Inter-operable, interconnected, electronic real-time reporting system: **Score - 3**
  - Country has in place and inter-operable, interconnected, electronic real-time reporting system, for public health and/or veterinary surveillance systems. The system is not yet fully sustained by the host government.

Assessment Tool

- The use of the word syndromic has different specific meanings depending on the context and the way each country defines it. We suggest this criteria be better defined and examples given.
- Not all countries perform surveillance using core "syndromes". We suggest either new criteria for disease specific surveillance, or general criteria for disease surveillance independent of just being "syndromic".
- The inter-operability implies that the public health AND (and not 'OR') the veterinary surveillance systems are connected.

GHSA Reporting
(*GHSA Action Package Detect-4*)

Introduction

Health threats at the human–animal–ecosystem interface have increased over the past decades, as pathogens continue to evolve and adapt to new hosts and environments, imposing a burden on human and animal health systems. Collaborative multidisciplinary reporting on the health of humans, animals, and ecosystems reduces the risk of diseases at the interfaces between them.

Uganda Level of Capabilities

- Uganda reports to have 11 national IHR focal points ;These IHR focal points sit in the following ministries: Office of the Prime Minister, Ministry of Health, Ministry of Agriculture Animal Industries and Fisheries, Ministry of Defense, Ministry of Transport, Ministry of Wildlife and Antiquity, Ministry of Internal Affairs, Ministry of Trade, Uganda National Bureau of Standards, National Environmental Authority, and Ministry of Water
- Uganda has nominated a National Focal Point for animal disease notification to the OIE; this Focal Point regularly participates in OIE regional capacity building seminars;
- The most recent real-life exercise for reporting was a single case of Marburg viral disease. The case occurred in September / October 2014 in Kampala, Mpigi and Kasese districts. The single case was a male health worker (radiographer) working in Mengo Hospital in Kampala;
- For reporting a PHEIC to WHO and/or OIE/FAO they uses a decision instrument to determine if the disease being reported complies to set criteria;
- The Uganda MOH reports the PHEIC to the WHO country office, and the country office then notifies WHO HQ;
- The OIE Delegate of Uganda complies with the OIE immediate notification (early warning system) and reporting (monitoring system) requirements using the World Animal Health Information System (WAHIS);
- Uganda has been very transparent with reporting outbreaks or other public health emergencies and events. There does not appear to be any resistance or reluctance for them to report;
- They use reporting of PHEIC to solicit support for outbreak or event response;
- They have been very successful in identifying and responding to events quickly and controlling outbreaks with limited numbers of cases. An example is recent VHF outbreaks occurring between 2011 and 2014.
- Need to verify reporting to WHO by the suggested time in the criteria of 24 hours. Have requested backup documentation;
- Uganda uses HMIS and DHIS2 for reporting of PHEIC alerts from the district to the national level. (This was outlined and detailed in AP Detect 2/3);
- Once alerts arrive at the national level and an event is verified and confirmed, reporting to the international level is performed using the WHO and OIE/FAO reporting mechanisms listed above;
- An exercise was performed in 2013 under the GHS demonstration project to validate this reporting capability and real-life events have provided demonstrated capability of Uganda to report within the criteria designated amount of time;

Recommendations:

- Reporting to WHO/OIE was considered to be well established and sustainable, but lacked adequate documentation. Better documentation of timely reporting to international agencies should be documented in final outbreak reports, or public documents;
- There should be specialized exercises conducted to demonstrate true timely reporting from district to international level using electronic reporting and WHO/OIE reporting.

Scoring for Uganda Using the Assessment Tool

- System for efficient reporting to WHO, FAO and OIE: **Score - 4**
    - Country has demonstrated ability to identify a potential PHEIC and file a report within 24 hours, and has a multi-sectorial process in place for assessing potential events for reporting

- Reporting network and protocols in country: **Score - 4**
    - Country demonstrates timely reporting of a potential PHEIC from district to international level (based on an exercise or real event); country has a sustainable process for maintaining and improving reporting and communication capabilities and communication mechanisms are backed by established documentation (e.g. protocols, regulations, legislation.)

Assessment Tool

- (typo: there is only one Delegate and WAHIS national Focal Point per country (=plural should be deleted))

GHSA Workforce Development
(*GHSA Action Package Detect-5*)

Introduction

Workforce development is important in order to develop a sustainable public health system over time by developing and maintaining the highly qualified public health workforce with appropriate technical training, scientific skill, and subject-matter expertise.

Uganda Level of Capabilities

- Makerere University School of Public Health (MAKSPH) provides primary university education and several specialized training courses on Public Health, including Masters of Public Health with important field work components; many veterinarians participate in these Public Health courses;
- A consortium of 14 Ugandan medical education establishments (including human health and veterinary establishments) are currently redefining the training curricula, putting greater emphasize on the One Health approach with a view to having a One Health Workforce in the coming years; public health courses need to be as multidisciplinary as possible for the optimal prevention, detection and response of communicative disease (inclusion of One Health modules);
- The OIE recommendations on the Competencies of graduating veterinarians ('Day 1 graduates') to assure National Veterinary Services of quality and companion Core Curriculum serve as a basis for this work;
- MAKSPH organizes training programs for field epidemiologists (approx. 500 workers trained); UVRI also provides students with lab training and is currently developing an Integrated Laboratory training for public health and veterinary laboratories;
- AFENET (African Field Epidemiology Network) also actively contributes to reinforcing field epidemiology and public health laboratory capacity in Uganda by providing FETP in the past; courses are tailored to the daily needs of the workers (basic, intermediate, advanced level training programs);
- The recourse to e-learning courses is also an approach which will be further developed in the years to come (already in place), in particular for continuing education; in-service training are largely used to minimize the training costs;
- Fellowship programs are currently implemented in several topic, one being to train future MoH higher management personnel;
- The public health workforce strategy of Uganda exists but is not implemented consistently;
- Low salaries in the public health sector incite health workers to quit their jobs; the Ministry of Public Services is currently developing a performance-based financing to create incentive to retain workers;
- Another challenge is the inequity in the geographical distribution of health workers in the country (urban and sub-urban areas are more populated with medical workforce than

remote areas); some districts provide top-up salary to encourage the installation of 'bush doctors'; scholarship programs are also implemented sharing a similar objective;

Note: the self-assessment was only 'human-health oriented' and did not provide indication on the animal health Workforce (veterinarians; farming/livestock professionals; etc) in Uganda.

Recommendations:

- The national Workforce Strategy should be reinforced and implemented;
- Fostering and expanding the public health workforce at the district and community level, especially in remote areas; in particular, a nation-wide Field Veterinary Network is essential for the early detection and reporting of any animal health event; the national Workforce Strategy should in particular include incentives for the installation and sustainability of health workers in remote areas;
- Inter-sectorial capacity, especially for critical zoonotic diseases should be built;
- Ensure that the workers who have received FETP training are indeed working in the fields they have been trained.

Scoring for "Country" Using the Assessment Tool

- Trained field epidemiologists – human: **Score - 3**
  - Country has at least one field epidemiologist per 200,000 population who has been trained in conducting timely outbreak detection and investigation, public health response, and public health surveillance, and other field epidemiology principles

- Field Epidemiology Training program or other applied epidemiology training program in place: **Score - 3**
  - Basic and Intermediate FETP or comparable applied epidemiology training program in place

- Workforce strategy: **Score - 2**
  - A public health workforce strategy exists, but is not regularly reviewed, updated, or implemented consistently

Assessment Tool

- The criteria 'one trained field epidemiologist per 200 000 population' may be an insufficient criteria to determine the workforce, in the event that the trained epidemiologist does not work in the field for which he was trained; keeping track of the individual training program a person received is necessary to understand the appropriate qualification of the workforce;
- The criteria 'one trained field epidemiologist per 200 000 population' does not indicate the distribution of the workforce across the country; this would need to be reflected in the tool to ensure the appropriate access to human and animal health delivery system at national level; a solution may be to provide information per district or region;
- The criteria 'one trained veterinarian per 400 000 animal units' is not used in the tool to demonstrate the level of capability.

GHSA Emergency Operations Centers
(*GHSA Action Package Respond-1*)

Introduction

A public health emergency operations center (EOC) is a central location for coordinating operational information and resources for strategic management of public health emergencies and events. EOCs provide communication and information tools and services and a management system during a response to an emergency or event. They also provide other essential functions to support decision-making and implementation, coordination, and collaboration.

Uganda Level of Capabilities

o The PHEOC is still in its development phase with described functions that although intersect with some objectives, short of the required platforms to plan, regulate, support, maintain, develop and evaluate performance to meet the set elements of success i.e. prevent, detect and respond. The EOC does establish district preparedness for reporting and electronic case reporting.
o Some of the platform functions are performed by the National Task Forces that are assembled in crises and derived after the fact to contain, control and prevent outbreaks from spreading.
o The PHEOC provides a central MOH location for coordination and executive support of incident response, but the concept of Incident Management is not well accepted and adopted by the MOH departments that are required to provide the technical support to the incident management team sitting in the EOC.
o The point of coordination with on-scene partners to: 1) acquire, allocate, and track resources 2) manage and share information. 3) establish response priorities 4) coordinate legal and financial support 5) act as a liaison with other jurisdictions and levels of government.
o Designated to receive, analyze, evaluate, and disseminate public health emergency information and display for action by decision makers. Acute health emergency information is a display of dashboard on the monitors including maps and progress of the outbreak to create situation awareness.
o Rented facility structured and equipped to be linked with the districts health services capacity including the national reference laboratories (UVRI, CPHL, and NTRL). This link is mediated through the District Health Information System 2 (DHIS2) with specimen tracking, reporting, relaying, and follow up capability between the central and district levels and back. It is equipped with:

   a. 13 workstations for the full time staff Incident Management team.
   b. Internet and web based network environment.
   c. Situation room with video conferencing and Satellite TV for disease surveillance from both local and international news.
   d. Tweet deck setup with search columns for outbreaks and specific pathogens/ event of public health concern.
   e. Security comprises of biometric access and video surveillance system
   f. ArcGIS software for GIS Mapping needs
   g. 5 Designated full time EOC emergency response personnel with some additional capacity for visitors. The role of staff within EOC functions and SOP was defined for:

   i. The EOC Manager & Administrative Assistant
   ii. Operations and GIS & Information Systems Specialists
   iii. Laboratory Liaison & Senior Lab Consultants
   iv. Technical Advisors for SOP, policies, procedures and standards for operation and training

- No National Training Curriculum and or Mandate for the EOC functions. Although a PHEOC Handbook outlining SOP and EOC functions is developed. On job benchmarked e-training programs and exercises are applied.
- Functional and tabletop exercises are applied but are randomly conducted out of any clear mandated regular schedule by any regulation or legislation. Although, some of those random exercises and real responses were used as tool for improvement plans derived by experience.

Recommendations:
- For a stronger commitment and support for Health Emergency Coordination at all levels of the GoU, the MOH, through its HSSIP priorities and investment within the National Health Policy and System, the PHEOC should be incorporated into an new office for public health emergency operations and coordination that reports to the Director General for Health Service in order provide a mandate and authority for coordination of all public health emergencies within the MOH This will be more in line with the Government of Uganda Core Mission;
- The position of the Public Health Emergency Operating Center (EOC) should be elevated to be a coordination body spanning across all "Department" and departments within the MOH through high level a administrative support as follows:
  - EOC High level Coordination Role: "Control Tower" over all planning and coordination; inter-ministerial coordination; and communication
  - EOC Functional Platforms: Coordination with inter-MOH departments for public health surveillance & investigation; scientific advisory board; epidemiology support group; data analytics; infection prevention & control; capacity; clinical operation including high risk area and transport; and lab and diagnostics
- This restructuring of the EOC can be built and sustained by defining the MOH financial priorities and future plans for sustainability, and outreach to health development partners as the beneficiaries of this coordination of health emergencies which will reduce the impact of adverse health events on the healthcare system;
- The MOH needs to implement and fully support practicing the Incident Command System (ICS) in its coordination and managing of health emergencies. This should be mandated from the highest levels so that all personnel understand its concepts and use it for outbreak management and responses
- This can be implemented through Five (5) principles which are: Mobilizing change through support from all MOH leadership and policy creation; Translating the strategy into operational terms and action plans; Aligning all external health development partners to this policy and strategy; Making this policy and strategy part of every MOH employees mandate and job; and Making the strategy a continually updated and sustainable process;

- Have a defined charter and mandate for the EOC and each policy based on eight (8) parameters: Objective; Outcome; Key Performance & Financial Indicators; Millstones; Authority Granted; Inter-dependencies; Reporting line; and Programs;

- All policies objectives are built up into the EOC overall objectives, outcomes, and indicators;
- The proper coordination mechanisms should be established to allow the mobilization and intervention of multi-sectorial rapid response teams (in particularly in the case of a PHEIC of zoonotic origin).
- The EOC needs to be recognized and respected as the central MOH coordination body to assist the lead departments in their response to any health-related emergency.

Scoring for Uganda Using the Assessment Tool

- Status of EOC (space): Developed Capability Score: **Score - 2**
  - National EOC space is active and has sufficient equipment to function

- Status of EOC (staff): Developed Capability Score: **Score - 2**
  - Staff have been identified to support the EOC (and hired, if necessary) and have received some training in emergency operations

- Emergency Operations Program: Developed capability Score: **Score - 2**
  - Functional exercise has been completed to test operations capabilities but EOC has not yet been activated for a response. System is not yet capable of activating a coordinated emergency response within 120 minutes of the identification of a public health emergency

Assessment Tool

- The tool only addresses capability based on EOC facility, staffing, training and testing which are only internal response related.
- Less emphasis on essential standard EOC operating system and its overall control objectives to address elements of success
- No focus on addressing EOC essential standard platforms that derive, coordinate, communicate, monitor, audit, evaluate , research, and augment prevention, detection and response to any potential risk within the scope of the GHSA
- No proper emphasis on assessing the scientific value and or services quality as outlined by cases definitions, its preventive measures, and its clinical and support management guidelines and protocols. It is essential to ensure and sustain the minimal capacity and processes standards needed for safe, clinically sound, efficient, and coordinated prevention, detection and response at all levels of crises encounters
- The tool does not address assessing the role of EOC in ensuring and sustaining clinical operation capacity level and or safety for home, health care facility, and or ambulance transport management, isolation capability, and or other IPC preventive measures to ensure crises containment.

GHSA Linking Public Health with Law and Multisectoral Rapid Response

(*GHSA Action Package Respond-2*)

Introduction

Public health emergencies pose special challenges for law enforcement, whether the threat is manmade (e.g., anthrax terrorist attacks) or naturally occurring (e.g., flu pandemics). In a public health emergency, law enforcement will need to quickly coordinate its response with public health and medical officials.

Uganda Level of Capabilities

- Law enforcement agencies involved in this assessment are the Uganda People Defense Force (UPDF) under Ministry of Defense and the Uganda Police Departments (UPD) under Ministry of Internal Affairs
- Law enforcement interaction with public Health in case of manmade terrorist, biological threats and attacks, or pandemics beyond the context of health services and activities is regulated at a higher level within the district and or national disaster plans and or its assembled Task Force committees by laws;
- In those events the roles and responsibilities to ensure the national borders safety and security is done by UPDF and all intra-nation law enforcement, property protection and other security functions are done by UPD.
- Joint training is conducted, including both public health and law enforcement officials at the border entry points for health screening and also for Pandemic Preparedness
- Identification of potential biological or other public health events that may have deliberate motives is of limited capacity and the responsibility of UPD Central Intelligence Department (CID).
- The Police Directorate of Counter-terrorism fulfills the HAZMAT response to investigate, contain and control potential and or actual biological threat incidents. Although of limited capacity, they are relatively well equipped, and have had the training required for chemical, biological, radiological, and nuclear event response.
- The Government of Uganda is internationally connected to the INTERPOL through the Ministry of Internal Affairs INTERPOL National Central Bureau (NCB) for Uganda. It is part of the Uganda Police Force established under Article 211 of the Uganda constitution and forms the link with INTERPOL's global network enabling member countries to work together on cross-border investigations.

Scoring for Uganda Using the Assessment Tool

- Public Health and Law Enforcement are linked during a suspect or confirmed biological event: Developed Capacity Score: **Score - 2**
    - Public health and law enforcement identify appropriate points-of-contact and triggers for notification/information sharing.

Assessment Tool

- Assessment of regulation to coordinate Inter-ministerial health services activities are within the National Health System Policy and Plans. Regulations to coordinate other Inter-ministerial activities beyond health are within the national or district disaster management plan or policy. Both are higher level documents than MOU.
- Assessment of the Law enforcement agencies to address dual function in areas that are high risk for civilian health services providers are not covered
- The tool does not outline the assessment of the various levels of multi-sectorial interaction and coordination within the different risk zones. It requires further spread of the assessment tool to address it.

GHSA Medical Countermeasures and Personnel Deployment

(*GHSA Action Package Respond-3*)

Introduction

Medical Countermeasures (MCM) are vital to national security and protect nations from potentially catastrophic infectious disease threats. Investments in the MCM create opportunities to improve overall public health. In addition, it is important to have trained personnel would can deploy in case of a public health emergency for response.

Uganda Level of Capabilities

- No formal written plan exists to identify procedures and decision making related to sending and receiving medical countermeasures during a public health emergency. The usual procurement and supply-chain process is followed, but expedited.
- The Uganda National Drug Authority has means to address regulatory concerns of receiving drugs or devices from an international source during a public health emergency. Though no formal plan exists, logistic concerns related to sending, receiving and distributing medical countermeasures during a public health emergency are well taken care of by existing policy and laws.
- Though no formal emergency plan exists, security concerns that may emerge related to sending/receiving/distributing medical countermeasures during a shortage are catered for.
- Uganda lacks a stockpile of medical countermeasures for national use during a public health emergency. No policy exists on stockpiling. Purchases are made when there is a health emergency. There is a fund set aside at the national drugs store for response to health emergencies and the country has in place agreements with distributors to do expedited procurement during a public health emergency.
- Uganda has procedures related to sending its health personnel during response to a public health emergency within the country. Uganda was among the first African countries to deploy health personnel to West Africa to combat Ebola. There is no plan or policy that directly address regulatory and licensure concerns of receiving health personnel from an international source.

   Recommendations:
   - Guidelines for stockpiling of medical countermeasures should be created, including detailed items that require to be stockpiled.
   - A clear policy on how emergency funds will be utilized during the very early stages of response should be set out, to avert critical delays especially in a rapid onset emergency

Scoring for Uganda Using the Assessment Tool

- System is in place for sending and receiving medical countermeasures during a public health emergency: **Score - 1**
  - o Plans have been drafted that outline system for sending and receiving medical countermeasures during public health emergencies

- System is in place for sending and receiving health personnel during a public health emergency: **Score - 1**
  - o Plans have been drafted that outline system for sending and receiving health personnel during public health emergencies

Assessment Tool

- The word 'countermeasures' may not be familiar with everyone around the world. It should be replaced with a more familiar term or clearly explained right from the outset.
- Indicators for assessing capabilities for systems to send and receive personnel during a public health emergency lack clarity.

Attachments

Attachment 1   **Global Health Security Agenda Action Packages**

Attachment 2   **Global Health Security Self-Assessment for Uganda**