



Uganda's Progress in Implementing Lab Biosafety / Biosecurity

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Biosafety, Biosecurity and
Infrastructure

*U.S. Centers for Disease Control and
Prevention–Uganda*

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Situational analysis

- Uganda is signatory to:
 - Biological and Toxin Weapons Convention (BTWC, 1972)
 - UN Security Council Resolution 1540
 - WHO International Health Regulation (IHR, 2005)
 - Chemical Weapon Convention 1993

Situational Analysis

- Legislation and policies;
 - Anti- Terrorism act, 2002
 - Occupational Health & Safety Act, 2007
 - Uganda National Health Laboratory Policy, 2009
 - Biosafety Act 2012
 - Biosecurity policies and bill, (draft) – hope to be passed in 2015

Challenges

- Definitions were not clear
 - Biosafety was poorly understood
 - “Bio” was a missing prefix for all definitions of **security** and **terrorism**
- The National Health Laboratory Policy 2009 addressed biosafety but not biosecurity
- The National Health Laboratory Strategic Plan 2010 – 2015 – only mentions biosecurity but does not plan for it.

Challenges

- The National Biotechnology and Biosafety Bill 2012 does not address health laboratory biosafety or biosecurity and is more agricultural.
 - The Bill is for an Act to ensure the safe development and use of modern biotechnology;
 - To provide mechanisms to regulate research, development and use of genetically modified organisms.

Challenges

- Biosafety and Biosecurity were not addressed in lab training curriculum
- Inadequate human resources in terms of skills and numbers
- Few labs implemented Biosafety and or Biosecurity
 - Expensive to implement
 - Poor infrastructure
 - Poor understanding of the concepts

Critical Considerations for Biosecurity and Bioterrorism

- Ebola outbreaks - 2000, 2007, 2011, 2012
- Marburg outbreaks - 2007, 2012
- Anthrax - 2010
- Yellow fever – 2010, 2012
- Highly perforating strain of typhoid -2009
- Nodding disease since 2013
- Though endemic, outbreaks of Plague, Typhoid, Cholera and Meningitis

Strategies and Accomplishments

- Lab infrastructure improvement
 - Renovation of Laboratories such as the BSL-2 Enhanced labs for VHF diagnostics, influenza laboratory
 - UHNLS under construction
- Strengthen Coordination
 - MoH - National Disease Control Department
 - National Laboratories – CPHL and UVRI
 - Formulation of the Bio-risk management Subcommittee of the National Laboratory Advisory Committee

Strategies and Accomplishments

- Improvement of surveillance –
 - Strengthened community component
 - Plague influenza, yellow fever, marburg, Ebola, meningitis, anthrax, botulism.
- Development of the National Biosecurity Bill (draft) and draft Policy used as a working document
- Specific Training in biosafety

Strategies and Accomplishments

- Development of the National Specimen Referral and Transportation Network
- Improved Identification of Pathogen
- Improved skills of personnel in referral labs
- Implementation of QA through SLMTA program (Strengthening Laboratories Management to Towards Accreditation)
- Establishment of the EOC – real time reporting of cases.

Strategies and Accomplishments

- 33 person ToTs in Biosafety and Biosecurity (8 trained in ACILT South Africa)
 - More than 700 laboratory personnel trained in biosafety
 - Biosafety officers are mandatory designated positions for all laboratory facilities

Strategies and Accomplishments

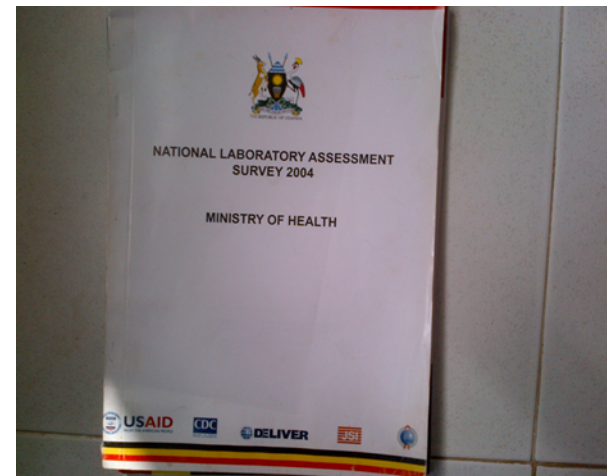
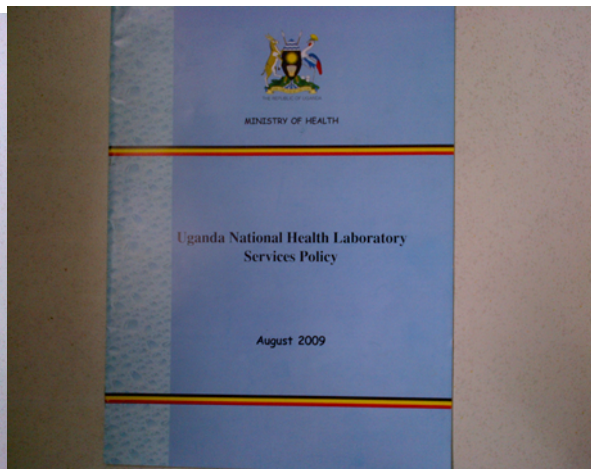
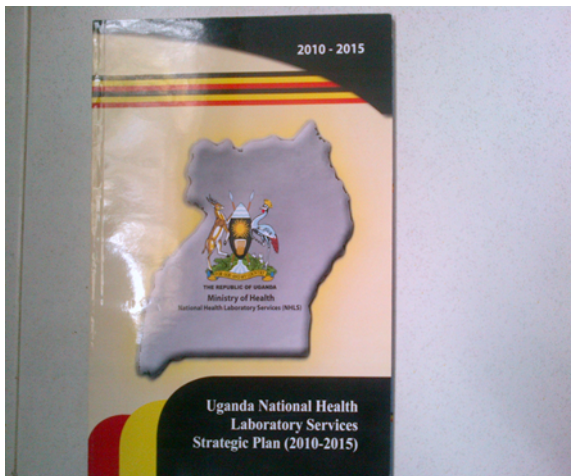
- 2 Biomedical Engineers trained at Eagleson Institute, USA on BSC certification and maintenance
- Perimeter wall construction at UVRI and National Animal Disease Diagnostic Epidemiological Center (NADDEC)
- Access control to UVRI and NADDEC

Where are we now...(1)

- Developed Laboratory Biosafety Manual
- Harmonization of national Curriculum for biosafety trainings
- National biosafety implementation plan
- Baseline biosafety assessment of the 100 laboratory hubs under way

Where are we now...(2)

- Uganda Government recognition of Biosafety and Biosecurity; Establishment of a college specializing on Biosecurity training at College of Veterinary Medicine and Biosecurity (COVAB) at Makerere University
- **Demonstrated that Global health Security Agenda works**





Current Challenges

- Sustainability of existing infrastructure and programmes; most are donor driven efforts
- Cost of equipment and technology is high and ever-changing – calling for a stable financial environment
- Culture of Biosafety and Biosecurity is still slow to acquire.
- Lack of standard body to certify in-country biosafety professionals

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Thank you

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