Professor Serwadda, infectious disease epidemiologist, is Professor, Disease control and the former Dean of the School of Public Health at Makerere University in Kampala. He received his medical degree, M.B.Ch.B and Masters in internal medicine M.Med from Makerere University and an MPH and honorary doctorate from Johns Hopkins Bloomberg School of Public Health. Dr. Serwadda was among the first researchers to report on the presence of AIDS/HIV in Uganda (Lancet, 1985) and has worked continuously on HIV-related research and prevention since the mid-1980s. He has been a senior investigator on the Rakai Program since its inception in 1988, and is the Ugandan principal investigator on the ongoing NIH-funded "Trial of Male Circumcision for HIV Prevention".

Professor Serwadda is a recipient of numerous awards. This include the Johns Hopkins Bloomberg school of Public Health Alumni Knowledge of the World Award-October 2010, Significant Contribution Award, British Council-2008, Pioneer in Behavior based HIV prevention, Harvard University May 2006. In recognition of his work Professor Serwadda has been inducted as a Johns Hopkins University society of scholars, May 2006, A member of the Institute of Medicine, IOM, Washington, D.C October 2011. Fellow of the Uganda National Academy of Science - 2012

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CHALLENGES IN IMPLEMENTATIONS

of One Health Strategies from a Country and Regional; African Perspective.

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The one Health strategy is intended to control the Public Health threat that arise from zoonotic infections, antimicrobial resistant pathogens or emergence of novel strain. The strategy involves a) early detection, b) Identification and c) management and control of the threat. Regional effort in the control of these epidemics is neccessary to prevent spread both locally and internationally. Political leadership is critical. There are challenges and opportunities experienced in Africa in the course of implementing the one Health strategy.

Early detection: 80% of the African population reside in rural populations. However there is an increasing dynamic movement of individuals between rural and the ever expanding urban population. Zoonotic epidemic, particularly Viral Hemorrhagic fever, VHF, usually start in rural population. Lack of community awareness/ education and in many cases this includes the local Health worker, is a major challenge in early detection of something unusual going on. Improving local road network facilitate infected individuals to rapidly move on to towns and thus spread the disease. However with the ever increasing penetration of mobile phone network there exist the opportunity to rapidly communicate the emergence of unusual illness from community members and health workers to regional hospital or established surveillance networks.

Identification: Highly trained health and laboratory staff are a challenge to find in Africa. Further specialised laboratory that are need to handle highly infectious specimen are very expensive to build and maintain. Identification still remains one of the most significant challenge managing particularly zoonotic disease threats. In the recent Ebola and Marburg epidemics that have occurred in Uganda. Blood samples still had to be sent to CDC, Atlanta for identification. DNA based technologies have completely changes the feasibilities of undertaking surveillance of microorganisms that were deemed too expensive to study in rural populations in Africa. Further they have enabled us to take specimens from household without invasive procedures. Inexpensive, reliable and easy to use technology of identification will significantly improve our abilities to rapidly indentify microorganisms at a more rural or primarily health setting

Management. At the local and country level the biggest constraint is the lack of well trained health personnel. In addition there are few or no proper treatment facilities to take care of infected individuals. Sadly in every Ebola epidemic experience in Uganda this year, health workers have died as a result of contracting the disease often due to a lack of proper protective gear. Further the cost of managing these epidemics is high. Although

Uganda has witnessed a regular occurrence of VHF epidemics in the last three years, there is no systematic budgeting for management these epidemics. Often there is a need for emergency budgeting/ reallocation of funds or donor partners supplement. Significant process has been made in some countries i.e Uganda to set up and maintain a good surveillance system for zoonotic infection however many countries either lack or have a dysfunctional system. Further there is lack of coordination between the veterinary, wild life and the health services

Regional Control. The emergency of rapid movement of diseases makes it imperative to have regional effort to coordinate, support and help manage disease control effort. This would involve having a collaborative effort in training a wide range of health and veterinary staff from monitoring and investigation of epidemic to managing and identification or diseases. Addition establishing regional centres of excellence in diagnostics will further help to leverage both financial and human resources. There are regional political / economic zone that can act as entry points to promote and coordinate one Health activities. For example there is the East Africa Community, EAC, that includes five countries; Uganda, Tanzania, Kenya, Rwanda and Burundi with a Health secretariat in Arusha. The leadership in this region have not yet demonstrated that one health is a priority which is a challenge. However the South African Development Countries, SADC countries, which include 15 states South African countries, are now served by the National Institute for Communicable Disease, NICD. This centre based in South Africa serves as a regional resource for early detection, identification of infectious microorganism in the region. The African Field Epidemiology Network, AFENET, based in Kampala has done an excellent job of ensuring that several Africa countries a facilitated in training health and veterinary workers in the investigation of epidemics and their control

Opportunity for University Leadership – the role of One Health networks in Africa in transforming the educational experience of future leaders in public health, animal health and the environment. One Health Central and Eastern Africa, OHCEA, is recent efforts by 14 school of Public Health and veterinary science in six countries in East and Central Africa , funded by USAID through the Respond program, to bring together Health and veterinary professionals to increase awareness, state of preparedness, monitor and evaluate disease threats in this region, which is considered a 'hotspot' for emerging and re-emerging diseases

One Health Policy Dialogue – mainstreaming OH in the Africa region requires significant review of current policy frameworks that largely stove-pipe the sectoral roles of key ministries likely to be involved in any OH agenda. Recent efforts by WHO, along with FAO and AU-IBAR to promote cross ministerial dialogue at a forum in Libreville, Gabon on12-14 November 2012 opens up opportunities for higher level policy dialogue on the role of OH in Africa and its implications for cross-sectoral partnerships involving health, environment and agriculture. Key points for consideration the need for inter-sectoral partnerships, between Public health, animal health and the environmental sectors, reinforcing laboratory capacity in the African region and to build capacity for surveillance, preparation and response to outbreaks Emphasis was made on the participation of communities in support of preparedness to zoonotic outbreaks.