

# AFRICAN FIELD EPIDEMIOLOGY NETWORK (AFENET)



Strengthening Systems and  
Building Capacity for a Healthier Africa



**ANNUAL REPORT 2010**

*"A Healthier Africa"*



African Field Epidemiology Network

## VISION

*"A Healthier Africa"*

## MISSION

AFENET is committed to ensuring effective prevention and control of epidemics and other priority public health problems.

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## ACRONYMS AND ABBREVIATIONS

AED	Academy for Educational Development
AFRICHOL	Africa Cholera Surveillance Network
AI	Avian Influenza
AZIP	Avian Influenza and Other Zoonotic Infections Project
ASCP	American Society for Clinical Pathologists
BL	Burkitt's Lymphoma
BLIS	Basic Laboratory Management System
BLN	Biomedical Laboratory Network
CDC	Centers for Disease Control and Prevention
CPHL	Central Public Health Laboratory
DTS	Dry Tube Specimen
EIS	Epidemic Intelligence Service
EMBLEM	Epidemiology of Burkitt's Lymphoma in East African Minors
EQA	External Quality Assurance
FELP-AA	Alumni Association of the Kenya Field Epidemiology and Laboratory Training Program
FELTP	Field Epidemiology and Laboratory Training Program
FMAWR	Federal Ministry of Agriculture and Water Resources
FMOH	Federal Ministry of Health
GHSS	Global Health Systems Solutions
HAI	Human Animal Interface
HHS	Department of Health and Human Services
IDSR	Integrated Disease Surveillance and Response
ILB	International Laboratory Branch
ILRI	International Livestock Research Institute
ITROMID	Institute of Tropical Medicine and Infectious Diseases
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KEMRI	Kenya Medical Research Institute
MMWR	Morbidity and Mortality Weekly Report
NCD	Non Communicable Disease
NHLQATC	National Health Laboratory Quality Assurance and Training Centre
NICD	National Institute of Communicable Diseases
NVRI	National Veterinary Research Institute
PAMJ	Pan African Medical Journal
PHSWOW	Public Health Schools Without Walls
PMTCT	Prevention of Mother to Child Transmission of HIV
PT	Proficiency Testing
SLMTA	Strengthening Laboratory Management Towards Accreditation
SURVAC	Project for Reinforcement of Surveillance in Central Africa
UABMS	Association of Biomedical Scientists
UHI	Uganda Heart Institute
UMLTA	Medical Laboratory Technology Association
UPMB	Uganda Protestant Medical Bureau
USAID	United States Agency for International Development
UVRI	Uganda Virus Research Institute
WA-FELTP	West Africa Field Epidemiology and Laboratory Training Program
WAHO	West Africa Health Organization
WHO	World Health Organization
ZINQAP	Zimbabwe National Quality Assurance Program

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## FOREWORD

We are pleased to welcome you to the 2010 AFENET Annual Report; a compilation of our successes and activities this year, as well as our plans for a healthier Africa in 2011. The theme of this year's report is "Strengthening Systems and Building Capacity for a Healthier Africa".

2010 has been a remarkable year for AFENET and her partners, as well as the communities we serve through training, community sensitization, disease outbreak surveillance, detection, and response among others. We are grateful to our partners and funders for enabling AFENET to harness intellectual and financial inputs from so many sources, through your generosity. AFENET's growth in 2010 has been astounding; from an increase in the number of programs and graduates in the Network, to moving to a new home and employing more staff to strengthen our team of experts.

This year, the Network registered over 40 graduates from Field Epidemiology (and Laboratory) Training Programs in Kenya, Uganda, and Zimbabwe. This brings the total number of graduates from the programs to over 600 since AFENET's inception in 2005. As is common knowledge today, many graduates in Africa are opting for greener pastures and better terms of service on other continents; consequently leaving behind limping economies and impoverished health systems. However, we are pleased to report that the FELTPs in the Network are rated highly on the anti-brain drain score card. The training offered by FELTPs in the Network has been instrumental in retaining at least 85% of graduates in their home countries, hence contributing to the strengthening of health systems through provision of valuable human resources. We made this revelation in our paper titled: "Field Epidemiology Training Programs in Africa- Where are the Graduates?" which was published in the journal-Human Resources for Health. To read the entire paper, please follow this link: <http://www.human-resources-health.com/content/8/1/18>.

In 2010, our trainees were involved in investigations and response to a number of disease outbreaks including cholera in Rwanda and Tanzania, anthrax in Uganda and Zimbabwe, lead poisoning in Nigeria, Rift Valley fever in South Africa, polio in Uganda and Ethiopia, and measles

in Ghana. Their participation enabled them to translate classroom theory into practice and boosted health systems in the affected areas.

Other new initiatives in which AFENET is involved are: the Health Diplomacy Training Program in Sokoto, Nigeria, the African Cholera Surveillance Network (AFRICHOL), and short course training in Sierra Leone. You can read more about these programs in this annual report.

On an exciting note, a new FELTP joined the Network in 2010. The Central Africa Field Epidemiology and Laboratory Training Program (CAFELTP) was launched in October 2010. The CAFELTP is a regional program for trainees from Cameroon, Central African Republic, and Democratic Republic of Congo. The Rwanda and West Africa FELTPs were also officially launched in 2010. We are optimistic that these programs will play a major role in boosting health systems in their respective countries.

We believe that sharing of scientific knowledge is critical for building a body of scientific knowledge which can influence health initiatives for a healthier populace. Through our partnership with the Pan African Medical Journal (PAMJ), AFENET has also provided a platform for African scientists to build this body of knowledge. PAMJ was established in 2007 and has since witnessed rapid growth and credence. In 2010, PAMJ received indexation from PubMed and also introduced an advanced article level metrics system that determines the impact of an article. We therefore encourage trainees from programs in the Network and other interested parties to submit articles for publication to PAMJ.

We are very thankful to our partners, staff, and trainees, who have contributed to raising AFENET to the pedestal at which it stands today, and continue to support our work. We are however mindful of the tremendous work which remains to be done to boost public health capacity and systems in Africa.

Have a pleasant reading.



**Prof. Mufuta Tshimanga**  
Board Chairman  
Resident Advisor, South Africa FELTP



**Mr. David Mukanga**  
Board Secretary  
Executive Director, AFENET

## ACKNOWLEDGEMENTS

AFENET is immensely grateful to our dear funders and esteemed partners for their continued support to our programs and training programs in the Network. We acknowledge your support and commitment to strengthening health systems in Africa and look forward to further building our relationships in 2010.

### We wish to recognize the following institutions and organizations:

Ministries of Health & Agriculture in member countries	African Union (AU)
Implementing universities in member countries	East African Community (EAC)
Technical and professional bodies	United States Agency for International Development (USAID)
US Centers for Disease Control and Prevention (CDC)	Global Outbreak Alert and response Network (GOARN)
US Department of Health and Human Services (HHS)	Academy for Educational Development (AED)
Southern Africa Development Community (SADC)	Emory School of Medicine
World Health Organization (WHO)	National Institutes of Health (NIH)
Merck Company Foundation	Research Triangle Institute (RTI)
Task Force for Global Health	International Research Institute for Climate and Society (IRI)
Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET)	Columbia University
European Centers for Disease Control (ECDC)	Glaxo SmithKline
International Association of National Public Health Institutes (IANPHI)	University of Ohio
International Livestock Research Institute (ILRI)	Agence de Médecine Preventive (AMP)
US Department of Defence	PepsiCo
International Association of National Public Health Institutes (IANPHI)	Health Systems 20/20
Bernhard Nocht Institute	

## BACKGROUND

The goal of the African Field Epidemiology Network is to strengthen field epidemiology and public health laboratory capacity and effectively contribute to the management of epidemics and other major public health problems in Africa. AFENET evolved from Field Epidemiology Programs and Public Health Schools Without Walls (PSWOW). As a network of Field Epidemiology and Laboratory Training Programs (FELTP)s, AFENET is steadily growing to be a leading public health organization in Africa; evidenced through its numerous achievements.

Established in 2005, AFENET has expanded its scope to include programs on immunization, Non Communicable Diseases capacity development, health diplomacy, HIV Quality Assurance, and Burkitt's Lymphoma epidemiology. These programs have trained health workers at national and district level in different aspects of public health, and have contributed to raising government and public awareness about epidemic-prone diseases.

Our footprint has extended from merely four countries since our inception, to 19 countries on the African continent: Angola, Burkina Faso, Cameroon, Central African Republic, Democratic Republic of Congo, Ethiopia, Ghana,

Kenya, Mali, Mozambique, Niger, Nigeria, Rwanda, South Africa, Southern Sudan, Tanzania, Uganda, and Zimbabwe. These programs have produced over 600 graduates in Applied Epidemiology and Public Health who play a key role in supporting health systems in their countries. Our trainees have been involved in surveillance, disease outbreak investigation, response, and laboratory management.

AFENET is also supporting scientific publication through its partnership with the Pan African Medical Journal (PAMJ). PAMJ is destined to be the premier choice of publication for African authors.

AFENET has been successful in building partnerships with organizations in Africa and beyond to work towards realizing its goal. AFENET's partners include Ministries of Health in member countries, Non Governmental Organizations, international agencies, the private sector, and other public health agencies.

This Annual Report showcases some of AFENET's milestones in 2010, and reinforces our commitment to ensuring a healthier Africa.

## PROGRAM ACTIVITIES

### AFENET- Lab



Laboratory services are one of the core health care services that countries must develop and strengthen as they play a major role in all the key processes of detection, assessment, response, notification, and monitoring of health events. While developed countries easily adapt their well-organized routine laboratory services, resource-limited countries need considerable capacity building as many gaps still exist. The African Field Epidemiology Network, through its AFENET-Lab initiative has made some efforts in supporting laboratory capacity development in the Africa region. The efforts range from a number of specific projects focusing on HIV external quality assurance, Basic laboratory information systems, strengthening laboratory management towards accreditation, laboratory management training, equipment calibration training and support, and networking.

### HIV External Quality Assurance (HIV EQA) Project

In 2009, AFENET in collaboration with CDC Atlanta and the mandated national institutes in Uganda and Tanzania, began the HIV External Quality Assurance (EQA) project using the recently developed dried tube specimen (DTS) as Proficiency Testing (PT) panels and HIV standardized logbook. The project is aimed at monitoring and improving the quality of rapid HIV testing. The project has enrolled a total of

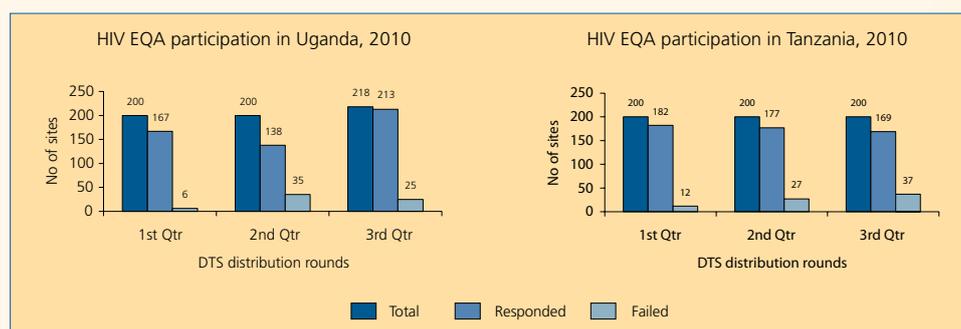
400 sites; 200 in Uganda and 200 in Tanzania.

The EQA project is a collaboration of AFENET, the Uganda Virus Research Institute (UVRI) and the National Health Laboratory Quality Assurance and Training Centre (NHLQATC) of Tanzania, with the objective of creating local capacity in proficiency or EQA programs.



By February 2010, AFENET had trained 400 HIV testing personnel from all targeted 400 HIV testing sites.

Three rounds of DTS panel distribution have been conducted and high participation rate were recorded over the three distributions. The results are being sent from the HIV testing sites through postal services, fax, phone calls and short message service (sms).



Support supervisions have been conducted for all the sites that had poor EQA performance. Reasons for failing have been poor reconstitution techniques, clerical errors and not following the algorithm.

Training on HIV External Quality Assurance - Dry Tube Specimen Production, Atlanta, USA AFENET's support to the HIV External Quality Assurance project was further boosted through capacity development of Mr. Ndlovu Nqobile – AFENET's Laboratory Project Officer.

Mr. Nqobile attended a training at the International Laboratory Branch of the US Centers for Disease Control and Pre-

vention (CDC) in Atlanta, Georgia USA from 26– 30 April 2010. The training exposed Mr. Nqobile to best practices in DTS pre-characterization, preparation, packaging, and reconstitution, quality assurance on HIV rapid testing, and data analysis on proficiency testing results. This training will essentially support AFENET's role in ensuring quality service delivery through accurate HIV test results as emphasized by the EQA project.

### Basic Laboratory Information System (BLIS) Project

At the core of patient management and good laboratory management is reliable information. In most African settings, laboratory data is not stored in a manner in which it can be easily accessed, summarized, or analyzed for public health action. Laboratory data is often captured in multiple reports that are inaccurate, non-standardized and illegible.

In an effort to enhance laboratory data storage and usage, AFENET, in partnership with CDC-Atlanta, is piloting a Basic Laboratory Information System (BLIS) in public health laboratories in Uganda and Tanzania. The project started in February 2010 and uses the BLIS software program designed

by the Computing for Good (C4G) program of the Georgia Institute of Technology – USA. The aim of the project is to enhance the capacity of laboratories to capture and analyze data at low to mid-level laboratories.

The BLIS pilot project has inbuilt sustainability features right from the initiation of the project through AFENET’s strong partnerships with Ministries of Health and national reference laboratories.

In Uganda, the project intends to involve trainees of Makerere University Faculty of Technology, in order to build local capacity for managing the BLIS when the pilot ends.



**Mr. Anthony Kimuli** (in blue shirt)  
AFENET’s Information Technology Officer  
installing the BLIS software at Kiwoko Hospital,  
Uganda

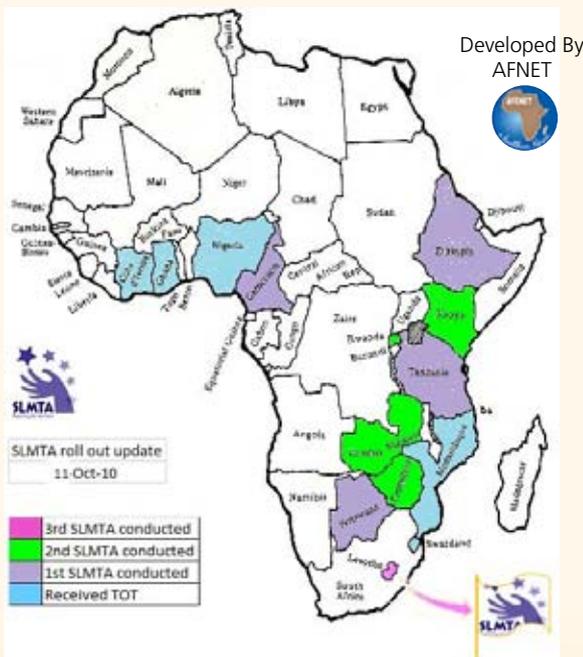


**Mr. Ndlovu Nqobile** (center)  
AFENET’s Laboratory Project Officer and Mr. Mark  
Dezalia (right)- CDC Atlanta, look at a log book during  
BLIS assessment at Mityana Hospital, Uganda

The first phase of the BLIS implementation was launched in August 2010, in partnership with the Uganda Protestant Medical Bureau (UPMB). The BLIS pilot is being conducted

at three laboratory sites namely: Alive Medical Center, St. Stephen’s Church of Uganda Hospital, and Kiwoko Hospital in Nakaseke District.

### Strengthening Laboratory Management Towards Accreditation (SLMTA) training



#### SLMTA experience in Rwanda

Rwanda is among the first African countries to complete SLMTA training following the three workshops model; and AFENET is proud to have been actively involved in the trainings. The last of the three recommended training workshops was held from 1-5 November 2010 in Kigali, Rwanda. This workshop was a major milestone for the five public health laboratories in Rwanda, and consequently set the pace for them to work towards WHO AFRO accreditation. The laboratories were: King Faisal Centre Hospitalier, Centre Hospitalier Universitaire de Butare, Centre Hospitalier Universitaire de Kigali, Kanombe Military hospital, and the National Reference Laboratory.

The first two SLMTA training workshops were held in January and June 2010. A total of 22 participants were trained. Participants implemented improvement projects in their labs after the first and second trainings.

A post-SLMTA training assessment is scheduled for April 2011.



*Participants of the SLMTA workshop in Rwanda, during an exercise*

### SLMTA experience in Zimbabwe

AFENET, in collaboration with the Zimbabwe National Quality Assurance Program (ZINQAP), facilitated the first and second SLMTA training workshops in Zimbabwe. A total of 20 persons from ten laboratories which included national reference, central and provincial hospital, and private labs participated in the workshops.

The first workshop was held in Harare from 22-24 March 2010 and the second was held from 30 August - 3 September 2010.

During the second workshop, participants received skills in storeroom auditing, safety auditing, as well as maintenance and quality control log creation.



**Mr. Ndlovu Nqobile-** *AFENET's Laboratory Project Officer, facilitates during the SLMTA workshop in Zimbabwe*



*A trainer from the Zimbabwe National Quality Assurance Program (ZINQAP), demonstrates laboratory procedures during the SLMTA workshop in Zimbabwe*

### SLMTA experience in Swaziland

In July 2010, AFENET's Laboratory Project Officer- Mr. Ndlovu Nqobile, together with officials from the Clinton Health Access Initiative (CHAI), Botswana Harvard Program (BHP), and the Zimbabwe National Quality Assurance Program (ZINQAP), conducted a baseline assessment of the Swaziland National Reference Laboratory (NRL) in preparation for

the country's roll out of the SLMTA program. The assessment which used the World Health Organization (WHO) Laboratory Accreditation checklist, focused on documents and records management, organization and personnel, client management and customer service, as well as process control and internal & external quality assurance.



## Laboratory Bio-safety and Bio-security Training, Kenya

Mr. Ndlovu Nqobile- AFENET's Laboratory Project Officer, attended a training workshop on Laboratory Bio-safety and Bio-security in Nairobi, Kenya from 8-12 March 2010. The workshop was organized by the African Biological Safety Association (AfBSA), and was supported by the U.S. Bio-safety Engagement Program (BEP). It's transportation of

infectious substances, emergency responses, occupational health and safety, waste management, sterilization, and decontamination, and preventing zoonotic disease transmission. The training AFENET's capacity and technical expertise to cascade the trainings in the region.

## Laboratory equipment calibration training

AFENET in collaboration with CDC organized a training to create a pool of local and regional biomedical engineers and equipment technicians with the capacity to meet the

demands of laboratory equipment maintenance, calibration and servicing in Africa.



*Participants during the laboratory equipment calibration training in Nairobi in August 2010*

In August 2010, six participants (2 from each of these countries – Kenya, Tanzania and Cameroon) received the practical training on the following equipment:

- Pipettes, Microscopes, Heating blocks, Incubators, CO2 incubators
- Autoclaves, Microplate washers and readers

- Vortex stirrer, Centrifuges, Refrigerators, Freezers
- All the participants are engineers working with their respective Ministries of Health institutions thereby ensuring that capacity to address equipment calibration is readily available. These engineers support especially the laboratories that are enrolled for accreditation. There are plans to equip the trained engineers with calibration tool kits.

## Management Training of Uganda Medical Laboratory Technicians, Uganda



*Some of the participants of the Management Training for Laboratory Technicians in Uganda*

AFENET, in collaboration with Uganda's Ministry of Health, Uganda Medical Laboratory Technology Association (UMLTA), Uganda Association of Biomedical Scientists (UABMS),

and the Biomedical Laboratory Network (BLN), conducted a one-week laboratory management training course in January 2010.

Twenty five District Laboratory Focal Persons (DLFPs) from 25 district public health laboratories in Eastern Uganda attended the course which aimed at enhancing participants' skills in effective laboratory management. Participants also received skills in communication, interpersonal skills and networking, report writing, budgeting, laboratory quality systems, quality improvement and audit, as well as laboratory safety.

The laboratory management training helped the participants to conduct self evaluations and design strategies to improve public health laboratory management in their respective districts.

## Conferences, workshops, meetings, and seminars

### WHO – AFRO Accreditation Workshop for Senior Policy Makers

As a follow up to the Rwanda launch of the WHO – AFRO Stepwise Accreditation Scheme, AFENET together with CDC organized a workshop for senior policy makers in the East Africa region. This workshop was a landmark in the development of quality laboratory services in Africa as participants agreed on strategies for enhancing accreditation of public health laboratories in Africa. The workshop

participants consented to the need for harmonized laboratory accreditation schemes and clear guidelines to support African countries in achieving laboratory accreditation by WHO AFRO. The workshop was held in Kampala, Uganda from 27-28 July and it attracted over 40 public health experts, including Directors in Ministries of Health from Uganda, Kenya, Tanzania, Rwanda, and Ethiopia.



*Workshop participants listen to proceedings*



**Dr. Stephen Mallinga-** *Uganda's Minister for Health speaks at the opening of the Laboratory Accreditation workshop in Kampala, Uganda*

AFENET, through AFENET-Lab, supported the 10th Biennial Conference of the Association of Pathologists in East, Central, and Southern Africa (APECSA), which was held from 13-17 September 2010 in Kampala, Uganda. Mr. Aloysius Bingi, a Laboratory fellow at AFENET Secretariat, shared AFENET's experiences in strengthening laboratory management capacity in Africa.

The theme of the conference was: Repositioning Pathology Practice in sub-Saharan Africa; opportunities and challenges. Topics discussed at the conference included: infectious diseases, HIV/AIDS pathology, and Neglected Tropical Diseases, Non- Communicable Diseases, and attracting, training and retention of laboratory medicine specialists.



**Mr. Aloysius Bingi** *makes his presentation during the meeting*

### AFENET-Lab publications

AFENET-Lab's contribution to strengthening public health laboratory capacity in Africa was featured in the first issue of the e-newsletter of the International Laboratory Branch (ILB) of the Division of Global AIDS which was published in September/October 2010. The article was titled, "Boosting Africa's Public Health Laboratory capacity" and was

written by Mr. Ndlovu Nqobile- Project Officer at AFENET Secretariat. It focused on several AFENET-L initiatives like: the External Quality Assurance (EQA) and the Basic Laboratory Information System (BLIS). For more information about AFENET-Lab publications and activities, please follow this link: <http://www.afenet-lab.net/>



*AFENET, CDC, NFEELTP officials handing over laboratory equipment and supplies to representatives of Nigeria CPHL in August 2010*

AFENET and its partners continue to support public health laboratories in Africa, mindful of the role of laboratories in disease prevention and provision of quality health care. Together with CDC, and Nigeria FELTP, AFENET donated laboratory supplies and equipment to the Microbiology, Bacteriology, Parasitology, and Virology sections of the Nigeria Central Public Health Laboratory (CPHL) on 29 October 2010.

The donations were meant to support and strengthen the laboratory's capacity, following an earlier request by the Nigeria CPHL.

A baseline survey was also carried out, and it highlighted a number of gaps which need to be addressed to enhance the laboratory's efficiency. AFENET, CDC, and NFEELTP pledged to support the Nigeria CPHL to address these gaps and elevate the quality of the laboratory's service.

### HEALTH DIPLOMACY PROGRAM FOR NORTHERN NIGERIA, USMANU DANFODIYO UNIVERSITY SOKOTO, NIGERIA

The Health Diplomacy Program for Northern Nigeria is a one-year program funded by the United States Department of Health and Human Services (HHS). The program aims at supporting the training and skill-set development of frontline health workers in Northern Nigeria, so as to increase access, effectiveness, safety, and quality of health services. It was initiated in September 2009 to support

the northern part of Nigeria, where health indicators are appalling.

The Program is implemented by AFENET, in partnership with the Usmanu Danfodiyo University, Sokoto (UDUS), and with oversight from CDC Atlanta and CDC Nigeria. The project is hosted by UDUS in Sokoto, Nigeria.



*Prof. Daneji (L)- Deputy Vice Chancellor, UDUS and Mr. David Mukanga-Executive Director, AFENET, exchange copies of the signed Memorandum of Understanding between AFENET and UDUS*



*Cohort I trainees of the Health Diplomacy Program in Sokoto, Nigeria*

The program offers two courses: the Basic Epidemiology Course for community healthcare workers and the Health Leadership and Management Course for health managers at State and Local Government Area (LGA) level. Each course runs for at least three months, and involves didactic,

fieldwork and feedback sessions. Participants receive a certificate from UDUS upon completion of the course. So far, 63 public health managers have benefitted from the Basic Epidemiology course.

## Two Basic Epidemiology trainings held in 2010



*Some of the trainees of Cohort II of the Basic Epidemiology course receive scholastic materials ahead of the course commencement in September 2010*

The Basic Epidemiology course focuses on enhancing participants' skills in disease surveillance, outbreak detection and reporting, as well as response for effective public health management.

The first Basic Epidemiology course was conducted from 14- 25 June 2010 and it attracted 32 participants. The second training of 31 participants was held from 20 September- 2 October 2010.

Given the social setting in Northern Nigeria, the first training was attended by only male participants. However, during the second training, there were five female participants.

The course participants registered great improvements in knowledge and skills gained, which they hope to use to implement strategies to support the Nigeria health system.

## PAN AFRICAN MEDICAL JOURNAL (PAMJ)

The need to boost scientific publication, especially from Africa, is one of the driving forces of the Pan African Medical Journal (PAMJ), whose vision is to become a leading medical journal in Africa, and one of the best in the world. PAMJ also seeks to contribute to the skills of African authors by conducting scientific writing courses and sharing online journal publication support materials.

PAMJ is an online, open-access, bi-lingual (English and French) journal with a mission to promote scientific publications from African scientists, and influence their contribution to scientific knowledge. In 2008, PAMJ entered a partnership with AEFNET, to provide a platform for public health practitioners in the Network to publish in this highly regarded journal.

The journal published its first article in May 2008, and has since registered a number of milestones. Visit the



*Graph showing number of articles published annually in PAMJ, since 2008*

Pan African Medical Journal today by logging onto [www.panafrican-med-journal.com](http://www.panafrican-med-journal.com). The journal also has a Facebook page which can be accessed via this link: <http://www.facebook.com/pages/Panafrican-Medical-Journal/>.

## Second PAMJ editorial office training

PAMJ believes that a committed and capable workforce is critical to the success of any initiative. As a closely-knit team of eight, PAMJ organizes annual trainings for its editorial staff. The second editorial office training was held on 21 & 22 May 2010 at the AFENET Secretariat in Kampala, Uganda; the first having been held in September 2009.

The training focused on equipping the editorial office staff with advanced skills to manage the journal's improved re-

view system, as well as use of professional software in the editorial process.

It was attended by Ms. Anita Tibasaaga, Mr. Allan Mwesi-ga, Dr. Rebecca Babirye, Mr. Ndlovu Nqobile (all editors), and the Managing Editors: Dr. Raoul Kamadjeu, Dr. Landry Tsague, and Dr. Sheba Gitta. Dr. Lazarus Kuonza, an editor working with the South Africa FELTP was unable to attend the training.



Members of the PAMJ Editorial Office 2010, pose with AFENET's Executive Director- Mr. David Mukanga (extreme left) during the second Editorial Office meeting in May 2010 in Kampala, Uganda

### PAMJ is indexed on PubMed

In April 2010, PAMJ was indexed onto PubMed and Med-Line. PubMed is managed by the US National Institutes of Health (NIH) and is the largest database of scientific papers in the world- with 19million citations for biomedical literature from life science journals and online books. PubMed indexation means that articles which are published in PAMJ will be accessed by millions of readers globally via PubMed. It will build a platform for African scientists, including trainees of Field Epidemiology and Laboratory

Training Programs (FELTPs), to share and receive information with their counterparts on other continents, and build scientific knowledge.

PAMJ is also listed in the following databases: Directory of Open Access Journals, African Index Medicus, Health InterNetwork Access to Research Initiative (HINARI), EBSCO, African Journals Online, Scopus, and Excerpta Medica Database (EMBASE).

### PAMJ hits 100<sup>th</sup> article



PAMJ editors at work during the second Editorial Office training in May 2010

PAMJ published its 100th manuscript on 29 September 2010. The research article is titled: L'infarctus du myocarde du jeune adulte -Analyse rétrospective des cas colligés au CHU de Dakar by Nobila Valentin Yameogo et al (from Senegal). Publishing the 100th manuscript in a period of two years is a phenomenal milestone for PAMJ, considering that many other journals publish 100 articles after several years. The manuscripts published in PAMJ are of exceptional quality because they go through a rigorous review process. The journal has over 600 reviewers from 40 countries and a team of eight experienced editors.

### PAMJ introduces article-level metrics

Growing from strength to strength, the Pan African Medical Journal (PAMJ) introduced an advanced article-level metrics system in September 2010. The article-level metrics system allows authors and readers to track the progress of any article published in the journal, and consequently, its impact. Through this system, readers can view the number of times an article was accessed, downloaded, shared, and recommended, as well as the geographical locations from

where it was accessed. This new system is different from the conventional way of determining a journal's impact simply by reflecting the average number of citations per article published. The Impact Factor (IF) is frequently used as a proxy for the relative importance of a journal within its field; with journals with higher impact factors deemed to be more important than those with lower ones.

## PAMJ shines at Open-Access Conference, Kenya

The Open-Access in Africa Conference highlighted PAMJ as one of the most technologically advanced open access journals in Africa. This compliment was based on PAMJ's exceptional journal standards and innovative use of technology, in its article level metrics system.

The Open-Access in Africa Conference which was organized by Biomed Central and Computer Aid international, and was held from 10-11 November 2010 at Kenyatta University, Nairobi, Kenya.

Representatives from Biomed Central expressed keenness to learn from PAMJ's innovation.

PAMJ is thus committed to maintaining high quality of material published through rigorous peer review and exceptional standards in journal management. The journal plans to become a center of excellence for training in scientific writing, peer review, and electronic resources.



*Dr. Raoul Kamadjeu (2nd left) - one of PAMJ's Managing Editors, with other participants at the Open-Access in Africa Conference, Nairobi, Kenya*

## STRENGTHENING MANAGEMENT DEVELOPMENT PROGRAM (SMDP)

The Strengthening Management Development Program (SMDP) was initiated after an assessment which reviewed available national data from Ministries of Health, showing the limited use of data for decision-making in health systems in Africa.

This assessment was done by AFENET and the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) in 2004. SMDP aims at supporting training programs in the Network and countries in Africa

to produce public health leaders and managers by enhancing their management capacity of trainees as well as staff of Ministries of Health.

The program therefore conducts management and a leadership training workshops in Health Management Information Systems (HMIS). Another course taught under this program is Improving Management of Public Health Interventions (IMPHI).

## Short courses and training - IMPHI course training



*Participants and facilitators of the IMPHI course which was held in Ghana in July 2010*

Participants at this year's Improving Management of Public Health Interventions (IMPHI) course (21 June - 16 July 2010) in Accra, Ghana received skills in leadership and management from one of Africa's best leadership and mentorship coaches, Mr. Charles Henderson.

Mr. Henderson heads the South Africa based Henderson, Harper & Associates which provides services in leadership, emotional intelligence and customer service. Emotional Intelligence is influential in enhancing one's leadership and management capabilities and most importantly-customer care.

This was the second IMPHI course and it attracted a total of 16 participants: from Ghana (11), Nigeria (4) and Rwanda (1). The first IMPHI course was held in July 2009. Effective

leadership and management are critical for the success of public health programs in Africa. Consequently, the IMPHI course aims at improving leadership and management skills of public health managers in sub-Saharan Africa. It builds

their capacity to apply effective leadership and networking skills, plan processes, and procedures to achieve measurable results, as well as mobilize and manage available resources to realize desired health goals.

## AFRICAN CHOLERA SURVEILLANCE NETWORK (AFRICHOL)

The World Health Organization (WHO) reports an estimated 3–5 million cholera cases and 100,000–120,000 deaths due to cholera every year. Most of these cases are reported in Africa, where the disease is endemic in many countries. The global cholera threat has received insurmountable attention from several international health-oriented organizations, with the aim of saving lives. One such organization is the Agency for Preventive Medicine (AMP) which received funds from the Bill & Melinda Gates Foundation for the development and implementation of a cholera surveillance network in eight countries. AFENET is a sub-grantee of AMP, and the two organizations will jointly implement the African Cholera Surveillance Network (AFRICHOL).

The data collected will help to estimate the incidence of cholera and laboratory capacity to confirm the diagnosis of diarrheal diseases in Togo, Cameroon, Guinea Conakry, Democratic Republic of Congo (DRC), Mozambique, Uganda, Kenya and Tanzania. This data will also be used to

make decisions concerning the type of intervention for the prevention and control of cholera; either by vaccination or improvement of water and sanitary conditions.

### AFRICHOL Project Goals

- i. Establish a consortium of organizations that will plan and oversee the development and implementation of a cholera surveillance network in 8 African countries
- ii. Enhance regional cholera surveillance by establishing a network of sites that can generate high quality data and routinely confirm cases by laboratory testing
- iii. Reinforce capacity to investigate and respond to substantial cholera outbreaks
- iv. Strengthen laboratory capacity to support cholera surveillance and outbreak investigation
- v. Design activities to be compatible with existing plans and policies, and develop strategies for sustainability

## Program activities - AFRICHOL consortium launched

The AFRICHOL Consortium was launched at a meeting held from 27-28 May 2010 in Congo, Brazzaville. The AFRICHOL Consortium aims at bringing together key African and international cholera and surveillance experts to exchange information on existing cholera surveillance, share knowledge regarding disease burden, and assess methods of cholera

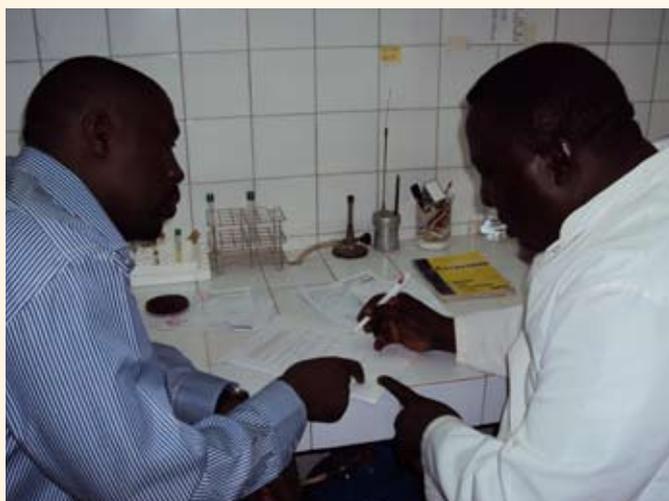
control in outbreak and endemic settings.

Prior to the implementation of the AFRICHOL project, an evaluation visit (country visit) will be carried out in each of the eight countries to identify sentinel sites. The first country visit was conducted in Togo.

## Togo Country Visit

The Togo country visit was held from 5-7 October 2010. The team members were: Mr. Aloysius Bingi- AFRICHOL Regional Laboratory Coordinator, AFENET, Dr. Abiba Kerebala- Country Focal Person, Institute Nationale d'Hygiene, Dr. Emmanuelle Espie- Project Coordinator, AFRICHOL Project-AMP, Dr. Mayet Koutouan-Regional Coordinator, AFRICH-

OL Project- AMP, and Dr. Tante- Cholera Surveillance Officer, Ministry of Health, Togo. The team visited four hospital laboratories in Togo and observed that some laboratories lacked basic reagents and equipment for cholera diagnosis, had no quality control systems, and absence of laboratory inventories.



**Mr. Aloysius Bingi**- Regional Laboratory Coordinator at AFENET Secretariat, discusses with a laboratory scientists in Lomé, Togo during the AFRICHOL country visits in October 2010



(L-R) **Ms. Melissa Dahlke**- AFRICHOL Regional Outbreak Coordinator, AFENET Secretariat, **Dr. Emmanuelle Espie**-AFRICHOL Project Coordinator, AMP, and **Dr. Anton**- AFRICHOL Project Coordinator, AMP during a planning meeting at the AFENET Secretariat in September 2010

## AVIAN INFLUENZA AND OTHER ZOOBOTIC INFECTIONS PROGRAM (AIZIP)

The Avian Influenza and Other Zoonotic Infections Project (AIZIP) was launched in March 2008 to strengthen capacity for Avian and other Pandemic Influenza infections premised on the One World, One Health concept. With support from an expanse of partners, the project has been instrumental in supporting countries in the Network to establish structures within their human and animal health systems, to address capacity building for outbreak investigations for zoonoses, surveillance, response, control, and prevention of zoonotic diseases.

AIZIP is pillared on five guiding principles namely: working with existing structures within member countries, building partnerships and teams, implementation based on country needs, building capacity of stakeholders, and

conducting implementation that is within the context of IHR and IDSR.

Cognizant of the threat of trans-boundary diseases which threaten lives all over the world, AIZIP has been at the forefront of supporting African countries to fast track the implementation of the 2005 International Health Regulations (IHR). The project has trained national teams to oversee the implementation of the IHR in the national Integrated Disease Surveillance and Response (IDSR) systems as mandated by the World Health Organization (WHO).

In 2010, AIZIP added a number of success building blocks through support to countries in the Network, and some of these activities are highlighted below.

### Participatory Epidemiology course, Uganda

Participatory Epidemiology (PE) is a unique aspect of epidemiology which involves practical use of lessons learnt in class to influence communities' understanding of diseases. Participatory Epidemiology is important in enhancing skills of communities to identify potential disease threats as well as to respond or report adequately.

As part of building capacity for disease outbreak surveillance and community awareness, AFENET, together with

the International Livestock Research Institute (ILRI), the US Centers for Disease Control and Prevention (CDC) Atlanta, and the Makerere University School of Public Health (MakSPH), organized a Participatory Epidemiology Course for 15 trainees of the Uganda program.

The course was held from 14-25 March 2010 in Arua District, Uganda, and was the first PE course conducted for public health professionals in the Network.



Through lectures, use of case studies, and field assignments, the trainees were equipped with skills in conducting needs assessments in public health for gap identification and planning appropriate interventions, designing communication messages targeting behavior change for disease prevention and improved health in communities, PE data collection and analysis, as well as conducting PE interviews, among others.

**Dr. Monday Busuulwa** (center)- Medical Epidemiologist at AFENET Secretariat, discusses with AIZIP team member Dr. David Mafigiri (left), and a trainee of the Uganda program, during the PE course in Uganda

### Short course in Zoonoses Outbreak Investigation, Surveillance and Management, Nigeria

Further to enhancing appreciation of the One Health approach towards zoonotic diseases prevention and management, a short course on Zoonoses Outbreak Investigation, Surveillance and Management was held in Nigeria in October 2009. The course was followed by presentations from the 32 participants who committed to supporting Nigeria's regional and national health efforts in zoonoses control using the skills learned.

The presentations workshop was held from 30 June- 1 July 2010 in Kaduna State, Nigeria. It was organized by AFENET, under the auspices of AIZIP, with support from USAID and CDC.

AFENET is currently in advanced stages of standardizing the generic materials for this course, for use in other countries that wish to conduct similar trainings.



Dr, Henry Akpan- Program Director, Nigeria FELTP, hands a certificate to Dr. Kwange, one of the participants of the short course

### Disease outbreak investigations - "Nodding disease" investigations in Kitgum District, Uganda

AIZIP also used the One Health approach in December 2009, when the project and its partners formed a multi-sectoral team to investigate a "Nodding Disease" outbreak in Kitgum District, Northern Uganda. The investigating team comprised of epidemiologists, clinicians, anthropologists, nutritionists, environmentalists, laboratory technologists, neuro-pediatricians, general physicians, Uganda FETP trainees, and biostatisticians. The team's objectives were to describe the disease, develop etiological hypothesis to guide investigations, carry out sample collection from the patients and the environment, line list the cases at the facilities and communities, orient health workers on a working case definition, case detection, recording and reporting, and finally conduct a case-control study.

Other partners involved in the investigations were: CDC Atlanta, CDC Uganda, WHO Uganda Country Office, Mulago and Butabika National Referral Hospitals, and the Uganda Ministry of Health.



**Dr. Monday Busuulwa** (center)- Medical epidemiologist at AFENET, and other AIZIP team members, conduct Nodding diseases investigations in Kitgum District, Uganda

## Support to anthrax investigations in Western Uganda



*Members of the Anthrax National Task Force collect samples from the carcass of a dead hippopotamus during anthrax investigations in Western Uganda*



*Members of the Anthrax National Task Force vaccinate animals in Western Uganda during the anthrax outbreak*

Members of the AIZIP multi-sectoral team, together with the Uganda Anthrax National Task Force, were involved in controlling the spread of anthrax, following an outbreak in the Western Uganda districts of Kasese and Rubirizi in July and August 2010. The team conducted surveillance and

community sensitization exercises which aimed at containing the outbreak. In September 2010, with support from the Ministry of Agriculture, Animal Industry, and Fisheries, and the Uganda Wildlife Authority, a mass vaccination of the animals in the area was conducted.

## One Health Laboratory Training for Laboratory Personnel from Human and Veterinary Sectors

The ultimate goal of the “One Health” concept is to ensure that disease detection and prevention are carried out early in the disease transmission cycle, in order to minimize the impact of infectious diseases on both humans and animals. This is done through inter-sectoral and cross-sectoral collaboration among the human, animal, and environmental health sectors. Prior to implementing the One Health approach, experts in the three sectors operated independently to manage diseases that interface between humans and animals. However, this approach had a minimal impact.

Consequently, the Uganda Anthrax National Task Force, under the auspices of AFENET, the RESPOND project of USAID, and other stakeholders, organized a two-day “One Health Laboratory Training for Laboratory Personnel from Human and Veterinary Sectors” from 13-14 September 2010 in Kasese District, South Western Uganda. This followed an anthrax outbreak in Queen Elizabeth National Park, Kasese.

The training targeted laboratory scientists from human, livestock, and wildlife sectors; during which they received orientation in the basic techniques for rapid diagnostic screening of anthrax.



*Demonstration to human and veterinary district laboratorians from Kasese and Rubirizi during the two-day laboratory training in Kasese district*

## Conferences, workshops, meetings, and seminars

### Kenya Zoonotic Disease Technical Working Group holds first meeting

The Zoonotic Disease Technical Working Group of Kenya, which was launched in October 2009, held its first meeting on 24 March 2010 in Nairobi, Kenya. The team's members are from diverse professional backgrounds and represent a number of institutions namely: Kenya Ministry of Public Health and Sanitation, Ministry of Wildlife, Ministry of Livestock Development, CDC, Food and Agricultural Research Organization (FAO), Kenya Medical Research Institute (KEMRI), and the Kenya National Museum. The variegated composition of the Zoonotic Disease Technical Working Group is a reflection of the 'One Health' approach as a modern strategy to strengthen surveillance, response, con-

trol and prevention of emerging and re-emerging zoonotic infections.

One of the meeting outcomes was a framework for creation of a joint surveillance system for zoonotic diseases, between the Ministries of Public Health and Sanitation and the Ministry of Livestock. A study by two residents of the Kenya FELTP, that assessed the burden of zoonotic diseases in Kenya, showed that there is under reporting of zoonoses data to the relevant ministries by the health facilities. This makes it difficult to determine the actual contribution of zoonoses to the national disease burden.

### Technical support in response to Buduuda landslide disaster

AFENET, through AIZIP, provided technical support during public health assessments following a landslide that killed at least 80 people and destroyed property in Buduuda District, Eastern Uganda. Dr. Monica Musenero- AFENET's Senior Program Officer, was part of a team from the Uganda

Ministry of Health which carried out the public health assessment that later guided the Ugandan Government to implement effective preventive and response measures. These included dispatching medical teams, supplying medicines, and providing other logistical requirements.

### Completion of the case definition of common infectious diseases manual for Uganda

AFENET, under the auspices of AIZIP, supported the development and completion of Uganda's Case Definitions for Common Infectious Diseases of the Ministry of Health. The Manual was discussed and proposed for adoption by the Ugandan Government, during a meeting of public health and veterinary officials from the Ministry of Health's Epidemiology and Surveillance Division (ESD), Ministry of Agri-

culture, Animal Industries, and Fisheries (MAAIF), District Health Officers (DHO)s, and AFENET. If adopted, the manual will be used in early detection of infectious diseases including zoonotic diseases of public health importance like yellow fever, plague, and brucellosis.

The case definitions were made in tandem with recommendations spelled out by the International Health Regulations

## NON COMMUNICABLE DISEASES (NCD) PROJECT

(IHR) 2005 of the World Health Organization (WHO). Non Communicable Diseases (NCDs) are on the increase; becoming a major public health concern in both developed and developing countries. NCDs such as cardiovascular diseases and diabetes mellitus (DM), are responsible for 35 million deaths annually across the globe, with 28.1 million of these deaths occurring in low and middle income countries.

Much attention has been directed to infectious disease in low and middle income countries due to the significant morbidity and mortality from these diseases in endemic areas, yet the burden of NCDs is rising.

In an effort to curb the threat of NCDs in Africa, AFENET, together with the Uganda Heart Institute (UHI) at Mulago National Referral Hospital and Mbarara Regional Referral Hospital, are working together to build a surveillance sys-

tem for NCDs. The goal of the project is to contribute to the improvement of information gathering processes at the two institutions by facilitating and strengthening data collection, analysis and dissemination.

AFENET also wishes to develop the Uganda Heart Institute and Mbarara Referral Hospital into AFENET collaborating centers for training, surveillance and research on NCDs. As centers of excellence in NCD surveillance and training, the two institutions will provide opportunities for young public health professionals in and outside Africa to develop their skills and competencies in research and public health.

Together with other partners like the US Centers for Disease Control and Prevention (CDC) and the Pepsi Corporation, the NCD project registered a number of successes which are enumerated below.

## Inaugural Symposium on Building Capacity For Non Communicable Diseases (NCD)s Epidemiology and Surveillance in the African Region



(L-R) **Dr. Samuel Sackey-** Ghana FELTP, **Mr. David Mukanga-** Executive Director, AFENET, and **Dr. Joaquim Saweka-** WHO Country Representative to Uganda, share ideas during the NCD Symposium in Kampala, Uganda



Delegates at the NCD Symposium in Kampala, Uganda in May 2010

AFENET in collaboration with the US Centers for Disease Control and Prevention (CDC) and the Pepsi Corporation's Global Research and Development Unit, convened a landmark workshop of Directors of Field Epidemiology and Laboratory Training Programs, Public Health and Chronic Disease Unit heads from Ministries of Health in the Africa region to design and explore strategies for implementing a comprehensive program of chronic diseases surveillance and capacity development in Africa. The symposium was held from 17-19 May 2010 in Kampala, Uganda and focused on leveraging existing human capacity, public health infrastructure, and interventions that are proven and sustainable for reducing the burden of NCDs.

It was attended by 34 delegates from Egypt, Ghana, Kenya, South Africa, Tanzania, and Uganda. The highlight of the Symposium was the signing of a Consensus Statement by which all delegates agreed on strategies and recommendations for raising the profile of Non-Communicable Diseases (NCDs) in Africa.

To read the full Consensus Statement, please follow this link: <http://www.afenet.net/english/project.php?code=NCD>. Also read about the Symposium in an article written in Uganda's Daily Monitor newspaper on 20 May 2010: <http://www.monitor.co.ug/News/National/-/688334/921868/-x04s4x/-/index.html>

### NCD project presentations at Uganda Heart Institute (UHI)

Technical persons of the NCD project met staff of the Uganda Heart Institute on 31 July 2010 to share the project's findings on NCD surveillance in Uganda thus far. The meeting also discussed ongoing initiatives towards improving NCD surveillance in Uganda. The participants included Dr. Paul Omangincho- Director, UHI, Dr. Elias Sebatta- UHI, Dr. Olivia Namusisi- Head of Programs (AFENET), Mr. Simon Kasasa- Makerere University School of Public Health, Mr. Enoch Musoke- UHI, Dr. Placid Mihayo- Director of Mbarara Referral Hospital, and Dr. Peter Kirabira- AFENET.



**Mr. Simon Kasasa** (standing) makes his presentation during an NCD meeting at the Uganda Heart Institute

### EPIDEMIOLOGY OF BURKITT'S LYMPHOMA IN EAST AFRICAN MINORS (EMBLEM) STUDY

AFENET joined the National Cancer Institute (NCI)- USA, Research Triangle Institute (RTI) International- USA, Information Management Services (IMS)- USA, and Ohio State University to carry out a multi-site study investigating the cause of Burkitt's Lymphoma (BL) in children. The study, titled, "Epidemiology of Burkitt's Lymphoma in East African

Children and Minors (EMBLEM)" is being carried out in Western Kenya (Western and Nyanza Provinces), Northern Tanzania (North Mara and Mwanza Regions), and Uganda (North Central and North West Regions).

A total of 1500 children with Burkitt's Lymphoma (cases)

**EMBLEM STUDY AREA: EAST AFRICA**



will be recruited at hospitals that routinely diagnose and treat Burkitt Lymphoma in these regions, while children without the disease (also called controls) will be recruited from children attending parish-level health centers and from homes in their village. The EMBLEM Study is designed to assess whether genes which influence the risk for severe malaria also influence the risk for developing BL. Because malaria transmission occurs all-year round in the regions where the study will be conducted, all children in the region can be assumed to have suffered from malaria multiple times during their life.

The EMBLEM Study will answer, in a definitive way, the question whether repeated infections with malaria increase the risk for BL. BL is estimated to affect 10-15 cases per 100,000 children every year in East Africa.

**UGANDA IMMUNIZATION TRAINING PROGRAM (UITP)**

The Uganda Immunization Training Program (UITP) is a project aimed at training mid-level immunization program personnel in Uganda to reinforce their skills in immunization service delivery.

Program partners include: the Task Force for Global Health, Makerere University School of Public Health (MUSPH), Uganda Ministry of Health (MOH), and the Uganda National Expanded Program on Immunization (UNEPI).

Currently, UITP is implementing cascade training for district mid-level managers in an effort to improve immunization service delivery at district level. The first part of the program focused on training immunization managers at national level.

Midlevel managers include: District Health Officers (DHO), Expanded Program on Immunization (EPI) focal persons, District Health Visitors (DHV), cold chain assistants, Health Sub-District (HSD) in-charges, and HSD EPI focal persons from all districts in Uganda. The national trainers include UNEPI/MOH staff and WHO.

As a result of successful training workshops, UITP and implementing partners are developing a tool to be used to follow up the participants of the mid level managers' training course. The tool will focus on participants' knowledge retention and application of skills acquired during the course. The data collected will also be useful in evaluating the entire project.

**Mid Level Managers' training, Kabale District, Uganda**

All five districts in South Western Uganda- Kabale, Kisoro, Kanungu, Rukungiri and Ntungamo, were represented at the third Mid Level Managers' (MLM) training that was held from 14-19 February 2010 in Kabale District, South Western Uganda. The first two training workshops were held in August and November 2009.

Thirty-three participants, who included District Health Visitors/District Nursing Officers, District Cold Chain Assistants, and in-charges of health sub-districts attended the training.

Participants conducted EPI support supervision activities at four health facilities in Kamukiira, Kabale Municipality, Kabale, and Rugarama Hospitals. They also discussed problems leading to low immunization coverage in their districts, and made recommendations to improve the trends.



*Participants and facilitators of the Mid Level Managers training which was held in February 2010 in Kabale District, South Western Uganda*

## ACCOMPLISHMENTS OF AFENET FELLOWS

AFENET has continued to provide technical assistance through direct presence of our personnel in Surveillance Units of Ministries of Health (MoH)s and FE(L)TPs in the Network. AFENET Fellows are assisting the MoHs to strengthen their surveillance systems, conduct outbreak investigations, and respond to acute public health events, as well as supervise FELTP trainees. Some of their activities include: writing weekly epidemiological bulletins of the MoH, compiling articles for the Integrated Disease Surveillance and Response (IDSR) bulletin, supervising child immunization days in the districts, investigating and responding to outbreaks and reviewing teaching materials for FE(L)TPs. Below are their accomplishments:



**Dr. Christine Nalwadda**  
Field Coordinator, Uganda Program

### Accomplishments:

- Coordinates trainees' field activities at Makerere University School of Public Health
- Participated in Nodding disease investigation in Kitgum district, Northern Uganda.
- Organized multiple mentorship meetings with final year Master of Public Health trainees of the Ugandan program,
- Initiated process of supporting trainees/graduates to write manuscripts from their dissertations
- Organized preparatory meetings with trainees for the 14th International Congress on Infectious Diseases (ICID).
- Attended the 14th International Congress on Infectious Diseases (ICID) in March 2010 with two trainees from the Ugandan program
- Attended Participatory Epidemiology course in Arua, Uganda in March 2010. Was tasked to mentor trainees who later developed their projects for possible funding from CDC



**Dr. Raymond Tweheyo**  
Resident Mentor, Uganda Program

### Accomplishments:

- Has a Master of Public Health (MPH) from Makerere University, Uganda
- Is author of "Male partner attendance of skilled antenatal care in peri-urban Gulu district, Northern Uganda" published in BMC Pregnancy and Childbirth, 2010, 10:53 doi:10.1186/1471-2393-10-53, available at [www.biomedcentral.com/1471-2393/10/53](http://www.biomedcentral.com/1471-2393/10/53)
- Has attended many international scientific conferences and made both oral and poster presentations, with published abstracts online
- Has mentored a number of trainees of the Uganda program and supported preparations of their presentations, such as to the 14th International Congress on Infectious Diseases (ICID), 59th annual meeting of American Society of Tropical Medicine and Hygiene (ASTMH) and the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) Conferences.
- Congress on Infectious Diseases (ICID), 59th annual meeting of American Society of Tropical Medicine and Hygiene (ASTMH) and the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) Conferences.
- Is a member/ facilitator for projects including: Eliminating National Gaps Advancing Global Equity (MakSPH), Population Reference Bureau (PRB), Regulatory mechanisms for absenteeism in the health sector in Low and Middle Income Countries, 2010 (WHO), Center for Family Health Research and Development (MakSPH), JHSPH Gates Institute for Population and Reproductive Health).
- Member of Participatory Epidemiology Network for Animal and Public Health (PENAPH), International Society of Infectious Diseases (ISID), Uganda Medical Association (UMA), WHO Reproductive Health Library (WHO-RHL), and Lions Clubs International (LCI)

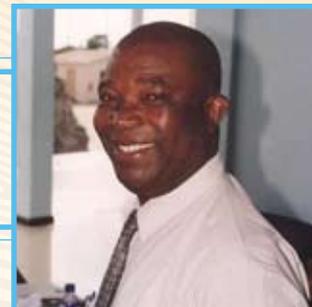


**Dr. Immaculate Nabukenya Nsamba**

AFENET Fellow, Uganda Ministry of Health

**Accomplishments:**

- Manages data entry, analysis, and publication of weekly epidemiological data at the Epidemiological Surveillance Division of the Uganda Ministry of Health
- Facilitated during four district-level trainings on Disaster Management and Planning, where 20 districts designed disaster preparedness plans
- Has done extensive work on zoonoses, with a special focus on Influenza H5N1 and Brucellosis.
- Her experience at AFENET has improved her skills and ability to serve a wider audience from public health and private sectors
- Supervised and mentored two Field Epidemiology Training Program (FETP) trainees attached to the Ministry of Health
- Coordinated the "One Health" workshop at the 6th Global TEPHINET Conference in South Africa, 2010



**Mr. Simon Kwadje**

Communication Officer, Disease Surveillance Department (DSD),  
Ghana Health Service

**Accomplishments:**

- Assists in preparation of reports and publications of the DSD
- Participated in review meeting of National Vaccination of Prioritized Groups
- Was repertoire for a workshop by Nutritional Care and Support for People Living with HIV
- Was National Supervisor during Influenza A (H1N1) Vaccination in Eastern Region, Guinea Worm Sensitization in Eastern Region, Local STOP Team for Acute Flaccid Paralysis in Ashanti Region, and National Measles Supplemental Immunization Activities in Northern Region, Ghana
- Is designated Secretary to the GFELTP Steering Committee

## TRAININGS, CONFERENCES, WORKSHOPS, MEETINGS

### Scientific Writing Workshop for AFENET Secretariat staff

The Science and Public Affairs Unit at the AFENET Secretariat held a writing workshop for three technical staff of the AFENET Secretariat from 7- 9 April 2010 in Kampala, Uganda. The workshop aimed at assisting the participants to prepare their manuscripts for publication. It was a major boost to the Secretariat's capacity to translate research findings into publishable work, and consequently share sci-

entific knowledge.

The workshop was facilitated by Dr. Elizeus Rutebemberwa and Dr. Fred Makumbi- both from Makerere University School of Public Health, and Dr. Sheba N. Gitta from AFENET. Activities included lectures by the facilitators and one-on-one practical sessions. By the end of the workshop, participants had good working draft manuscripts.

### Scientific Writing Workshop for FELTP Trainees

During the 5th African Regional TEPHINET & 3rd AFENET Scientific Conference held in Mombasa-Kenya in August / September 2009, six trainees from Field Epidemiology and Laboratory Training Programs (FELTP)s in the Network were awarded for making the best oral and poster presentations. Consequently, a scientific writing workshop was organized to improve the trainees' presentations, in the hope of developing them into publishable manuscripts. Participants received resourceful information and tips from the facilitators: Dr. Elizeus Rutebemberwa- Makerere University School of Public Health, Dr. Sheba N. Gitta- AFENET, Mr. John Bosco Bwanika- a statistician, Mr. Ndlovu Nqobile- AFENET, Dr. Patrick Nguku- Nigeria FELTP, and Dr. Raoul Kamadjeu- Pan African Medical Journal (PAMJ). Participants learned how to plan to write scientific manuscripts, ethical issues in scientific writing and publishing, as well as using specific computer programs to support data analysis and referencing among others.



**Dr. Sheba N. Gitta** (right)- Head of Science and Public Affairs at AFENET Secretariat hands a certificate to **Dr. Edgar Kansiime** (left) an alumni of the Uganda program who participated in the Scientific Writing workshop

### Meeting with Northrop Grumman Corporation

As part of the efforts to build partnerships to support systems strengthening and public health capacity building, some AFENET officials had a meeting with representatives from Northrop Grumman Corporation, USA on 18 February 2010. Mr. Timothy Baker, Ms. Nancy Nelson, and Dr. Rusty Roesch-, represented Northrop Grumman Corporation, while Dr. Olivia Namusisi- Head of Technical Programs, Dr. Sheba N. Gitta- Head, Science and Public Affairs, and Mr. Ndlovu Nqobile-

Laboratory Project Officer- represented AFENET.

The meeting discussed potential areas of collaboration between the two institutions including: laboratory capacity development, surveillance systems strengthening, and climate change management. Northrop Grumman Corporation is a leading global provider of security and information solutions.

### Anti-rabies meeting, Ghana

AFENET joined the United States Agency for International Development (USAID) and other partners, in committing to develop a clear strategy and action plan to combat rabies in West Africa and Africa at large. This was at a meeting organized by USAID from 10-11 March 2010 in Accra, Ghana under the theme: "Defining the Disease Burden and

Integrated Action Plan to Respond to Rabies Threat in West Africa". Other delegates were from the Ghana Veterinary Services, Ghana Ministry of Food and Agriculture, WHO, Food and Agricultural Organization (FAO) Africa Office, CDC, Kansas University-USA, World Organization for Animal Health, and Merial-an animal health company.

The meeting made several resolutions which included: supporting the formation of an inter-sectorial rabies network for West Africa, influencing countries to implement clear human and animal rabies prevention and control programs, and ensuring effective collaboration, co-ordination and communication between animal and human health sectors.

**Dr. Charles Rupprecht** (in black jacket)-Chief of CDC's Rabies Branch, guides a group discussion during the Rabies Meeting in Accra, Ghana



## COUNTRY REPORTS

### CENTRAL AFRICAN FIELD EPIDEMIOLOGY AND LABORATORY TRAINING PROGRAM (CAFELTP)



*Residents of the CAFELTP with the Resident Advisors and the program's AFENET Technical Liaison*

The Central Africa Field Epidemiology and Laboratory Training Network (CAFELTP) is the newest member of this ever growing Network of public health training institutions in Africa. The program was launched in October 2010 in Yaoundé, Cameroon. The CAFELTP is a regional training program made of three Central African countries namely: Cameroon, Central African Republic (CAR), and the Democratic Republic of Congo.

The program is supported by the Project to Strengthen Epidemiology and Surveillance in Central Africa or Le Projet de Renforcement de la Surveillance en Afrique Centrale (SUR-VAC), a project of the CDC Foundation, WHO, Ministries of Health of CAR, Cameroon, and DRC, and AFENET. The University of Yaoundé, Cameroon is the awarding academic institution.

The CAFELTP offers a two-year professional Masters degree program in Applied Epidemiology and Public Health Laboratory Management, with the aim of enhancing the capacity of the region to carry out effective disease surveillance,



*Some of the participants at the short course discuss*

outbreak investigations and response.

The program has two Resident Advisors: Dr. Dieula Delis-saint and Dr. Ditu Kazambu. Prior to establishing the SUR-VAC project, a short course in Outbreak Detection, Investigation, and Response was held from 4-16 June 2010 in Bangui, CAR. The course aimed at developing a critical mass of public health professionals to carry out effective disease surveillance at national and regional levels. Other objectives were to develop a pool of trainers capable of training and supervising health officials at district level, as well as identify suitable candidates to manage the CAFELTP.

The short course was attended by 28 participants from regional health offices in CAR, ministries of health of CAR, Cameroon, Chad, and DRC, as well as Institut Pasteur de Bangui- who are involved in surveillance, disease outbreak investigation and response. It was facilitated by experts from CDC Atlanta, WHO Africa Regional Office (AFRO), WHO Lyon, University of Bangui, and Ministry of Health of Central African Republic.



## ETHIOPIA FIELD EPIDEMIOLOGY AND LABORATORY TRAINING PROGRAM (E-FELTP)

The Ethiopia Field Epidemiology and Laboratory Training Program (E-FELTP) was established in January 2009, and joined AFENET in May 2009. The program has 13 trainees who include doctors, medical officers, laboratorians, and environmentalists. Cohort II was admitted in 2010 with 22 residents.

Upon completion of this two-year Masters Program, residents will be awarded a Masters of Public Health (MPH) in Field Epidemiology by the University of Addis Ababa. The program aims at strengthening public health systems in Ethiopia by training public health professionals and supporting disease surveillance and out-

break response activities in the country.

As a member of AFENET, the E-FELTP benefits from both technical and financial support, and closer linkages with the other programs in the Network and all of AFENET's partners. The program has a Country Liaison Officer at the Secretariat who coordinates E-FELTP's activities with those in the Network.

### Outbreak investigations

One resident of the E-FELTP participated in investigation of vaccine-derived polio cases in Oromia Region, Ethiopia.

## GHANA FIELD EPIDEMIOLOGY AND LABORATORY TRAINING PROGRAM (GFELTP)

The Ghana Field Epidemiology and Laboratory Training Program (GFELTP) was established in 1995 as one of the Public Health Schools Without Walls (PHSWOW)- an initiative of the Rockefeller Foundation. Like other programs in the Network, the Ghana FELTP's core objective is to build capacity by training postgraduate level public health personnel with technical, managerial and leadership competencies required to run increasingly decentralized health systems. The program is a collaboration of the Ghana Health Service- Ministry of Health, the Veterinary Service

Directorate- Ministry of Food and Agriculture, the School of Public Health- University of Ghana, and international partners: CDC, USAID, WHO, and AFENET.

The GFELTP admitted Cohort IV of eight trainees (two veterinary doctors, three laboratory scientists, and three medical doctors) in August 2010. The GFELTP plays a pivotal role in advancing public health in Ghana and Africa as a whole. The program's achievements are highlighted below.

### Short courses and training

#### Integrated Disease Surveillance and Response (IDSR) Activities for Laboratory Personnel and Disease Control Officers

As part of AFENET's Trainee Grants' Project, one resident- Ms. Gifty Boateng, conducted a training course on Integrated Disease Surveillance and Response (IDSR) Activities for Laboratory Personnel and Disease Control Officers in Ghana's Eastern Region from 28 July to 2 August 2010. The objective was to strengthen the knowledge and skills

of laboratory personnel and disease control officers in IDSR activities and improve communication between laboratory and disease control/surveillance officers at the district level. The training was attended by 22 participants, including representatives from Ghana Health Service and National Public Health Reference Laboratory.

#### GFELTP supports national surveillance capacity for Avian Influenza

As part of efforts to strengthen national surveillance capacity for Avian Influenza (AI) and other emerging and re-emerging zoonotic diseases, the Ghana FELTP, in collaboration with the USAID Stop A1 Project, organized a two-week course on Integrated Avian Influenza Outbreak Response and Pandemic Influenza at the School of Public Health- University of Ghana from 29 March- 9 April 2010.

This was the first course of its kind to be conducted in Africa and it was carried out to pre-test the curriculum, lesson plans, course modules, as well as finalize the modules for use by other programs in the Network. The course was attended by 18 participants including: trainees from Cohort Two and Three of the GFELTP and three veterinary doctors from three regions in Ghana.

## Outbreak Investigations and field studies - Measles outbreak investigation

Four GFELTP residents were part of the District Health Management Team which investigated an outbreak of measles in Okurase town, West Akim Municipality in the Eastern Region of Ghana in August 2010. The investigation aimed at determining the magnitude of the problem, identifying the source of the outbreak, factors contributing to the outbreak, and implementing control and preventive measures.

*GFELTP Residents during the investigation of a suspected measles outbreak in West Akim Municipality, Ghana*



## Conferences, workshops, seminars, and meetings Trainees Research Proposal Seminars

Four trainees of the GFELTP: Ms. Gifty Boateng, Dr. Reuben Tetteh, Ms. Florence Iddrisah, and Dr. Vitus Burimuah, presented their research proposals during Trainee Seminars in February 2010. Their proposal titles are: "Prevalence and Distribution of Human Papillomavirus Genotypes among Women in North Tongu District, Ghana", "Prevalence of

Hepatitis E Viral Infection in Swine and Their Human Handlers in Accra Metropolitan Area", "Outcome of Antibiotic Combination Therapy on the Healing of Buruli Ulcer in Five Endemic Districts, Brong Ahafo Region", and "Ducks as Potential Reservoirs of Avian Influenza Viruses in Post HPAI H5N1 Outbreak Area, Sunyani Municipality" respectively.

## GFELTP Stakeholders' Dissemination Seminar

GFELTP, in collaboration with the Ghana Health Service and the Veterinary Service Department, organized a one-day GFELTP Dissemination Seminar for Stakeholders on 3 February 2010. The Seminar provided a platform for trainees of Cohort II to present their abstracts, and was an opportunity for stakeholders to receive updates of recent investigations

by GFELTP trainees. It was held at Korle – Bu, Ghana and was attended by 23 participants from the Ghana School of Public Health, the World Health Organization (WHO), Centers for Disease Control and Prevention (CDC), and Ghana Health Service.

## KENYA FIELD EPIDEMIOLOGY AND LABORATORY TRAINING PROGRAM (FELTPK)

As a competency-based training program, the Kenya Field Epidemiology and Laboratory Training Program (FELTPK), has exposed its trainees, alumni, and program faculty to a number of public health activities; ranging from training, outbreak investigation and response, disease surveillance, and public health laboratory management among others. Consequently, the Kenya FELTP has boosted the numerical and technical strength of Kenya's Ministry of Public Health and Sanitation (MoPHS) by enabling trainees to participate in MoPHS activities and providing technical and logistical support.

Established in 2004, the Kenya FELTP is a partnership between the Kenya MoPHS and the US Centers for Disease Control and Prevention (CDC), and receives funding from

the Ellison Medical Foundation. In 2005, the Kenya FELTP started admitting residents from other countries in the region and now its graduates include epidemiologists and laboratory managers from Kenya, Tanzania, Uganda, Ghana and Southern Sudan.

The program admitted its seventh cohort of residents in May 2010, following intensive interviews of over 40 applicants. Six residents were admitted for the Applied Epidemiology track while six were selected for the Laboratory track. One of FELTPK's major achievements in 2010 was the graduation of 10 Cohort V residents during the 17th graduation ceremony of the Jomo Kenyatta University of Agriculture and Technology (JKUAT) on 30 July 2010.



*Residents of Cohort V during the 17th JKUAT graduation ceremony on 30 July 2010*

### Short courses and training

#### Short course on Rapid and Traditional Laboratory Identification of Outbreak Bacterial Pathogens For Health Workers

The Kenya FELTP organized a refresher training course on Rapid and Traditional Laboratory Identification of Outbreak Bacterial Pathogens For Health Workers at district and provincial level in Kenya. The course was timely as Kenya was experiencing a prolonged cholera outbreak (since 2008) in Western Kenya; however, the country was faced with a dearth of skills of health workers to manage the outbreak.

The course aimed at enhancing skills of public health practitioners, clinical officers, and laboratory technologists in surveillance and response of enteric disease outbreaks. By the end of the training, participants were able to describe the principles of outbreak investigation, detection and reporting, adequately respond to suspected outbreaks of acute watery diarrhea, and apply principles of bio-safety in the field.

### Global Health Diplomacy Training

The US Centers for Disease Control and Prevention (CDC)'s Global Disease Detection Program and the San Diego State University organized a stimulating three-day training program on 'Global Health Diplomacy,' in Nairobi, Kenya from 18-20 August 2010. With the rapidly evolving global health environment; new architecture, networks, and programs in global health increasingly require a more in-depth understanding of how this changing environment affects the work of professionals in field assignments, as well as their fellow citizens. Participants learnt to evaluate mecha-

nisms and instruments of global health governance to their work, evaluate, discuss, and understand the new US Global Health Initiative, and manage relationships with official delegations and communication with US Government personnel across departments.

Speakers at the training included US-based public health experts, staff from the US White House, CDC, WHO, and FELTPK (Dr. Jared Omolo and Dr. Samuel Amwayi).

### Outbreak investigations and field studies

#### Evaluation of cholera surveillance and response in Kenya: December 2009- January 2010

The study was conducted by two FELTPK residents: Zeinab Gura and Wako Boru. The objectives were to describe the surveillance system, evaluate its level of usefulness and attributes, as well as identify gaps in the system and offer recommendations. The residents used CDC guidelines for

evaluating public health surveillance systems and information collected through key informant interviews. The residents highlighted the need to develop guidelines and case definitions to support disease surveillance in Kenya.

## Evaluation of Preparedness Status of Provincial Laboratories in Kenya to Respond to Public Health Emergencies

This study by Ronoh Y, Njeru Mercy, Abdirazak M, Waqo B, Karoki S, Joe Oundo, Mohamed Abade, Samuel Amwayi, and Jared Omolo, aimed at identifying gaps in response and preparedness to disease outbreaks and emergencies. It was carried out from 26-29 July 2010. The team noted the

importance of improving laboratory infrastructure, maintenance of equipment, supply of reagents, and timely reporting of diseases for effective monitoring and response. These elements are essential in building effective public health systems.

## Exclusive Breast Feeding survey

Ms. Joyce Wamicwe of Cohort VII conducted this investigation on "Non-adherence to Exclusive Breastfeeding by Mothers Attending Mbagathi District Hospital, Nairobi, Kenya" in June 2010. The study was prompted by Kenya

government's efforts to make breastfeeding promotion one of its priorities, and amend breastfeeding and weaning recommendations. Systematic random sampling was used during enrolment of consenting mothers.

## Investigation of knowledge on prescribed medication among patients

This study was carried out by Mr. Dickens Onyango, a Cohort VII resident, in June 2010. He sought to determine the level of knowledge on prescribed medication by patients attending a government pharmacy and factors associated with inadequate knowledge. Participants, who failed to correctly identify the prescribed medicine, did not know

the diagnosis of their diseases, and failed to correctly report the means of administration, dosage, and frequency of intake of their medication. Those attending outpatient departments were more likely to have inadequate medication knowledge. Generally, the level of knowledge on prescribed medication among the study population was low.

## Conferences, workshops, seminars, and meetings Grant Writing Workshop for FELTPK alumni

In a world of limited resources, the need for resource mobilization remains paramount in the fight against public health concerns in Kenya. In light of this, the Alumni Association of the Kenya Field Epidemiology and Laboratory Training Program (FELP-AA) organized a Grant Writing workshop to boost knowledge and skills of Association members in resource mobilization.

The workshop was held from 6-9 July 2010 in Nairobi, Kenya and was attended by 20 participants from Kenya, Uganda, Tanzania, and Southern Sudan.

Present at the workshop were: Dr. David Mutonga from the Kenya Ministry of Public Health and Sanitation (MoPHS), Dr. Argata Guracha- Chairman of FELP-AA, Dr. Kariuki Njenga - CDC Kenya, and FELP-AA representatives from Kenya, Sudan, Tanzania and Uganda. The workshop was facilitated by Ms. Kaitlin Sandhaus- Director of Global Implementation Solutions (GIS) and Dr. Sheba N. Gitta from AFENET.



*Participants and facilitators at the FELP-AA Grant Writing workshop*

## Meeting on Basic Multi-Disease Public Health Surveillance and Response System

This meeting was held on 29 June 2010 in Nairobi, Kenya. It aimed at discussing a draft concept for developing a basic multi-disease public health surveillance and response system in Kenya. The meeting was attended by 10 participants from Ministry of Public Health and Sanitation Kenya, Centers for Disease Control and Prevention (CDC) Kenya and CDC Atlanta, and alumni of

the Kenya FELTP.

Some of the key action points were: sensitization of provincial teams on the concept of basic multi-disease surveillance and response through visits to the provincial headquarters and conducting a short course on Basic Epidemiology for district and provincial health teams.

## Publications and presentations

AUTHOR (S)	TITLE	PUBLICATION REFERENCE
O-tipo Shikanga, et al	High Mortality in a cholera outbreak in Western Kenya after post-election violence in 2008	American Society of Tropical Medicine and Hygiene, 81(6), 2009, pp. 1085–1090)
Eric M. Osoro, Z. Ng'ang'a, J. Omolo and J. Oundo	Severity and Factors Associated With Road Traffic Injuries In Patients Attending Thika District Hospital, Kenya. 2009. (Oral presentation)	Epidemic Intelligence Service (EIS) conference. April 2010. Atlanta-Georgia, USA
Gladwell K. Gathecha, A. Makokha, P. Wanzala, J. Omolo	Dental Carries and Oral Health Knowledge and Practice among Children - Nairobi West and Mathira West Districts, Kenya (poster presentation)	Epidemic Intelligence Service (EIS) Conference. April 2010. Atlanta-Georgia, USA
Zainab Gura	The descriptive Epi of cholera outbreak in Kenya, 2009 and related surveillance and response challenges	Cholera Dissemination workshop. June 2010. Nyeri, Kenya
Yuster Rono	The Community Cholera Knowledge, Attitudes, and Practices (rural and urban)	Cholera Dissemination workshop. June 2010. Nyeri, Kenya
Tabu C.	Epidemiology of Non-Typhi Salmonella Bacteraemia in Population – Based Surveillance in Rural and Urban Kenya, 2006-2009	International Conference for Emerging Infectious Diseases (ICEID). July 2010. Atlanta-Georgia, USA
Kelly A. Nelima	Epidemiology of Vertebrate Animal Bite/Scratch Injuries In Patients Reporting at Kakamega Provincial Hospital, Western Kenya (poster presentation)	International Conference for Emerging Infectious Diseases (ICEID). July 2010. Atlanta-Georgia, USA
Herman O.Weyenga	A Case Control Study on Factors Associated with Multi Drug Resistant Tuberculosis in Kenya, 2009 (poster presentation)	International Conference for Emerging Infectious Diseases (ICEID). July 2010. Atlanta-Georgia, USA
Patrick M. Nguku, S. K. Sharif, David Mutonga, Samuel Amwayi, Jared Omolo, et al	An Investigation of a Major Outbreak of Rift Valley Fever in Kenya: 2006-2007	American Society of Tropical Medicine and Hygiene. 2010; 83 05-13
Amwayi S. Anyangu, L. Hannah Gould, Shahnaaz K. Sharif, Patrick M. Nguku, Jared O. Omolo, David Mutonga et al	Risk Factors for Severe Rift Valley Fever Infection in Kenya, 2007	American Society of Tropical Medicine and Hygiene. 2010; 83 14-21
Mohamed Mohamed, Fausta Mosha, Janeth Mghamba et al	Epidemiologic and Clinical Aspects of a Rift Valley Fever Outbreak in Humans in Tanzania, 2007	American Society of Tropical Medicine and Hygiene. 2010;83 22-27

## MOZAMBIQUE FIELD EPIDEMIOLOGY AND LABORATORY TRAINING PROGRAM

The Mozambique program is currently conducting short courses in Outbreak Investigation, Detection, and Response, so as to equip public health practitioners with skills

to boost the health system in the country. The program is implemented in partnership with CDC, and the Mozambique Ministry of Health.

### Short courses and training

#### Short course on Outbreak Investigation, Detection, and Response

Mozambique held its second short course in Outbreak Investigation, Detection, and Response from 12-28 May 2010. This training, like the first one which was held in 2009, is part of preparations towards setting up a two-year Masters Program in Field Epidemiology and Laboratory Training Program in Mozambique.

The course was attended by 22 participants and focused on developing fundamental competencies of participants as a training foundation to enhance public health infrastructure in Mozambique. It enhanced the participants' knowledge in areas such as: developing working case definitions for diagnosis and active case finding, collecting and describing epidemiologic data, and using statistical measures among others.

Following the training, participants carried out field projects which echoed the importance of an active role of laboratory scientists in disease surveillance and epidemic response.



*Some of the participants of the short course on Outbreak Investigation, Detection, and Response in Mozambique during a group assignment*

## NIGERIA FIELD EPIDEMIOLOGY AND LABORATORY TRAINING PROGRAM (NFELTP)

Established in October 2008, the Nigeria Field Epidemiology and Laboratory Training Program (NFELTP) is a two year in-service training program in applied epidemiology, veterinary epidemiology and public health laboratory practice. The program, implemented in collaboration with University of Ibadan and Ahmadu Bello University in Nigeria, aims at training field epidemiology, veterinary epidemiology, and public health laboratory residents for leadership positions at various levels of both the ministries of health and agriculture.

In addition to the two-year course which awards degrees to residents are awarded degrees, NFELTP also offers a series of short courses to strengthen the epidemiological capacity

of various public health implementers at the Federal, State and Local Government Areas (LGA) levels. In the last two years, the program has conducted a total of eight short courses in Outbreak Investigation, HIV/TB collaboration and Zoonoses control. Overall, over 270 health officials have been trained in all 36 states of Nigeria.

Furthermore, Nigeria was the first country in the Network to implement a veterinary track to address the ever-increasing threat of zoonotic infectious diseases and strengthen the collaboration between the human and animal health sectors a concept popularly known as the "One World, One Health, One Medicine" concept.

### Short courses and training - Short course in zoonoses management

The NFELTP organized the first short course on Zoonoses in November 2009 at the National Veterinary Research Institute (NVRI) in Plateau State. The course aimed at building participants' skills in zoonotic diseases surveillance, investigation, and response, using the "One Health" approach.

The "One Health" approach calls for multi-sectoral interventions to manage and prevent zoonoses. Zoonoses are a major pub-

lic health threat because of their nature to infect both humans and animals. The course was a collaborative effort of AFENET, CDC, and NVRI; focusing on surveillance and management of zoonosis outbreaks, advocacy for change, team work and coordination, laboratory tour and communication change. It was attended by 35 participants from the Nigeria Federal Ministry of Health, Federal Ministry of Agriculture and Water Resources, respective State Ministries and research institutions.

## Outbreak Investigations and field studies

### Cholera outbreak investigation

Eight residents of the NFELTP improved their applied epidemiology skills investigation and response activities of cholera outbreaks in various Nigerian states including: Adamawa, Borno, Yobe, Jigawa and Taraba States in North East Nigeria. These states border Cameroon, where a similar outbreak was reported.

The outbreak was first reported in August 2009, and over 11,000 cases were reported in the subsequent four months. There were over 400 deaths in the five states. In September and October 2010, the residents were deployed to the affected states, where they took part in determining the extent and magnitude of the outbreak, defining risk factors and supporting response activities including public health education, case management and laboratory confirmation.



**Dr. Tsofo Ahmed**- NFELTP Cohort II resident, disinfects his hands before being entering one of the cholera camps in Yobe State, North East Nigeria

### Leptospirosis outbreak among kennel workers

The leptospirosis outbreak followed an increase in morbidity and mortality among dogs in a national kennel in Abuja, Nigeria between February and October 2009. Consequently, investigations were conducted.

One of the residents of the NFELTP was involved in these investigations, where he sought to identify the source of

the outbreak, describe its extent, and identify risk factors. He found that 15 of 63 kennel-workers were affected but no death was reported. The outbreak was laboratory confirmed (in animals and kennel workers). It was however successfully managed through improvement in hygienic and sanitary conditions, health education, and rodent management.

### Lead poisoning outbreak investigations

Four NFELTP residents were involved in response activities following a lead poisoning outbreak in April 2010 in Zamfara State, North Western Nigeria. They were part of a team of experts from the National Center for Environmental Health- Health Homes and Lead Poisoning Prevention Branch and Centers for Disease Control and Prevention (CDC) Atlanta.

The team described and characterized the magnitude of the outbreak, screened suspected lead poisoning cases, carried out environmental assessment, and participated in development of a long term multi-agency response strategy. More than 50 deaths and 200 cases were reported during the outbreak whose suspected cause was environmental pollution, occasioned by small scale gold mining and extraction processes in the affected villages.



**Dr. Suleiman Haladu**- a Resident of the Nigeria Field Epidemiology and Laboratory Training Program (NFELTP) determining lead soil contamination levels using XFR machine in Zamfara State, Nigeria

### Human Animal Interface (HAI) Project

The Office of One Health at CDC Atlanta is currently supporting residents of the NFELTP to conduct research projects/trainings and other projects that involve diseases which ex-

ist at the Human-Animal Interface (HAI). In the first NFELTP cohort, the following four research projects met the criteria for HAI funding.

RESIDENT'S NAME	PROJECT TITLE
Dr. Alabi Olaniran	Survey of Rabies in Dogs used for Food in Lafia, Nasarawa State, Nigeria
Dr. Emmanuel Awosanya	Survey of Influenza A/H1, H3 & H5 In Slaughtered Pigs and Pig Workers In Lagos State, South West Nigeria
Dr. Suleiman Haladu	Seroprevalence of Brucellosis among Febrile Hospital Patients in Kano State, Nigeria
Dr. Ndadilnasiya Endie Waziri	The Role of Mycobacterium bovis in Tuberculosis Burden in Kaduna State, Nigeria

### Conferences, workshops, seminars, and meetings West Africa writing skills workshop by British Medical Journal

Thirteen residents of the second cohort attended a writing skills workshop organized by the British Medical Journal (BMJ) - West Africa and London- from 25–28 January 2010 in Abuja, Nigeria.

The workshop, whose theme was "Promoting Quality and Safety in Health through Writing", boosted participants' enthusiasm for scientific publication and research for better public health interventions. It also focused on topics to help participants improve the quality of their manuscripts and critique scientific literature.

The workshop was facilitated by renowned writers and editors, including Professor Richard Smith- a former editor of the BMJ in London.



(L-R) **Prof. Kabir Sabitu**, Ahmadu Bello University Focal Point and **Dr. Olufemi Ajumobi**, Cohort II resident during the 5th National Conference on HIV/AIDS in Nigeria

### Publications and presentations

AUTHOR (S)	TITLE	PUBLICATION REFERENCE
Endie Waziri	Shiga toxin-producing Escherichia Coli in Fresh Milk Samples from Smallholder Dairy Farms in Kaduna, Nigeria (poster presentation)	International Congress on Infectious Diseases (ICID) Conference. March 2010. Miami, Florida USA
Saheed Gidado	Cholera Outbreak in Bashuri, Jigawa State, Nigeria; September, 2009: The importance of hand washing with soap (oral presentation)	59th Epidemic Intelligence Service (EIS) conference. Atlanta, USA
Olufemi Ajumobi	Assessment of Knowledge and Practices on HIV Testing Among HIV Laboratory Personnel in Health Facilities, Federal Capital Territory, January 2009	5th National Conference on HIV/AIDS. Nigeria
Oladayo Biya	Leading Underlying Causes of Death in Federal Capital Territory, Nigeria, 2009: A Hospital-based Mortality Review (poster presentation)	International Conference on Emerging Infectious Diseases (ICEID). July 2010. Atlanta, USA
Endie Waziri	Live Bird Markets As A Source of Highly Pathogenic Avian Influenza In Nigeria (poster presentation)	International Conference on Emerging Infectious Diseases (ICEID). July 2010. Atlanta, USA

## CDC Director visits NFELTP

As one of the partners of the NFELTP, the CDC is committed to supporting training of public health professionals in the program, so as to support the Nigeria health system. In 2010, the NFELTP was thus honoured to host the Director of the US Centers for Disease Control and Prevention (CDC)- Dr. Thomas Frieden, in June 2010. Dr. Frieden was on a Nigeria country tour to hold discussions with the Nigerian government on CDC's support towards strengthening the country's health care system. On 15 June, the residents made poster presentations on a range of public health activities in which they were involved. Dr. Frieden acknowledged the NFELTP's efforts in strengthening Nigeria's public health workforce and urged the NFELTP to persist on training high caliber public health professionals.



**Dr. Thomas Frieden** (2nd right)- CDC Director, chats with some of the residents of NFELTP during his visit to the program in June 2010

## RWANDA FIELD EPIDEMIOLOGY AND LABORATORY TRAINING PROGRAM (RFELTP)

The Rwanda Field Epidemiology and Laboratory Training Program (RFELTP) is a two-year in-service training program in applied epidemiology and public health laboratory practice. It offers a Master of Science degree in Applied Epidemiology and Laboratory Management. Residents of the RFELTP are trained for leadership positions at various levels of the public health system in Rwanda. They provide service to the Rwanda Ministry of Health through field placements.

The RFELTP's implementing partners are: Rwanda Ministry

of Health, Rwanda Ministry of Agriculture and Animals, Treatment Center on AIDS, Malaria, Tuberculosis, and other Infectious Diseases (TRAC Plus), National Reference Laboratory, National University of Rwanda, Rwanda Animal Resource Development Authority (RARDA), US Centers for Disease Control and Prevention (CDC), and AFENET.

In 2010, the Rwanda FELTP embarked on various activities, most of which were geared towards the launch of the Masters course.

### Rwanda FELTP launched

The Rwanda FELTP recorded a major milestone in public health capacity building when it launched its Master's Course in Applied Epidemiology on 10 May 2010. The program was launched by Dr. Corine Karema- Director General of the Treatment Center on AIDS Malaria, Tuberculosis, and other Infectious Diseases (TRAC Plus).

Prior to its launch, the RFELTP admitted 15 residents as Cohort I in March 2010, and they include: doctors, laboratory technologists and veterinarians. The course is taught by ex-

perienced public health experts from within the Network and from partner organizations. They include: Dr. Patrick Nguku- Nigeria FELTP, Dr. Jared Omolo- Kenya FELTP, Dr. Fausta Moshia- Tanzania FELTP, Dr. Italia Rolle- CDC Atlanta, and Dr. Nicholas Ayebazibwe-AFENET Secretariat. Other faculty are drawn from School of Public Health, TRAC Plus, Rwanda Ministry of Health, and CDC Rwanda. This combination of public health experts provides a unique teaching experience for residents of the Rwanda FELTP.

## Outbreak investigations and field studies Cholera outbreak investigation, Nkombo Sector, Rusizi District

Seven residents of the RFELTP: Emmanuel Sabayezu, Claude Rutanga, Samson Ntegeyibizaza, Marie Aimee Muhimpundu, Richard Nkunda, Therese Mukankwiro, and Hinda Ruton were involved in cholera outbreak investigations in Nkombo Sector, Rusizi District of Rwanda from 4-9 June 2010. The residents established a case definition and a line-list. They also participated in identifying cases and community sensitization on prevention and control of cholera. Forty eight cases were identified and no deaths were reported.

The investigation team noted that people in Nkombo Sector (a collection of islands), depend on Lake Kivu for their water supply, fishing, bathing, swimming, and animal feeding, and human consumption. The absence of exclusive lake water usage could have led to the rapid spread of cholera to the islands. At community level, it was observed that there was insufficient clean potable water and poor pit latrine infrastructures.

## SIERRA LEONE



(L-R) Dr. Nyki Precely, Mr. Peter Edwards, Dr. Chima Ohuabunwo, and Mr. Nathan Mubiru, during the scoping mission at a health facility in Waterloo, Sierra Leone

AFENET has joined forces with the Division of Global Public Health Systems and Workforce Development at the Center for Global Health (COGH) at CDC, Atlanta to support the Sierra Leone Ministry of Health (MoH) in enhancing public health capacity development.

This partnership comes after a call from the Sierra Leone MoH and the Global AIDS Program (GAP)/ CDC to support existing national efforts for prevention and control of other diseases of public health importance.

Consequently, a scoping mission by officials from AFENET, CDC, was conducted from 5-9 April 2010 in Free Town, Sierra Leone to assess the feasibility of establishing a Field Epidemiology and Laboratory Training Program in the country. The mission included Mr. Peter Edwards, Dr. Chima Ohuabunwo, Dr. Nyki Precely- all from CDC Atlanta, and Mr. Nathan Mubiru from AFENET.

The team noted that Sierra Leone has an elaborate health leadership line which enables effective administration for disease prevention and management. However, the country lacks a national Public Health Reference Laboratory (PHRL) to strengthen outbreak response and disease control. As such, disease outbreak laboratory confirmation tests are carried out at the WHO reference laboratory in Abidjan, Ivory Coast.

## SOUTH AFRICA FIELD EPIDEMIOLOGY &amp; LABORATORY TRAINING PROGRAM (SAFELTP)

The South Africa Field Epidemiology and Laboratory Training Program (SAFELTP) offers two Masters Degree programs in Applied Epidemiology and Public Health Laboratory Practice. Ten public health professionals have so far graduated from the program which aims at building innovative human capacity needed to serve the government at national, provincial, district, and local levels.

The SAFELTP also aims at strengthening the culture of critical thinking and problem-solving in the public health

community. Residents make recommendations to improve public health, train other health workers, and disseminate their findings through various presentations and publications. Program places emphasis on service, consequently residents spend 35% of their time in classroom instruction and 65% carrying out field assignments.

In December 2010, the SAFELTP is to host the 6th TEPHINET Global Scientific Conference in Cape Town, South Africa. Below are some of the program's achievements in 2010.

## Outbreak investigations and field studies

In April 2010, SAFELTP residents and graduates supported Rift Valley Fever outbreak response activities in the Free State and Northern Cape Provinces. Together with the provincial Departments of Health and Agriculture and the National Institute of Communicable Diseases (NICD)'s Outbreak and Special Pathogens Units, they conducted

investigations on affected farms in Free State and Northern Cape Provinces and a sero survey among all public veterinary officials in the Free State Department of Agriculture. The sero survey contributed to estimating the extent of the outbreak in the country and highlighting the risk factors.

## Conferences, workshops, seminars, and meetings - 59th EIS Conference

Three faculty of the SAFELTP: Prof. Mufuta Tshimanga, Dr. Faustine Ndagulile, and Dr. Bernice Harris, represented the program at the 59th Epidemic Intelligence Service (EIS) conference which was held in April 2010 in Atlanta, USA.

They attended several meetings on: planning for the 6th

Global TEPHINET Conference to be held in Cape Town, South Africa in December 2010, collaboration with the School of Public Health of the University of Georgia, and support from the US Centers for Disease Control and Prevention (CDC). The team also met the newly appointed CDC Director- Dr. Thomas Frieden.

## SAFELTP participates in symposium on NCDs

Prof. Mufuta Tshimanga and Dr. Bernice Harris attended the Inaugural Symposium on Capacity Building for Non-Communicable Disease Epidemiology and Surveillance in the African Region, which was held in Kampala, Uganda from 17-19 May 2010. The symposium was organized by AFENET, in partnership with the Pepsi Corporation and CDC Atlanta.

Its main objective was to explore ways by which Field Epidemiology Training Programs in Africa can support their countries to control and manage NCDs. Other participants from South Africa were: Ms Sandhya Singh- Director, Chronic Diseases- South Africa Department of Health and Dr. Krisela Steyn from the Chronic Diseases Initiative, University of Cape Town.



**Prof. Mufuta Tshimanga**- SAFELTP Resident Advisor, speaks during the NCD Symposium in Kampala, Uganda

## SOUTHERN SUDAN PROGRAM



Two of the graduates from Southern Sudan, who graduated from the Kenya FELTP in 2010, with **Mr. Eric Gogstad** (center) from CDC

The Southern Sudan program began in 2008, following an expressed interest of the Southern Sudan Ministry of Health to build public health capacity of front line public health workers at intermediate level, through training in field epidemiology, surveillance, and laboratory practice.

The program also provides logistical and supervisory support to southern sudan residents in the Kenya FELTP. So far, six public health professionals from Southern Sudan have graduated from the Kenya program and are working in Juba.

### The trainees from Southern Sudan who graduated from the Kenya FELTP are:

Dr. Lucia Kur	Trachoma Coordinator
Dr. Dr. Pinyi Nymol	Director for Non-Communicable Diseases
Dr. Robert Patrick Napoleon	Focal Person, Influenza A (H1N1)
Ms Sheila Konga	FELTP Resident, Lab Track
Mr. Johnson Mayik	FELTP Resident, Lab Track
Dr. Doris Daniel Lado	FELTP Resident, Lab track

Southern Sudan has been greatly devastated by a multitude of communicable disease outbreaks, compounded by recurrent political insurgencies, a thinned out human resource, deteriorating health infrastructure, and poor disease response mechanisms. Most common diseases in Sudan include: meningitis, cholera, measles, kala azar, guinea worm, and Viral Hemorrhagic Fever.

In a bid to quell these outbreaks for a healthier population, the country's Ministry of Health, together with its partners, has embarked on strategies for early detection and control

of communicable diseases in the region. One such strategy is strengthening integrated disease surveillance and response (IDSR) and epidemics control and management through capacity building of health managers and implementers.

Further to this, AFENET, in partnership with the Ministry of Health of Southern Sudan, conducted a short course on Outbreak Investigation and Management, to equip middle level health workers with basic knowledge and skills in disease outbreak investigation.

## Short courses and training

### Short course in Management of Outbreaks for Middle Level Health Workers of South Sudan

This short course aimed at strengthening public health capacity to respond to public health emergencies, promoting computer use for effective public health management, and increasing laboratory participation in outbreak investigation and surveillance. It was held from 18-29 January 2010 and it attracted over 35 participants, including state surveillance and clinical officers, military medical corps, data managers, and state provincial laboratory technicians from four states.



*Participants of the short course in Management of Outbreaks for middle Level Health Workers of Southern Sudan*

The participants received skills in laboratory management in response and control of communicable diseases, basic computer applications to help them build databases and generate reports, as well as planning.

Following the short course training, the residents made presentations of their projects on 8 October 2010 in Juba, Southern Sudan.



**Dr. Olivia Namusisi**- Head of Programs at AFENET Secretariat, hands a certificate to one of the participants of the short course in Management of Outbreaks for middle Level Health Workers of Southern Sudan

### AFENET and Southern Sudan Ministry of Health sign MoU

AFENET and the Ministry of Health (MoH) of the Government of Southern Sudan (GoSS) formalized their partnership with the signing of a five-year Memorandum of Understanding (MoU) on 26 February 2010.

The MoU is expected to strengthen the partnership between the two institutions in areas of field epidemiology, laboratory capacity strengthening, and regional collaboration in disease surveillance, outbreak investigation and response.

Through this agreement, AFENET will provide technical assistance for disease surveillance and outbreak management, as well as support linkages with experts in the region.

AFENET will also promote and support international exposure of trainees of the Southern Sudan program and staff of the Surveillance Unit. MoH will provide mentorship and supervision of FELTP trainees as well as provide opportunities for trainees to have field experience during real field challenges such as disease outbreaks.



*(L-R) Dr. Olivia Namusisi and Dr. Majok Yak Majok shake hands after signing the Memorandum of Understanding in Juba, Southern Sudan in February 2010*



## TANZANIA FIELD EPIDEMIOLOGY AND LABORATORY TRAINING PROGRAM (TFELTP)

The Tanzania FELTP is a competency-based training program offering a Master's Course in Applied Epidemiology and Laboratory Management. The program was established in 2008 with funding from the Global AIDS Program (GAP), Centers for Disease Control and Prevention (CDC) Tanzania, the US Presidential Malaria Initiative (PMI), and the United States Agency for International Development (USAID). The TFELTP is designed to strengthen public health systems and infrastructure in Tanzania and other countries in the region. The program supports capacity building of the Ministry of Health and Social Welfare (MoHSW) at federal, regional and district levels, so as to meet the perennial challenges of communicable and Non Communicable Diseases, emerging and re-emerging infectious diseases, and other public health events of local and international concern.

This program is a collaboration of the Tanzania Ministry of Health and Social Welfare (MoHSW), National Institute of

Medical Research (NIMR), Muhimbili University of Health and Allied Sciences (MUHAS), and CDC. Other partners are the World Health Organization (WHO), National Institute for Medical Research (NIMR), and USAID. The partnership is designed to ensure effective and efficient development of human resource for health with adequate capacity and zeal to strengthen and manage the public health system.

TFELTP's vision is to improve the health of the people of Tanzania and beyond, through training and service in applied epidemiology and laboratory management. Its mission is to assist the Ministry of Health and Social Welfare in building a sustainable network of highly skilled field epidemiologists and laboratory managers who are measurably improving public health. In August 2010, 24 residents were admitted for the Master of Science program at the TFELTP.

### Short courses and training - TFELTP to conduct two new short courses

As part of innovations by the TFELTP, two new short courses on Vaccine Preventable Diseases (VPD)s and on Non Communicable Diseases (NCD)s, will be offered by the program during the academic year 2010/11. The program faculty have already developed the course curricula, which was shared with both local and international partners for review. Funds to conduct the courses have also been secured. To provide technical assistance ahead of rolling out of the courses, Dr. Italia Rolle from US Centers for Disease Control and Prevention (CDC) Atlanta visited the TFELTP

from 20-26 May 2010. Focusing on NCD surveillance, Dr. Rolle's support activities included: thesis proposal development for Cohort 2 Residents, finalization of theses for Cohort 1 Residents, and meeting with the Baylor University representative on TFELTP activities and possible areas of collaboration. She also held discussions with officials from CDC Tanzania, Muhimbili University of Health and Allied Sciences (MUHAS), National Institute for Medical Research (NIMR), and the Tanzania Ministry of Health and Social Welfare.

### Scientific Communication course

Cohort II residents participated in a Scientific Communication course which was facilitated by Dr. Pascale Krumm-CDC Atlanta, from 28 June to 6 July 2010. The Scientific Communication course aimed at enhancing the residents' skills in scientific writing and preparation of scientific communication materials.

Resulting from the course, residents are expected to pre-

pare and present information (investigations and findings) about activities they are involved in, to various audiences including colleagues, supervisors, stakeholders, and members of the general public.

They are also required to present their findings at national, regional, and international scientific conferences, as well as submit them to reputable scientific journals for publication.

### Outbreak investigations and field studies

Residents and faculty of the TFELTP, in collaboration with Muhimbili University of Health and Allied Sciences, once again saved lives of scores of fellow country-men and showcased the program's firm belief in applied field epidemiology as they participated in a number of outbreak investigations in Tanzania in 2010. Some of the outbreaks in which they provided support were: Plague in Mbulu,

Influenza A (H1N1) outbreak in Buzwagi and Shinyanga, Anthrax outbreak in Hai-Kilimanjaro, cholera outbreak in Arusha, and chemical poisoning in Lindi. Participating in investigation and response activities during the outbreaks gave the residents immense first-hand learning experience, enabling them to mitigate morbidity and mortality from the outbreaks.



**Dr. Thomas Ruta-** a Cohort II resident of the Tanzania FELTP collects water samples during cholera outbreak investigations in Mbeya, Chunya District, Tanzania



**Mr. Emmanuel Zephania-** a Cohort II resident of the Tanzania FELTP interviews a woman in Shinyanga, Bariadi District, during cholera outbreak investigations

### Community education and health promotion

Advancing recommended basic public health practices is best supported by clear implementation strategies and active community engagement. Therefore, as part of their field work, three Cohort Two epidemiology residents planned and executed three training workshops for local

and regional health workers, and community gate keepers in 2010. They trained a total of 100 participants in cholera management and prevention, career choices, and mid-term strategic plans against malaria.

### Leadership and Management course

The first Leadership and Management course for residents of Cohort 1 was held from 10-24 May 2010. During the course, residents participated in lectures, practical sessions, and had a workshop on Health Planning, as well as other

aspects of management. The training, which was conducted by facilitators from Muhimbili University of Health and Allied Sciences, National Institute of Medical Research, and TFEELTP, concluded with a continuous assessment test.

### Tanzania FELTP supports other FELTPs in Africa

The TFEELTP is a strong proponent of partnerships, and earnestly believes in working together with, and supporting other training programs in the region to elevate the profile of public health in Africa.

In 2010, one of TFEELTP's most noble achievements was supporting three other FELTPs in the Network through technical assistance by the resident advisors and field coordinators.

Faculty of the TFEELTP were instrumental in coordinating and conducting short courses, first cluster training for the Master programs, and development of laboratory tracks for FELTP activities in the Southern Sudan, West Africa, and Rwanda programs. These supporting activities have helped to institutionalize field epidemiology training in the respective countries.

### Conferences, workshops, meetings, and seminars CDC Director and Assistant Secretary visit TFEELTP

The Tanzania FELTP hosted the CDC Director- Dr. Thomas Frieden on 20 May 2010, during his country tour of Tanzania. During his visit, two residents made oral presentation on field activities in which the residents and faculty of the program are involved.

Together with CDC Tanzania, the program was once again

privileged to host a distinguished delegate. On 24 May 2010, the United States Assistant Secretary for Oceans, Environment, Science, and Health- Dr. Kerri-An Jones visited CDC Tanzania. During her visit, TFEELTP made a dual presentation; first on the TFEELTP organizational structure and activities, and secondly on an Influenza A (H1N1) outbreak investigation in Mwanza, Tanzania.

## Publications and presentations

TITLE	PUBLICATION SOURCE
Morbidity And Mortality Of Humans And Livestock As A Result Of Chemical Contamination Of Community Water Supply In Mara Region, Tanzania; 2009	National Institute of Medical Research (NIMR) Annual Scientific Conference. March 2010. Arusha, Tanzania
Risk Factors For Cholera Outbreak In Handeni, Tanga, 2009	National Institute of Medical Research (NIMR) Annual Scientific Conference. March 2010. Arusha, Tanzania
Role Of Schools As Social Networks In Transmission Of Influenza A (H1N1) 2009: Mbulu District, Northern Tanzania; November 2009 Experience (poster presentation)	14th International Congress on Infectious Diseases (ICID) Conference. March 2010. Miami, Florida USA
From Strategy To Action: The Vital Roles Of Trained Field Epidemiologists And Laboratory Management Professionals In Epidemic Control And Prevention In Tanzania (poster presentation)	14th International Congress on Infectious Diseases (ICID) Conference. March 2010. Miami, Florida USA
Controlling persistent cholera outbreaks in Africa: Lessons from the recent Cholera Outbreak, West District Unguja Zanzibar and Tanzania (oral presentation)	14th International Congress on Infectious Diseases (ICID) Conference. March 2010. Miami, Florida USA

## UGANDA PROGRAM

The Uganda Program is hosted by the Makerere University School of Public Health (MakSPH). It offers a Master of Public Health program. Since its inception in 1994, the program which is 60% field based, has passed out about 200 gradu-

ates. The trainees are attached to districts throughout the country, where they provide technical support to the District Health Teams. Below are highlights of the program's activities in 2010.

Agnes Anjait	Edson Katushabe
Alfred Okiria	Getrude Namazzi Kalema
Edgar Kansime	John Bua
Joseph Lubwama	John Ecumu
Lily Joyce Piloya Okot	Peter Isabirye
Nicholas Ayebazibwe	Raymond Tweheyo
Peter Wasswa Kityaba	Rebecca Nyakagwenyo
Simon Ogwang	Refaya Ndyamuba
Sulaimani Mutauza	Sarah Linda Kyokusingura
Vicent Kawooya	Torii Chiaki

### Program activities - 20 trainees graduate

Twenty trainees of the Uganda program graduated with a Master of Public Health of Makerere University, during the university's 60th graduation ceremony. Some of the trainees have been recruited as AFENET Fellows while others are supporting national and district health systems in the country.

## Short courses and training

### Trainees attend first Participatory Epidemiology course

Fourteen trainees of the 2008 Cohort of the Uganda program attended the first Participatory Epidemiology course which was organized by the International Livestock Research Institute (ILRI), the US Centers for Disease Control and Prevention (CDC), and AFENET from 17-25 March 2010 in Arua, North Eastern Uganda. The trainees learnt skills in applying participatory rural appraisal to disease surveillance and response. They were grouped into teams of three (including a mentor), in which they were tasked to

write proposals for field work on priority field epidemiology projects. The projects would be submitted to CDC for potential funding.

The trainees conducted their projects from 25 October to 5 November 2010 in selected districts in Uganda. They focused on epidemic-prone diseases, nodding disease, maternal mortality, notifiable diseases, jiggers, and diarrhea in children below five years.



*Some of the trainees of the Participatory Epidemiology training in Arua, Uganda during a classroom exercise*



*Dr. Michael Adrawa (left) listens to a resident of Arua District, during the Participatory Epidemiology course which was held in March 2010*

## Global Health Institute on One Health

Five trainees of the Uganda Program had the opportunity to enhance their understanding of the "One Health" approach during a Global Health Institute Course on "One Health" for International Public Health. The course was jointly organized by Makerere University School of Public Health and the University of Minnesota's School of Public Health, with support from USAID's RESPOND project.

It was conducted from 1-15 August 2010, and it focused on building the trainees' knowledge and understanding of zoonotic diseases, global public health systems, participatory epidemiology, and applied biostatistics. As a precursor to the Course, a public lecture was delivered on 9 August by Dr. Dennis Carroll- Director, Avian Influenza and Other Emerging Threats Program, USAID Washington DC.

## Outbreak investigations and field studies

### Malaria outbreak investigation

Two trainees: Mr. Gerald Pande and Dr. Richard Walyomo joined officials from the Uganda Ministry of Health (MoH) to investigate a malaria outbreak in Mubende District in January 2010. The investigation aimed at guiding implementation of appropriate response interventions. This outbreak investigation gave the trainees an opportunity to contribute to strengthening the MoH's surveillance system while enhancing their practical knowledge in disease outbreak management.

The investigation team noted some of the factors which propelled the outbreak as: limited stock of drugs in health facilities, remote access to health centers, limited usage of Insecticide Treated Nets, late reporting of cases, and the absence of village health teams to conduct surveillance. Consequently, the team carried out community sensitization and recommended adequate supply of antimalarials.

## Anthrax outbreak investigation, Western Uganda

Dr. Ben Nsajju, a trainee of the 2008/2009 intake of the Uganda Program, was part of the Uganda National Anthrax Task Force which assessed the capacity of health facilities in Kasese and Rubirizi districts of Uganda in August 2010, to correctly detect and diagnose anthrax. This followed con-

firmation of an anthrax outbreak in the Western Uganda districts in June 2010. Dr. Nsajju participated in response activities such as community sensitization about the outbreak and supporting health centers in the two districts to detect and respond to the disease.

Other members of the task force were from Uganda's Ministry of Agriculture, Animal Industry, and Fisheries, Ministry of Health, Central Public Health Laboratory, Makerere University Faculty of Veterinary Medicine, Uganda Wildlife Authority, Conservation through Public Health (CTPH), AFENET. These experts also shared

unique working experiences and lessons with Dr. Nsajju, in an effort to contribute to developing public health workforce in Uganda.

By August 2010, 83 hippopotamuses and 11 buffaloes had died. No human cases were reported.

## Investigations of Wild Polio Virus

Four trainees of the Uganda program: Dr. Ben Nsajju, Dr. Michael Adrawa, Ms. Rachel Ankunda, and Mr. Muhammad Lubega were part of the National Stop Transmission of Polio (STOP) mission which was constituted by the World Health Organization (WHO), to provide technical support during an outbreak of Wild Polio Virus Type 1 (WPV 1) in Eastern Uganda. The Wild Polio Virus Type 1

(WPV 1) was confirmed in Bugiri District, Eastern Uganda in October 2010. The STOP mission worked closely with district health teams to contain the outbreak and prevent its spread to neighboring districts. The STOP mission also undertook activities to enhance disease surveillance, focusing on Acute Flaccid Paralysis (AFP) and other vaccine preventable diseases.

## Publications and presentations

AUTHOR (S)	TITLE	REFERENCE
David Lubogo	Factors influencing access to HIV care services by clients referred from a district home-based HIV counseling and testing program in Eastern Uganda, 2009	14th International Congress on Infectious Diseases (ICID). March 2010 in Miami Florida, USA
Rachael Ankunda	Factors associated with DPT 1-3 vaccine drop-outs in Kabarole District, Western Uganda	14th International Congress on Infectious Diseases (ICID). March 2010 in Miami Florida, USA
Racheal Ankunda	Prevalence and factors associated with hospital acquired infections in Kayunga District hospital, Central Uganda	14th International Congress on Infectious Diseases (ICID). March 2010 in Miami Florida, USA
Vincent Kawooya	Adherence to infant feeding practices among HIV positive women with infants aged less than six months in Rakai District, South-western Uganda	14th International Congress on Infectious Diseases (ICID). March 2010 in Miami Florida, USA
Michael Ediau	Knowledge, Attitudes and Practices of community members of Indoor Residual Spraying for Malaria in Soroti District	11th Annual Meeting of Uganda Society of Health Sciences (USHS). June 2010. Kampala, Uganda
Peter Kirabira	Health Effects and Coping Strategies to Floods in Kumi District, Eastern Uganda	59th Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH). November 2010. Atlanta, USA
Walter D. Odoch	Sero-Prevalence and Distribution of Kala-Azar in Pokot County Amudat District, Eastern Uganda	59th Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH). November 2010. Atlanta, USA
Moses Tetui	Ten-Year Cancer Trend and Available Institutional Capacities for Response in Uganda, 2010	59th Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH). November 2010. Atlanta, USA
Moses Tetui	Acceptability of Transport Cost Payment For Mothers Seeking Antenatal and Delivery Care Services: A Survey Of Transporters' Attitudes - Eastern Uganda, 2009	59th Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH). November 2010. Atlanta, USA



(L-R) **Ms. Racheal Ankunda**- trainee, Uganda program, **Dr. Raymond Tweheyo**- Resident Mentor, Uganda program, and **Dr. David Lubogo**- trainee, during the 14th International Congress on Infectious Diseases (ICID). March 2010 in Miami Florida, USA

## WEST AFRICA FIELD EPIDEMIOLOGY AND LABORATORY TRAINING PROGRAM (WA-FELTP)

The WA-FELTP is one of the exceptional programs in the Network because it is composed of four countries namely: Burkina Faso, Mali, Niger and Togo. The program was established in December 2007, to strengthen the capacity of French speaking countries in West Africa, to conduct surveillance, outbreak investigation and response. The WA-FELTP is made-up of four countries: Burkina Faso, Mali, Niger and Togo; with a vision to progressively include all French-speaking countries in West Africa. The WA-FELTP offers a two-year Master of Field Epidemiology and Laboratory Manage-

ment, and is hosted at the University of Ouagadougou in Burkina Faso.

The WA-FELTP is implemented in collaboration with AFENET, WHO's Multi Disease Surveillance Center, CDC, USAID, West Africa Health Organization (WAHO), and University of Ouagadougou. The program is headed by a Program Director- Prof. Evariste Mutabaruka, and has three temporary duty advisors namely: Dr. David Mutonga (Kenya), Dr. Mohamed Ally Mohamed (Tanzania) and Dr. Roy Mayega (Uganda). The program accomplished the following in 2010.

### Official launch of the Master Course of the WA-FELTP

The West Africa Field Epidemiology and Laboratory Training Program (WA-FELTP) was officially launched on 14 January 2010; marking an important milestone in public health training aimed at supporting African countries to curb the threat of epidemics. The launch was presided over by Burkina Faso's Prime Minister- His Excellency Tertius Zongo, who commended the WA-FELTP and its partners for their commitment towards alleviating disease in Africa, through competency-based public health training. Also present were Mr. Seydou Bouda, Mr. Mamadou Pare, and Mr. Joseph Pare, Burkina Faso's Health, Animal Resources,

and High Education Ministers respectively. Other officials present were Dr. Djamilia Cabral- WHO Representative in Burkina Faso, Dr. Cardoso Placido- Director General, West Africa Health Organization (WAHO), Professor Couliati Jean- President, University of Ouagadougou, Dr. Olivia Namusisi- AFENET's Head of Technical Programs, and Dr. Mohammed Ally Mohammed- Tanzania FELTP. The University of Ouagadougou is the host and awarding institution for this Masters program. For its first year, the WA-FELTP recruited 12 residents as Cohort I - three from each participating country.

### Short courses and training - Short courses in outbreak investigation

Twenty participants from Burkina Faso attended the fourth short course on Outbreak Investigation and Response which was organized by the WA-FELTP from 10-19 May 2010. The first three short courses were held between 2008 and 2009.

The 10-day training equipped the participants with basic knowledge in epidemiology and public health surveillance, outbreak investigation, laboratory management for public

health, Epi Info, and communication.

The facilitators were drawn from University of Ouagadougou, WHO Burkina Faso Country Office and Inter Country Support Team.

Similarly, twenty participants attended the fifth short course on Outbreak Investigation which was conducted in Lomé, Togo from 28 June- 7 July 2010. Majority of the participants were medical doctors.

## Conferences, workshops, seminars, and meetings

### Facilitators' Orientation workshop

Ahead of the official launch of the Master Course of the WA-FELTP, the Program organized a Facilitators' Orientation workshop from 12-13 January 2010. The facilitators were from Burkina Faso, Mali, Niger, and Togo. The workshop aimed at, among others, reviewing the approved curriculum, reviewing field sites and field supervisors, as well as giving facilitators a chance to choose which courses

they are comfortable teaching. Facilitators discussed the WA-FELTP training methodology and training materials and tools, potential field activities for residents, the role of mentors and field supervisors, assessment and evaluation of residents, and administration and management of the Master FELTP.

### WA-FELTP participates in communication workshop by AED

Dr. Ousmane Badolo- former National Program Officer of the WA-FELTP represented the WA- FELTP at a communication training organized by the Academy for Educational Development (AED) in Dakar, Senegal from 10-17 February 2010. The training was a collaboration of the PREVENT project of USAID and AFENET, in an effort to strengthen communication skills of field epidemiologists

in French-speaking West Africa. Il s'est agit au cours de cet atelier de :

Participants gained skills in effective communication (active and objective listening and response), preparing and taking part in media interviews, dealing with the press, as well as communicating to the public.

## ZIMBABWE FIELD EPIDEMIOLOGY TRAINING PROGRAM

The Zimbabwe Field Epidemiology Training Program (FETP) was the first field epidemiology training program to be established in Africa, with support from the Rockefeller Foundation Public Health Schools Without Walls (PHSWOW) initiative. The program is currently supported by the US Centers for Disease Control and Prevention (CDC). The Master of Public Health (MPH) program is the only masters-level public health training program offered in Zimbabwe. Since its inception in 1993, the Zimbabwe FETP has trained over 90% of the current public health leadership in Zimbabwe. Despite the high levels of brain drain in Zimbabwe,

the majority of Zimbabwe FETP alumni are currently spearheading a number of crucial public health programs related to HIV/AIDS, Tuberculosis, and Malaria in Zimbabwe.

The Zimbabwe FETP recruited 14 residents for the 2010 cohort which comprises of eight doctors, three environmental health officers, two occupational therapists and a pharmacist.

In 2010, the Zimbabwe FETP registered a number of accomplishments which are highlighted below.

### Zimbabwe FETP trainees graduate

Eleven trainees of the 2008 Cohort of the Zimbabwe Field Epidemiology Training Program (FETP) graduated with Masters of Public Health (MPH) degrees from the University of Zimbabwe on 19 March 2010. Since its inception in 1993, the Zimbabwe FETP has held 15 graduation ceremonies, producing a total of 132 alumni.

The program has become a model for the demonstration of a successful integration and collaboration between major partners in public health training like Ministry of Health, universities, AFENET, Centers for Disease Control and Prevention (CDC), and other partners.

The MPH Program also has an Alumni Association which was established in September 2008 to promote and maintain links between the Association's members and the University of Zimbabwe.



**Dr. Asta Kone Coulibaly** was one of the graduates from the Zimbabwe FETP in March 2010

Below is a list of the 2008 Cohort graduates:

Emmanuel Tachiwenyika

Ngoni W. Mashumba

Pride Mucheto

Asta Kone-Coulibally

M. Mwazha

I. Phiri

Edward Dembedza

L. Mangwanyana

R. Moreira

V. Mukotami

S. Sekenhamo

### Outbreak investigations and field studies

#### Anthrax outbreak investigations, Mashonaland West Province

Dr. Bernard Medina, a trainee of the Zimbabwe FETP, was involved in investigations of a suspected anthrax outbreak in Chegutu District- Mashonaland West Province in December 2009. Dr. Medina participated in case finding and

implementing educational campaigns to sensitize the communities about the outbreak. This experience contributed to Dr. Medina's application of classroom theory to a practical experience.

#### Dysentery outbreak investigations, Masvingo Province

A suspected dysentery outbreak was reported in Mwenzi District of Masvingo Province on 5 February 2010. Two trainees- Dr. Mandy Sibanda and Mr. Murdered Musithu,

with assistance from the Provincial Health Team, investigated the outbreak and participated in response activities. A total of 189 cases and nine deaths were reported.

#### Typhoid outbreak investigations, Mabvuku Suburb of Harare City

Dr. Collen Madembo- a trainee attached to Harare City, together with health officials from the City's Health Department and other partners investigated a typhoid outbreak in Mabvuku Suburb in Harare. By 8 March 2010, 31 cases had been admitted at Beatrice Road Infectious Disease Hospital;

most of who presented with fever, headache, and abdominal pain.

The outbreak was also proliferated by heavy rains in Harare at the time as well as burst sewer pipes and uncollected refuse.

#### Measles outbreak investigations in Epworth, Mashonaland East Province,

One trainee, Dr. Hilda Bara, was involved in investigations of a measles outbreak in Epworth, Zimbabwe in January 2010. She conducted a study to characterize the outbreak and determine factors associated with contracting measles in this community.

Dr. Bara recommended that timely field investigation and outbreak response activities should be promptly facilitated in future outbreaks to immunization campaigns with a high coverage to help increase herd immunity in the population at risk.

## Conferences, workshops, seminars, and meetings

### IDSR Training of Trainers workshop

Mr. Notion Gombe (AIZIP National Focal Point) facilitated at an Integrated Disease Surveillance and Response (IDSR) Training of Trainers Workshop at Troutberk Inn in Inyanga from 22-26 March 2010. The workshop aimed at building national capacity for training district health teams in the implementation of IDSR in Zimbabwe. It attracted 52 participants who included: doctors, nurses, environmental health officers, pharmacists, laboratory scientists, health information officers and health

promotion officers. These cadres of health officers are essential in sustaining reliable health systems in countries.

The workshop was the second of its kind, after a similar one was conducted for Southern Zimbabwe in Bulawayo City. It was funded by WHO. At the end of the training, participants designed plans to cascade IDSR training to district staff in their respective provinces.

## Publications and presentations

AUTHOR (S)	TITLE	PUBLICATION REFERENCE
Emmanuel Tachiwenyika	Determinants of Perinatal Mortality in Marondera District	National Malaria Conference. Nyanga, Manicaland Province
Edward Dembedza	Factors Associated with Mortality in a Cholera Outbreak in Beitbridge	National Malaria Conference. Nyanga, Manicaland Province
Ngoni Mashumba	Evaluation of the National Vector Control Program	National Malaria Conference. Nyanga, Manicaland Province
Pride Mucheto	Determinants of Nondisclosure of HIV Status among Women attending the Prevention of Mother-to-Child Transmission Program, Makonde District, 2009	Epidemic Intelligence Service (EIS) Conference. April 2010. Atlanta Georgia, USA
Ngoni Mashumba	Public. Health Implications of Child Sexual Abuse, 2009	Epidemic Intelligence Service (EIS) Conference. April 2010. Atlanta Georgia, USA
N. T. Gombe, B. M. M. Nkomo, B. Mabaera, M. Tshimanga, G. Shambira, A. Chadambuka	Evaluation of the IMCI Strategy Implementation in Bulawayo City, Zimbabwe	South African Journal of Child Health. 2010
J. Mberikunashe, R. Matchabaho, S. Banda, M. Tshimanga, N.T. Gombe, G. Shambira, A. Chadambuka	Prevalence and Risk Factors for Obstructive Respiratory Conditions among Textile Industry Workers in Zimbabwe, 2006	Pan African Medical Journal (PAMJ). July 2010

## Conferences, workshops, meetings, and seminars

### Annual Medical

Seventeen abstracts of trainees of the Zimbabwe FETP were presented at the Annual Medical Research Day meeting of the Institute of Continuing Health Education, University of Zimbabwe, which was held on 23 October 2010.

Other participants were from the African University of Mutare and National University of Science and Technology, Bulawayo, as well as individual researchers.



*Trainees of the Zimbabwe FETP who attended the Annual Medical Research Day meeting in Harare, Zimbabwe on 23 October 2010*

## APPENDICES

### APPENDIX 1: CENTERS/ ORGANIZATIONS/ INSTITUTIONS PARTNERING WITH AFENET

#### Ethiopia

Addis Ababa University  
 CDC Global AIDS Program, Ethiopia  
 Ethiopia Federal Ministry of Health  
 Ethiopian Public Health Association

#### French-speaking West Africa

West Africa Health Organization (WAHO)  
 WHO Multi Disease Surveillance Center (MDSC)

#### Kenya

CDC Foundation  
 CDC Kenya  
 Ellison Medical Foundation  
 Jomo Kenyatta University of Agriculture and Technology  
 Kenya Medical Research Institute (KEMRI)  
 Kenya Ministry of Health

#### Mozambique

CDC Mozambique  
 Mozambique Ministry of Public Health and Sanitation

#### Nigeria

Ahmadu Bello University  
 CDC Nigeria  
 CDC's National Center for Zoonotic, Vector-Borne, and Enteric Diseases  
 Federal Ministry of Health  
 University of Ibadan  
 USAID  
 Usmanu Dan Fodiyo University, Sokoto  
 WHO Nigeria

#### Rwanda

Rwanda Ministry of Health  
 Treatment and Research AIDS Center (Trac Plus)  
 University of Rwanda

#### South Africa

CDC South Africa  
 National Institute for Communicable Diseases (NICD)  
 South Africa Ministry of Health  
 National Health Laboratory Services  
 University of Pretoria  
 CDC's Coordinating Center for Infectious Diseases

#### Southern Sudan

Carter Center  
 Southern Sudan Ministry of Health  
 United States Agency for International Development (USAID)  
 CDC Kenya  
 WHO

#### Tanzania

CDC Tanzania  
 Muhimbili University of Health and Allied Sciences  
 National Institute of Medical Research (NIMR)  
 Tanzania Ministry of Health

#### Uganda

CDC Uganda  
 Makerere University School of Public Health (MakSPH)  
 Uganda Ministry of Health  
 Uganda National Expanded Program on Immunization  
 Uganda Protestant Medical Bureau  
 Uganda Virus Research Institute (UVRI)  
 WHO Country Office

#### Ghana

Ghana Ministry of Health  
 UN Foundation  
 University of Ghana, School of Public Health

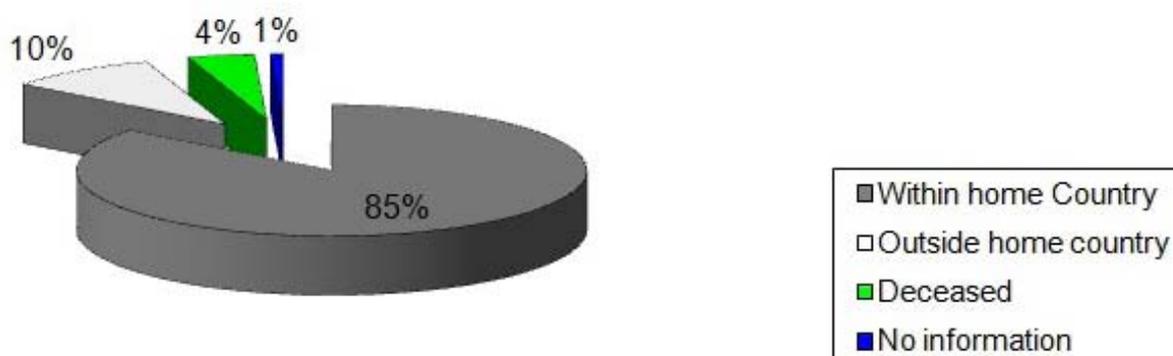
#### Zimbabwe

University of Zimbabwe  
 CDC Global AIDS Program  
 Zimbabwe Ministry of Health and Child Welfare

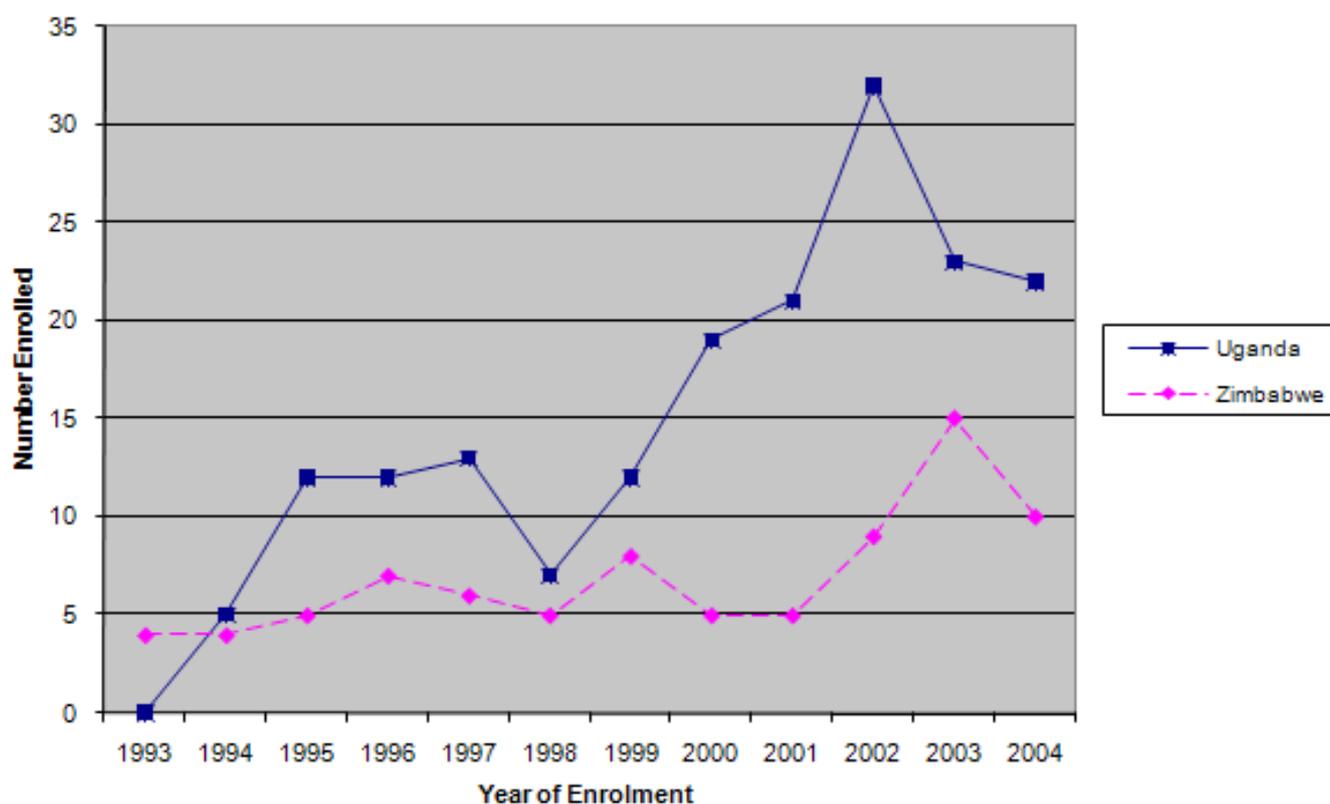
**APPENDIX 2: "FIELD EPIDEMIOLOGY TRAINING PROGRAMS IN AFRICA-WHERE ARE THE GRADUATES?"- STUDY FINDINGS**

To read the entire paper, please follow this link: <http://www.human-resources-health.com/content/8/1/18>.

**Figure 2. Current Locations of Uganda & Zimbabwe FETP graduates, 1993-2004**



**Figure 1. Annual Trainee Enrolment by Programme (1993-2004)**



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