



ANNUAL REPORT 2015





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Vision

A healthier Africa

Mission

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

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ACRONYMS & ABBREVIATIONS

AFRICHOL	Africa Cholera Surveillance Network
AFENET	African Field Epidemiology Network
BL	Burkitt's Lymphoma
HHS	Department of Health and Human Services
DGHP	Division of Global Health Promotion
DGHA	Division of Global HIV/AIDS
DTS	Dry Tube Specimen
ETP	East Africa Training Program
EIS	Epidemic Intelligence Service
Epi	Epidemiology
EMBLEM	Epidemiology of Burkitt's Lymphoma in East African Minors
EQA	External Quality Assurance
FMOH	Federal Ministry of Health
FELTP	Field Epidemiology and Laboratory Training Program
FETP	Field Epidemiology Training Program
IDSR	Integrated Disease Surveillance and Response
Lab	Laboratory
M&E	Monitoring and Evaluation
NCD	Non Communicable Diseases
OGHA	Office of Global Health Affairs
PAMJ	Pan African Medical Journal
SLMTA	Strengthening Laboratory Management Towards Accreditation
CDC	U.S. Centers for Disease Control and Prevention
UCTI	Uganda Tobacco Control Initiative
USAID	United States Agency for International Development
VHF	Viral Hemorrhagic Fever
WHO	World Health Organization





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FOREWORD

Dear Reader,

Ten years of existence and so much has been achieved. Over the past decade, we have grown from four founding members to 16 member programs in 2015. We currently operate in 28 African countries namely: Angola, Benin, Burkina Faso, Cameroon, Cote d'Ivoire, Democratic Republic of Congo, Ethiopia, Gambia, Ghana, Guinea Bissau, Guinea, Kenya, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, South Sudan, Tanzania, Togo, Uganda and Zimbabwe. From the onset, our overall objective has been to improve the capacity of health systems in Africa to manage disease outbreaks and other priority health problems. One way this has been achieved is through strengthening field epidemiology capacity by spearheading professional development of field epidemiologists, competent in addressing a wide range of contemporary public health problems. We are pleased to present the 2015 Annual Report of the African Field Epidemiology Network (AFENET) that highlights the major achievements and challenges of the Network 10 years down the road.

Through support of our partners, FELTP residents have investigated and responded to a number of outbreak investigations and made presentations of their research and field work at various scientific conferences. AFENET has so far held five major scientific conferences in Accra, Ghana (2005), Kampala, Uganda (2007), Mombasa, Kenya (2009), Dar es Salaam, Tanzania (2011) and Addis Ababa, Ethiopia (2013). These events have enabled residents interact with skilled public health practitioners and to share their research and field experiences.

We have registered a growing number of scientific publications from our FELTPS. This year alone, a total ofpublications were published in a variety of scientific journals.

Over the last 10 years, AFENET has enrolled 1,843 residents across the 16 member programs. A total of 783 residents have successfully graduated from the AFENET affiliated two year Field Epidemiology and Laboratory

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”

Training Programs (FELTPs). Residents are equipped with skills to adequately respond to outbreaks, conduct operational research and support surveillance and other public health programs at their respective national and regional placements. Graduates from the training programs have provided technical support in the various positions they hold within the Ministry of Health and other public health agencies.

AFENET participated in the launch of the Liberia Basic FETP to strengthen capacity for epidemic preparedness surveillance and response. This is an advancement in West Africa is leading public health training institution with an enrollment of 30 residents so far.

AFENET is establishing its footprint in 28 African countries and has recorded a great interest from more countries to participate in establishing FELTPs. In 2015, a FETP-Frontline project was rolled out as a 3 month in-service training that aims to strengthen detection of and response to diseases and events of public health importance or international concern. The project seeks to strengthen and build capacity by strengthening public health surveillance and promoting use of data for decision-making at all levels of the surveillance system.

The training of more public health practitioners translates into growth in human resource capacity in Africa. Every step towards strengthening health systems is a step closer to realizing a Healthier Africa.

Enjoy the report and may you have a great year ahead.

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AFENET is establishing its footprint in 28 African countries and has recorded a great interest from more countries to participate in establishing FELTPs.
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BOARD OF DIRECTORS



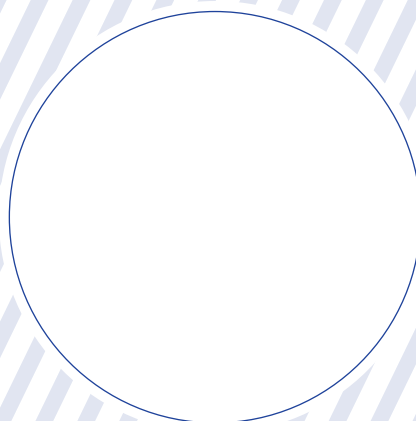
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Program Director Zimbabwe FELTP
(Chair Board of Directors)



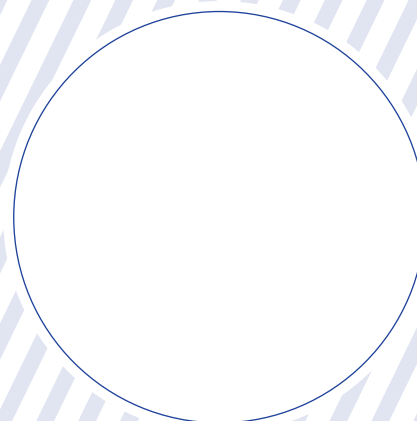
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WHO Country Representative - Uganda
(Member - WHO)



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Executive Director AFENET
(Secretary)



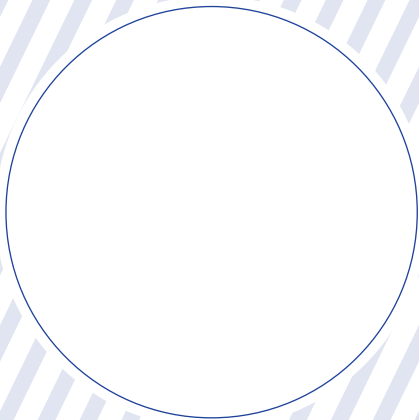
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Program Director Ethiopia FELTP
(Member)



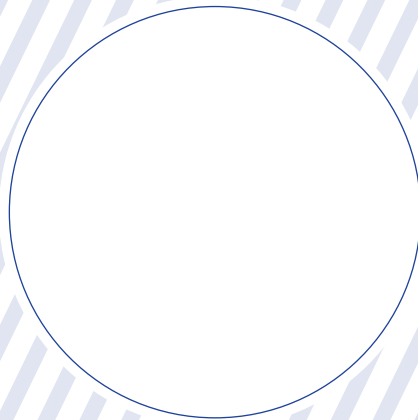
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Pro. Fred Newton Binka
Ghana (Member - Eminent Public
Health Professional)



Dr. Zeinab Gura
Program Director Kenya FELTP
(Member)



Dr. Mamodou Sawadogo
Program Director Burkina Faso FELTP
(Member)

EXECUTIVE SUMMARY



Dr. Kenneth Ofosu-Barko
Executive Director



Dr. Elizeus Rutebemberwa
Chair, Board of Directors

“
The Nigeria Field Epidemiology and Laboratory Training Program (NFELTP) scooped a prestigious award for “Best FELTP in Outbreak Response” at the 64th Annual Epidemic Intelligence Service (EIS) Conference.
”

This annual report highlights the achievements of the African Field Epidemiology Network (AFENET) over 10 years of existence. Over the years we have registered growth all Field Epidemiology and Laboratory Training Programs (FELTPs) hence increasing public health capacity. Capacity is built to allow the ministries respond to outbreaks, conduct investigation on communicable and non-communicable diseases, and effective response. FELTPs also strengthen laboratory support for disease surveillance, diagnosis, treatment, and monitoring. Through its AFENET - Lab initiative, AFENET in partnership with CDC and National Ministries of Health has over the last five years supported laboratory-strengthening activities in 7 African and 11 Caribbean countries.

Trainees were involved in more than over 50 major disease outbreak investigations and response, in their respective countries. Residents were involved in contact tracing, community

sensitization and identification of risk factors for the diseases. Through these investigations residents acquire relevant field skills that they are required to implement in their local health facilities and through ministries of health.

In 2015, at least 41 scientific articles were published by Field Epidemiology and Laboratory Training Programs residents and graduates in peer-reviewed journals, including the Pan African Medical Journal supplement. Trainees also attended numerous scientific conferences and made presentations on outbreak response and research, scooping awards in two major conferences. Writing workshops are organized in respective countries to support publication of research. AFENET organized a combined scientific writing workshop in Kampala for eleven FELTP residents and graduates from Kenya, Ghana, Ethiopia, Nigeria, South Sudan and Uganda. The participants were equipped with skill that enabled them submit research to various journals.

Programs scooped various awards at International conferences which is testimony to the competency of the two year Applied Epidemiology training. The Nigeria Field Epidemiology and Laboratory Training Program (NFELTP) scooped a prestigious award for “Best FELTP in Outbreak Response” at the 64th Annual Epidemic Intelligence Service (EIS) Conference. Mr. Takura Matare, graduate of the Zimbabwe FETP (Cohort XXI) also won the William H. Foege award for the best scientific oral presentation at the EIS conference. This is the second time in a row the Zimbabwe FETP has won this award. Residents also attended the the 8th Global Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) in which NFELTP was honored with the John Snow award for best overall presentation.

Through the years, AFENET continues its strategy to enhance collaboration through training, research and other capacity building initiatives.

We hope you enjoy reading these and many more stories in this annual report.

PROGRAM REPORTS

ANGOLA FIELD EPIDEMIOLOGY & LABORATORY TRAINING PROGRAM

The Angola Field Epidemiology and Laboratory Training Program (A-FELTP) was established in 2011 in close collaboration with the Angola Ministry of Health, Agostinho Neto University (UAN) and Army Health Services. The first and second cohorts of nine residents each were enrolled in 2011 and 2013 respectively. On 1st June 2015, the program started its third cohort comprising of eleven residents: four medical doctors and seven laboratory professionals.

Didactics and short courses

Cohort I graduation

On 12th March 2015, six out of the nine Cohort I residents of the Angola FELTP were awarded a Masters in Field Epidemiology. The program has so far enrolled three cohorts since establishment.

Baseline assessment study

Cohort III residents participated in the study of Baseline Assessment of Services and Data HIV / AIDS in nine health facilities in Luanda from 17th - 30th August 2015. This was under a request by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) - Angola to ensure effective interventions under epidemic control. On 28th September 2015, the residents staged activities for consolidation of knowledge and skills acquired in the different academic modules that are part of the health system.

Scientific writing workshop in Mozambique

Three Cohort II residents of the Angola-FELTP participated in a scientific writing workshop held in Maputo, Mozambique from 27th July - 1st August 2015. The workshop was organized by AFENET in collaboration with the National Institute of Health of Mozambique.

Outbreak investigations

Rabies outbreak

investigation in Luanda

Cohort II residents: Albertina Cardoso an Environmental Health officer and Joaquina Cambuta a Veterinary officer participated in a rabies outbreak investigation in Luanda that killed 40 people from 1st January - 31st March 2015 in Viana district, Luanda Province. A provincial dog rabies campaign was conducted in all municipalities of Luanda.

Presentations made by Angola FELTP Cohort II residents at scientific writing workshop, Mozambique

Nº	Name	Topic
1	Claudete Samutondo	Evaluation of Epidemiological Surveillance System Malaria, Luanda from 2008 - 2014
2	Albertina Cardoso	Audit as Instrumental for Reducing Maternal Deaths: Secondary Analysis of Maternal Death Data, Luanda, from 2006 - August 2014
3	Mariza Lopes	Vaginal exudate as Diagnosis of Infections of the Genitourinary Tract: Analysis of the National Institute of Database of Public Health from 2009 - 2013

Establishment of a surveillance system for epidemic prone diseases in a refugee camp

Following a number of anticipated public health emergencies among the displaced populations in Benguela Province, a crisis committee was set up and two residents participated in the establishment of a surveillance system for epidemic prone diseases. The residents: Mariza Lopes and Ivone Epaco responded to the disaster in Benguela Province where the houses of 110 families got destroyed and 77 were killed. Both residents helped in setting up a small health facility to attend to the health needs of people and implement public health surveillance measures to prevent outbreaks.

Conferences and meetings

5th Scientific conference on the HIV/AIDS

Dr Maria de Rosario, a Cohort II resident participated at the fifth Scientific conference on the HIV/AIDS of Hospital Nossa Senhora da Paz, in Cubal, Benguela Province from 21st - 23rd May 2015. She made two presentations titled:

- Evaluation of Vertical Transmission Prevention Program Surveillance System of HIV (PMTCT) in Luanda from 2008 to 2010
- Co-infection TB / Acquired Immunodeficiency Virus Treatment and Outcome in Patients on ART in Hope Hospital, Angola, 2008 - 2014

4th National conference on science and technology, Luanda

Four of residents: one from Cohort I and three from Cohort II took part in the 4th National Conference on Science and Technology, organized by the Ministry of Science and Technology of Angola from 9th - 11th September 2015. The biannual event focuses on the presentation and discussion of results of scientific research.

IX Scientific EPISUS meeting

Angola FELTP was represented at the 9th Training Program in Epidemiology at the National Health System Services (EPISUS) organized by the Ministry of Health of Brazil from 15th - 17th September 2015. The meeting presents a platform to share work done by the programs trainees and graduates, as well as share experience with professionals from other countries. One resident, Dra Albertina Cardoso a Cohort II resident presented two papers titled:

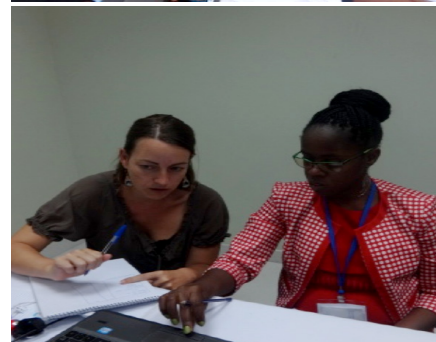
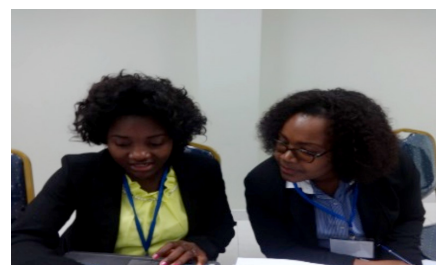
- Case reports of Human Rabies and monitoring Exposed in Luanda from January - April 2015 (Oral)
- Evaluation of Epidemiological Surveillance System - Human Rabies, Luanda, January - 2008 December 2013 (Poster)

“
Mariza Lopes and Ivone Epaco responded to the disaster in Benguela Province where the houses of 110 families got destroyed and 77 were killed.
 ”

PROGRAM REPORTS



▲ *University faculty with the graduates of the Angola FELTP Cohort I Graduation Ceremony*



▲ *Cohort II residents at the Scientific workshop in Maputo, Mozambique*



▲ Angola FELTP residents addressing various public health emergencies as a result of a natural disaster in Benguela Province



▶ Dr. Albertina Cardoso Cohort II resident at the IX Scientific Meeting of EPISUS presenting one of her research papers



▶ Dr Luis Miguel's Cohort I graduate presenting his work at the 4th National Conference on Science and Technology, Luanda



▲ Dr. Maria de Rosario, Cohort II resident presenting at the 5th Scientific Conference on HIV/AIDS in Benguela Province

PROGRAM REPORTS

DEMOCRATIC REPUBLIC OF CONGO FIELD EPIDEMIOLOGY & LABORATORY TRAINING PROGRAM

The Democratic Republic of Congo FELTP was established in 2013 to strengthen national surveillance systems and enhance public health capacity by developing a critical mass of health professionals with advanced applied epidemiology skills. The program is a cooperation amongst: AFENET, CDC Atlanta, USAID, Kinshasa University (School of Public Health) and the Ministries of Health and Agriculture. DRC FELTP's mission is to build a mass of competent health professionals able to effectively prevent, monitor, control and respond to outbreaks and other conditions of public health importance.

Enrolment of Residents Since 2013

Cohort year of admission	Gender	Sub-total	Total recruited	Year of graduation
Cohort I: 2013	F	2	12	2015
	M	10		
Cohort II: 2014	F	3	20	2016
	M	17		
Cohort III: 2015	F	4	20	2017
	M	16		
Cohort IV: 2016			25	2018
Total	F	9	77	
	M	43		

Didactics and Short Courses

The program faculty conducted five short courses for more than 125 health experts on competency based Monitoring and Evaluation, Malaria, Integrated Disease Surveillance and Response (IDSR), Ebola preparedness, HIV programs management, surveillances and zoonosis. The program held a short course in infection control, and monitoring for staff returning from Ebola-affected areas in May 2015. In addition, a training on measles, rubella, and others vaccine preventable diseases was conducted in the same month.

Cohort II

Cohort II residents undertook various field and individual outbreak investigations but also prepared for their final thesis

Cohort III

Cohort III residents took part in field activities at their various field placement sites for 12 weeks; (three weeks at the DLM, three at the EPI, four at the PNLS, two at the PNLT, three at the PNL, two at Lab/vet; one at DPSA and two at INRB and in preparation for group investigation in early July, in Kinshasa and surroundings provinces.

Outbreak investigations and responses

Program residents were involved in a number of outbreak investigations in 2015. These included:

- Onchocerca volvulus in Oriental province (Kisangani): Two residents helped on the evaluation of diagnostic tools to support African river blindness elimination programs.
- Monkey Pox: Four residents participated on survey in Equator province to assess the acceptability of candidate vaccine on Monkey pox
- Evaluation of surveillance Systems and Public Health Programs
- Investigating and responding to a cholera outbreak in three provinces (Katanga , Kisangani , and Maniema)



▲ Dr Yassa Ndjakani facilitates a didactic session for DRC FELTP residents

PROGRAM REPORTS

ETHIOPIA FIELD EPIDEMIOLOGY TRAINING PROGRAM

The Ethiopia Field Epidemiology Training Program (EFETP) is a partnership between CDC Ethiopia, the Federal Ministry of Health, the Ethiopian Health and Nutrition Research Institute, Addis Ababa University School of Public Health, and the Ethiopian Public Health Association. The program has enrolled six cohorts of 121 residents and graduated over 80 since its inception in 2009.

Ethiopia FETP expansion program

The Program initiated an expansion program to include eight universities in a bid to increase the country's workforce in surveillance and outbreak investigation. The Federal Ministry of Health (FMOH) is driven to meet the Global Health Security Agenda (GHSA) target of 1 epidemiologist to 200,000 people. Additionally a new Field Epidemiology Laboratory Management Track and a Field Epidemiology track which focuses primarily on Urban related health problems such as road traffic accidents, food borne diseases, pollution etc has been started. The Urban track is conducted at the St. Paul Hospital Millennium College. The program also started laboratory and veterinary tracks to boost the already existing epidemiology track. With this expansion, the program enrolled 180 residents into its two year training program in 2015 - 2016. The participating universities include: Mekelle University, Gondar University, Hawassa University, Jimma University, Bahir Dar University, Haramaya University, St. Paul's Millennium Medical College and Addis Ababa University.

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The Federal Ministry of Health (FMOH) is driven to meet the Global Health Security Agenda (GHSA) target of 1 epidemiologist to 200,000 people.
”

Residents and graduates

To date there have been 83 graduates from Cohort I (13), Cohort II (22), Cohort III (16), Cohort IV (15) and Cohort V(15). The program had 188 residents as of March 2014: Mekele University 12 in Cohort 1 , Jimma University 10 in Cohort I, Hawasa University 10 in Cohort I ,Haromaya University 10 in each Cohort I and II, Gondar University 18 Cohort I &11 in Cohort II, Saint Paul's Hospital Millennium Medical College 26 Cohort I and 42 in Cohort II , Addis Ababa University 18 Cohort VI and18 in Cohort VII and Bahir Dar University 5 Cohort I .

Training and short courses

Ebola Surveillance

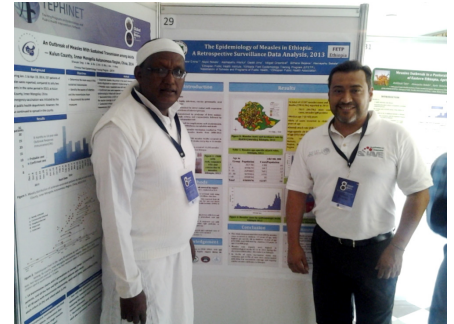
Cohort V trainees were mainly engaged in Ebola surveillance and screening and training at the airport and high traffic border points in the country. The MOH together with trainees established a screening centre at all border entry and exit points

Outbreak investigations

Cohort V residents undertook several activities such as outbreak investigation (32), surveillance, health profile assessment (16), evaluation of surveillance health system (16), training of health professionals (about 650 were trained), and participating in national humanitarian needs assessment program. All 16 residents participated in assessing national health and nutritional problems.

Conferences and meetings

All Cohort V residents participated in the Annual Ethiopian Public Health Conference, which took place in February 2015.



▲ *Caption*

The EFELTP Program Coordinator Dr Zegeye Hailemariam and three Cohort V residents participated in the 7th International Symposium on Filoviruses Ebola: West Africa and Recent Developments in Washington, USA from March 25th - 30th/2015 while 12 Residents of the same cohort participated in a malaria training in Dubai from 20th - 28th March 2015.

TEPHINET Conference

Nine residents and staff of the EFETP participated in the 8th Global Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) Conference in Mexico City, Mexico, from 7th - 11th September 2015 where they made one oral and five poster presentations.



▲ *Residents and faculty of the Ethiopia FETP during the 8th Global TEPHINET Conference in Mexico*

PROGRAM REPORTS

GHANA FIELD EPIDEMIOLOGY & LABORATORY TRAINING PROGRAM

The Ghana Field Epidemiology and Laboratory Training Programme (GFELTP) is a two-year post graduate course of service and on- the- job learning in applied epidemiology and public health laboratory practice for scientists, physicians, veterinarians and other health professionals leading to the award of a Master of Philosophy degree in Applied Epidemiology and Disease Control (M.Phil). The Vision of the GFELTP is to improve the health of the people in Ghana and beyond while its mission is to contribute to addressing Ghana's public health needs and priorities through training and service provision in Applied Epidemiology and Public Health Laboratory Management.

Training and short courses

Basic FETP short course

The GFELTP had a 3 month training on “Basic FETP Curriculum: Public Health Surveillance, Outbreak Investigation and Response” from November 24th 2014 - February 27th 2015. The training which targeted frontline health personnel in the various regions began in the Greater Accra Region. Through a series of lectures, case studies and presentations, participants were assisted to identify topics in surveillance system evaluation, surveillance data analysis and disease outbreak investigation and response. Participants after the workshop were followed-up and supervised in the field for three months from 8th December 2014 - 27th February 2015.

A two day dissemination workshop where participants gave feedback of their area of study to Stakeholders was organized from April 9th - 10th 2015 at the Noguchi Memorial Institute for Medical Research (NMIMR).

Ghana Basic FETP public health surveillance short course

The Ghana Field Epidemiology and Laboratory Training Programme (GFELTP) signed an agreement with the WHO and the Japanese government to organize a short course on Basic FETP Public Health Surveillance, Outbreak Investigation and Response for the Ghana Health Service and Veterinary Services Department. The purpose of the short course is to train 30 frontline officers comprising of Disease Control Officers, Public Health Nurses, Health Information Officers, Technical Officers and Veterinarians from selected districts as well as one laboratorian from the Regional Public Health Reference Laboratory per region in five regions in the Country.

The agreement signing ceremony was attended by dignitaries such as Dr. Magda Robalo - Ghana WHO Country Representative, His Excellency Mr. Kaoru Yoshimura - Ambassador Extraordinary and Plenipotentiary of Japan to the Republic of Ghana, Prof. Yao Tettey - Provost College of Health Sciences, University of Ghana, Prof. John Gyapong – Pro-Vice Chancellor, University of Ghana, Prof. Richard Adanu – Dean, School of Public Health, University of Ghana and Dr. Victor Asare Bampoe, Hon - Deputy Minister of Health – Ghana among others.

Cohort IX Admission

Recruitment of cohort IX

Ghana FELTP admitted 21 residents into the Master of Philosophy in Applied Epidemiology and Disease Control programme for the 2015/2016 academic year. This new recruitment makes up Cohort IX of the program. Residents began their first semester on 17 August 2015. Five of the residents admitted come from three other African countries: Gambia, Sierra Leone and Liberia. Two of which: Sierra Leone and Liberia were severely affected by the West Africa Ebola outbreak.

An orientation ceremony was organized for the Cohort IX residents on 1st October 2015 at the Noguchi Memorial Institute for Medical Research (NMIMR). On the same day, a competency graduation ceremony was held for a total of 9 alumni from Cohorts III – VI who were awarded FELTP competency certificates. Presentations were made on topics titled “Assessment of University Students Knowledge on Ebola Virus Disease, Ghana - 2014” and “Foodborne disease outbreak in a secondary school in Fanteakwa District” by Dr. Ernest Konadu Asiedu and Dr. Zakariah Adams (both Cohort VIII residents).

Special awards were given to outstanding alumni. Dr. Amo-Addae was awarded the “Best Female Graduating Field Epidemiologist”, Mr. Mensah had the “Best Graduating Field Epidemiologist” (Laboratory Track) and Dr. Ameme won the “Overall Best Graduating Field Epidemiologist”.

Key personalities present at this ceremony included Dr. Ebenezer Appiah-Denkyira, Director General - GHS, Dr. Philip Ricks, CDC Resident Malaria Advisor - Ghana, Prof. Richard Adanu, Dean - School of Public Health, Dr. David Opare, Head - National Public Health and Reference Laboratory (NPHRL), Dr. Kenneth Gbede, Veterinary Services Department, Dr. Patricia Akweongo, Head - Epidemiology and Disease Control Department, Dr. Kofi Mensah Nyarko, Director - GFELTP, Prof. Col. Edwin Afari (Rtd.), Coordinator - GFELTP, representatives from the Veterinary Services Department and Lecturers of the GFELTP.

List of GFELTP Graduates

Name	Cohort
Dr. Samuel Otu-Nyarko	III
Mr. Gideon Kye-Duodu	IV
Mr. Ebenezer Kofi Mensah	
Dr. John Tengey	
Dr. Esther Amemor	V
Dr. Donne Kofi Ameme	
Dr. Maame Pokuah Amo-Addae	VI
Mr. Joseph Asamoah Frimpong	
Mr. Alexander Asamoah	



▲ Group picture of invited guests, facilitators and participants at the dissemination workshop for the Basic FELTP Curriculum training

PROGRAM REPORTS



Dr. Victor Asare- Bampoe, Hon. Deputy Minister of Health - Ghana giving an address during the agreement signing ceremony for the Basic FETP Short course Cohort IX Admission

GFELTP Basic FETP, Takoradi – Western Region

Following the establishment of the Basic FETP in the Greater Accra Region in 2014, a series of training were held in 2015 with the aim to ensure sustainability and train more frontline health personnel to be able to respond to public health emergencies, the WHO together with other funding agencies supported the GFELTP to train 200 health personnel in 6 regions in Ghana. The first of the 6 trainings was held in the Western Region. A two-week workshop took place from 5th - 16th October 2015 at the Grand Favor Hotel, Takoradi – Western Region. A total of 34 health personnel from 5 out of the 26 districts in the Region were who were selected by the Ghana Health Service and Veterinary Services Department, participated in the training.

Summary of participants selected from the districts

Districts	No of participants
Tarkwa – Nsuaem Municipal	6
Sefwi Wiawso Municipal	6
Shama District	6
Jomoro District	6
Sekondi Takoradi Municipal	10
Total	34



Caption

Participants were taken through a series of lectures, case studies and presentations which helped them identify topics in Surveillance System, hands-on on Surveillance Data Analysis, Disease Outbreak Investigation and Response and Monitoring and Evaluation.

The Basic FETP short course was facilitated by staff of the Ghana Health Services (GHS), University of Ghana School of Public Health and alumni of the GFELTP.

World Cancer Day 2015

Cohort VIII residents of the GFELTP participated in this year's world cancer day celebration held on February 4th 2015. The theme for this year's world cancer day celebration was "Cancer: Not Beyond Us". Residents of the GFELTP and other nurses from the Ministry of Health were responsible for the breast cancer screening exercise. A total of sixty women were screened.

At the celebration, Dr. Victor Bampoe - Deputy Minister of Health said that, patients should do away with myth and report early to the facilities for treatment since 30% of such cases can be completely cured when detected early.



The farm manager being interviewed by the investigation team at the Achimota farm

Dr. Kofi Mensah Nyarko – Director, GFELTP and Program Manager, Non Communicable Diseases (NCDs), made a presentation titled “Overview of Cancer Situation in Ghana”.

Dignitaries present included; Dr. Ebenezer Appiah-Denkyira – Director General, Ghana Health Service, Dr. Kofi Mensah Nyarko – Director, GFELTP and Program Manager, Non Communicable Diseases (NCDs), Dr. Magda Robalo - World Health Organization Representative, Prof. Clegg Lamptey, Head of Surgery, Korle-Bu Teaching Hospital and other dignitaries.

Dry run for Basic FETP Dissemination workshop: Public Health Surveillance and Outbreak Investigation.

The Ghana FELTP organized a one-day dry run for all district health workers in the Greater Accra Region who participated in the 3 months Basic FETP in Public Health Surveillance and Outbreak Investigation training on March 12th 2015. This dry run was to prepare participants for the actual dissemination workshop which took place 9th - 10th April 2015 at the Noguchi Memorial Institute for Medical Research (NMIMR). The dissemination workshop is for participants to give feedback to stakeholders and facilitators on the work they did. The dry run took place at the School of Public Health, College of Health Sciences, University of Ghana, Legon.

Outbreak Investigations

Outbreak of Avian Influenza (H5N1) in Ga West Municipality, Ga South Municipality and Kpone Katamanso District in the Greater Accra Region Residents and alumni of the GFELTP participated in an Avian Influenza (H5N1) outbreak in Ga West Municipality, Ga South Municipality and Kpone Katamanso District in the Greater Accra Region from May 26th - 3rd June 2015. This was based on a telephone call from the Head of Disease Surveillance Department, Ghana Health Service that poultry birds in a farm in Achimota and Kpone Katamanso District were suspected of having H5N1 infection. According to the report, the Veterinary Services Department had gone to the farm to cull the birds and had requested the Ghana Health Service to follow up on the human contacts.

Following these reports, a team comprising of residents and alumni of the Ghana Field Epidemiology and Laboratory Training Programme (GFELTP) and the Ghana Health Service went to investigate the outbreaks with the following objectives:

- To determine the magnitude of the outbreak
- To follow up on human contacts
- To implement control measures

Over 23,000 birds were involved with no human case. A follow up monitoring exercise was conducted from 27th May - 25th June 2015.

The investigation team took the following actions:

- Active case search on the affected farms
- Follow up of human contacts on the affected farms
- Education of contacts on the transmission and prevention of Avian Influenza
- Oropharyngeal samples taken from suspected human contacts and sent to the laboratory for testing
- Sensitization of health facilities in the affected districts on Avian influenza



PROGRAM REPORTS

KENYA FIELD EPIDEMIOLOGY & LABORATORY TRAINING PROGRAM

The Kenya FELTP was established in 2004 as a collaborative partnership led by the Kenya Ministry of Health (MOH), the Jomo Kenyatta University of Agriculture and Technology, and CDC with funding from the Ellison Medical Foundation. This program was also tasked to train laboratory epidemiologists from other parts of Africa. In 2014, the program became affiliated to Moi University which awards a Master of Science in Field Epidemiology to its graduates. The program has to date enrolled 133 trainees in 11 cohorts since inception.

Didactics and Short Courses

Cohort XI Defense for planned protocol based study

On 1st July 2015, Kenya FELTP Cohort XI residents of the Advanced Level Epidemiology class defended their planned protocol based studies to two panels comprising of Moi University School of Public Health lecturers and FELTP faculty. The event took place in the university campus in Nairobi.

Intermediate Epidemiology Training

Cohort I residents undertook the 3rd course on Intermediate Epidemiology from 13th - 17th July 2015 at the Hadassah Hotel, Nairobi. During the course, the trainees were introduced to measures of association and impact, role of laboratory in public health; control measures in public health and risk communication in public health. The trainees were also taken through sessions of Epi info involving data entry, cleaning and performing descriptive analysis. The trainees were exposed to case studies, daily quizzes and individual/group assignments to reinforce the didactic sessions.

Cohort XII Recruitment

Kenya FELTP recruited Cohort XII residents in September 2015. Twenty residents were selected of whom, 10 had undergone basic level epidemiology training and six were graduates of the intermediate level field epidemiology training. First semester classes begun on 14th September 2015. Some of the topics covered include: Outbreak investigation, public health surveillance, biostatistics and principles of epidemiology. Residents undertook a three week field exercise and field placement.

Cohort XI

Nineteen Cohort XI submitted their theses to the ethical review board on 30th September 2015. The residents will commence data collection in November 2015.

The residents sat for their semester two examinations from 22nd - 24th July 2015 at the Moi University Bazaar campus. The subjects examined were applied epidemiology, research methods and scientific communication.

In Semester 3, residents undertook various topics which include: one health for field epidemiologists, leadership and policy and a course on vaccine preventable diseases. The residents went back to their placement sites for field placement three on 7th September 2015. Some of the residents were involved in establishing water surveillance in Mombasa County while others were involved in cholera outbreak investigations in Wajir and Siaya counties. The residents sat for their third semester exams on 7th December 2015.

Cohort X

Two residents published their manuscripts and submitted their thesis to Jomo Kenyatta University of Agriculture and Technology for examination. Ten Cohort X residents finished data collection for their thesis projects and developed manuscripts for publication.

Cohort IX

One resident successfully defended his thesis while two others submitted to the Jomo Kenyatta University of Agriculture and Technology for examination. Two residents published their manuscripts and submitted for examination. Six residents also developed manuscripts while two others collected data.

Cohort VIII

Two Cohort VIII residents graduated from the Jomo Kenyatta University of Agriculture and Technology during the 25th graduation ceremony held at the Juja graduation square on 31st July 2015. The other 11 residents are at various stages of completion.

Basic Level Training on Field Epidemiology

The basic epidemiology trainings for group five participants from 29th June - 3rd July 2015. Participants were drawn from Machakos, Kitui, Kirinyaga, Tharaka Nithi and Embu Counties. Topics covered during this course included outbreak investigation, measures of disease frequency, data analysis using MS excel, monitoring and evaluation. Participants then had a three week break which they used to analyze their data, conduct lot quality assessments and prepare power point presentations of their findings.

The third course of the training was held from 27th - 29th July 2015. Participants presented the findings from their field projects which were scored and ranked by the FELTP facilitators. During the third day of the training, participants were awarded certificates and books by Dr. Ruth Muthama, the deputy county director of health for Machakos County.

Intermediate Level Training

Course 5 of the International Level Training begun from 29th June - 3rd July 2015 began on 31th August 2015 and will go on up to September 2nd 2015 at Ngong hills hotel. During the course, the trainees undertook table top exercises whose aim reinforcing the new skills the trainees had acquired from basic and intermediate epidemiology trainings combined with their own experiences in tackling real life public health challenges. A table of top exercises was provided to the trainees with real scenarios where they need to think through and under take some actions and decisions. Facilitators for the simulation exercise were advance level training alumni and their main role was to observe, evaluate and guide the trainees through the exercise. At the end of the exercise, the participants generated reports which they presented. At the end of the course, the participants were awarded certificates, having successfully completed the intermediate level training.

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Selection exercise for Medical Electives Students

University of Nairobi, September, 2015

The short listing of the medical students for the medical electives was done in September by a representative from the school of public health and a member of the FELTP faculty. Out of the 94 applicants, 50 of the top students were selected also considering the availability of placement sites. The 50 students also undertook a one week didactic course from 5th - 9th October 2015 in Nairobi. Thereafter, 30 participants were selected and sponsored for a seven week elective in various placement sites across the country.

Supervision of Veterinary Students under MEPI Program

A total of 26 veterinary students who were trained under the MEPI program and deployed to various county and national government veterinary establishments was conducted from August 24th - 31st 2015 at their various places of attachment. During the period of attachment which began on July 1st 2015 to August 31st 2015, the students were expected to write an orientation report a week after reporting, develop a work plan, identify a surveillance system and describe it and identify a dataset from the same surveillance system and analyze it and generate both word and power point report. The students were thereafter expected to disseminate their findings to their peers and FELTP stakeholders for evaluation. The objective of the supervision was to ensure that the students have achieved the deliverables expected of them and have adhered to the work plan. The supervision was done by FELTP in collaboration with University of Nairobi (UoN) staff.

University of Nairobi Dissemination Meeting

The dissemination meeting for 5th Year University of Nairobi veterinary students in basic epidemiology, was held on 28th - 29th September 2015. All 26 students who had completed their elective term attended the dissemination meeting. At the end of the two day workshop, the students were awarded certificates of completion.

Outbreak investigations

Lead poisoning in Owino Ouru and Bangladesh settlements residents participated in at least five major outbreak investigations during 2015. This included lead poisoning in Owino Ouru and Bangladesh settlements in Mombasa and cholera outbreaks in Mombasa, Homa Bay and Nairobi counties.

KAP Survey on

Cholera preparedness

Report on FELTP/ EIS cholera Health care workers and Community health workers KAP Survey, July 2015 A KAP survey was conducted among health care workers and community health workers in Nairobi, Homa Bay and Mombasa counties to assess their knowledge, attitude and practices on cholera. The counties selected were three of the counties with high case fatality rates, multiple outbreaks or high number of cases. The objectives of the survey was to evaluate cholera preparedness of health care facilities and health workers ; assess cholera control efforts and identify gaps; assess cholera awareness in affected counties and determine chlorine levels in drinking water in Nairobi county.

In all 3 counties, some health care facilities lacked basic, life-saving, cholera treatment supplies (IV fluids, ORS). Few had capability to properly collect and transport lab specimens due to insufficient supplies. The team recommended to the counties:

- Training in cholera diagnosis and case management in high-risk and affected counties
- Develop job aids regarding case definition, case management and lab specimen collection

- Ensure adequate availability of unexpired rehydration supplies in the health care facilities
- Early case detection and confirmation which can be achieved by good surveillance and well equipped laboratories that is able to isolate vibrio cholerae
- Training of laboratory personnel on basic microbiology
- Develop and implement policy for appropriate use of rapid cholera (RCT) kits early in outbreaks
- Develop a community preparedness and response plan

Cholera Outbreak Investigation in Wajir County

Following an outbreak of cholera in Wajir in July 2015, A multidisciplinary team comprising a health promotion expert, an epidemiologist from the Kenya FELTP, an environmental health expert and a laboratory expert were dispatched to the county on 13th August to assess the magnitude of the outbreak, conduct outbreak investigations to identify the source of and risk factors for the outbreak and to support the response efforts.

The team recorded 767 suspected and confirmed cases who had been line-listed with eleven deaths reported (case fatality rate 1.4%). The most affected villages were in Wajir East namely: Godade, Barwaqo, Jogoo, Township, Makoror and Wagberi. All water samples tested showed widespread contamination of water sources with fecal coliforms except for two water bottling companies.

Participants in the case control study had a median age of 31.5 years (IQR 21.5-50). Most were housewives (48.3%), unemployed (15%), students (15%), businesspeople (4.2%) or food handlers (3.3%). Most (70%) of the participants had used bucket toilets which were emptied by burying. The commonest source of drinking water was shallow wells and the water was then stored in narrow mouth containers. Eighty (67%) participants had hand washing facilities in the homestead and 118(98%) washed hands after using the toilet. However, 54(46%) used water alone, 58(49%) used water and soap, 4(3%) used water and ash while only one (1%) used water, tissue paper and soap. One hundred thirteen (94%) washed hands before eating while 77(64%) washed hands after changing diapers. Solid waste was disposed off in rubbish pits (50%), open dumpsites (38%) or sacks (11%) while only 2% was collected by county tractors.

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Some of the recommendations made include:

- Enhancement of response and control efforts.
- Enhancement of Health promotion emphasizing hand washing with soap and household water treatment.
- Enforcement of the Public Health Act to promote better waste management, food safety from field to plate and ensure continuous water quality surveillance.
- Management of possible sources of water contamination such as converted toilets should be immediately decontaminated and sealed or appropriately managed.
- Prioritize a public water supply

Cholera outbreak Investigation IN Siaya County

August - September, 2015

Siaya county experienced three outbreaks of cholera in 2015, with the first in May recording 14 cases and 1 death (CFR; 7.1%), the second in July where 16 cases and 3 deaths (CFR; 18.75%) were reported and the third confirmed in September 2015. The investigation team confirmed two cases despite the lack on a cholera control plan and uncoordinated response activities. The team also noted that infection prevention mechanisms were weak in all cholera treatment centers. Their main source of drinking water for the community was from rivers and the water obtained was clearly turbid. The water had not been tested for coliforms.

The team recommended training of health care workers on integrated disease surveillance and response to improve early case detection and reporting, continuous water quality surveillance and provision of safe clean water and establishment of a Cholera preparedness and response plan.

FELTP Support to NPHLS: Capacity Building diagnostic Capability of microbiology laboratories at National and County Level (PEPFAR Funds)

Kenya FELTP often collaborates with the National Public Health laboratory Services (NPHLS) especially during outbreak investigations as well as placement of FELTP residents. It was therefore necessary to build the capacity of NPHLS and other public clinical microbiology laboratories in Kenya Clinical laboratories which play a crucial role in the confirmatory diagnosis of suspected cases. Support to the NPHLS included the following:

- Bacterial isolate banking to National Public Health Laboratory (NPHLS) which was done through the purchase of one freezer at -80 0 C. This will provide additional storage for isolates collected during outbreak investigations.

- The NPHLS was supported to respond to the ongoing cholera outbreak in Kenya. A Laboratory field team was engaged to provide laboratory support to the counties with a view of enhancing the counties' capability to diagnose, confirm and monitor cholera outbreak.
- Culture related supplies were also procured to support NPHLS and selected laboratories with requisite supplies. This included culture media, reagents, antimicrobial susceptibility drugs (AST) and typing sera for cholera.
- FELTP also supported a three day basic microbiology training for laboratory personnel currently working in microbiology sections of selected laboratories. These trainings focused on sample collection, transportation, processing and referrals. Sample processing training entailed basic bacterial culture, identification and AST.

Conferences and Meetings attended

Eastern Africa Regional Conference on Zoonotic Diseases

Residents and alumni of the Kenya FELTP participated in the East Africa Regional Conference on Zoonotic Diseases which took place in Naivasha, Kenya from 9th -13th March 2015. The Conference was the first regional conference convened to discuss the various elements of zoonosis in East Africa. Participants were mainly from: Kenya, Uganda, Tanzania, Rwanda, Burundi, South Sudan and Ethiopia. The plenary discussions covered a variety of topics which included: the One Health approach, rabies in East Africa and its control and the Global Health Security Agenda.

World Veterinary Day Celebrations

Five residents and a faculty of the Kenya Field Epidemiology and Laboratory Training Program (KFELTP) attended the 49th Annual Scientific Conference and 15th World Veterinary Day Celebrations from 22nd - 25th April 2015 in Busia district, Western Kenya. The theme for this year's conference was 'One vision for a sustainable animal and human health and welfare'.

Epidemic Intelligence Service (EIS) conference

Kenya FELTP Program Director - Dr Samuel Amwayi alongside two lecturers from Moi University: Dr Simiyu Taabu and Dr Peninah Masibo and one resident - Dr Adam Hassan attended the Epidemic Intelligence Service (EIS) conference held 20th - 23rd April 2015 in Atlanta USA. Dr Hassan made a poster presentation titled: "Evaluation of two interventions for reducing routine vaccination dropout rates in three Kenyan districts 2014"

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[Residents make presentations at TEPHINET Conference](#)

Fourteen residents and seven faculty of the Kenya Field Epidemiology and Laboratory Training Program attended the TEPHINET Conference in Mexico City, Mexico, from 7th - 11th September 2015. Residents made seven oral and seven poster presentations on various public health topics to showcase some of the research activities undertaken. The Kenyan team presented a song to share their rich culture during the conference International Night. The 8th TEPHINET Conference brought together residents, instructors and other stakeholders from all the member countries of the network to exchange experiences and knowledge that will benefit global health, disease prevention and health promotion. The conference activities included scientific sessions and workshops related to the management of health projects and public health interventions as well as the investigation of outbreaks of communicable diseases, laboratory practices and technology.

[Public Health Management for Action \(IMPACT\) meeting, 22nd - 23rd September, Nairobi](#)

Dr. Zeinab Gura attended a two-day meeting to discuss the development of a new educational program for public health managers known as Improving Public Health Management for Action, or IMPACT. It aims to increase public health workforce capacity across Kenya by focusing on enhancing public health management in U.S. partner countries. Graduates will acquire skills in Program planning and management, analysis and assessment, strategic communication, organizational leadership and systems awareness, budget and financial planning skills and basic public health sciences and practices.

[Meeting to review Priority Zoonotic Disease List, September 2nd - 4th, 2015 Nakuru](#)

Dr. Githuku attended a meeting to review the priority zoonotic disease list held in Nakuru from 2nd - 4th September 2015. This meeting was of particular importance to FELTP as it identifies the research gaps that can be exploited by FELTP incoming residents as they choose their protocol based studies. At the end of the exercise, the working group had successfully reviewed the priority disease list that would be used by the zoonotic disease unit and its partners.

International One Health Review Meeting, September 22nd - 25th 2015, Nairobi Kenya

Dr. Zeinab Gura, Dr. Sara Lowther and Mr. Tura Galgalo attended a regional meeting organized by the zoonotic disease unit to discuss the successes and challenges of implementing the one health approach in regional countries. The one health approach has been recommended by the World Health organization as the best approach to prevent and control emerging zoonotic diseases.

Africa Field Epidemiology Network Stakeholder's Meeting, Nairobi, September 2015

Dr. Githuku attended an AFENET stakeholders meeting on 8th September 2015 in Nairobi. The meeting brought together health care from various hospitals in the Ministry who were implementing quality management systems. They had an opportunity to share their experiences on the process of accreditation, the challenges faced and the lessons learnt. Dr. Githuku gave a presentation on how the experience of the Field Epidemiology and Laboratory Training program (Kenya) in building laboratory capacity as well as supporting the National public health laboratory services.

The 7th International Conference on Birth Defects and Disabilities in the Developing World , Dar Es Salaam Tanzania, 21st - 24th September 2015

Dr. Jane Githuku staff and Ms. Beatrice Ochieng, a cohort XI residents attended the 7th international conference on birth defects and disabilities in Dar es Salaam. The conference brought together stakeholders and researchers from all over the world in a forum where they could exchange information on birth defects. Dr. Githuku made a presentation on setting up a birth defects surveillance system in Kenya as well as a presentation on the determinants of referral time for children with spina bifida and encephalocele in Central Kenya.

Submissions and Publications

The following were manuscripts submitted/ published by FELTP graduates and residents this quarter.

	Manuscript Title	Author	Journal
1	Characterization and antimicrobial susceptibility pattern to commonly prescribed antimicrobials of Diarrheagenic Escherichia coli in patients attending Thika District Hospital-2014	Evalyne Kanyina	African Journal of Health Sciences
2	Infection rates and correlates of non tuberculous mycobacteria among TB retreatment cases in Kenya	Jacquelyn Limo	Prime Journal
3	Knowledge, attitude and practices towards brucellosis in a pastoral community in Kenya, 2013.	Mark Obonyo	Journal of Innovation and Research

Case study development course, 10th - 21st August 2015

Dr. Jane Githuku, Field coordinator, FELTP-K, attended a two weeks training organized by Emory University and AFENET at Emory university in Atlanta. The training's focus was on development of case studies for FETPs in Africa. The training was held from August 10th - 21st 2015 and attended by nine FETP representatives. During the training, Dr. Githuku developed a case study dubbed: "Cholera Outbreak in Homabay County-Kenya, 2015". The case study was based on an outbreak of cholera which occurred in Homabay County in February 2015 and was investigated by Cohort XI FELTP residents.

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▲ Kenya Intermediate Epidemiology FELTP Cohort I residents attending the 3rd course, 13th - 17th July 2015 at the Hadassah hotel, Nairobi



▲ Residents and faculty of the Kenya FELTP at the 8th TEPHINET Conference in Mexico City, Mexico



▲ Participants of the intermediate level training receive their certificates of completion



▲ Kenya FELTP Cohort VIII residents graduated from the Jomo Kenyatta University of Agriculture and Technology during the 25th graduation ceremony held at the Juja graduation square on 31st July 2015



▲ Cohort 11 residents participating in the lead poisoning investigation in Owino Ouru and Bangladesh settlements ▶



▲ Case study development course, Emory University

▶ Illegal water connections passing close to an open sewer in an informal settlement in Nairobi



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LIBERIA BASIC FIELD EPIDEMIOLOGY & LABORATORY TRAINING PROGRAM

Cohort I Basic FELTP training in Liberia

AFENET participated in the launch of the Basic FETP on 3rd August 2015 at the Emergency Operations Centre, (EOC) Liberia Ministry of Health. The first cohort of 30 residents began their training from 3rd - 7th August 2015 and thereafter undertook field projects in surveillance data analysis and reporting and data quality auditing from selected health facilities. The opening ceremony was graced by several dignitaries including: Hon Tolbert Nyenswah - Deputy Minister of Health, Mr. Thomas Nagbe - Director, Disease Prevention and Control, MoH, Dr. Alex Gassasira - WHO Representative to Liberia, Dr. Paul Weidle - CDC, National Center for HIV, STD, and TB Prevention and Mr. Bryan Wheeler - CDC regional advisor. AFENET was represented by Dr Hebert Kazoora – Epidemiologist AFENET who facilitated the training.

On 5th August 2015, Dr Tom Frieden the Center for Disease Control and Prevention (CDC) Director and Deborah Malac - US Ambassador to Liberia, paid a courtesy visit to the FETP class. In his remarks, Dr Frieden expressed excitement over the launch of Basic FETP in Liberia. He emphasized the crucial role of FETP trainees in controlling future threats and outbreaks, and in building long-term public health capacity.

The basic FETP in Liberia was established to strengthen national capacity for epidemic preparedness surveillance and response. The program is funded by the US CDC and coordinated by the Rollins School of Public Health at Emory University in partnership with AFENET and Liberian Ministry of Health. The program aims to increase usage of data among local public health workers for monitoring community health, improve the skills in basic data collection and analysis, interpretation, and communication and improve quality and use of surveillance data at the local levels.



Cohort I Basic FETP trainees. Front Row: Right to Left (Prof Scott McNabb - Emory University, Dr Farhat Ghada - Emory University, Amb Deborah Malac - US Ambassador to Liberia, Dr Tom Frieden - US CDC Director, Hon Tolbert Nyenswah - Deputy Minister of Health and Dr Herbert Brian Kazoora - Project Coordinator and Epidemiologist - AFENET

MOZAMBIQUE FIELD EPIDEMIOLOGY & LABORATORY TRAINING PROGRAM

The Mozambique FELTP was established in 2009 through collaboration between the National Institute of Health of Mozambique and University of Eduardo Mondlane. The program has enrolled three cohorts of 37 residents since its inception. The Program enrolled 13 new residents for the third cohort which started in March 2014. Out of 11 Cohort I residents, 10 have so far graduated.

Training and Short Courses

Geographic Information Systems Workshop, Mozambique

Four residents from Cohort II and III of the Mozambique Field Epidemiology and Laboratory Training Program (FELTP) participated in Geographic Information Systems (GIS) training from 22nd - 23rd July 2015 at the National Institute of Health, Mozambique. The workshop introduced residents to the ArcGIS software and principles of spatial data. The ArcGIS software is a professional software for creating maps, conducting spatial analysis and sharing intelligent visualizations for better decision making.

7th FELTP Short Course in Zambezia

The Mozambique FELTP, in conjunction with the Ministry of Health and Zambezia Province Health division conducted a 3-week short course for 25 surveillance officers from 25 districts. This is the 7th short course conducted by the program and was held from 8th - 22nd July 2015 in the Zambezia Province, Quelimane City.

Mozambique FELTP residents, Cristolde Salomão (Cohort I, Epi Track), Cláudio Muianga (Cohort III, Epi Track) and Fernando Padama (Cohort II, Epi Track) participated as key facilitators. The short course is designed to improve skills in outbreak detection and disease surveillance. The course was conducted through presentations, case studies, hands on exercises and field work.

15th International Training on Molecular Epidemiology of Emerging Infectious and Parasite Diseases

Esmeralda Cossa, a Cohort III, Lab Track resident participated in the 15th International Training on Molecular Epidemiology of Emerging Infectious and Parasite Diseases from 15th - 25th July 2015 in Salvador-Bahia, Brazil. This international course is specially designed to present the principles and practices of this new discipline in epidemiology, to laboratory professionals and epidemiologists involved in infectious diseases of relevance to public health.



▲ Mozambique FELTP Cohort II and III residents attending the Geographic Information Systems (GIS) at the National Institute of Health

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Mozambique FELTP Scientific Writing Workshop

AFENET in collaboration with the Mozambique National Institute of Health organized a scientific writing workshop held in Maputo from 27th July to 1st August 2015. The workshop was attended by three residents from the Angola FELTP, three participants from the National Institute of Health of Mozambique (Instituto Nacional de Saúde, INS) and seven residents from Mozambique FELTP. Ms Agnes Namugaya - Administrator, AFENET provided administrative support during the workshop.

Cohort III Activities

- All residents from Cohort III Lab Track participated in the Workshop on Sample collection and safety procedures for influenza specimens and Infectious Substance Shipper Training (ISST), that was held in Maputo, from 9th - 10th July 2015.
- There was short course, held in Zambezia Province, Quelimane City, from 8th - 22nd July 2016, with the participation of 22 surveillance technicians from all the provincial districts and 1 participants form the Health Provincial Direction, 1 from Quelimane City and 1 from Zambézia Provincial Hospital.
- Four residents from the Cohort II and III attend the GIS Workshop Training from July 22-23 at National Institute of Health. The workshop was organized by the National Institute of Health to introduce to the post-graduations students and research investigators the ArcGIS software and the principles of spatial data.
- One resident, Esmeralda Cossa (Cohort III, Lab Track) participated in XV International Training Molecular Epidemiology of Emerging Infectious and Parasite Diseases held in Salvador-Bahia, Brazil from 15th - 25th July



▶ Short Course participants after receiving their certificates of attendance at the Ministry of Health, Instituto De Ciencia De Saude, Quelimane. Second to the left is Dr. Lorna Gujral - Head of Surveillance at National Institute of Health, Mozambique

Outbreaks and other field activities

- Measles suspected outbreak investigation Quelimane City, Zambézia Province, from 16th - 24th July with participation:
 - Cristolde Salomão (Epi Track, 1st Cohort).
- Diarrhea outbreak investigation in Lichinga City, Niassa Province, from 21st September to 2nd October with participation of Jorge Jone (Epi Track, Cohort II).
- Trainees attended the “9o Encontro Científico do Programa de Epidemiologia Aplicada aos Serviços do Sistema único de Saúde (EPISUS)”, in Brasília, from 15th -17th September (The Brazilian FELTP Scientific Meeting). For this meeting the presenter was Geraldo Chambe (cohort II, Epi track), with the presentation “ Avaliação da cobertura e prevalência da malária após uma campanha de distribuição de redes mosquiteiras, província de Nampula, Moçambique, 2013” (Evaluation the distribution campaign of mosquito nets coverage and malaria prevalence in Nampula province, Mozambique, 2013).

Meetings and Conferences

- Trainees and faculty attended the 8th TEPHINET Global Conference in México from 7th- 11th September.
 - Cynthia Semá Baltazar (Program Director)
 - Cláudio Muianga (3rd cohort, Epi Track)
 - Fernanda Oliveira (3rd cohort, Lab Track)
- Twenty six abstracts were presented at the XV Jornadas de Saúde The largest national conference in health sector in Mozambique, which was held in Maputo City from 16th - 18th September (abstracts listed in attach).



▶
Participants at the Mozambique
FELTP Scientific Writing
Workshop in Maputo

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NIGERIA FIELD EPIDEMIOLOGY & LABORATORY TRAINING PROGRAM

The Nigeria Field Epidemiology and Laboratory Training Program was established in October 2008 as a long-term program within the Federal Ministry of Health (FMOH) and Federal Ministry of Agriculture and Rural Development (FMARD). The Program aims at training field epidemiology, veterinary epidemiology and public health laboratory residents for leadership positions in both ministries. The Universities of Ibadan and Ahmadu Bello teach and accredit the academic qualifications of NFELTP graduates. A total of 260 trainees have so far been admitted in seven cohorts.

NFELTP Cohort VII Commencement

Cohort VII residents of the Nigeria Field Epidemiology and Laboratory Program (NFELTP) commenced their didactics on 2nd March 2015 at the program offices in Abuja. They comprise of 7 veterinarians, 12 laboratory scientists and 32 medical officers drawn from various states in Nigeria. The 55 residents were welcomed by the Program Director - Dr. Akin Oyemakinde, other NFELTP staff and faculty from the two collaborating Universities of Ibadan and Ahmadu Bello. The seventh cohort brings to 262 the number of NFELTP residents so far admitted in seven years.

Surveillance Activities

Developing Standard Operating Procedures (SOPs) for the KADAIS Survey
As part of the activities under PEPFAR support, graduates and residents from Cohorts III, IV and VI participated in a workshop to develop Standard Operating Procedures (SOPs) for the Kaduna Aids Indicator Survey (KADAIS) that will be used to determine prevalence and risk factors of HIV in Kaduna state. The survey which was conducted from 26th - 29th January 2015 is spearheaded by the Kaduna State Ministry of Health and supported by CDC.

Snake Bite Study in Kaltungo, North-Eastern Nigeria with funding from BEP
Nigeria FELTP in collaboration with the Infectious and Tropical Diseases Unit of Bayero University, Kano and the Department of Sociology, Kaduna State University conducted a descriptive cross-sectional study in Kaltungo, north-Eastern Nigeria, to identify socioeconomic, psychological and health system challenges of snakebites. The study involved 30 field workers from the collaborating institutions and NFELTP residents. Residents were exposed to the basics of snake envenomation, socio-economic and psychological as well as health-system challenges of snakebite. The study was conducted from 2nd August to 5th September 2015. The residents who

participated include: Drs Abba Bala Shehu, Aminu Sudawa, Garba Itopa Yahya, Abubakar Ahmed, Babalola Joseph, Abdulnasir Adamu, Rabi Usman, Maryam Buba, Fatima Sale, Hameed Obani, and Mohd Jibreel Omar from Cohorts V, VI and VII.

Two abstracts developed from the study were accepted for presentation at the 18th World

Congress of the International Society on Toxinologists which took place from 25th to 30th

September 2015 in London.

The abstracts titled: Snakebite socioeconomic challenges: a problem of the neglected and vulnerable and Prevalence and pattern of psychosocial morbidity among snake bite victims in Kaltungo, Gombe state were presented by Dr. Dalhat Mahmood, a graduate and presently a staff of the program.

Residents posted to support HIV activities in CDC priority states

Nine cohort 7 residents were posted to seven states of the country; Cross River, Kaduna (2), Lagos, (2), Nasarawa, Oyo, Plateau and the Federal Capital Territory, Abuja.

Residents posted to Kaduna, assisted in the identification of the hotspots for Female Sex Workers (FSWs), and Intravenous drug users (IDU) across the 23 LGAs of the state. Residents working in the Oyo State AIDS and

STI Control Program (Oyo SASCP). The residents posted to Lagos State assisted the state in the implementation of the Integration of HCT into the Maternal, Neonatal and Child Health (MNCH) week of the state in July 2015.

Nigeria FELTP Alumni Association Launch

The Nigeria Field Epidemiology and Laboratory Training Program Alumni Association (NFELTP AA) inauguration ceremony was held on September 29th - 30th 2015 in Abuja. The alumni association was created and registered to ensure that all the graduates of the program remain networked and continue the program's efforts in strengthening public health systems. The association was launched officially by Dr Henry Akpan, Permanent Secretary Office of Secretary of Federation Government and a former Program Director. In attendance was Program Director, Dr Akin Oyemakinde, Representative of CDC Lisa Esapa, Director Federal Ministry of Health Port Health Services Dr Sani Gwarzo and the Honourable Commissioner of Health Kano State Dr Kabir Getso (Cohort III graduate).

CDC Director, Dr. Thomas Frieden and PMI Coordinator Rear Admiral Tiim Ziemer visit 29 July 2015

The Director U.S. CDC, Dr. Thomas Frieden and the Coordinator President Malaria Initiative (PMI), Rear Admiral Tim Ziemer visited the Nigeria Field Epidemiology and Laboratory Training Program (NFELTP) on 29th July 2015.

NFELTP residents/graduates presented their malaria related work as outlined below:-

- Dr. Olufemi Ajumobi (Graduate): Evidence for Use of Malaria Rapid Diagnostic Test in children less than five years in Nigeria.
- Mr. Samuel Emiasengen(Cohort V) :Factors Associated with Asymptomatic Malaria Parasitaemia Among Women Attending ANC in Secondary Health Facility Nassarawa - Eggon, Nasarawa State
- Dr Yomi Bamiselu (Cohort V): Adherence to Malaria Diagnosis and Treatment Guidelines among Health Workers in Ogun State, Nigeria
- Dr. Olukemi Titi Olugbade (Cohort V): Progress of Malaria Surveillance in Oyo State, Nigeria, 2008 - 2015

PROGRAM REPORTS

SORMAS Evaluation debrief visit to the Permanent Secretary (PS) Federal Ministry of Health

A team from the Surveillance and Outbreak Response Management Analytic System (SORMAS) project visited together with the Nigeria FELTP and FMOH visited Oyo State to evaluate the progress and utility of the project. The team had a debrief session with the Permanent Secretary Federal Ministry of Health and the Director and Chief Executive of the Nigerian Centre for Disease control on 14th July 2015.

Prof Gerard Krauze and Associate Prof Gabriele Poggensee highlighted the outcome of the preliminary evaluation of the pilot study in Oyo State and the added value that SORMAS will bring to outbreak management and response.

Malaria manuscript writing workshop

Dr Olufemi Ajumobi (NFELTP) and Dr. Ikeoluwapo Ajayi coordinated a four day Malaria Manuscript Writing workshop from 13th -16th July 2015. This was attended by 14 graduates and residents. The workshop was facilitated by members of the academia including Drs Ikeoluwapo Ajayi, Olufunmilayo Fawole, Bidemi Yusuf (University of Ibadan), Dr M.S. Ibrahim (Ahmadu Bello University Zaria), Dr. Chimere Agomo (University of Lagos), Dr. Mahmood Dalhat and Prof. Debola Olayinka Laboratory resident Advisor NFELTP, and Dr. Olufemi Ajumobi and Mr. Kingsley Godson (National Malaria Elimination Programme). Dr. Richard Niska CDC-PMI Advisor, Drs. Uwem Inyang and Abidemi Okechukwu - Malaria Managers (USAID) were in attendance. A total of 16 draft manuscripts were developed. Residents and graduates were assigned to facilitators and resource persons for review. Dr Steve Yoon, Malaria Branch CDC Atlanta further engaged residents and graduates on their draft manuscripts from 27th - 31st July 2015.

Outbreak investigations

Residents participated in several outbreak investigations and responses in 2015. These included investigation of Avian Influenza (H5N1) in seven states including Kano, Plateau and Lagos using a One Health Approach and suspected cholera outbreaks in Rivers State and Borno IDP camps and Jigawa Communities. Residents also characterised a maculopapular rash in Ogun State and investigated a Cerebro-Spinal Meningitis (CSM) Outbreak in Kebbi State.

Measles outbreak in Kano State July 2015

On 23rd July 2015, increased cases of measles were reported in 3 local government areas of Kano State namely Bunkure, Madobi and Kura in Kano State. Residents investigated the outbreak to determine the source and risk factors. Fifteen blood samples were tested one hundred and twenty three cases were identified with 6 deaths. Eleven specimen tested positive for measles.

Avian influenza outbreak in Rivers State August 2015

In response to outbreaks of H5N1 Avian Influenza in birds reported in 17 states of the Federation, the Nigeria Centre for Disease Control (NCDC) in conjunction with Nigeria Field Epidemiology Training Programme (NFELTP), Federal Ministry of Health sent teams to affected states. The aim was to investigate possible Human components by active surveillance among contacts of affected birds. The FELTP team were deployed in Rivers State from 16th to 21st August 2015 to carry out active surveillance using a protocol developed for the purpose by the NCDC and NFELTP. The team was made up of staff of NCDC, NFELTP and the Rivers State Ministry of Health and Agriculture. The activities carried out included advocacy visits, visits to affected farms and other farms, (administration of questionnaire, sample collections from contacts, sensitization and awareness creation), Key informant interviews and debriefing of stake holders at the end of the exercise. The outbreak in Rivers was reported in 2 farms without any report of human component. However, our investigation during this active surveillance for H5N1 among human contacts of infected birds shown more farms affected. Five of the seven farms visited were positive for AI H5N1. No suspected case in human based on case definition but samples were collected from a total of 25 farm workers. 18 of which had direct contact with confirmed AI infected birds.

Cholera outbreak in Gajala community, Birnin-Kudu LGA, Jigawa State September 2015

NFELTP was deployed to investigate and support response to a cholera outbreak reported in the Gajala community and Birnin Kudu LGA. The Epidemiology unit of the Jigawa State Ministry of Health had observed an increase in cases of diarrhoea and vomiting from 11th September 2015 in. A laboratory however confirmation of cholera on 16th September 2015.

Cholera Outbreak in Borno IDP camps

Residents of the Nigeria Field Epidemiology Training Program (NFELTP) participated in the outbreak response to cholera and gastroenteritis in the Internally Displaced Persons (IDP) camps in Borno State and communities in Jigawa State respectively. The response commenced on 17th September 2015 and lasted one week. Residents conducted descriptive, analytic and environmental studies as well as provided case management support. On 16th September 2015 there was notification by one NFELTP resident about the occurrence of an outbreak of vomiting and diarrhoeal illness in 3 out of the 16 IDP camps situated in Maiduguri Metropolis. Six NFELTP residents were deployed on 17th September 2015 for outbreak investigation. The residents involved in the Borno response included: Isa Ali Hassan, Joyce Adebayo, Muhammed Jibreel, Tijani Ahmed, Shaiki Andeh and Philip Igawe. In Jigawa State, five Cohort VII residents and one Cohort VI resident took part, namely: Musa Sarki, Ugochukwu Osigwe, Usman Rabi, Fatimah Saleh, and Robinson Nnaji and Maryam Buba (Cohort VI). The Jigawa team was supervised by Dr Usain Ibala, an NFELTP graduate currently working as the Director of Disease Control in Jigawa State.

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Conferences and meetings attended

Nigeria FELTP Scoops Prestigious Award at EIS Conference, Atlanta

The Nigeria Field Epidemiology and Laboratory Training Program (NFELTP) scooped a prestigious award for “Best FELTP in Outbreak Response” at the 64th Annual Epidemic Intelligence Service (EIS) Conference FETP International Night on 22nd April 2015. The award was handed out to the Nigeria FELTP Program Director - Dr. Akin Oyemakinde from Centers for Disease Control and Prevention (CDC) Director - Dr. Thomas Frieden and FETP Branch Chief - Dr. Linda Quick. The FETP International Night was hosted by CDC’s Division of Global Health Protection and the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET).

TEPHINET Conference

A total of 15 abstracts were accepted for the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) Conference from 8 - the Nigeria program (8 oral and 7 posters) the third highest in the world.

The program won the best overall presentation - John Snow award. The award was won by Mr Akanbi Kayode who presented on Ebola Virus Disease - Gaps in Knowledge and Practices among Health-Care Workers - Lagos, Nigeria, August 2014.

Africa One health Leadership meeting

Nigeria Field Epidemiology and Laboratory Training Program (NFELTP) took part in the Africa One health Leadership meeting held on 24th September 2015 in Nairobi Kenya. One health is the collaborative effort of multiple disciplines working together locally, nationally, and globally to attain optimal health for people, animals and the environment all in an effort to reduce the loss of human lives associated with emerging infectious diseases, reduce the economic impact, predict and prevent future emerging and re-emerging infectious diseases. The regional international One Health review meeting was organized on behalf of the government of Kenya by Kenya’s One Health Office referred to as Zoonotic Disease Unit (ZDU) in collaboration with a partner, Global Implementation Solutions (GIS). The goal of the meeting was to share the success and challenges of implementing One Health (OH) approaches in our countries in order to enhance prevention and control of emerging and re-emerging diseases in particular the neglected zoonotic diseases.

NFELTP Publications

- A graduate of the 2nd cohort published an article in the lancet journal describing lessons learnt in mental health issues in emergency response during the ebola response. The details of the publications are as follows;- Abdulaziz Mohammed, Taiwo Lateef Sheikh, Gabriele Poggensee, Patrick Nguku, Adebola Olayinka, Chima Oluabunwo, Julian Eaton. Mental health in emergency response: lessons from Ebola. The Lancet Vol 2, November 2015. [http://www.thelancet.com/pdfs/journals/lanpsy/PIIS2215-0366\(15\)00451-4.pdf](http://www.thelancet.com/pdfs/journals/lanpsy/PIIS2215-0366(15)00451-4.pdf).
- An evaluation of psychological distress and social support of survivors and contacts of ebola virus disease infection and their relatives in Lagos, Nigeria: a cross sectional study - 2014. journal: BMC Public Health. Emmanuel Onuche Musa et al. Epidemiological profile of ebola virus disease in Nigeria July - September 2014,

Pan-African Medical Journal August 2015.

- Usman Aishat, Dairo David and Fawole Olufunmilayo. Exclusive breastfeeding and HIV/AIDS: a cross-sectional survey of mothers attending prevention of mother-to-child transmission of HIV clinics in southwest Nigeria. Pan-African Medical Journal August 2015.

National Stop Transmission of Polio Program (NSTOP) Updates

The National Stop Transmission of Polio Program (NSTOP) conducted several activities during 2015 including District Health Information Management System-2 (DHIS-2) training in Kano State from 5th - 10th January 2015 And Routine Immunization (RI) Coverage Survey in Polio High-Risk LGAs in Northern Nigeria from 8th - 16th January 2015. The also program deployed 216 NSTOP officers including N-STOP LGA officers (NSLOs) to support the January supplemental immunization activities in polio high risk Local Government Areas of northern Nigeria. The NSTOP officers provided management support during pre-campaign, intra-campaign and post-campaign activities.

July 2015 Immunization Plus Days (IPDs)

In July 2015, Immunization Plus Days (IPD) was conducted in all the eleven polio high risks northern states, including Adamawa and Taraba states. The campaign also coincided with the second outbreak response (OBR) to the cVDPV in Kwali Area Council of the Federal Capital Territory (FCT) Abuja. The scope of the OBR response vaccination covered all the 6 area councils in FCT and local government areas bordering these area councils. The LGAs are in Niger, Kogi and Nasarawa states. The NSTOP program deployed 337 Management Support Teams (MSTs) comprising of NSTOP Field Coordinators, NSTOP Local Government Officers, NFELTP graduates/residents and government personnel were deployed to support both the polio campaign and the outbreak response.



▲ Dr. Akin Oyemakinde – Program Director NFELTP receiving award for best FELTP in outbreak response from CDC Director - Dr. Thomas Frieden and FETP Branch Chief Dr. Linda Quick (Photo courtesy of Ken Johnson)



▲ A cross-section of residents, graduates, facilitators and PMI staff at the workshop



▲ Cross section of participants during the survey on developing standard operating procedures (SOPs) for the KADAIS

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Profiling IDP camps

NSTOP conducted an exercise to profile recognized IDPs camps located in the north eastern part of the country. The profiling was done based on the mandate given to NSTOP by the National Polio emergency centre (NEOC). The profiling team comprised of Cohort VI residents, Dr Waziri Ndakilnasiya Endie and Dr Jibrin Idris Manu.

NSTOP 2015 Quarter Two Review Meeting

A quarter two review meeting was held from 2nd - 3rd July 2015 at Barcelona Hotel, Wuse 2 FCT - Abuja. A total of one hundred and five (105) staff including national and state staff, NFELTP Resident Advisor and a representative of CDC Nigeria was in attendance. The meeting reviewed quarter 3 activities and shared updates of activities by all states; presented by each of the state team leads. The team also participated in reviewing National and State levels NSTOP activities with a view to evaluate performances, proffer solutions to challenges and to make recommendations.

▶ *Dr. Patrick Nguku, Prof Gabriele Poggensee, Mr Linus Awute (PS), Prof. Grerard Krauze, Prof. Nasidi (Director NCDC) and Mr Celestine Ameh (NFELTP)*



▲ *Caption*



▲ *Cohort VII residents together with NFELTP staff and faculty from University of Ibadan and Ahmadu Bello University*



▲ *(L - R) NFELTP residents: Kayode Ojo, Peter Adewuyi and Akinyode Akinfemi conducting outbreak investigation of maculopapular Rash in Abeokuta*

SOUTH AFRICA FIELD EPIDEMIOLOGY & LABORATORY TRAINING PROGRAM

The South Africa Field Epidemiology and Laboratory Training Programme (SAFELTP) was created in 2006 after recognizing the need to build and sustain the country's human resource capacity in applied epidemiology and public health practice. It was formed as collaboration between the South Africa Department of Health (DoH), the National Institute for Communicable Diseases (NICD), the National Health Laboratory Services (NHLS), CDC and the University of Pretoria.

Program Enrolment and Graduation

Eleven residents were enrolled into the South Africa Field Epidemiology and Laboratory Training Programme (SAFELTP) on Monday 12th January 2015. The residents included one medical doctor, two veterinarians, three nurses, four medical scientists and one environmental health practitioner. They are due to complete the training in December 2016.

Cohort VIII class completed training

Thirteen residents of the Cohort VIII class (2014 intake) completed the 2 year FETP residency and were awarded certificates at a farewell ceremony held on Friday 11th December 2015 at the National Institute for Communicable Diseases. Dr Nancy Knight, the CDC Country Director to South Africa, served as a key note speaker at the farewell event. The University of Pretoria will award MPH degrees at a graduation ceremony to be held in April 2016.

Short Course Trainings

The program conducted two short courses on basic applied epidemiology for district level department of health staff in KwaZulu Natal and Eastern Cape Provinces. A total of 48 health staff completed the course, 25 from KwaZulu Natal Province and 23 from the Eastern Cape Province.

The programme held a two-day training workshop for field supervisors, on 18th - 19th August 2015 at the NICD. The goal of the workshop was to orient new field supervisors on the FETP curriculum, the tools/guidelines that are used to support/monitor residents during field placement and to the roles and responsibilities of supervisors/mentors during FETP residency. The workshop is held annually, before the residents are placed in the field.

Outbreak investigations

SAFETP investigated a numerous disease outbreaks during the course of the year. The following below are some of these outbreaks.

- Outbreak of Hepatitis A at a day care centre in Pretoria, Tshwane district of South Africa: October 2014 - March 2015

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- Investigation of a suspected diarrhoeal outbreak at Dr Harry Surtie Hospital in Upington, Northern Cape Province, March - July 2015
- Food borne illness outbreak at a secondary school in Tshwane district, North of Gauteng: February 2015
- Outbreak of staphylococcal foodborne illness in Tshwane District, Gauteng Province, South Africa during June 2015
- Gastroenteritis outbreak in a Provincial Tertiary Hospital, Gauteng Province of South Africa, December 2015

Meetings and conferences

Program residents made several presentations at national and international conferences including the International Conference on Emerging Infectious Diseases (ICEID), 8th Global TEPHINET Scientific Conference, the 18th International Conference on AIDS and STIs in Africa and 11th Public Health Association of South Africa (PHASA).

Selected presentations are in the table below;

9 th International Conference on Emerging Infectious Diseases (ICEID) 24 th - 28 th August 2015		
Author	Presentation title	Type
Nicola Page	Investigation of increased numbers of diarrhoeal cases in Swaziland in July 2014	Poster
Hluphi Doreen Mpangane	Odysean Malaria in Protea Glen, Johannesburg, Gauteng Province, South Africa, January 2015.	Poster
Thobani Ntshiqha	Predictors of condom use among sexually active young women-National HIV community survey, South Africa, 2012	Poster
Hetani Ngobeni	An investigation of a potential increase in pertussis cases identified through sentinel surveillance in South Africa, July 2012 - September 2014.	Poster
8 th Global TEPHINET Scientific Conference, 7 th - 11 th September 2015, Mexico City, Mexico		
Eva D Mathatha	Outbreak of Cholera in Diepsloot, Johannesburg, South Africa, September 2014	Oral
Ngormbu J Ballah	Decline in Syphilis Seroprevalence among Females of Reproductive Age in the Northern Cape Province, South Africa, 2003 - 2012: Utility of Laboratory - based information.	Oral



▲ Cohort VIII residents pose for a group photo with Program staff during the farewell ceremony held 11th December 2015. 4th left seated is Dr Nancy Knight, CDC Country Director to South Africa

TANZANIA FIELD EPIDEMIOLOGY & LABORATORY TRAINING PROGRAM

The Tanzania Field Epidemiology and Laboratory Training Program (TFELTP) was established in 2008 as a partnership among the Ministry of Health and Social Welfare (MOHSW), Muhimbili University of Health and Allied Sciences, National Institute for Medical Research, and local and international partners. The program aims at producing highly qualified personnel to contribute to development of high quality and robust disease surveillance systems and effective response to outbreaks. TFELTP is a 2-year full-time training program that has since enrolled a total of 90 trainees in 8 cohorts. A total of 14 Cohort VII residents were enrolled in 2015.

Ten residents are enrolled into the epidemiology track and 4 into the laboratory track.

Tanzania Field and Laboratory Epidemiologist Alumni Association (TANFLEA) Launch

The Tanzania field and laboratory epidemiologist alumni association (TANFLEA) was officially launched on 4th July 2015 at the Stella Marris hotel in Bagamoyo, Tanzania. The association is meant to bring together all the TFELTP alumni. The launch was officiated by Dr Mohamed Ali Mohamed - Director Quality Assurance Directorate, Ministry of Health and Social Welfare.

Cohort VII Data Analysis

Cohort VII residents submitted their data set analysis and field site reports for assessment in early August. They also submitted their dissertation proposals to the Muhimbili University IRB for ethical clearance.

The residents collected data for their dissertations from October to December 2015.

TFELTP Cohort VII Dissertation titles

Name	Title Of Dissertation	Track
Pricillah Kinyunyu	Effectiveness of Monovalent Rotavirus Vaccine in Protecting children below two years against rotavirus Diarrhoea in Mwanza Region, Northern Tanzania	Epidemiology Track
Asha Ussi Khamis	Data quality and effect of Rotavirus vaccination on Childhood Diarrhoea in Zanzibar	Epidemiology Track
Daniel Nkonya	Use of Rapid diagnostic test for malaria under reduced malaria burden and its influence on malaria case management in Misungwi district, Mwanza Tanzania	Epidemiology Track
Josephine Kapinga	Household sanitation conditions, hygiene practices and influencing factors in Mkinga district, Tanzania	Epidemiology Track

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Name	Title Of Dissertation	Track
Neema Camara	Identification of Clinical characteristics and determinants of dengue infection among febrile cases in Dar Es Salaam	Epidemiology Track
Ally N. Said	Factors associated with number of antenatal care visits among recently delivered women in Morogoro Municipality	Epidemiology Track
Athanas M. Lucas	The influence of Health Status and health care seeking behavior on community health fund (CHF) membership in Kahama District Council, Shinyanga	Epidemiology Track
George Cosmas	Factors associated with treatment defaulting among HIV positive pregnant and lactating mothers in the era of option B+ implementation in Dodoma Municipality, Tanzania	Epidemiology Track
Libamba Sobo	Evaluation of WHO TB and HIV collaborative activities in Tandahimba and Masasi district hospitals	Epidemiology Track
Sheuya Hussein	Magnitude and causes of acute febrile illness among under five children in a rural setting of Muleba district in Northern Tanzania	Epidemiology Track
Shaba Kilasi	Factors influencing utilization of Cervical cancer screening among HIV positive women in Mbeya, Tanzania	Epidemiology Track
Sakasaka Philoteus	Human Brucellosis among people presenting with febrile illness in Kiteto district	Laboratory Track
Mohammed A. Ali	Blood infection among non-malaria acute febrile illness patients at Mnazi Mmoja hospital, Zanzibar	Laboratory Track
Makame M. Jabir	Seroprevalence and spatial distribution of rift valley fever in humans residing in agro- pastoral communities during inter epidemic period in the Serengeti ecosystem, Northern Tanzania.	Laboratory Track
Kateule O. Clarence	Validation of Dried Spot Specimen for Diagnosis of Dengue Virus Infection among Febrile Patients in Dar Es salaam, Tanzania	Laboratory Track

Leadership and management course

Cohort VI attended leadership and management course from 10th July to 7th August 2015 and thereafter defended their thesis. Fourteen Cohort VI residents and one Cohort V resident successfully defended their dissertations on 10th -11th August 2015.

Outbreak investigations

Residents participated in a number of outbreak investigations and responses in 2015. Among these were a cholera outbreak in Kigoma Region, anthrax outbreak in Meru district and plague outbreak in Manyara Region were the residents assisted the district team to carry out surveillance and also participated in dusting of homesteads using carbaryl 15% in order to control the fleas. The program worked closely with the Epidemiology section to

ensure that regions and districts strengthen their early detection system so that events and rumors were captured and investigated by residents and competencies were attained.

Six Cohort VII residents and two alumni under the supervision of Dr Rogath Kishimba – Epidemiology Fellow and Loveness Urio – FELTP Fellow were deployed to the Kasulu and Kagunga refugee camps in Kigoma region to carry out disease surveillance and prevention control. The activity which conducted from 25th May 2015 until 7th June 2015. A summary of these and other outbreaks is indicated in the appendix.

Shell fish poisoning outbreak in Pemba, Zanzibar

Asha Ussi a Cohort VI resident under the supervision of Dr Rogath Kishimba (FELTP) and Innocent Semali (MUHAS) investigated an outbreak of shell fish poisoning in Pemba, Zanzibar. Zanzibar Epidemiology and Diseases Surveillance Unit (ZEDS Unit) received information from Wete District Medical Officer of unknown illness. As of 18th July 2015 a total of 175 cases had been reported. Thirty two human samples, Shell fish samples and water samples were taken for laboratory analysis. The Investigating team gave health education to the community, cases

management was improved and a cases control study was carried out to elicit the risk factors for the disease. The outbreak affected different villages including Gando and Junguni shehia in Wete district.

Cholera outbreak in various regions

Five Cohort VII residents investigated a cholera outbreak in Dar es salaam. The 1st cases was reported on 15th August 2015 and as of 27th September 2015 a total 2545 cholera cases had been reported. FELTP resident are participating in strengthening surveillance and assist in control and prevention measures. A total of 9 regions namely Dar es Salaam, Morogoro, Pwani, Kilimanjaro, Kigoma, Dodoma Geita Mwanza and Mara have been affected.

Distribution of cholera cases by region is indicated in the table below;

Region	Cumulative Number of Cases
Dar es Salaam	2103
Morogoro	121
Pwani	78
Kilimanjaro	2
Kigoma	57
Dodoma	43
Geita	11
Mwanza	72
Mara	76
Total	2545

Mentorship and supervision activities

National and Regional field site supervision and resident assessment was conducted in July 2015 for Cohorts VI and VII. The objectives of the supervision were:

- To assess resident competencies accomplishments
- To provide mentorship

Some of the issues discussed during the site visits included:

- Discussions with field site supervisor on how to ensure sufficient mentorship
- Discussions of the resident's competencies
- Resident's log book

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Review of residents' work (TFELTP and MUHAS)

The TFELTP faculty provided major support in dissertation proposal development for cohort VII and addressing thesis minor corrections for Cohort VI.

Program meetings, Capacity building and other activities

Weekly program meetings were held, which aimed at ensuring residents' participation in surveillance, monitoring and response. FELTP residents were actively involved in the cholera outbreak investigation. Program meetings also focused on the preparation for cohort 7 for defence of projects/thesis, and selected residents for TEPHINET and NIMR conference

Capacity building for Case Studies Development in US

Dr Rogat Kishimba attended a case study development meeting supported by AFENET and Emory Rollins School of Public Health. The meeting took place on August 10th - 21st, 2015 at Emory University in Atlanta. Several FELTP programs participated in the case study development. The agenda of the meeting was to allow FELTP program to develop case studies that reflects their local setting and Africa context.

Intermediate course meeting in US

Senga Sembuche - TFELTP Basic Course Resident Advisor and Dr James Gibson attended intermediates course curriculum review meeting that was held on 2nd- 4th September 2015. The main agenda of the meeting was to review the intermediate course curriculum that was prepared by the Atlanta FELTP branch. Tanzania FELTP intermediate FELTP course is scheduled to start in January 2016.

Evaluation of Surveillance Systems

Over the past four years, residents have evaluated 67 surveillance systems and gave recommendations to the ministry; and investigated about 70 outbreaks/ rumours that have provided recommendations to health officials in the districts as well as the affected communities regarding actions or remedies to be taken to control the outbreak; and all of the 40 of the 63 (60%) of thesis projects have been driven by research questions developed between various programs within the ministries in collaboration with MUHAS and hence results are being utilized by various programs.

Regional Sites/ Centers of Excellence

TFELTP identified 11 regional sites identified as centers of excellences, namely: Morogoro, Dodoma, Arusha, Kagera, Mwanza, Kigoma, Mbeya, Kibongoto, Mtwara, Tanga and Zanzibar. These regions have benefitted in terms of logistical support like desktops and printers and modems. Some of these regions have FELTP graduates who can supervise the residents

Meetings and conferences

Tanzania FELTP residents and graduates made at least five presentations at local and international scientific meetings and a total of 13 presentations at national and international conferences.

Presentations made by TFELTP residents in 2015

Conference/Meeting	N° of Presentations	Date
National Institute for Medical Research (NIMR)	4 oral presentations	April 2015
Epidemic Intelligence Service (EIS)	1 poster presentation	April 2015
Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET)	One (1) oral and (1) poster presentation	September 2015
Birth Defect and Disabilities Conference	3 oral presentations	September 2015
Public Health Association of South Africa (PHASA)	3 oral presentations	October 2015:

A total of nine (9) manuscripts have been produced since inception of the program in 2008, seven (7) of them in the current 4th budget year. This constitutes approximately 18% of field projects (9/49 completed thesis) Manuscripts produced in 2015

Cohort I

Marcelina John Mponela, Obinna Oleribe, Ahmed Abade, Gideon Kwesigabo. *Post exposure prophylaxis following occupational exposure to HIV: a survey of health care workers in Mbeya, Tanzania, 2009 - 2010.* PAMJ in 2015)

Cohort III

Rogath Saika Kishimba, Rose Mpembeni, Janneth Mghamba. *Factors*

associated with Birth Defects, at Muhimbili National Hospital and Municipal hospitals in Dar es salaam -2012”, The Pan African Medical Journal. 2015;20:153

Loveness John Urrio, Mohamed Ally Mohamed, Janneth Mghamba, Ahmed Abade, Aboud Said. *Evaluation of HIV antigen/antibody combination for diagnosis of HIV infection in Dar es salaam, Tanzania.* The Pan African Medical Journal 2015;20:196

Rogath Saika Kishimba, Rose Mpembeni, anneth M Mghamba, David Goodman, Diana Valencia. *“Birth prevalence of structural birth defects among newborns delivered at Muhimbili National hospital and three Municipal hospitals in Dar es Salaam, Tanzania, 2011-2012”.* Journal of Global Health. December 2015; 5 (2). doi: 10.7189/jogh.05.020411

Cohort IV

Alfred Geoffrey, Aboud Said, Ahmed Abade. *Methicillin resistant staphylococcus aureus colonization among intensive care unit patients and co workers at Muhimbili National Hospital.* PAMJ in 2015.

Cohort V

Deogratius Bintabara, Mohamed Mohamed, Janneth Mghamba, Peter Wasswa, Rose Mpembeni. *“Birth preparedness and complication*

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readiness among recently delivered women in chamwino district, central Tanzania: a cross sectional study”. Reproductive Health 2015, 12:44 (16 May 2015)

Cohort VI

Cosmas George Kauky, Rogath Saika Kishimba, Loveness John Urio, Ahmed Mohammed Abade, Janneth Maridadi Mghamba. “Prevalence of helmet use among motorcycle users in Dar Es Salaam, Tanzania”. Pan African Medical Journal. 2015; 20:438. <http://www.panafrican-med-journal.com/content/article/20/438/full/>

▶ *Dr. Mohamed Ali Mohamed (Director Quality Assurance) and Dr Janneth Mghamba (Program Director TFELTP) during launching of TANFLEA on 4th July 2015*



▶ *Yazid Kachwamba, Cohort VII resident making presentation during dissertation proposal defence, at Muhimbili University, August, 2015*



▶ *Participants of case study development workshop at Rolin School of Public Health - Emory University, August, 2015*



▶ *Loveness Urio (In dark blue T-shirt) and Cohort VI resident Athanus Lucas collecting information from a health worker in Kagunga border point, Kigoma region, Tanzania*

UGANDA MASTER OF PUBLIC HEALTH PROGRAM

The Uganda Master of Public Health (MPH) Program is one of the founder members of AFENET, having started in 1994 under the Public Health without Schools (PHSWOW) concept. The program is hosted by the Department of Health Policy Planning Management (HPPM) in Makerere University School of Public Health (MakSPH). Supported by CDC and other partners, the MPH program is aimed at enhancing applied epidemiology, surveillance, outbreak investigation and other skills among trainees. Similar to other FETPs, most of the program training is field based. Since inception, the program has enrolled over 325 trainees in 22 cohorts.

Field Activities and Trainings

Admission of MPH 2015/2016 cohort (Cohort I)

Forty five students were admitted in the 2015/2016 cohort. The residents comprise of 30 public health specialists (including 16 males and 14 females). Residents commenced didactics in August 2015. By September 2015, a number of course units had been covered which include: Applied Epidemiology II, Applied Biostatistics II, Advanced Disease Surveillance and Outbreak Investigations, Seminar Series I, Scientific Writing and Communication and Monitoring and Evaluation.

Dissemination of short study findings to Kabarole District Stakeholders

Two students who received funding to disseminate their field studies to the respective districts were able to accomplish this. Lydia Nakire disseminated her findings on “Male partner involvement in PMTCT of HIV in Kabarole District” to the stakeholders in Kabarole district while Philip Wanduru disseminated on “Availability of Family Planning Commodities and Infrastructure in Health Units in Lira District, Uganda” to stakeholders in Lira district.

Surveillance systems strengthening and evaluation activities

Up to 10 residents in the 2013/2014 cohort participated in national measles supplementary immunization related activities. This mainly included: capacity building of district teams for measles mass vaccination. This activity run from September to October 2015. The residents were part of the national task force formed by MOH and WHO. Residents underwent one week training and were passed as National Facilitators. They then spent two weeks in the field training district health teams, health workers and other key stakeholders on the roll out of mass measles immunization exercise. They also supported in setting up mass immunization district mass immunization teams as well as supporting District Health Teams in planning (including budgeting for the mass immunization exercise). Following capacity building for the district teams, mass immunization was conducted and the students further participated in monitoring the implementation of the exercise. They wrote activity reports and submitted to the districts and MOH/ WHO.

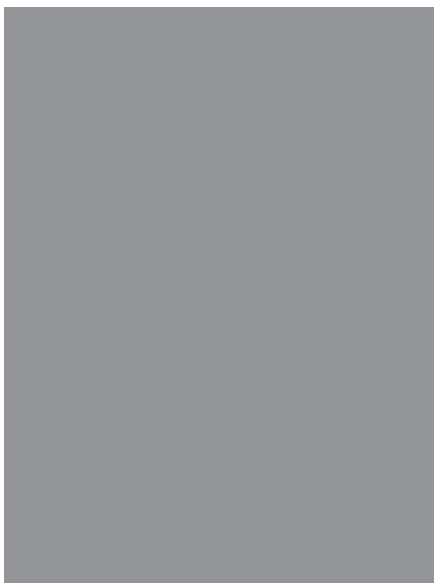
Data Improvement Teams (DIT)/ Surveillance

Four students participated in the Data Improvement Teams (DIT) exercise which also involved building capacity of district health teams and health works to generate quality immunization data and effectively utilize it to detain and hence ensure timely response to any possible outbreak of any disease in question. This was part of surveillance systems evaluation and strengthening where the students have been part of the DITs supporting districts through training and mentorship on immunization data improvement. See table 5 for details

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▲ Gerald Obai making his oral presentation “Proportion and Determinants for Non-Retention of Mother-Baby Pairs in Care in the Elimination of Mother-To-Child Transmission of HIV-Northern Uganda, 2014”



▲ Lyida Nakiire making her oral presentation on a study “Male-Partner Involvement in Prevention of Mother-To-Child Transmission of HIV - Kabarole District, Uganda, 2014”

Supporting MPH Year II residents (cohort 2014/15) in conducting field short studies and developing concepts for dissertation proposals
Sixteen residents of MPH 2014/2015 and one from 2012/2013 (Alice Namugamba) who were in the field for 10 weeks were supported by the Makerere SPH Faculty in conducting the field studies (I and II) for which proposals had been developed with support of the faculty. This involved guiding students in data collection, analysis and report writing. Residents submitted these reports on time. The residents were also guided in identifying two appropriate dissertation topics which were reviewed and presented at the Makerere University School of Public Health Higher Degrees Research and Ethics Committee. They were also assigned respective supervisors to support them in developing their dissertation proposals and eventually reports. Please see tables in Appendix 2 for short studies conducted and concepts developed and approved.

National Measles Supplementary Immunization Activity

Eighteen residents participated in preparations for the National Measles Supplementary Immunization Activity (SIAS) with support from the Uganda Ministry of Health and World Health Organisation (WHO). The preparations began with a national training from 14th - 18th September 2015. The training aimed at equipping residents with the knowledge and skills to train district immunization teams. The residents conducted district based trainings from 20th September 2015 to 4th October 2015. The district trainings were aimed at equipping district immunization teams with skills on how to successfully plan, organise, implement and evaluate the National Measles Supplementary Immunization Activity.

Conferences and Meetings attended

8th TEPHINET Global Scientific Conference

Four residents of the Master of Public Health (MPH) Program: Ms Lydia Nakiire, Ms Damalie Nsangi, Mr Gerald Obai and Mr Francis Ocen presented their research at the 8th TEPHINET Global Scientific Conference held 7th - 11th September 2015 in Mexico City.

One of the residents, **Damalie Nsangi**, shared her experience after the conference. “I had an amazing opportunity to interact with FETP trainees and graduates from programs all over the world. This allowed me to share my field epidemiology experiences with them and learn more about the pressing health issues they deal with in their countries. The cultural diversity was also exciting and enlightening” she stated.

Makerere University International Research and Innovations Dissemination Conference

Three trainees from the Uganda Program: Said Moalim Mohamud, Gloria Nsereko and Nsangi Damali Kajumba made presentations at the Makerere University International Research and Innovations Dissemination Conference which took place from 20th - 21st April 2015 in Kampala, Uganda. The conference attracted participants from Makerere University, other public universities in Uganda as well as researchers/scientists from international collaborating institutions and universities and other stakeholders. The conference was themed: “Community Transformation through Research, Innovations and Knowledge Translation”.

Joint Annual Scientific Health (JASH) Conference 2015, Kampala

Four MPH residents (2013/2014 cohort) developed and submitted abstracts to the 11th Joint Annual Scientific Health (JASH) Conference 2015, Kampala from 23rd - 25th September 2015 at Speke Resort Munyonyo Kampala, Uganda. One out of the four residents: Kwagonza Leocadia presented. One other student (Naomi Apoto) of 2012/2013 cohort was also supported to develop an abstract from her dissertation which she recently defended. This was also accepted for an oral presentation and she made the presentation

Outbreak investigations

Typhoid Outbreak in Kampala

Four trainees participated in a typhoid outbreak investigation in Kampala, Uganda which was first reported in February 2015. The trainees worked alongside Kampala Capital City Authority and Epidemiology Surveillance Unit, Ministry of Health, coordinated through the Emergency Operations Center. The trainees participated specifically in data entry and analysis.

Malaria Outbreak Investigation in Northern Uganda

Four trainees participated in the malaria outbreak investigation and surveillance systems strengthening in Northern Uganda in July 2015. Malaria is a leading cause of morbidity and mortality in Uganda. Estimates from the Ugandan Ministry of Health show that 16 million cases of malaria occur annually in the country, with 100,000 people dying from the disease, mostly pregnant women and children. In July 2015, the government of Uganda reported an unusual outbreak of malaria in the northern region of the country. The outbreak affected one million people since July 2015 and 658 people have died from malaria in northern Uganda. Some of the worst-affected districts include: Lamwo, Gulu, Kitgum, Oyam and Agago. The trainees were part of the national task force with the main objective of rapidly reducing the number of Malaria cases and deaths in the affected districts.

PROGRAM REPORTS

ZAMBIA FIELD EPIDEMIOLOGY TRAINING PROGRAM

AFENET with funding from the Malaria branch of the US CDC is supporting the development of epidemiological capacity and public health leadership in Zambia leveraging the existing in country capacity and the FELTP model.

To enhance malaria focused trainings spearheaded by the in country CDC PMI resident advisor as well as other local malaria experts, PMI funds will be used to support residents attached to the National Malaria Control Program to document best practices and their response to challenges, as well as support FELTP residents' involvement in surveillance improvement processes for their competency development. The funds are to specifically support; tuition, stipends, training materials, travel to field sites, travel to national and international conferences and support for outbreaks when they occur.

The resident has received tuition and stipends to date, field visits related to malaria have been funded we are currently in the process of procuring text books and other related study material.

ZIMBABWE FIELD EPIDEMIOLOGY TRAINING PROGRAM

The Zimbabwe Masters in Public Health Program is a two-year competency based training that was initiated in 1993 with the aim of assisting the Ministry of Health and Child Welfare (MOHCW) create a permanent capacity to recruit, train, and employ public health practitioners to sustain the public health infrastructure. The MPH program is operated from two sites: the Department of Community Medicine (DCM) at the College of Health Sciences, of University of Zimbabwe (UZ) and the Health Studies Office (HSO) in MOHCW. The program has enrolled 258 trainees in 23 cohorts to date.

Training and Related Activities

Celebrating 23 years of Existence

Cohort XXIII Enrolled

Thirteen residents were enrolled into Cohort XXIII of the Zimbabwe FETP. Didactics for Cohort XXIII commenced on 12th January 2015 with a module on Public Health Philosophy which was completed on 16th January 2015 followed by a module on Epidemiology and Field Research which run from 19th January 2015 to 6th February 2015.

Zimbabwe FETP provided the foundation that lead to the growth and expansion of similar training programs (FELTPs) in Africa. The Zimbabwe FETP is also one of the four founding member programs of the African Field Epidemiology Network (AFENET).

Achievements

During its 20 year existence, the program has made the following achievements listed below:

- Over 200 graduates since inception, of which 66% have assumed leadership positions in different organisations, including MOHCC.
- At least 200 outbreak investigations, 200 surveillance system evaluations, 200 program evaluations.
- Over 150 data sets analysed
- Over 20 publications in peer reviewed journals
- Most outstanding scientific oral presentation at 63rd EIS Conference in April 2014.
- The program has trained 208 residents comprising of 124 male, 84 female including doctors, nurses, Environmental Health Officers (EHOs), Nutritionists, Occupational Therapists, Laboratory Scientists,

PROGRAM REPORTS

Dentists, Health Promotion Officer (HPOs), Pharmacists, Biochemists and Veterinarians.

- Alumni have assumed key positions most notably of which is the current Permanent Secretary of Health Brigadier General Dr G. Gwinji and former Minister of Health Dr Henry Madzorera as well as PMDs and City Health Directors.

Case Study Development Course

Dr. Gerald Shambira (Lecturer at the University of Zimbabwe, Department of Community Medicine) and Mr. Notion Gombe (Senior Assistant Field Coordinator, ZFETP) attended a Case Study Development Course in Atlanta Georgia, USA hosted by the Hubert Department of Global Health in the Rollins School of Public Health at Emory University from 10 – 21 August 2015. The course was attended by 13 participants from African countries including, Ethiopia (1), Ghana (3), Kenya (1), Nigeria, Mozambique (1), Tanzania (2), Uganda (1) and Zimbabwe (2). At the end of the two week course participants were each awarded a certificate of completion.

This course used didactic and hands-on trainings to develop competency in case study design and development and other pedagogical skills. Its aim was to help students design and develop a thoughtful, detailed, and culturally tailored public health case study that addresses a health concern in the geographical context. Participants identified case study topics and learnt the anatomy of a case study as well as developing one. This course helped participants understand and develop the elements of a case study and lesson plan.

Publications

The following articles were published during the period under review and are now available online.

- Madziro, N. T., Mugurungi, O., Chirenda, J., Mungati, M., Bangure*, D., Gombe, T. N., & Tshimanga, M. (2015). *Analysis of the national early infant diagnosis dataset, Zimbabwe: 2007 to 2010. Journal of AIDS and HIV Research*, 7(6), 61-67.
<http://www.academicjournals.org/journal/JAHR/article-abstract/C81B3BE54105>

- Regis C. Choto · Stanley M. Midzi · Joseph Mberikunashe · Mufuta Tshimanga · Notion T. Gombe · Donewell Bangure ; *Evaluation of the Performance of Two Diagnostic Assays in Malaria Diagnosis in Mashonaland East Province, Zimbabwe, 2010; Open Journal of Epidemiology* 08/2015; 5:187-196
<http://www.scirp.org/Journal/PaperInformation.aspx?PaperID=58528>
- Juru P. Tsitsi · Ncube Nomagugu · Notion T. Gombe · Mufuta Tshimanga · Bangure Donewell · More Mungati · Chikodzore Rudo; *Evaluation of the Notifiable Diseases Surveillance System in Beitbridge District, Zimbabwe 2015; Open Journal of Epidemiology* 08/2015; 5(3):197-203.
<http://www.scirp.org/journal/PaperInformation.aspx?PaperID=58816>
- Annamercy Chenaimoyo Makoni · Milton Chemhuru · Donewell Bangure · Notion Tafara Gombe · Mufuta Tshimanga; *Rubella outbreak investigation, Gokwe North District, Midlands province, Zimbabwe, 2014 - a case control study; Pan African Medical Journal* 09/2015; 22:60
<http://www.panafrican-med-journal.com/content/article/22/60/full/>

Outbreak investigations and other field activities

The following investigations were conducted during the period under review:

- Acute gastrointestinal illness outbreak at Golden Primary School, Kadoma, Zimbabwe, 2015
- Evaluation of the HIV Clinical Mentorship Programme in Chikomba and Goromonzi Districts, Zimbabwe
- Analysis of the transport management system in Nkayi District, Zimbabwe, 2015

Residents were involved in risk factor analysis as well as controlling the outbreaks. Results from these investigations have been utilized by stakeholders including the Ministry of Health and Child Care to come up with appropriate interventions aimed at controlling the outbreaks for instance health education campaigns.

PROGRAM REPORTS

Conferences, Meetings and Workshops

TEPHINET Conference 2015

Two residents represented the 8th Global Scientific Conference Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) held in Mexico City from 7th - 11th September 2015.

Zimbabwe FETP Presentations at the TEPHINET Conference 2015

Name of resident	Title of presentation	Type of presentation
Dr. Gladwin Muchena	Determinants of Multidrug Resistance amongst Tuberculosis Patients in Matabeleland North and Bulawayo Metropolitan Provinces, Zimbabwe, 2014	Oral
Ms. Tsitsi Juru	Food Poisoning among Zonal Games Participants at Kadoma, Zimbabwe, February 2015	Poster
	Trends in Cervical Cancer Screening at Gwanda Provincial Hospital, Zimbabwe, 2013 - 2014	Poster

National Malaria Conference

Four residents attended the National Malaria Conference held at Golden Peacock Hotel in Mutare City from the 7th - 11th November 2015.

The residents are as listed below;

Name of resident	Title of presentation
Mr. Roy Chiruvu	Malaria outbreak investigation in Chitulipasi, Beitbridge District, Zimbabwe
Dr. Otilia Unworried	Malaria outbreak investigation in Goromonzi District, Zimbabwe
Dr. Paul Matsvimbo	Factors associated with contracting malaria at Weya Rural Hospital, Makoni District Manicaland Province, Zimbabwe 2015
Ms. Faith Mutsigiri	Risk Factors for developing Severe Malaria among Children below ten years in Manicaland Province, Zimbabwe



◀
Tsitsi Juru Zimbabwe FETP resident presents her poster during the 8th TEPHINET Global scientific conference in Mexico City, 2015



▲ *Zimbabwe FETP Cohort XXIII Residents at the University of Zimbabwe Department of Community Medicine, 2015*

PROJECTS

THE AFENET MINI GRANTS PROGRAM

The AFENET Minigrants Program is an initiative that provides competitive grants to FETP trainees and graduates to support them to conduct short field projects. Trainees work collaboratively with district or provincial health authorities and receive technical support from their respective program supervisors. Each of the award recipients is expected to disseminate their study findings so that public health action is taken.

In the 2014/2015 financial year, eight residents of EFTEP were funded through a competitive call to support efforts towards developing novel and effective strategies and interventions that will help improve Vaccine Preventable Diseases in Ethiopia. This funding was provided by the Bill and Melinda Gates Foundation through CDC's Global Immunisation Division (GID).

List of EFETP residents and graduates who received GID minigrants in 2014/2015

Name	Title
Alefech Addisu Gezihagn	Factors affecting proper cold chain maintenance in Western Zone of Tigray Region, Ethiopia, 2014
Amelework Getinet Alene	Assessment of Factors associated with Low immunization Coverage in children 12 to 23 months, Enemay district Northwestern Ethiopia
Birhanu Kenate Sori	Assessment of Vaccination Status and factors associated with non- immunization in Dendi District of West Shewa Zone, Oromia, Ethiopia, 2014
Engdayehu Hailu Gebetu	Assessment of status of health service related factors contributing for measles outbreak in a high vaccination coverage reporting setting: The case of Halaba District; Ethiopia
Ketema Belda Hirpo	Immunization coverage survey and factors for non-vaccination in West Wollega zone, Ethiopia
Mekdes Demisse Gudeta	Assessment of vaccination coverage and related factors in 12 to 23 months of age children in Sodo Zuria District, Welayita Zone, Southern Ethiopia
Tasew Erena Duressa	Assessment of factors associated with full immunization in Informal, Formal and Mixed Settlements among children 12 to 23 months in Addis Ababa, Ethiopia 2014
Wake Abebe Lemma	Assessment of magnitude of vaccination status and factors related among children 12 to 23 months of age in Abuba Gindeberet District, Oromia region, Ethiopia.
Alefech Addisu Gezihagn	Factors affecting proper cold chain maintenance in Western Zone of Tigray Region, Ethiopia, 2014
Amelework Getinet Alene	Assessment of Factors associated with Low immunization Coverage in children 12 to 23 months, Enemay district Northwestern Ethiopia
Birhanu Kenate Sori	Assessment of Vaccination Status and factors associated with non- immunization in Dendi District of West Shewa Zone, Oromia, Ethiopia, 2014

AFENET Scientific Writing Workshop held in Kampala

AFENET organized a scientific writing workshop in Kampala for eleven FELTP residents and recent graduates from Kenya, Ghana, Ethiopia, Nigeria, South Sudan and Uganda. The workshop was held from 9th - 13th February 2015 and aimed at imparting knowledge and skills of writing manuscripts for submission to peer-reviewed journals. The participants were beneficiaries of immunisation trainee grants funded by USAID through a CDC COAg with AFENET.

Participants worked with their mentors, sourced from AFENET and Makerere University School of Public Health to improve their draft manuscripts. Each participant received a certificate from AFENET Executive Director - Dr. Kenneth Ofosu Barko who encouraged them to utilize every opportunity to submit manuscripts to enhance their skills and build on scientific knowledge. To date, five of the manuscripts have been submitted and one by Nkatha Meme Prevalence of undiagnosed diabetes and pre-diabetes among hypertensive patients attending Kiambu District Hospital, Kenya: a cross-sectional study was published in the Pan African Medical Journal in November 2015.

GLOBAL PARTNERSHIP INITIATED BIOSECURITY ACADEMIA FOR CONTROLLING HEALTH THREATS (GIBACHT)

GIBACHT is a training programme that focuses on threats and risks conferred by biological agents and bioweapons and their successful prevention and control. The programme is offered by the Robert Koch Institute and the Bernhard Nocht Institute for Tropical Medicine in Germany, the Swiss Tropical and Public Health Institute in Switzerland and AFENET. The objectives of the program are to provide basic understanding and training in control of infectious diseases and the management of biohazards, to intensify and sustain international cooperation in the fields of biosafety, biosecurity and the prevention and management of epidemics, and to strengthen national and local centres for infectious disease epidemiology and management, biosafety and biosecurity.

The program recruited 17 participants from 13 countries that included Burkina Faso, Egypt, Ethiopia, Ghana



▲ Participants work with their mentors at the AFENET minigrants scientific writing workshop held 9th - 13th February 2015 in Kampala, Uganda

PROJECTS

ONE HEALTH E-SURVEILLANCE INITIATIVE (OHSI) PROJECT

The One Health e-Surveillance Initiative aims to develop strategic plans for implementing One Health electronic surveillance within the context of Integrated Disease Surveillance and Response (IDSR) and the International Health Regulations (IHR) 2005. The project is implemented in five pilot countries; Burkina Faso, Cameroon, Kenya, Nigeria and Uganda and is funded by the Defence Threat Reduction Agency (DTRA) of the US Department of Defence. The project is implemented by Public Health Practice (PHP) LLC in collaboration with AFENET, CDC, WHO-AFRO and the ministries of Ministries of Health, Agriculture, Livestock, and Wildlife among others.

In 2015, the two year project ended on the 19th May 2015. AFENET worked with Public Health Practice (PHP) and Country Level Workgroups in Burkina Faso, Cameroon, Nigeria, Kenya and Uganda to complete the eSurveillance country assessment reports.

PUBLIC HEALTH FELLOWSHIP PROGRAM (PHFP)

The Long Term Fellowship Program of the Uganda Ministry of Health was successfully launched on April 30th, 2015. The program is hosted by the Ministry of Health and supported by the Makerere University School of Public Health, CDC and AFENET. The goal is to establish and institutionalize a multi-tiered and multi-specialty, experiential, training-through-service program within the Ministry of Health and its affiliated research and service organizations. The benefiting officers will acquire core competencies in: applied epidemiology, field investigation of acute public health problems, planned epidemiologic studies, field laboratory management, public health informatics, scientific manuscript writing, oral presentation skills and cultivating the next generation of public health leadership to ensure strengthening of public health in Uganda. The first cohort of fellows was recruited in January 2015 and began classes in February 2015.

UGANDA TOBACCO CONTROL INITIATIVE

The Uganda Tobacco Control Initiative aims at strengthening MOH's capacity to promote tobacco control policies and programs and to provide a multi sectoral model for other NCD initiatives in sub Saharan Africa. The 3-year initiative is collaboration among CDC, AFENET, WHO and Ministry of Health (MoH) and supports a post-FETP fellow, Mr Daniel Kadobera positioned at the MOH.

Achievements

World Conference on Tobacco or Health in Abu Dhabi 16th - 22nd March 2015

Mr Kadobera participated in a symposium on tobacco control in low resource settings. The symposium was based on presentations from countries that had just completed the Global Adult Tobacco Survey (GATS) which included Uganda, Kenya and Cameroon. During the conference, he presented two posters titled; Changes from 2007 to 2011 in tobacco use and factors that may affect use among Uganda youth: The Global Youth Tobacco Survey and Nutritional status of children less than five years in tobacco growing and non tobacco growing households in Kiryandongo district. The latter was one of the results of one of the MPH officers sponsored by the fellowship mentorship component. Daniel was also a panelist in a session on Meeting NCD Targets: Analysis and Application of Data for Research and Policy that was organized by CDC.

Upcoming activities

- Data analysis of the Health cost study
- Data analysis of alternative livelihood study proposal
- Analysis of the Maternal and Child health dataset with tobacco questions
- Coordination of the symposium at WCTOH

PROJECTS

REPRODUCTIVE MATERNAL & CHILD HEALTH (MCH)

The Reproductive Maternal and Child Health (MCH) project aims at supporting the Uganda MOH to implement activities focused on strengthening maternal and child health services. This includes providing technical assistance on monitoring and evaluation for MCH programs at the district level, supporting maternal mortality reduction activities in Uganda related to the Saving Mothers Giving Life (SMGL) initiative and Maternal Death Surveillance and Response. The project has a full-time program officer; Dr Frank Kaharuza and a fellow-Ms. Emily Atuheire.

Achievements

Supporting Saving Mothers Giving Life initiative monitoring and evaluation (M&E) activities in Uganda.

The core function of this scope is to lead the M&E activities of the SMGL initiative working group largely on the data management and analysis. Some of the accomplishments include;

- Data collection. The team conducted refresher training in Fort Portal in which over 80 people were trained in community maternal mortality surveillance. After the training, a data verification exercise was started which showed an underreporting of deaths of women of reproductive age that prompted a data cleaning and collection process.
- A Rapid Process for Institutionalized Pregnancy Deaths (RAPID) data collection process was conducted in January in Kibaale district. This was largely done to collect maternal death data from facilities that had not collected data and for maternal deaths that could have occurred in December 2014.
- Dissemination of information: In February 2015, two CDC Hubert Fellows were hosted in Kabarole SMGL to study the maternal and perinatal death review process and SMGL and provide recommendations on how to improve the maternal and perinatal death review process in the country. This information was presented to the facilities, CDC top management and MOH.
- The program officer participated in a technical consultation meeting on reporting and Mapping Maternal Deaths in countries with high maternal mortality in Washington and SMGL M&E meetings in Atlanta. A meeting report was finalized and there are plans for developing a manuscript from the project.

Saving Mothers Giving Life initiative (SMGL-I) Team Building Event

Saving Mothers Giving Life (SMGL) project held an international team building event from 5th - 8th May 2015 in Fort Portal, Uganda. The meeting brought together members from Uganda, Washington, USA, Nigeria and Zambia.

Saving Mothers, Giving Life was launched in 2012 to accelerate the reduction of maternal and newborn deaths in sub-Saharan African countries. This five-year initiative aims to accelerate reductions in maternal and newborn mortality.

GLOBAL HEALTH SECURITY INITIATIVE, UGANDA

The Centres for Disease Control and Prevention (CDC) in cooperation with other U.S. agencies reinforced its commitment to assist WHO Member States through the creation of the Global Health Security (GHS) Demonstration Projects in 2013. The goal of the project is to strengthen the public health disease surveillance system's capacity for detection, specimen referral/transportation and laboratory confirmation of infectious diseases. Within this initiative, a public health emergency operations centre (PHEOC) capable of receiving, evaluating, triaging and distributing information and reports was established which serves as a center for collaboration and coordination of response operations.

Achievements

The Public Health Emergency Operations Centre (PHEOC) supported the MOH in responding to several outbreak investigations and responses. These included a suspected outbreaks of anthrax, cholera and typhoid outbreak and the screening of passengers arriving at Entebbe International Airport for Ebola.

As part of the daily monitoring of public health events of concern, the EOC Situation Awareness team scans news networks and on the internet for reports of public health events of importance and tracks them using the incident log and forwards to appropriate contacts for follow up. During the year, the EOC monitored several diseases including cholera, avian influenza, Middle East respiratory syndrome coronavirus (MERS-CoV), Rift Valley Fever and measles outbreaks in Uganda, and Ebola outbreak in West Africa.

During the outbreak response activities, the EOC was involved in data collection and analysis, mapping of the outbreaks social mobilization through radio talk shows among other activities.

PROJECTS

East Africa Scientific conference 25th - 27th March 2015 at Serena hotel Kampala

The PHEOC Manager attended the EAC Scientific conference and was requested to share experiences in fighting Ebola in Uganda and establishing PHEOC at the Ministry of Health. These two topics were well received since the concept of EOCs is new to most East Africans.

DATA IMPROVEMENT TEAM (DIT) PROJECT

The immunization data improvement team strategy is a collaborative initiative led by the Uganda Ministry of Health (Resource Center and UNEPI), with support from WHO, CDC, GAVI, UNICEF and other partners that aims to build capacity of district DITs to strengthen the health system through improving the quality of immunization data in Uganda. The DIT project conducted a number of activities in 2015.

During the first quarter of 2015, the project revised training materials and updated the facilitator guides. It trained field teams of 42 participants from nine districts in Northern Uganda. All trained officers from the districts were deployed for data improvement activities in their respective districts. In March 2015, the project trained and deployed teams in Eastern and Western Uganda, with 10 districts each being trained in both regions.

In the second quarter, the project conducted completion of Mbarara region DIT field deployment activities and compilation of field deployment documentation for 10 participating districts, including Ntungamo, Mbarara, Isingiro, and Bushenyi. The project also conducted a DIT post-deployment review meeting with Makerere School of Public Health officers and CDC M&E officers at the Ministry of Health

In May 2015, the project conducted Mbale region DIT training activity 2015 in Jinja. Participating districts included Mbale, Kapchorwa, Tororo, and Pallisa. A total of 56 participants (EPI focal persons, surveillance focal persons, district biostatisticians and Makerere School of Public Health students) were trained. This was followed by regional field deployment activities between.

The project also conducted mentorship of health workers on immunization data quality improvement in 326 health facilities.



▲ *Participants engaged in Fishbone Analysis session during Kabarole region DIT Training*

DIT Kabarole Region Training and Deployment

The Immunization Data Improvement Team (DIT) project conducted a training targeting 45 EPI focal persons, biostatisticians, and surveillance focal persons from seven districts in Uganda which include: Kabarole, Kamwenge, Kasese, Kyegegwa, Kyenjojo, Ntoroko and Bundibugyo. The aim of the training was to prepare regionally trained DITs for field deployment and to improve data recording and reporting processes at the district and health facility levels.

The training was conducted from 20th - 22nd August 2015 in Kabarole district, Western Uganda. Facilitators included: Dr. Kevin Mugenyi (DIT National Coordinator, AFENET), Mr. Ronnie Sseguya (Uganda Virus Research Institute [UVRI]/ World Health Organization [WHO]), Mrs Betty Irwasi (Uganda National Expanded Programme on Immunization [UNEPI]/Ministry of Health [MOH]), Ms. Carolyn Balwanaki (MOH/ Resource Center) and Mr Brian Mugisha (MOH Regional Performance Monitoring Teams). Field deployment was conducted from 24th August to 9th September 2015.

Summary of key activities conducted by DIT in 2015

The table below shows the number of Regions dates of trainings and the number of participants trained.

Activity/ region	Month	Venue	Number of districts	Number Trained and deployed
Lira region DIT training/ field deployment	February	291 Suites, Lira town	9	42
Jinja region DIT training/ field deployment	March	Source of the Nile Hotel, Jinja town	10	40
Mbarara region DIT training/field deployment	April	Mbarara town	10	43
Mbale region DIT training/ field deployment	May	Source of the Nile Hotel, Jinja Town	14	55
Arua region DIT training and field deployment	July/August	Arua Crane Resort Hotel, Arua town	8	33
Kabarole region DIT training/ field deployment	August/ September	St. Joseph's Inn, Virika, Kabarole town	7	32
Gulu region DIT training/ field deployment	October	Palema Crown Hotel, Gulu town	6	22
Kabale region training/ field deployment	November	Home Again Hotel, Kabale town	4	30
Mubende region training/ field deployment	November	Maria Flo Hotel, Kabale town	7	45

PROJECTS



▲ Participants sit for a morning quiz

SUPPORT TO THE SOUTH SUDAN MOH

The South Sudan Immunisation and Field Epidemiology Training Project (IFETP) with funding from the Gates Foundation Grand Challenges Exploration (GCE) supports basic level training in surveillance, data collection and interpretation. The goal of this project is to improve detection and reporting of seven priority diseases and conditions in Eastern Equatorial State. These include; leishmaniasis (kala-azar), brucellosis, anthrax, measles, acute flaccid paralysis (AFP), schistosomiasis, and onchocerciasis; particularly at the border of South Sudan, Kenya, and Ethiopia by adopting the guinea worm eradication model of community-based surveillance. The project as enrolled five cohorts to date.

Cohort IV residents consisted of 29 state and county surveillance officers, monitoring and evaluation officers, county expanded program on immunisation supervisors (EPI), county laboratory staff, payam-level Guinea worm surveillance officers, and other county and payam staff enrolled. During the training, participants are taught modules on outbreak detection and response, basic statistics, developing and applying case definitions among others



▲ Muki & Boboya reward best cohort performers with project T-shirts

Cohort IV Graduation

On 5th August 2015, 20 Cohort IV residents graduated during a scientific and graduation day held in New York Hotel, Juba, South Sudan. The ceremony was officiated by Dr Muki Johnson- IFETP and GCE Project Director and Dr James Ransom- CDC-DGHP and Principal Investigator (GCE). The ceremony involved a number of activities including oral and poster presentations. Other invited guests included Mr Silvestre Onimi Balla- Director General Eastern Equatorial State and Dr Dr Moses Bateganya-CDC DGHA Country Lead-South Sudan.



▲ Graduate presents her work at the graduation ceremony.

STRENGTHENING TECHNICAL ASSISTANCE FOR ROUTINE IMMUNIZATION TODAY (START)

START is a volunteer program to improve routine immunization service delivery and is modelled after the Stop Transmission of Polio (STOP) Program as means of sustaining the gains made by the STOP initiative. The START project was piloted in Uganda to offer technical assistance and strengthen EPI systems in the country. START team 1 & 2 comprised of eight volunteers who supported 22 districts in the Eastern region of the country including: Sironko, Bulambuli, Kapchorwa, Kween and Bukwo and five districts in the Western part of Uganda; Mbarara, Bushenyi, Buhweju, Mioma and Sheema. The project provides technical assistance on specific areas such as capacity building on EPI micro-planning, data quality and use of data for action, and monitoring and supervision. It is anticipated that districts will perform at a higher level after START support is withdrawn.

START Supervision

Together with Uganda National Expanded Program on Immunization (UNEPI), AFENET conducted supervision in several districts in Western Uganda to evaluate the work done by the START consultants. The major purpose of this activity was to evaluate if the districts were sustaining the good practices that were left in the districts where the START consultants worked. Below is a summary of the findings:

Mbarara district: Mbarara DHT moved Misrak in most health facilities and worked alone in some of the facilities. They together with the START consultant helped build EPI skills among the facilities they worked in. Several repeat visits were conducted to ensure that all health workers acquired the necessary skills. With exception of Mwizi HC III, all health facilities in Mbarara completed their microplans.

Buhweju district: START was a good experience for the district. They together with the START consultant trained staff from five facilities. Their focus was monitoring EPI performance using coverage and drop out charts. Most facilities are still conducting monitoring long after the consultant was withdrawn.

Kamwenge district: "START was a good project in that it was EPI focused and practical and used available data". Of all the interventions that were started by START, use of microplans and defaulter tracking were sustained in Kamwenge.

Kyenjojo district: In Kyenjojo, START was most useful in training health workers on how to conduct RED categorization, and monitoring EPI performance.

The START program was found to be very useful by all districts interviewed. The notable useful areas were: microplans, EPI monitoring, defaulter tracking and RED categorization.

PROJECTS

NEGLECTED TROPICAL DISEASE STUDY

AFENET together with CDC submitted the study protocol to Uganda Virus Research Institute (UVRI) IRB for review. The study is entitled; Detection of analytes and biomarkers associated with live/viable stages of *Onchocerca volvulus* post-ivermectin administration. The aims of the study are to: better understand the temporal persistence of onchocerciasis-associated biomarkers in areas undergoing active chemotherapeutic intervention and to establish a bank of biological specimens for use in current and future validation of biomarker detection assays.

EPIDEMIOLOGY OF BURKITT'S LYMPHOMA IN EAST AFRICA (EMBLEM)

EMBLEM is a five year multi-country, multi-site collaborative research study being conducted by the US National Cancer Institute (NCI/NIH) to find out the association of malaria resistance with Burkitt's lymphoma (BL). The main field work is coordinated by AFENET in Uganda and WESTAT in USA. The study enrolls cases and controls in Kenya (Nyanza and Western Provinces) Tanzania (Mwanza and North Mara Regions) and Uganda (North central and northwest regions).

In June 2015, the study enrolled a total of 749 cases in Uganda, Tanzania and Kenya.

The table below shows the status of enrolment in case and control enrolment as of 27th November 2015.

Country	Spotted Cases	Enrolled Cases	Population Controls	Health Center Controls	Matched Controls
Uganda	725	387	950	184	1,020
Tanzania	497	123	N/A	N/A	149
Kenya	598	239	N/A	N/A	336
Total	1,820	749	950	184	1,505

EMBLEM Maintains Collaborative Training Efforts

In an effort to increase community and patient benefit and promote sustainable research methods within the region, the National Cancer Institute donated a portable ultrasound machine and a rotary microtome to each participating country with the goal of improving BL diagnosis. EMBLEM also endeavors to engage global collaborators to fund training of local health care providers in diagnostic techniques that will build BL diagnostic capacity and early treatment throughout the region. Duke University, USA provided funding for a two-week training program in 2015 for two Tanzanian oncologists, Dr. James Makorere and Dr. Beda Likonda, in ultrasound-guided biopsy at St. Mary's Lacor Hospital in Gulu.

EMBLEM Presents Preliminary Results

In November 2016, EMBLEM participated in the 2015 African Organisation for Research and Training in Cancer at Marrakech, Morocco. Dr. Sam M. Mbulaiteye, a Senior Investigator at the NCI and Principle Investigator for EMBLEM, made a presentation titled "Burkitt's Lymphoma in the 21st Century". Janet Lawler-Heavner – BL Study Manager at WESTAT, made a presentation titled "EMBLEM – Building Research Capacity in East Africa". The EMBLEM study was also invited to chair a two-hour session during the main conference on 21st November entitled "Burkitt's Lymphoma: Bridging the Gap Between Knowledge and Treatment or Prevention." The session was co-chaired by Dr. Sam Mbulaiteye (NCI), Dr. Peter Odada Sumba (Kenya Medical Research Institute, Kisumu) and Dr. Edus Hootie Warren (Fred Hutchinson Cancer Center, Seattle, Washington).

The presentations were as follows:

- E. H. Warren (USA) Pathogenesis of African Burkitt's Lymphoma: Confronting the enigma
- L. Leoncini (Italy) Distinct viral and mutational spectrum of endemic Burkitt's Lymphoma
- K. Lombardo (USA) Dissecting the role of the B-cell receptor in African Burkitt's Lymphoma
- K. Bhatia (USA) EBV Variants in Burkitt's Lymphoma
- L. Ayers (USA) Small molecules for treatment of EBV-positive Burkitt's Lymphoma
- S. Mbulaiteye (USA) Malaria infection is protective for Burkitt's Lymphoma: Reformulation of the malaria dogma
- M. Yeager (USA) Population genetics and malaria-resistance genes: Uncovering the genetic risk factors of Burkitt's Lymphoma in Africa



◀ Dr. James Makorere, of Shirati Hospital, Tanzania, practices ultrasound-guided biopsy skills during a training program at St. Mary's Lacor Hospital in Gulu, Uganda.

PROJECTS

PAN AFRICAN MEDICAL JOURNAL (PAMJ)

PAMJ published three Volumes and 1078 articles in 2014 which also marks is the journal's eighth year. All three Volumes set new records for number of articles in a Volume; Volume 17 had 324, Volume 18 had 353 and Volume 19 had 400. PAMJ is a peer-reviewed Open Access biomedical journal published in electronic format in collaboration with the African Field Epidemiology Network (AFENET).

Graph

Pan African Medical Journal (PAMJ)

2013 Proceedings manuscripts published in PAMJ

On Wednesday 22nd July 2015, the Pan African Medical Journal (PAMJ) published proceedings of the 2013 AFENET scientific conference. The proceedings were published as two separate articles: one for the keynote addresses and oral presentations (PAMJ 21-208) and the other for the poster presentations (PAMJ 21-209).

Proceedings of the African Field Epidemiology Network (AFENET) Scientific Conference 17th - 22nd November 2013 Addis Ababa, Ethiopia: keynote addresses and oral presentations <http://www.panafrican-med-journal.com/content/article/21/208/full/>

Proceedings of the African Field Epidemiology Network (AFENET) Scientific Conference 17th - 22nd November 2013 Addis Ababa, Ethiopia: posters sessions <http://www.panafrican-med-journal.com/content/article/21/209/full/>. The proceedings will be available in Pubmed soon.



Participants of the second cohort from Cote d'Ivoire pose with their certificates of completion (photo courtesy of Dr Peter Wasswa)

SURVEILLANCE TRAINING FOR EBOLA PREPAREDNESS (STEP)

The US CDC in partnership Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET), AFENET and the Ministries of Health of Cote d'Ivoire, Guinea Bissau, Mali and Senegal implemented a project to train district surveillance officers and public health workers who were involved in collecting, reporting, analysing disease surveillance data in order to build their respective countries' capacity to conduct Integrated Disease Surveillance and Response (IDSR). The Surveillance Training of Ebola Preparedness (STEP) Project was focused on improving the skills of the participants to use data to characterize the pattern of health events in populations and detect disease outbreaks in the community so as to guide the ministry of health in public health decision-making. These skills were particularly essential in these countries since they were neighbouring countries affected by the Ebola pandemic.

Overall, 183 participants were trained in the four countries from January to July 2015. Each of the trainings involved one-week of didactic workshop which was followed by three weeks of mentored field work at their respective workplaces. The interactive didactic workshops focused on topics such as data collection and analysis, investigating and responding to suspect cases and Ebola contact tracing. During the field work, participants analysed sets of surveillance data and provide recommendations for improvement. The participants then returned to the training venues and presented their findings.

Number of participants Trained in the STEP Project

Country	Cohort One	Cohort Two	Total
Cote d'Ivoire	25	26	51
Guinea Bissau	25	27	52
Senegal	26	27	53
Mali	27	-	27



Dr. Roodley Archer (CDC mentor) facilitates a session in Bamako, Mali (Photo courtesy of Dr. Peter Wasswa)

PROJECTS

AFRICAN CENTERS FOR DISEASE CONTROL & PREVENTION FELLOWSHIP PROGRAM

Africa Field Epidemiology Network (AFENET) with funding from CDC established the African Center for Disease Control and Prevention (CDC), to serve as a platform for African Union Member States to share knowledge, exchange lessons learned, build capacity, and provide technical assistance to each other. Through the African Union, AFENET, CDC and other member states, a two-year fellowship program has been established to manage an Emergency Operations Center during events of public health concern.

The fellowship will include eleven young African Epidemiologists. The two-year training program would commence with a three-month intense training program that will introduce the Africa CDC Fellows to African Union and AFENET administrative staffing procedures, as well as technical and scientific content that will enable them to become the principal Africa CDC staff responsible for guiding, serving, and coordinating the public health engagement of the African Union with its Member States.

AFCDC recruitment targets graduates of the Field Epidemiology training programs throughout the African continent.

AFENET-Lab

Over the last five years, the AFENET-Lab initiative, that is primarily funded by the Presidential Emergency Plan for AIDS Relief (PEPFAR) has provided technical and logistical support to laboratory Quality Management Systems (QMS) in seven African and eleven Caribbean countries. These projects include expanded External Quality Assurance for HIV rapid testing (EQA); bio safety training; Strengthening Laboratory Management towards Accreditation (SLMTA), ; and other laboratory capacity improvement activities most of which are aimed at accrediting the respective laboratories.

ANGOLA

The AFENET Angola office aims to strengthen public health laboratories capacity and field epidemiology and effectively contribute to addressing epidemics and other major public health problems in Angola. Since 2012, AFENET has been developing three main scopes in Angola: Strengthening Laboratory Management Towards Accreditation (SLMTA); HIV – External Quality Assessment (HIV-EQA) and HIV Early Infant Diagnosis (HEID).

Strengthening Laboratory Management Towards Accreditation (SLMTA)

SLMTA has been implemented through workshops, site visits and mentorship training. The 1st cohort of laboratories had four SLMTA workshops and the 2nd cohort of laboratories had two SLMTA workshops. 3rd Cohort laboratories have not participated in SLMTA workshops as yet but have had mentorship support since August 2014.

AFENET has five laboratories presently enrolled in the SLMTA program.

Angola public health laboratories enrolled in SLMTA

Cohort/ Year	Name of the laboratory	Location	Units with mentorship in quarter 2
I / 2012	INSP - Micro-biology & Parasitology	Luanda	X
	INSP - Immuno-serology	Luanda	X
II / 2014	INLS - Molecular Biology Laboratory	Luanda	X

SLMTA/SLIPTA Laboratory Mentorship

- Mentorship visits were conducted in the laboratories to implement improvement projects from the SLMTA workshops and also to address WHO-AFRO Stepwise Laboratory (Quality) Improvement Process Towards Accreditation (SLIPTA) audit gaps.
- Two laboratory mentors attended and successfully completed the SLMTA - Training of Trainers (TOT) from 2nd to 13th March 2015 in Johannesburg, South Africa.
- Three ASLM consultants from Mozambique were invited to support all the laboratories to establish an action plan to solve the non-conformities identified during the SLIPTA audit and to provide technical expertise in Quality Management Systems.
- ISO15189: 2012 and laboratory mentorship training was conducted from 20th to 25th March 2015 for 18 staff selected from AFENET supported laboratories. The participants included laboratory mentors, laboratory managers and quality focal persons of the laboratories on SLMTA.
- A SLIPTA audit conducted by African Society for Laboratory Medicine (ASLM) certified auditors was successfully carried out in February 2015 in three laboratories and the international certification was received (as shown in the table below).

PROJECTS

Public health laboratories audited using SLIPTA checklist in February 2015

Name of the laboratory	SLIPTA Total Points	SLIPTA
Star Rating		
INSP - Microbiology & Parasitology	171	**
INSP - Immuno-serology	155	*
INLS - Molecular Biology Laboratory	179	**

HIV / External Quality Assessment (EQA)

Distribution of HIV-EQA DTS Proficiency Testing Panels

In Angola, the Dried Tube Specimen (DTS) proficiency testing panels are sent out to the health facilities on a quarterly basis and two distributions were carried in 2014/2015. The first set of panels was sent out in September 2014, the second set of panels in January 2015 and the third HIV-EQA panel was distributed in 40 testing laboratories in Luanda Province. Distribution of the fourth panel was done in October 2015.

Dried Tube Specimen is a simple and cost effective approach for proficiency testing programs to monitor and improve quality of HIV rapid testing within health facilities. The DTS proficiency testing panel is made up of six samples of known Sero reactivity (two HIV positive and four HIV negative samples). The DTS panels are prepared from the HIV Reference Laboratory and later sent out to laboratory technicians/assistants in the different participating health facilities who test and send back results to the HIV Reference laboratory for analysis/scoring. After analysis of the results, it was observed that all the tested health units had proficiency of 100%. However, 26% of the health units presented an unsatisfactory record filling, in particular with the omission of test kit lot numbers or expiration date, panel number or the name of the health unit.

HIV- Early infant diagnosis (HEID)

The Centers for Disease Control and Prevention (CDC)-Angola and AFENET provided technical assistance and mentoring activities to the implementation of an HIV-EID program in Angola. Early infant diagnosis (HIV-EID) of HIV infection due to mother to child transmission is crucial to initiate anti-retroviral therapy earlier, and to reduce morbidity and mortality of HIV infected infants. Implementation meetings were held with Instituto Nacional de Saude Publica (INSP) Director, CDC - Angola to discuss priorities, collaborations and support for the HEID activities.

- Eight HIV testing sites within Luanda, Angola were enrolled between January and March 2015. Site visits were carried in four of the eight laboratories that were to implement the HEID study.
- A comprehensive HEID implementation manual was developed.
- Training in Dried Blood Sample (DBS) Polymerase Chain Reaction (PCR) testing was carried out by an external consultant from 26th - 30th January 2015 for laboratory staff from all the eight laboratories were enrolled in the program.

KENYA

AFENET Kenya Laboratory project office has been implementing laboratory systems strengthening program for the Ministry of Health (MOH) Laboratories in Kenya to strengthen laboratory quality management systems and accreditation. Additionally, it has supported the implementation of laboratory bio-safety in Kenya including Occupation Safety and Health (OSH).

Strengthening Laboratory Management towards Accreditation (SLMTA)

Cohort I and II SLMTA Mentorship Support

Bi-weekly residential mentorships were done in all the 6 laboratories using the WHO SLIPTA checklist and ISO 15189: 2012; followed by a three weeks offsite mentorship for laboratory staff.

SLMTA III training Workshop for Cohort II Laboratories

The SLMTA III training workshop for Cohort II Laboratories was held in Nakuru, Kenya from 19th to 22nd January 2015. The training was attended by 15 participants who comprised of: Medical Superintendents, Hospital Directors, Clinicians and Laboratory Managers, Quality Assurance Officers and Biosafety Officers. The four-day training was facilitated by: Ms. Mercy Mshai (AFENET) and Mr. Isaac Mugo (AFENET) and Mr. Andrew Mboche – (MOH, Nyeri Provincial General Hospital [PGHL]).

Quality Control-Method Validation training

Quality Control-Method Validation training was held in Naivasha, Kenya from 23rd - 27th February 2015. Twenty participants comprising of laboratory managers, quality officers, laboratory technologists and laboratory mentors attended the training. The key objectives of the training were to understand and apply statistical quality control principles to quantitative tests, monitor and evaluate quality control in the laboratory, design an effective quality control program and transfer basic quality control knowledge to the laboratory. Mr. Robert Njuguna from Kenya Accreditation Service (KENAS) and Mr. Thomas Gachuki from MOH facilitated the training.

Occupational Safety and Health (OSH)

Development of OSH guidelines

The Kenya Ministry of Health (MoH) supported by CDC through AFENET developed OSH guidelines to guide the implementation of the National OSH policy. In Kenya, the status of Occupational Safety and Health (OSH) has been a growing issue of importance over time. Currently, it is a requirement for all government sectors to develop guidelines that will guide the implementation of the National OSH policy and ultimately comply with Occupational Safety and Health Act (OSHA) 2007. Several partners including the Government of Kenya have prioritized compliance to the act in the MOH.

PROJECTS

OSH Requirements Pilot Training

The OSH requirements pilot training for three of the nine selected health facilities was conducted from 2th - 6th March 2015 in Nakuru, Kenya. The aim of the training was to inform the finalization of the training manual and training materials before the same training could be rolled out to other facilities. The training was attended by 24 participants from Nyeri, Kajiado and Kijabe Hospitals.

CARIBBEAN REGION

AFENET Caribbean continued the implementation of laboratory strengthening projects within 11 countries in the Caribbean. In collaboration with the Global AIDS Program (GAP) and CDC, the Caribbean Regional Office worked in partnership with respective Ministries of Health in the Caribbean Region to initiate the US President's Emergency Plan for AIDS Relief (PEPFAR) Laboratory Health Systems activities through supporting the implementation of Laboratory Quality Management Systems (QMS) and Accreditation, Proficiency Testing (PT), Equipment Servicing, Laboratory Information System (LIS) implementation, Reagent Procurement and National Laboratory Strategic Plan (NLSP) development. AFENET supported a number of activities within the eleven (11) countries namely: Antigua, Bahamas, Barbados, Grenada, Jamaica, St. Kitts, St. Lucia, St. Vincent, Suriname, Trinidad and Dominica.

Some of the significant achievements are listed below:

- Conducted onsite and offsite support for the preparation and implementation of laboratories' QMSs. This included the preparation and review of over two hundred and sixty eight (268) QMS documents.
- Completed internal audit training programme to support the continuous resolution of identified NCs and preparation for external CARICOM Regional Organisation for Standards and Quality (CROSQ) assessment for St. Ann's Bay (SAB) Hospital laboratory in Jamaica.
- Onsite mentorship visit conducted at St. Ann's Bay (SAB) Hospital laboratory from 3th - 6th March 2015, in preparation for external CROSQ assessment.
- Onsite mentorship visit was concluded at the Cornwall Regional Hospital (CRH) laboratory from 4th - 6th March 2015.
- Gap assessments conducted at: Academic Hospital Laboratory (AHL), the Military Hospital Laboratory (MHL), the Eric Williams Medical Complex (EWMC) and Port of Spain General Hospital (POSGH) laboratory
- A CDC evaluation Site Improvement through Monitoring (SIMS) visit was conducted at the National Public Health Laboratory, Jamaica on

9th January 2015, the Queen Elizabeth Hospital Laboratory (QEHL), Barbados on 26th March 2015 and the Suriname Central Laboratory (SCL) from 11th - 14th March 2015.

- Implementation of the Site Improvement through Monitoring Systems (SIMS) programme in Barbados, Jamaica and Suriname. An assessment tool was administered and reviews of reference documents for relevant domain areas were conducted.

TANZANIA

HIV/EQA Dried Tube Specimen (DTS)

Round one DTS-EQA schemes

In March 2015, a total of 585 sites were supported to participate in round one of the DTS-EQA schemes for the year 2014/2015. Among the sites, were 335 Prevention of Mother-to-Child Transmission (PMTCT) of HIV sites and 250 voluntary counselling and testing services (VCT) sites. These included: referral hospitals, regional hospitals, districts hospitals, special and private hospitals which serve as regional or district hospitals, health centres and dispensaries.

Enrolment of New HIV/EQA testing sites

A total of 105 new sites were enrolled and their staff trained in HIV-EQA testing in March 2015. The new sites received their first DTS-EQA panels in round two of the scheme. The sites include: Voluntary counselling and testing services (VCTs) and Prevention of Mother to Child HIV transmission (PMTCTs) from Mwanza and Kilimanjaro regions.

Printing National HIV logbook

The project successfully printed 1500 copies of the National HIV logbooks and handed them over to the National Health Laboratory Quality Assurance Training Centre (NHLQATC). These logbooks were in turn distributed to HIV testing sites across the country.

RESEARCH ACTIVITIES

Onchocerciasis study in Uganda

Onchocerciasis Study in Kitgum and Lamwo districts, Uganda

- AFENET in collaboration with the CDC Atlanta and the Ministry of Health, Vector Control Division (VCD) conducted an onchocerciasis study in Kitgum and Lamwo districts in Northern Uganda from 10th - 30th September 2015. The study is aimed at determining how long microscopic worm larvae (called microfilariae) caused by the worm remains in one's body. It also aimed at finding the best way to test for worms that can cause blindness.
- Onchocerciasis is an infection caused by the parasitic worm *Onchocerca volvulus*, spread by the bite of an infected simulium blackfly. It is also called river blindness because the fly that transmits infection breeds in rapidly flowing streams and the infection can cause blindness. The World Health Organization's expert committee on onchocerciasis estimates that at least 25 million people are infected and 123 million people live in areas that put them at risk of infection.

AFENET SECRETARIAT

Visitors to the Secretariat

AFENET secretariat hosted Dr. Scott McNabb, a Research Professor at the Emory Rollins School of Public Health on 30th January 2015. Prof. Scott met with AFENET Executive Director - Dr. Kenneth Ofori Barko to discuss a new project titled: Establishing an African Center of Excellence for Public Health Security awarded to EMORY with AFENET as a partner. EMORY received the 5 - year Cooperative Agreement from CDC to set up a center of excellence in Africa.

Dr Linda Quick - FELTP Branch Chief at Centers for Disease Control and Prevention (CDC), Atlanta and Mr. Alstead Forbes - Public Health Advisor, East Africa visited the AFENET secretariat from 30th September - 2th October 2015. They met staff on 30th September 2015 and shared about the Global Health Security Initiative as well as listen to presentations from AFENET's units: Administration, Finance, Technical and Science and Public Affairs.

Building Health Security beyond Ebola

AFENET took part in a high level partners meeting themed "Building Health Security beyond Ebola" hosted by the World Health Organization (WHO) in Cape Town, South Africa from 13th - 15th July 2015. The meeting aimed at establishing a continental framework for action in terms of surveillance and resources during outbreaks. During the meeting, AFENET introduced a concept, the Continental Rapid Response Corp (CRRC). Led by the Executive Director - Dr Kenneth Ofori-Barko, AFENET held a side meeting where potential partners were invited to discuss the feasibility of the concept. The concept attempts to overcome the challenge in rapidly mobilizing appropriate and timely response towards epidemics. It advocates for a well - structured system that can have first responders deployed at the site of any epidemic on the continent within 72 hours of notification. The CRRC concept was inspired by AFENET's 2014 experience in mobilizing for the Ebola outbreak in West Africa under the African Union support to Ebola Outbreak in West Africa (ASEOWA).

The meeting was chaired by Dr. Sreeram Krishnamachari from the Bill & Melinda Gates Foundation. He moderated a panel of experts who included: Dr. Delanyo Dovlo - Director Regional Office Health Systems and Services (HSS) at WHO AFRO, Dr. Badu Sekodi - Director Public Health, Ghana, Mr. Raphael Kuuchi - Vice President International Air Transport Association (IATA) and Dr. Kenneth Ofori-Barko - Executive Director AFENET. In attendance were other AFENET staff who included Dr. Sheba N. Gitta - Senior Deputy Executive Director, Science and Public Affairs, Dr. Herbert Kazoora - Epidemiologist and Ms. Racheal Chelimo - Editor and Public Affairs Officer.



▲ Dr. Scott McNabb - Research Professor, EMORY together with staff at the AFENET Secretariat



▲ Panellists at the AFENET Continental Rapid Response Corp (CRRC) meeting. (L-R) Dr. Kenneth Ofosu-Barko - Executive Director AFENET, Mr. Raphael Kuuchi - Vice President International Air Transport Association (IATA), Dr. Delanyo Dovlo - Director R.G.O. Health Systems and Services (HSS), Dr. Badu Sekodi - Director Public Health, Ghana and Dr. Sreeram Krishnamachari from the Bill & Melinda Gates Foundation and chaired the meeting. (Courtesy of Racheal Chelimo)



▲ AFENET Secretariat staff pose for a picture with CDC guests, Dr Linda Quick - FELTP Branch Chief (CDC) (centre - back row), Atlanta and Mr. Alstead Forbes - CDC Atlanta



▲ Participants at the World Health Organization (WHO) High Level Partners Meeting Building Health Security Beyond Ebola convened by the from 13th - 15th July 2015 in Cape Town, South Africa (Courtesy of Racheal Chelimo)

APPENDIX

FETP/FELTP	Established	No. of Cohorts enrolled	Residents enrolled since inception	No. of current Year 1 residents	No. of current Year 2 residents	Total no. of residents/alumni by track			Total no. of Graduates
						Epidemiology	Laboratory	Veterinary	
Angola	2011	3	22	11	9	15	7	0	6
DRC	2013	3	52	12	0	25	9	9	12
Ethiopia	2009	7	121	16	16	121	0	0	80
Ghana	2007	9	91	11	9	19	23	15	28
Kenya	2004	11	133	20	18	76	46	11	66
Mozambique	2010	4	37	11	14	22	15	0	10
Nigeria	2008	7	261	49	39	155	66	40	57
Rwanda	2010	3	48	13	15	38	10	0	13
South Africa	2006	9	80	9	5	62	18	0	46
South Sudan	2012a	4	18	18	0	18	0	0	33
Tanzania	2008	7	105	15	13	66	46	0	45
Uganda	1994	21	329	18	26	329	0	0	241
Zimbabwe	1993	23	241	17	20	241	0	0	192

	Program	Year of establishment	No. of cohorts enrolled	No. of residents since inception	Number of graduates since inception
1	Angola	2011	3	29	6
2	Central Africa	2010	2	35	0
3	DRC	2013	4	77	0
4	Ethiopia	2009	7	301	65
5	Ghana	2007	9	57	28
6	Kenya	2004	11	155	68
7	Mozambique	2010	4	49	10
8	Namibia	2013	2		
9	Nigeria	2008	8	316	57
10	Rwanda	2010	3	48	13
11	South Africa	2012	9	91	46
12	Tanzania	2008	7	90	45
13	Uganda	1994	22	325	241
14	West Africa	2010	1	12	12
15	Zambia	2014	1		
16	Zimbabwe	1993	23	258	192
	Total	116	1,843	783	

APPENDIX

Outbreaks investigated in the Field Epidemiology and Laboratory Training Programs in 2015

FELTP	Outbreaks investigated	Selected Outbreak	Date	Place	Trainees involved	Key Findings and Public Health Action
Angola	Rabies, febrile syndromes	Rabies	January - March 2015	Viana district, Luanda Province	Joaquina Cambuta	Rabies vaccination Campaign
Democratic Republic of Congo	Ebola					
Ethiopia						
Ghana						
Kenya	Lead poisoning, cholera, cholera	Lead poisoning	January 2015		Cohort 11	Data collection and analysis, blood lead level testing
Mozambique						
Nigeria	Avian Influenza (H1N1), cholera, cerebrospinal meningitis	Cholera	September 2015	Borno and Jigawa IDP Camp	11 Cohort VI and VII trainees	Conducted descriptive, analytic and environmental studies as well as provided case management support
South Africa	Hepatitis A, chicken pox, diphtheria		February 2015		Phumzile Gladys Phiri and Pattience Manjengwa	Records review, contact tracing and case isolation
Tanzania	Plague, cholera, anthrax, bloody diarrhoea, flooding	Plague	February 2015	Mbulu District, Manyara Region	Cohort VI residents: Philoteus Sakasaka, Neema Camara, Jabir Makame	Surveillance and dusting of home steads
Uganda	Typhoid	Typhoid	February 2015	Kampala	Four Residents	
Zimbabwe						

Selected Articles Published by Field Epidemiology and Laboratory Training Programs Residents and Graduates in 2015

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APPENDIX

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- 14 Donewell Bangure, Daniel Chirundu, Notion Gombe, Tawanda Marufu, Gibson Mandozana, Mufuta Tshimanga, Lucia Takundwa. Effectiveness of short message services reminder on childhood immunization programme in Kadoma, Zimbabwe - a randomized controlled trial, 2013; *BMC Public Health* 2015, 15:137.
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APPENDIX

List of AFENET Partners

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 World Health Organization Multi Disease Surveillance Center (MDSC)
 World Health Organization (WHO)
 World Health Organization Regional Office for Africa (WHO AFRO)

U.S. Government

U.S. Agency for International Development (USAID)
 U.S. Centers for Disease Control and Prevention (CDC)
 U.S. Department of Health and Human Services (HHS)
 U.S. Department of Defence
 U.S. Department of State
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