FETP Updates

July-September 2019

TEPHINET requests updates from its member programs for inclusion in each issue of TEPHINews, our quarterly newsletter.

This update has been compiled using text provided by the contributing field epidemiology training programs. Editing has been limited to minimal corrections where necessary. The information in each program’s section is the responsibility of the program.
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BRAZIL FIELD EPIDEMIOLOGY TRAINING PROGRAM
Programa de Treinamento em Epidemiologia Aplicada aos Serviços do Sistema Único de Saúde – EpiSUS (FETP-Brazil)

Participants of the advanced level of EpiSUS, the Brazilian Field Epidemiology Training Program, participated in four field investigations between July and September 2019. The investigations were as follows:

1. **Mass event monitoring in the Federal District (Distrito Federal):** A health event convened people from all over the country in Brasilia, and the medical care that occurred during this event was monitored. Monitoring allowed the identification of an outbreak of acute diarrheal disease. A case-control study was conducted to analyze the foods associated with the disease.

2. **Health survey in a population exposed to environmental disaster in Maceió (Alagoas):** Three districts of this municipality are sinking due to rock salt extraction and pre-existing underground faults. Residences are being cracked, and therefore, part of the exposed population has been evacuated. A (qualitative and quantitative) survey was conducted to find out the health status of the population of former residents of these neighborhoods.

3. **Measles outbreak in São Paulo (São Paulo):** A major outbreak of measles has been affecting young children and young adults whose circulating genotype is G8 with characteristics similar to those from Europe. Studies are underway to a) identify transmission chains, b) analyze factors associated with complications, c) estimate vaccine effectiveness, and d) evaluate measles knowledge, attitudes, and practices.

4. **Measles outbreak in Pernambuco:** An outbreak is underway with several cases of measles, probably imported from the State of São Paulo. Studies are underway to identify transmission chains.

During this period, EpiSUS participated in the 55th Congress of the Brazilian Society of Tropical Medicine (MEDTROP 2019) with the presentation of two papers and a short course for outbreak investigations and the XIX International Course on Molecular Epidemiology in Emerging Infectious and Parasitic Diseases (Epimol 2019) with the presentation of two papers. The 2nd Introductory Course on Economic Health Assessment was also held, with the participation of health economists and epidemiologists.

Selection has been completed for the new EpiSUS-Advanced cohort, the 16th class (2019-2021). In the first phase, 1,170 candidates were enrolled, of which 207 sent documents for curriculum analysis. Of these, 100 were pre-selected for the second stage, where 89 underwent an interview with the selection team. In the third stage, 50 candidates were pre-selected, of which 47 attended the five-day “Intensive Course in Applied Epidemiology.” At this stage the candidates were evaluated, and 12 were selected to be part of the 16th EpiSUS-Advanced class, which will begin training on November 4, 2019.

The EpiSUS Elementary Level, offered this year to priority and border areas, has completed classes in the states of Acre and Rondônia. Three other classes are in progress in border regions, offering a total of 10 vacancies for health professionals from Bolivia and two for Argentina.
Background:
The Burkina Faso Field Epidemiology and Laboratory Training Program (BFELTP) launched its fourth advanced cohort on November 1, 2018. Residents are currently in the field.

The program was created on October 21, 2009 as the West Africa Field Epidemiology Training Program (WAFETP) and commenced in January 2010 with 12 residents from four countries in the region (Burkina Faso, Mali, Niger and Togo) with the support of the CDC Foundation through the University of Joseph Ki-Zerbo/Ouagadougou.

Due to a lack of funding, the program was inactive from 2012 to 2014. The program reopened at the end of 2014 with support from the World Bank through the West African Health Organization (WAHO) and West African Regional Disease Surveillance (WARDS) project with technical assistance from the U.S. CDC. Eight countries were involved in the reopened program (Benin, Burkina Faso, Cote d’Ivoire, Guinea, Mali, Niger, Senegal and Togo), which graduated a total of 40 residents from 2010 to 2017.
Baptized the Burkina Faso FELTP (or BFELTP) in 2018 under the World Bank’s Regional Disease Surveillance Systems Enhancement (REDISSE) project, the program enrolled 37 residents from nine countries (Benin, Burkina Faso, Cote d’Ivoire, Guinea, Guinea-Bissau, Mali, Niger, Senegal and Togo).

With support from WAHO, CDC, and the African Field Epidemiology Network (AFENET), the program held its first theoretical session from November 2018 to January 2019 and then sent residents back to their countries for field work.

**Field coordination supervision:**
From May 20 to July 12, 2019, the BFELTP coordination team visited each country for resident supervision. The team identified the following achievements: Residents’ deliverables (surveillance data analysis, surveillance evaluation systems, and investigations) were completed at 94/111 (85 percent), final reports 28/111 (25 percent) and abstracts received 13/37 (35 percent); after supervision, these achievements were improved up to 80 percent.

During BFELTP coordination supervision in Togo (July 2019)
Supervision in Benin with the newly appointed francophone epidemiologist from U.S. CDC, Dr. Peter Thomas (center left), and the service surveillance head, Dr. Sourakatou Salifou (center right) and the BFELTP coordination team (Dr. Bernard Sawadogo, regional technical francophone for West Africa at AFENET [left] and Dr. Otshudialdjeka Joseph, BFELTP Resident Advisor [right])

The second session of theoretical courses was launched on September 2, 2019, with a leadership and management course. The program received around 20 residents plus three staff members from the Ghana FELTP to share experiences and English and French learning by participating in a survey on road safety in the field, classroom sessions, and field work presentations.
Visit of residents from the Ghana FELTP from September 7-20, 2019

Exam session after the end of the module on leadership and management
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Other activities:

- The BFELTP steering committee meeting was held from July 29-30, 2019, in Ouagadougou, Burkina Faso with the attendance of participants from U.S. CDC.
- Five abstracts from the program were accepted to international conferences (two for ESCAIDE in Stockholm, Sweden; two for TEPHINET in Atlanta, Georgia, U.S., and one for the Pharo conference in Marseille, France).

The next steps are as follows:

- The end of the second session on October 18, 2019
- The second coordination supervision across BFELTP countries to support the finalization of residents’ deliverables and validate thesis proposals
- Supporting residents in their participation at the international conferences (TEPHINET and ESCAIDE)

Many thanks to all for the support!

CANADA FIELD EPIDEMIOLOGY PROGRAM

Beginning in 1975, CFEP has contributed to the development of multiple generations of epidemiologists through training opportunities, placement site work, and mobilizations. CFEP is a two-year advanced program housed at the Public Health Agency of Canada (PHAC). Each year, a cohort of five field epidemiologists from across Canada graduate from the program.

Recently CFEP field epidemiologists have been involved in several exciting mobilizations at the local, provincial, and federal levels. These have included outbreak investigations, designing epidemiological studies, and developing data analysis plans and tools for a broad range of infectious diseases including measles, foodborne pathogens, and sexually transmitted infections. One field epidemiologist and one Program Director are contributing to the Ebola response in the Democratic Republic of the Congo (DRC). During these mobilizations, field epidemiologists had the opportunity to integrate into local teams and work alongside partners to reach public health goals, provide expertise, and gain valuable skills.

This summer, CFEP held its annual Project Review Week in the nation’s capital, Ottawa. Members of cohorts 43 and 44 each shared a project they had been working on. Topics included surveillance system evaluations, outbreak investigations, and other applied epidemiology-related projects. After three days of presentation preparation, review, and feedback, the field epidemiologists presented their projects to a diverse audience of public health practitioners, PHAC senior management, students, and former CFEP alumni. This activity fostered field epidemiologists’ presentation skills and highlighted the incredible value of CFEP to protect populations from public health threats.

After these presentations, graduates from cohort 43 were presented with certificates and had the opportunity to celebrate with peers and friends.
COLOMBIA FIELD EPIDEMIOLOGY TRAINING PROGRAM

CDC Director highlighted leadership and work of the FETP in Colombia

On August 27, Dr. Robert Redfield, the Director of the U.S. Centers for Disease Control and Prevention (CDC), made his first visit to Colombia’s National Institute of Health (NIH). He highlighted the excellent work, organization, leadership and joint work the NIH has carried out for more than 25 years. In 1992, the NIH created the country’s Field Epidemiology Training Program (FETP) based on the Epidemic Intelligence Service (EIS) model. Colombia’s FETP has trained 131 public health professionals from diverse backgrounds as field epidemiologists and has provided career development for more than 3,500 professionals across several disciplines. At the end of his visit, Dr. Redfield reaffirmed that, “there is much we can do together, there is much we have done, and much remains to be done.”
Colombia’s NIH continues South-South cooperation

As part of its South-South cooperation process and with the support of the CDC Central America Regional Office (CDC-CAR) in Guatemala, Colombia’s FETP has conducted outbreak training courses for 70 officials from eight countries of the Council of Ministers of Health of Central America and the Dominican Republic (COMISCA).

This has allowed for the strengthening of response to outbreaks of foodborne diseases, acute respiratory infections, and healthcare-associated infections. The participation of three officials from the region is expected in the intermediate course which will take place in Colombia this November.

New Cohort of Field Epidemiologists

In July, the 22nd cohort (2019-2021) of the advanced level of Colombia’s FETP began its activities. The cohort consists of 16 students from different regions of the country. From August 12-16, the 2018 and 2019 cohorts developed the programmed field work for three municipalities in the Magdalena department in northern Colombia. They carried out Vaccination Coverage Assessment (ECV) work, opportunity and complete vaccination scheme applying the methodology of the World Health Organization (WHO).

Frontline Courses

FETP Colombia’s Frontline training level continues to work jointly with the health secretariats. In the last year, Frontline has trained 356 officials and 228 Frontline tutors who will assume leadership in their respective entities to train professionals and technicians at the local level.
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ETHIOPIA FRONTLINE FIELD EPIDEMIOLOGY TRAINING PROGRAM
Field Epidemiology Training Program (FETP)-Frontline: Enhancing Surveillance Capacity at the District Level in Ethiopia

Introduction

FETP-Frontline is a three-month in-service training that aims at strengthening prevention, detection, and response to diseases and events of public health importance and of international concern. The Ethiopia Ministry of Health adopted FETP-Advanced in 2009, launching FETP-Frontline in 2016. Ethiopian Public Health Institute (EPHI) hosts the program, with technical and financial support from the U.S. CDC and the World Health Organization (WHO).

Achievements

Since its initiation in 2016, 469 Public Health Emergency Management (PHEM) Officers have graduated, coming from all 11 regions and two city administrations, over 80 percent of the 91 zones, and 38 percent of the 1,021 districts. All of the graduates have produced data quality audit and surveillance summary reports from data collected during fieldwork one. During fieldwork two, most participants produced expanded surveillance summary reports and problem analysis. They have also conducted investigations of measles, Acute Flaccid Paralysis (AFP), rabies, maternal death, and other immediately notifiable diseases. The trainees have also participated in outbreak investigation and response of scabies, cholera, malaria, malnutrition and other epidemic prone diseases in the country. In addition to the District PHEM officers, 110 surveillance focal persons from the Ministry of National Defense and Federal Police Commission have been trained. The training is expected to help these Ministries establish their own surveillance systems, while also strengthening data sharing and coordinated responses.

Challenges

Despite having a large number of graduates in only two years’ time, the program faces many shortcomings that require urgent action. Some of the challenges include dropout and turnover of trainees, lack of adequate support from mentors and supervisors, large numbers of trainees in some cohorts, and longer than scheduled time-intervals between the workshops, and lack of adequate resources (mainly time, transport, computers and budget) for the fieldwork projects.
The Way Forward

EPHI, in collaboration with U.S. CDC, WHO and other partners is working to achieve the target of having one Frontline graduate from all districts. The plan could be achieved by having about 300 annual graduates until the end of 2022.

Conclusion

FETP-Frontline has been successfully adopted by the Ethiopian PHEM system, building surveillance officer capacity to prevent, detect, and respond to public health emergencies. However, in order to measure the effectiveness of the program in Ethiopia, a formal outcome evaluation is planned in late September.

Figure 1: Ethiopian FETP-Frontline Coverage (Percent) by Region, August 2019
HONDURAS FIELD EPIDEMIOLOGY TRAINING PROGRAM

In order to generate evidence for decision-making in the National Health System, the Health Surveillance Unit delegated, to the field epidemiology training program (FETP) of Honduras, the coordination and execution of the study, “Influencing factors in late diagnosis of tuberculosis in Honduras, 2019.” A work team was formed with graduates and interns from the advanced and intermediate level of the FETP, with grant funding from the Global Fund, to conduct this study.

Preliminary results were shared and discussed on July 29, 2019 with authorities from the Ministry of Health, heads of the 20 health regions of the country in charge of tuberculosis surveillance, heads of the Integrated Network of Health Services, epidemiologists and regional social communicators; as well as representatives of the Honduran Social Security Institute.
This was an observational, analytical, cross-sectional study, with a sample of 337 interviews with patients with pulmonary tuberculosis diagnosed from January 1, 2018 to March 31, 2019; 125 interviews were conducted with directors of health facilities as well as a knowledge assessment on 290 people working in these establishments.

From the principal results, we can disclose that the highest proportion of those affected were men, between the ages of 18 and 44, single persons, with a primary education and who have elementary occupations such as workers and day laborers, housewives and students; those who do not have a fixed salary and who reside in an urban area, mainly in the San Pedro Sula region.

In the diagnosis of tuberculosis, the average time between the first delay (related to the patient) and the second delay (capitation time as someone with respiratory symptomatology) was 69 days. The third delay (sampling) and fourth delay (time of sending results to the health facility) was three days. The fifth delay (delivery of diagnosis to the patient), had an average delay of five days. The total delay time throughout the process was 95 days.

Among the risk factors associated with late diagnosis of tuberculosis were: being a man older than 44 years, suffering from diabetes, and living more than 15 minutes from a health facility.

With the data obtained, improvement plans were drawn up in the 20 health regions of the country with the aim of reducing the delay in the diagnosis of tuberculosis.

INDONESIA FIELD EPIDEMIOLOGY TRAINING PROGRAM

The National Scientific Conference on Epidemiology (NSCE) is an annual conference combining scientific sessions and symposiums where the Indonesia FETP students and alumni share their scientific findings through oral and poster presentations featuring public health research and outbreak investigation. NSCE is Indonesia’s largest annual event devoted to the science and practice of field epidemiology. Field epidemiologists provide scientific, evidence-based information for disease prevention and control strategies, so this conference can contribute to preventing and controlling both communicable and non-communicable diseases and other public health problems in Indonesia.

The 8th NSCE was held from August 20-22, 2019 in The Patra Bali Resort & Villas, Indonesia. Pre-conference workshops were held on August 19. This year’s conference theme, The Role of Field Epidemiologists in Disaster Risk Reduction, embodies the Ministry of Health’s commitment to helping build capacity to improve disaster risk management in Indonesia. In Lombok, Palu, Banten and Lampung, FETP students and alumni are actively involved in the response to surveillance post-disaster and
outbreak investigation. Attended by 301 participants, the 8th NSCE brought together practitioners, academicians, FETP students, FETP alumni, FETP-Intermediate trainees, FETP-V Indonesia alumni, and stakeholders at the national and district levels. The Directorate of Surveillance and Health Quarantine, Ministry of Health, FETP Indonesia Secretariat, and ALERTAsia Foundation organized this conference.

Plenary sessions revolved around the following topics: Disaster Risk Management, Surveillance, Outbreak Investigation, and Surveys. Our colleagues from the Ministry of Health, National Disaster Management Agency (BNPB), Institute of Vector and Reservoir Control Research and Development (B2P2VRP) Salatiga, NTB Provincial Health Office, FETP UI, FETP UGM, PAEI, U.S. Centers for Disease Control and Prevention (CDC), and the World Health Organization Southeast Asia Regional Office (WHO SEARO) were speakers in the plenary sessions. This year, we accepted 63 presentations (48 oral and 15 posters) and a diverse range of topics, from vaccine-preventable diseases, food- and water-borne diseases, vector-borne diseases, chronic diseases, environmental health, and more. Presenters represented five universities (Universitas Indonesia, Universitas Gadjah Mada, Universitas Airlangga, Universitas Udayana, and Universitas Hasanuddin). In addition, for the first time, FETP Intermediate trainees and FETP-V alumni had the opportunity to present their work during the oral and poster presentation sessions.

In one of the plenary sessions, WHO SEARO introduced participants to the opportunities, processes, challenges, and realities of working as part of an international multidisciplinary outbreak response team on a GOARN deployment with the World Health Organization. GOARN (the Global Outbreak Alert and Response Network) provides opportunities for FETP alumni to be involved in epidemic and pandemic events and work as epidemiologists in an international outbreak response with GOARN and WHO. In addition, the conference includes the annual meeting of the Indonesian FETP Alumni Association (PAELI) for the first time as a forum for FETP alumni to discuss the development of PAELI's work program. Alumni representatives from 34 provinces attended this meeting.

Every year, the improvement of NSCE has progressed significantly with themes and topics relevant to strengthening capacities to prevent, to detect, to respond, also to solve public health problems. The NSCE activity has generally been going well thanks to the collaboration between the committee and the help and support of various parties. Next year, we will hold the 9th NSCE in Surabaya, East Java Province.

IRAQ FIELD EPIDEMIOLOGY TRAINING PROGRAM

In order to initiate the first cohort of a new intermediate-level FETP in Iraq, the Ministry of Health, in collaboration with the Defense Threat Reduction Agency (DTRA) and Eastern Mediterranean Public Health Network (EMPHNET), conducted two back-to-back screening workshops in Al-Sulaymaniya province to select 20 participants from the ministries of health and agriculture. Each workshop lasted for five days. The first four days were composed of lectures and group work. The last day was dedicated to an electronic exam. The first workshop took place from August 23-27, while the second took place from August 30-September 3, 2019.

The program also selected eight students for its ninth advanced-level cohort and graded the students of its eight cohort during September.
Photos from the first screening workshop:
Photos from the second screening workshop:
LIBERIA FIELD EPIDEMIOLOGY TRAINING PROGRAM
Moving from Response to Capacity Building – Frontline and Intermediate Updates, August-September 2019

2nd Annual National Scientific Conference

The 2nd annual Emmet Dennis National Scientific Conference was held from August 27-29, 2019 with the theme, “Strengthening Global Health Security – The Liberia Experience.” A total of 121 abstracts were submitted from 13 counties in Liberia and two other countries: Ghana and Nigeria. Two poster sessions, three oral presentation sessions, and three plenary sessions were held. The conference was a collaboration between the Liberia Field Epidemiology Training Program and the National Public Health Institute of Liberia.

Conference honoree, Prof. Emmet Dennis with the Guest of Honor, Her Excellency Jewel Taylor (Liberian Vice President), other dignitaries, and conference participants

Left: A poster presentation by a frontline graduate, LFETP
Right: An oral presentation by an intermediate resident, LFETP
Frontline Cohort 10 Graduation

Left: Cohort 10 comprised 19 participants, which included seven health facility surveillance focal persons, two environmental health officers, five national surveillance officers, two port of entry health officers, two zonal surveillance officers, and one military health officer. The training was conducted from July 8 to September 20, 2019.

Bottom: The graduation on September 20, 2019 was attended by dignitaries from the Ministry of Health-Liberia, United States Centers for Disease Control and Prevention (CDC), and World Health Organization-Liberia.

From our residents in the field

Left: Frontline Cohort 10 resident, Amanda Jondo Williams disseminates the results of a data quality audit (DQA) to staff of the SOS hospital in Monrovia.
In July 2019, the Malaysia Epidemic Intelligence Program (EIP) hosted the 3rd Joint Consultative Meeting between the ASEAN Veterinary Epidemiology Group (AVEG) and the ASEAN plus Three Field Epidemiology Training Network (ASEAN+3 FETN) and the 10th Steering Committee Meeting of ASEAN+3 FETN.

The 3rd Joint Consultative Meeting between the ASEAN Veterinary Epidemiology Group (AVEG) and the ASEAN plus Three Field Epidemiology Training Network (ASEAN+3 FETN) took place from July 2-3 and was attended by ASEAN+3 FETN and AVEG contact points and representatives from Brunei Darussalam, Cambodia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam; the “plus Three” Countries (namely China, Japan, and the Republic of Korea); and the ASEAN Secretariat. Development Partners, namely the Food and Agriculture Organization of the United Nations (FAO), World Health Organization (WHO), World Organization for Animal Health (OIE), as well as Southeast Asia One Health University Network (SEAOHUN) and the U.S. Centers for Disease Control and Prevention (CDC) were also in attendance.

The meeting aimed to review progress on and further strengthen collaboration and to advance regional and global health security through a multi-disciplinary approach. The meeting facilitated further dialogue and mechanisms for collaboration between the AVEG and the ASEAN+3 FETN; reviewed and reported on progress on collaboration in the areas identified in the 2nd AVEG-FETN Joint Meeting; shared good practices in epidemiology capacity building and proposed collaborative activities for 2019-2020.

The 10th Steering Committee Meeting of ASEAN+3 FETN was held on July 3-4. Representatives from ten ASEAN+3 countries (except Indonesia, Myanmar and the Republic of Korea), the ASEAN Secretariat (ASEC) and the ASEAN+3 FETN Coordinating Office attended this meeting. Key development partners also attended, including the Australian National University (ANU), Global Outbreak Alert and Response Network (GOARN), Southeast Asia One Health University Network (SEAOHUN), the U.S. Centers for Disease Control and Prevention (CDC), World Health Organization Western Pacific Regional Office (WHO-WPRO), and the World Organization for Animal Health (OIE). The meeting was held to review and update the activities of the network and to discuss future plans and strategies to strengthen capacities. The meeting included experience sharing, enhanced partnership, discussion on work plans and inputs on technical aspects.
MOZAMBIQUE FIELD EPIDEMIOLOGY AND LABORATORY TRAINING PROGRAM

Mozambique FELTP Conducts Mass Gathering Surveillance during the Pope’s Visit

Pope Francis visited Maputo, Mozambique from September 4-6, 2019. In order to respond to possible health situations related to the Pope’s visit, the Government of Mozambique, through the Ministry of Health, deployed a total of 10 medical and paramedical teams for first aid and referral of patients in need of care.

The Mozambique Field Epidemiology and Laboratory Training Program (FELTP) joined the health teams and participated in pre-event planning, collecting data in four official public events, and producing a daily epidemiological report for the Ministry of Health.

The FELTP team consisted of five graduates, three residents, and the Resident Advisor.
The Nigeria FELTP participated in a workshop to review and adapt the latest edition of the WHO-AFRO Technical Guidelines for Integrated Disease Surveillance and Response (IDSR) strategy which serves as the framework for universal surveillance in the country. The activity was led by the Nigeria Centre for Disease Control and involved the Federal Ministry of Agriculture and Rural Development, the Federal Ministry of Environment, World Health Organization (WHO), and African Field Epidemiology Network (AFENET), among other partners. The week-long workshop took place at Dover Hotel in Lagos, Nigeria.

4th NCDC/NFELTP Conference (September 9-11)

The Nigeria Centre for Disease Control (NCDC) and the African Field Epidemiology Network held the 4th NCDC/NFELTP Conference. The theme of this year’s conference was Applied Epidemiology: Providing Evidence for Public Health Action. The sub-themes were Outbreak Investigations, Emergency Response and Preparedness, Vaccine-preventable Diseases and Immunisation Strategies, Surveillance and Information Management Systems, Neglected Tropical Diseases, HIV/AIDS and Tuberculosis, Malaria and
other Vector-borne Diseases, Risk Communication, Public Health Systems Strengthening, Non-Communicable Diseases. Out of the 339 abstracts submitted, 104 were accepted – 48 for oral presentation and 56 for electronic poster. The abstract presentations were interspersed with nine keynote speeches delivered by experts from Africa, Europe and North America. There were also pre-conference workshops. The conference and workshops were attended by more than 700 participants.

![Conference Image](image)

*Figure 4. 4th NCDC/NFELTP Conference, September 9-11, Transcorp Hilton, Abuja, Nigeria*

**Strategic Risk Communication Workshop (September 12-14)**

A total of 39 participants comprising Nigeria FELTP current residents and recent graduates participated in a strategic risk communication workshop with facilitators from the U.S. Centers for Disease Control and Prevention (CDC), African Field Epidemiology Network, Nigeria (AFENET-Nigeria); Epid Alert, and the Nigeria Centre for Disease Control. The overall goal of the three-day workshop was to teach participants core communication principles and how to use effective communication skills, tactics and channels to reach target audiences and deliver clear, concise messages using plain language principles.
Commencement of Cohort 11 Training (September 16)

The 11th Cohort of the Nigeria FELTP commenced training on September 16, 2019 at the training hall of the National Reference Laboratory of the Nigeria Centre for Disease Control, Abuja. The cohort comprises 30 physicians, 14 laboratory scientists and 17 veterinary officers. During this cluster, they will have lectures, exercises, hands-on sessions and case studies covering Basic Epidemiology, Public Health Surveillance, Biostatistics, Laboratory Methods in Epidemiology, Computer Applications in Public Health, Introduction to Veterinary Public Health and Zoonoses. The first cluster of lectures will run for six weeks.
PAKISTAN FIELD EPIDEMIOLOGY AND LABORATORY TRAINING PROGRAM

Highlights:

- In August, 41 fellows from FELTP Pakistan took the second annual examination for the degree of MSc Field Epidemiology. Of the 41 who took the exam, 28 (68 percent) were declared successful by the University of Health Sciences, Lahore.
- An outbreak of dengue fever was reported from all over the country with more than 11,000 cases reported through September 22, 2019. The Emergency Operations Center (EOC) at the National Institute of Health, Islamabad was activated to coordinate control activities between the provinces. FELTP Pakistan fellows are playing a leading role in data collection and response efforts all throughout the country. Dr. Wasif Malik, a fellow of the 10th FELTP cohort, has been appointed the Incident Command and Control Officer/Team Lead for the EOC.
FELTP Pakistan concluded its tenth training successfully in the city of Multan. This training was organized at the special request of the Government of Punjab, with an aspiration of capacity building of all the district level managers from South Punjab in surveillance and outbreak investigation skills. A total of ten district managers for vaccinations successfully completed the training.
PARAGUAY FIELD EPIDEMIOLOGY TRAINING PROGRAM
Paraguay FETP initiates its fourth cohort

In August, the fourth cohort of the Field Epidemiology Training Program (FETP) began in Paraguay after its members underwent a selection process consisting of a call for applications on behalf of the national coordinators of the program, an application review, and knowledge tests for qualified applicants on computer science, language and basic epidemiology.

Five applicants were selected, all of them belonging to the epidemiological surveillance network and the country’s regional departments of health surveillance. They were awarded scholarships by the Ministry of Public Health and Social Welfare as a strategy to strengthen said network.

The introductory course was developed with the support of a teacher from Brazil and covered topics related to public health surveillance and biostatistics.

During this in-person course, participants carried out fieldwork that consisted of an active community search of 20 randomly-chosen urban area conglomerates. 206 homes were visited, 857 people were registered and a general survey was administered. The survey was aimed at gathering data on sociodemographics, access to basic services, knowledge about preventative measures and clinical characteristics of people who had symptoms of arboviruses during 2019.

Of those interviewed, nine percent reported that a family member had presented some sign or symptom of arboviruses (74/857). Of these, 49 percent (36/74) presented arthralgia, and 42 percent (15/36) reported disability, with an average duration of two months.

In addition, an active institutional search was carried out using emergency records (pediatric, adult and gynecology-obstetrics) and external practice. A total of 11,588 records of consultations were verified from January to July; 1,128 fulfilled the operational definition for arboviruses, 344 were reported in the surveillance system for acute febrile syndrome, so a sub-registry of 47 percent was estimated.

A survey of knowledge about arboviruses was implemented among health professionals at the district area hospital and the district’s seven mobile family health units (USF). 58 percent participation in the district area hospital and 86 percent in the district’s seven mobile family health units (USF) was achieved. Among the most relevant findings, it should be noted that professionals were poorly sensitized to the diagnoses of the arbovirus in other clinics. Recommendations consisted of conducting continuous training on diagnosis of arboviruses and of raising awareness about the importance of case notification to health professionals at all levels of care.
Photo (1): First fieldwork exercise, Minga Guazú district (X Health Region - Alto Paraná)

Directors prior to data collection with tablets
Visit to Family Health Unit (USF) before implementing survey of knowledge about arboviruses to local medical professionals.

PERU FIELD EPIDEMIOLOGY TRAINING PROGRAM
The Second Intermediate-Level Cohort Graduates!

On September 6, 2019, the Peru FETP held the closing ceremony for its intermediate-level training, which was developed by the Ministry of Health (Minsa) through the National Center for Epidemiology, Disease Prevention and Control (CDC) and the National School of Public Health (ENSAP) of the Ministry of Health.

The closing ceremony was presided over by Deputy Minister Rosell De Almeida. The Director General of the CDC, Dr. Gladys Ramirez, and the General Director of the ENSAP, Dr. José Luis Seminario, were also present. They agreed on the positive impact of this Minsa effort and, above all, on the increase in epidemiological capacities that health professionals are reaching in recent years. The Deputy Minister of Public Health stressed the importance of these programs which strengthen the skills of professionals for the advancement of public health in the country.
The cohort comprises 50 health professionals from 20 regions of Peru who developed competencies to manage the epidemiological surveillance system as well as apply epidemiological concepts and tools for the investigation and control of epidemiological outbreaks and health emergencies. They also participate in the design and implementation of interventions for the prevention and control of major public health threats at the local and regional level.

Peru FETP: The Advanced Level Inaugurates its Seventh Cohort

On September 2, the seventh cohort of the advanced level of the Peru FETP initiated training activities. The purpose of the advanced program is to train field epidemiologists to lead public health surveillance and the prevention and control of events of public health importance with the hope of reducing their impact on the population of the country. The official inauguration ceremony was carried out on September 9 with the presence of the Vice Minister of Public Health and other authorities of MINSA and UNMSM.

The advanced level training takes two years to complete and is conducted by the National Center for Epidemiology, Prevention and Control of Diseases of the Ministry of Health and the National University of San Marcos. The cohort comprises 20 health professionals from 14 regions of the country who were selected among the participants of the first intermediate cohort held in 2018.
PHILIPPINES FIELD EPIDEMIOLOGY TRAINING PROGRAM

Since January 2019, there was an increasing number of dengue cases in Municipality X, Zamboanga Sibugay Province. The municipality declared a dengue outbreak during the second week of July. FETP fellows conducted an outbreak epidemiological investigation on July 23, 2019. Upon investigation, three different peaks of cases were identified between the months of June and July. A total of 244 cases was identified through review of records and active case finding. There were three suspected dengue deaths with a case fatality rate of 1.23 percent. All suspected deaths were below 10 years of age. One hundred thirty (53 percent) were females. The percentage of cases (24 percent) were highest among those aged six to 10 years. All respondents experienced fever accompanied by other signs and symptoms such as headache, abdominal pain, and vomiting.

In municipality X, residents stored water in different types of containers because of a water shortage. Their sources of water were from dug wells (manual fetching and jetmatic), nearby streams, or private water rationing. Residents also collect rain water by leaving uncovered water receptacles like rubber tubs, drums, and pails outside. Garbage is collected weekly. Discarded materials, such as empty bottles, tires, and plastic packaging, were observed.

An entomological survey done in two villages showed that they were dengue sensitive or high risk areas. Three dengue serotypes were co-circulating in the area. Five (two percent) were positive for dengue virus on PCR.

The local government unit mobilized the community in a synchronized search and destroy activity to all barangay every Friday morning. Indoor residual spraying in households and misting in schools were also done. The Northern Mindanao Center for Health and Development continued to give support by strengthening the promotion of dengue 4S (Search and destroy, use Self-protection measures, Seek early consultation, and Say yes to fogging during impending outbreak) strategy. As a result, the number of dengue cases have already decreased in municipality X. Sustaining vector-control practices may eventually reduce cases below the alert and epidemic thresholds.

In addition, the Philippine FETP celebrated its 32nd Annual Scientific Conference and Graduation with the theme, “Field Epidemiology in the Era of Universal Health Care” on September 2-6, 2019 at Pearmont Inn, Cagayan de Oro City, Philippines. It was attended approximately 100 participants.
Graduation Rites for FETP Batches 27 and 28 was held on the night of September 4, 2019. Four graduates from Batch 27 and three graduates from Batch 28 were newly recognized as “Public Health Specialist in Applied Epidemiology” by the Department of Health.

**SOUTH AFRICA FIELD EPIDEMIOLOGY TRAINING PROGRAM**

South African Field Epidemiology Training Program (SAFETP) Alumni Scientific Writing Workshop

The South African Field Epidemiology Training Program (SAFETP) hosted their annual Scientific Writing workshop for second year residents from August 13–16, 2019. The objective of this workshop is to allow residents time for structured writing to complete their university dissertations. As in previous years, a seasoned scientific writing expert was sought to facilitate the 2019 workshop, but unfortunately, the facilitator canceled with just days left before the scheduled start of the workshop. Instead of canceling the workshop, SAFETP staff, with the help of SAFETP alumni and NICD staff, relied on their resourcefulness and experience working under pressure to pull together a successful workshop.

Every morning, a SAFETP alumnus presented on an IMRaD (Introduction-Methods-Results-and-Discussion) portion of the dissertation. Residents were then allowed time to polish each section of their dissertation. Each day closed with residents reviewing each other’s writing using the ‘Checklist for Evaluation of a Quantitative Manuscript’ as a guide. On the third day, a biostatistician was brought in to provide statistical support to strengthen residents’ statistical analyses. At the end of the workshop, each resident was paired with a dedicated expert alumnus who reviewed the entire dissertation developed through the week and provided comments and suggestions.

A range of research topics were reviewed, including:

1. A serological survey of Q fever among abattoir workers in the Free State and Northern Cape Provinces, South Africa 2018
2. Common mental health disorders among informal waste pickers in Johannesburg, South Africa
4. Factors associated with Isoniazid mono-resistant and drug susceptible tuberculosis (TB) patients in South Africa from 2012-2014
5. Factors associated with use of insecticide treated nets among children under-five years in Malawi, 2017
7. Predictors of HIV positive status among 15-49 years old pregnant women attending public antenatal care in public health facilities in South Africa: a cross-sectional survey in using the 2017 ANC survey data
8. Risk factors associated with mortality in children under 5 years old with Severe Acute Malnutrition in Limpopo Province, 2014-2018
10. The incidence of lower respiratory tract illness in Cape Town, 2016-2017
11. The prevalence of Malaria in Limpopo province, South Africa, 2015-2017

A formal evaluation was conducted at the end of the weeklong workshop. All of the residents rated the content, mode, and usefulness of the workshop as very good. Residents particularly appreciated being removed from the field and being allowed time for focused writing. Residents also remarked on the timing and spacing of sessions throughout the week and having a dedicated biostatistician to review their statistical analyses.

One resident summed it up nicely, “Going through the research report section part by part—Monday dealing with the introduction and literature review; Tuesday, methodology; Wednesday, results; Thursday, discussion; and Friday, one-on-one with a knowledgeable person to go through the whole report and give advice on top of that.”
Dr. Natalie Mayet, deputy director of the National Institute for Communicable Diseases (NICD) of South Africa, addresses the 2018 cohort.

2018 SAFETP cohort (second year residents) and SAFETP staff members
South Africa Field Epidemiology Training Program – Frontline

The South African Field Epidemiology Training Program (SAFETP) seeks to build epidemiology capacity through the two-year full time residency program and through short courses delivered through the Frontline training course. Four Frontline cohorts recently completed their first week. The course is aimed at enhancing local capacity to prepare for, detect, and respond to emerging and re-emerging infectious diseases. A total of 90 public health professionals were trained. Trainees included veterinary officers, nursing supervisors, environmental health practitioners and surveillance officers.

The training, delivered by FETP staff and alumni, included an introduction to public health surveillance, data collection, case definitions, line listing, data quality, summarizing qualitative and quantitative data, and interpreting surveillance data. Trainees practiced how to summarize and display surveillance data using Microsoft Excel. The first week of training was scheduled as follows:

<table>
<thead>
<tr>
<th>Province/District</th>
<th>Date</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free State Province</td>
<td>July 22-26, 2019</td>
<td>25</td>
</tr>
<tr>
<td>Ethekwini district municipality</td>
<td>July 29-August 2, 2019</td>
<td>23</td>
</tr>
<tr>
<td>Gert Sibande district municipality</td>
<td>August 26-30, 2019</td>
<td>18</td>
</tr>
<tr>
<td>Gauteng Province</td>
<td>September 2-6, 2019</td>
<td>24</td>
</tr>
</tbody>
</table>

Training of Gauteng Frontline Cohort in session
FETP Updates

Ethekwini District Municipality participants analyzing a case study

Gert Sibande District Municipality Cohort focusing on data management
TANZANIA FIELD EPIDEMIOLOGY AND LABORATORY TRAINING PROGRAM

From July to September 2019, the Tanzania FELTP conducted many activities including dissertation defenses, dissertation proposal presentations, sponsorship interviews, workshops, steering committee meetings and outbreak investigations. Below is the summary of these activities.

1. Residents’ major field attachment, activities and didactics:

Dissertation defense for cohort 10: Sixteen cohort 10 residents defended for their dissertations September 2-4, 2019. All the residents defended successfully and received only minor corrections.

Proposal writing and presentations for cohort 11: Twenty one residents presented their dissertation proposals to the Muhimbili University of Health and Allied Sciences (MUHAS). All of the proposals went through for ethical approval application.

Sponsorship interviews for the upcoming cohort 12: On September 19, 2019, the program conducted sponsorship interviews for 30 applicants who were admitted by the Muhimbili University.
2. Meetings and workshops:

Regional and national supervisors’ workshop: From September 28-29, 2019, the program conducted this workshop for all of the regional and national supervisors who mentor and supervise the residents. The supervisors were oriented on the roles and responsibilities of supervisors and operational issues for residents during field work. New and old supervisors were provided opportunities to get to know one another and to build the foundation for experience sharing and coordination.

Steering committee meeting: On August 14, the FELTP conducted its steering committee meeting to discuss progress and the future of the program in strengthening the health system through addressing workforce development in epidemiology, surveillance and response.

3. Outbreak investigations:

From September 2-6, 2019 in Kakoma hamlet, we conducted a desk review on routine immunization and vaccine preventable diseases (VPD) surveillance in the area after being notified of a 14-year-old girl, a resident of Kashasha in Kakoma hamlet, Kibare village, who had recently returned from Uganda and was visited by health care workers from Kibare dispensary after community health workers reported that the girl had an onset of rash on July 30 accompanied by high grade fever and red eyes, with no history of measles-rubella vaccination. A rapid convenient measles-rubella vaccination coverage assessment was conducted in Kakoma hamlet. Vaccine verification was done through reviewing child vaccination cards in the area. Active case search, through reviewing of outpatient and inpatient registers at visited health facilities, was also conducted during the period. Additionally, an intensive door-to-door search of fever and rash illness cases in Kakoma hamlet was conducted to identify unreported cases. A total of 15 cases were identified in the area (seven laboratory confirmed IgM+ and eight epidemiologically linked), with onset between July 30-September 2, 2019. Twelve cases occurred in people who had contact with the index case at the community gathering point. One case was due to health care-associated infection as one measles case was given a rest at Kibare dispensary in the same room with a pregnant woman who, after fourteen days, developed the clinical signs and symptoms of measles. One case occurred due to family contact as they were living in the same house.
At the time of confirmation of the outbreak, the MPH residents were conducting their field placement. Four of the residents were placed at the Hoima District health office, four at the Ministry of Health in Kampala and two at the Kabarole District health office (it neighbors Kasese, where the index case was confirmed). The residents were then called upon by the Ministry of Health and deployed as part of the integrated Kasese District Rapid Response Team. The residents contributed to service and acquired competences in conducting outbreak investigation, planning and implementing public health emergency response.

The MPH resident (with backpack) mans the chlorine disinfection facility during the training of community health workers

2) MakSPH-MPH Uganda Alumni Association holds the MPH@25 years celebration planning meetings in September 2019

The Uganda Master of Public Health (MPH) Program at Makerere University will celebrate 25 years of training with an event in October 2019. The Alumni Association, together with the Makerere University School of Public Health, are leading the organization of the celebration. Several planning meetings are currently being held. The three-day celebration event will include hosting the Association of Schools of Public Health in Africa Conference, conducting community service in one of the urban communities in Kampala, and holding the MPH Alumni Annual General Meeting and the official MPH@25 years celebration event.

UGANDA PUBLIC HEALTH FELLOWSHIP PROGRAM

Boots on the Ground for Uganda’s Ebola Preparedness and Response Efforts: The Uganda Public Health Fellowship Program’s Contribution

When the Democratic Republic of Congo (DRC) declared an Ebola Virus Disease (EVD) outbreak in August 2018, Uganda was listed by the World Health Organization (WHO) as one of the countries at high risk for EVD due to its proximity to the epicenter across the DRC border. As such, the country quickly embarked
FETP Updates

on preparedness activities including risk communication, heightened surveillance, contingency planning, and mobilization of resources, among other things.

Among the priority activities was a quick and thorough risk mapping of the country, including Points of Entry (POE). This task was spearheaded by the Uganda Public Health Fellowship Program, also known as the Advanced Field Epidemiology Training Program, who are members of the National Rapid Response Team (NRRT). Fellows were deployed to identify high risk districts together with other partners and undertook the exercise using the Population Connectivity across Borders methodology. A quick, proactive assessment and risk mapping initiative in 12 priority category 1 high-risk districts bordering the DRC’s North Kivu province where the outbreak started was organized to guide the development of a result-driven contingency plan.

The efforts in Western Uganda served as an opportunity to reveal gaps in the country’s readiness to detect and respond to an EVD case eventuality. This further guided planning and resource mobilization for early strengthening of EVD preparedness in priority areas. Uganda also held a full-scale simulation exercise a few weeks before the EVD spill into Uganda with participation from members of the NRRT. The exercise brought to light some of the gaps in the system and therefore allowed for improvement and positioning of a response.

On June 11, the Uganda Ministry of Health declared an EVD outbreak in Uganda. A family of an Ebola case had crossed the border after burial with some family members already showing signs of illness. They were missed at the POE but easily identified at the health facility they sought treatment and isolated for management. The outbreak was swiftly contained as members of the NRRT easily swung into action. The three persons who showed signs after moving to Uganda unfortunately died, but no new infections were registered. As part of the response, about 13 FETP fellows and alumni supported efforts to minimize spread through contact tracing, orientation of health workers, risk communication and data management. The country remained on standby, and, in August, another imported case surfaced at a border district health facility. It was similarly easily identified, isolated and managed with no further spread.

Support to EVD response continues with a number of fellows and alumni still engaged in preparedness activities including training Village Health Teams (VHTs) for Community Event Based Disease Surveillance (CEBDS) and orientation of staff at POE. This is mainly because the outbreak in the DRC rages on with no signs of waning any time soon. Uganda remains at high risk, with health workers keeping very high levels of suspicion for viral hemorrhagic fever signs across the country. There are more than 3,000 people crossing the various border points from DRC daily and this poses great and constant risk and calls for close monitoring.

While we look to sustain efforts towards EVD prevention and containment, cross-border collaboration has been vital in technical and strategic engagement. International and regional partners have also played a great role. As a show of support and motivation, Uganda hosted the WHO Director General, Dr. Tedros Adhanom Ghebreyesus, and more recently the U.S. Secretary for Health and Human Services, Alex Azar, among others. They held bilateral discussions with H.E, Yoweri K. Museveni, President of the Republic of Uganda, who has relentlessly supported public health efforts towards prevention and control of diseases. In addition, the delegation held discussions with the Honorable Minister of Health, Dr. Jane Ruth Aceng, and other Ministry of Health officials on EVD preparedness and response efforts. EVD remains a threat to Uganda and response teams are on standby to handle even rumors from the community while
sensitization of communities through different avenues continues in an effort to keep the Uganda population safe.

**UKRAINE INTERVENTIONAL EPIDEMIOLOGICAL SERVICE**

The Ukrainian Field Epidemiology Training Program (known as the IES, or Interventional Epidemiological Service) was established in May 2018. Two cohorts of sixteen public health professionals were recruited – the first in May 2018 and the second in June 2019. The second cohort completed their introductory course in June 2019 and conducted an environmental health assessment of a community affected from pollution released from a titanium factory in Kherson region. The second cohort completed an advanced epidemiology course in September 2019. They also presented the results of their surveillance project.

This update describes the three field activities IES residents participated in between July and September 2019.

**Barriers to HIV testing of risk groups initiated by primary care physicians.** This survey identified the main barriers for the implementation of HIV rapid testing services of individuals at risk in the primary healthcare facilities. The aims were to provide guidance on steps that can be taken to remove barriers to improve the delivery of HIV testing services. 151 primary care physicians were interviewed in seven primary healthcare facilities of Lviv region that were selected because of a high presence of people at risk of HIV. Sampling of the primary health care facilities were done proportional to the population and then randomly selected in each city. The list of primary care physicians was obtained from each of the randomly selected primary care facilities. Interviews have been completed, and the data is being analyzed.

**Investigation of an outbreak of gastrointestinal illness associated with a restaurant chain**

The Public Health Center was notified of 29 cases of gastrointestinal infection from May to August. All ate at the same restaurant chain. The company has nine restaurants and is headquartered in Odessa,
which is famous for harvesting seafood products, including oysters, shrimp and mussels. The chain’s eight restaurants in Kiev receive their seafood from Odessa and international suppliers. Of the eight restaurants in Kiev, cases of gastrointestinal infection were related to six.

The main symptoms of the disease were diarrhea, nausea and vomiting and had an incubation period of one to two days. Epidemiological investigation revealed that most commonly the patients consumed seafood products such as oysters, shrimps and mussels.

The bacteria isolated from the 13 stool samples collected from cases were *Citrobacter freundii* in three cases and *Staphylococcus aureus* in three other cases. Two cases were tested for *Norovirus* infection, but the results were negative. Food and environmental samples were tested for bacterial diseases and did not isolate any pathogens.

The Ukraine Food Safety Agency identified six seafood suppliers that provided oysters, shrimp and mussels in Ukraine. This includes the restaurant chain associated with the outbreak. The Food Safety Agency obtained samples from two out of six suppliers and test results were negative for number of pathogens including *Norovirus* and *Vibrio parahaemolyticus*.

Currently, no more cases have been reported from this restaurant chain. A case-control study is planned as the next step of the investigation.

**Investigation of botulism cases connected to consumption of fish**

In Ukraine, 141 cases, including 12 deaths, were reported in 2017; 117 cases, including nine deaths, were reported in 2018. The proportion of botulism cases related to consumption of fish products increased from 2016-2018. Out of 117 botulism cases reported in 2018, 63 percent were connected to the consumption of dry or smoked fish purchased in retail or preserved at home.

Of the 98 botulism cases reported in 2019, 44 percent of cases were connected to consumption of fish; 60 percent of those cases were in the Zaporozhye, Chernigov, Cherkasi and Dnepropetrovsk regions that are located by Dnepr, one of the largest rivers in Ukraine. Many people in this region are recreational fishermen and preserve fish they catch. We investigated the cases of botulism from these regions.

Currently, we investigated 13 botulism cases in the Zaporozhye and Chernigov regions. The IES-Ukraine residents reviewed medical charts and interviewed cases to identify the fish preparation process. Our investigation revealed that most cases consumed home-prepared dry fish. The investigation identified violations of dry fish preparation, included storing uneviscerated fish before open air drying and placing it in a plastic bag to protect from insects. In addition, the amount of salt that was added to the fish before drying was not specifically identified.

We will continue the investigation of cases from the other high-risk regions.
ZAMBIA FIELD EPIDEMIOLOGY TRAINING PROGRAM

Graduation of Cohort 4 Frontline FETP Residents

From August 5-9, 2019, the Zambia Field Epidemiology Training Program (ZFETP) conducted a third and last workshop for the fourth cohort of the frontline Field Epidemiology Training Program (FETP) comprised of 21 residents; all of the 21 residents graduated successfully (Figures 1 and 2).

Participation in International Conferences

Three recent graduates from the Zambia Advanced FETP have been selected to participate in the 10th TEPHINET Global Scientific Conference that will be held in Atlanta from 28 October through 1 November 2019. Two of the residents will make poster presentations while one will give an oral presentation.

Cohort Three Advanced FETP

Current cohort three of Advanced FETP completed the six months classroom work at the University of Zambia and have all reported in their field sites. Prior to reporting in their field sites, the field supervisors and residents were called in one central place for an orientation meeting on the expected deliverables in the field including roles of mentors and supervisors (Figures 3 and 4). During the meeting, memorandums of understanding for field placements were signed.
Field Placements for Current Advanced Residents

Two residents have been assigned to National Malaria Elimination Centre; two at Zambia National Public Health Institute under surveillance, and epidemic preparedness and response; two at Ministry of Health department of public health; one and a tropical disease research center; and three at provincial health offices. All the 10 residents have settled well and on course with their deliverables (Figure 5).

![Figure 5: One of the residents at the field sites; office space and furniture provided.](image)

New Resident Advisor for Zambia

Dr. Jonas Hines arrived in Zambia to take over from Dr. Ellen Yard; both were present during the orientation for current residents with the supervisors; this was strategic to allow for continuity of the support to Zambia FETP.