Building Global Applied Epidemiology Capacity through Field Epidemiology Training Programs

2018 ANNUAL PROGRESS REPORT OF THE TEPHINET SECRETARIAT
Contents

4 A Message from the TEPHINET Advisory Board Chairman
5 Introducing the Global Field Epidemiology Roadmap
7 2018 By the Numbers
8 In Memoriam
10 Who We Are
14 Programs
16 Features:
   - Spotlight on the Cameroon Field Epidemiology Training Program
   - Spotlight on the Bangladesh Field Epidemiology Training Program
   - Until There Are None: Immunizing All Children is Key to Eradicating Polio
26 2018 TEPHINET Conferences
32 2018 Projects
40 TEPHINET Advisory Board
41 TEPHINET Secretariat Staff
43 Acknowledgements
A Message from the TEPHINET Advisory Board Chairman

Dear Friends and Partners,

Greetings from the TEPHINET Advisory Board. The rapid growth of our network and TEPHINET’s constant striving to add value in the realm of global public health resulted in a number of important activities in 2018. To this end, we are proud to share some of TEPHINET’s achievements this year and our future outlook.

TEPHINET continues its commitment to improving the quality of field epidemiology training programs (FETPs) and conducted a complete update to improve our accreditation-related documentation, including application forms and reference documents. The fourth cycle of FETP accreditation is currently underway. In 2018, the TEPHINET Global Accrediting Body accredited five field epidemiology training programs as a result of the third cycle of accreditation. The programs accredited in that cycle are based in Australia, Colombia, Nigeria, South Africa and Tanzania.

In April 2018, TEPHINET and CDC co-hosted the 2018 FETP International Night in Atlanta, Georgia, United States, continuing a tradition going back nearly 20 years. This event gives FETP trainees and graduates from around the world the opportunity to present their work at the annual Epidemic Intelligence Service (EIS) Conference. A total of twenty-one poster presentations and six oral presentations were accepted from a pool of more than 300 authors of scientific abstracts related to field epidemiology.

Participants from the TEPHINET Secretariat and network of programs and partners participated in a meeting organized by The Task Force for Global Health at the Rockefeller Foundation Bellagio Center in June 2018 to develop a roadmap for building global epidemiological capacity through field epidemiology training programs. The guiding vision that emerged from the workshop was that “Every country in the world will have effective applied epidemiology capacity.” There was a reframing of the FETP initiative as a true, multi-partner global enterprise with a variety of leaders, stakeholders, implementing partners, and funders, and a set of seven recommendations were crafted for improving and accelerating progress toward the FETP vision. This is a work-in-progress and will be the launch pad of TEPHINET’s future trajectory.

TEPHINET hosted the July 2018 TEPHINET Program Directors Meeting in Johannesburg, South Africa in conjunction with the South African Field Epidemiology Training Program (SAFETP), convening leadership from approximately 50 of our member FETPs and partner regional FETP networks. The meeting also served as a forum to get feedback on several strategic initiatives that TEPHINET is undertaking, including: improvement of the quality of TEPHINET scientific conferences; the development of an FETP alumni network to facilitate workforce mobilization during health emergencies; the development of a new continuous learning strategy to support the needs of TEPHINET’s FETP network; and many more.

TEPHConnect, our global FETP alumni online community, grew to more than 1,000 members in 2018 (and now has more than 1,600). In addition, as part of our developing learning program, TEPHINET launched e-learning modules on public health laboratory core competencies, cancer prevention and control, and entomology in public health to meet the needs of the programs and networks in general.

Moving forward, TEPHINET plans to provide more frequent progress updates between our biennial Program Directors Meetings in order to keep our network engaged with and informed about our work and to provide more opportunities for feedback throughout the year. The Advisory Board remembers the inspirational leadership of a colleague and dear friend, Dr. Dioniso Herrera Gubert, who passed on in December 2018 after battling a long illness. His smile and warm embrace remain with us as we forge ahead, ever mindful of our shared vision that “Every country in the world will have effective applied epidemiology capacity.”

Sincerely,

Carl Reddy, MB.BCh, MSc, FCPHM, DA
Chairman, TEPHINET Advisory Board
Director, South African Field Epidemiology Training Program (SAFETP)

Dear Reader,

I am excited to have this opportunity to share with you some key information about the development and implementation to date of the Global Field Epidemiology Roadmap, the guiding framework for a new, far-reaching initiative to modernize, strengthen, and expand Field Epidemiology Training Programs (FETPs) worldwide. Since its founding at CDC decades ago, the FETP initiative has become an enormously successful, complex, multi-partner undertaking to improve public health—a global FETP enterprise defined as the totality of stakeholders, targets, standards, agreements, and technologies supporting this work. After 38 years of steady investment by agencies around the world, there are now 86 FETPs serving more than 160 countries. This enterprise provides tremendous benefits to global public health, and the world must keep it going for the health of future generations.

The Global Field Epidemiology Roadmap begins to outline how we can ensure the longevity of the FETP enterprise. The Roadmap was the result of a meeting that The Task Force for Global Health convened last June with leaders in global field epidemiology capacity-building at the Rockefeller Foundation Bellagio Center in Italy. With a common vision that every country in the world should have the applied epidemiology capacities needed to protect and promote the health of its own population, the ‘Bellagio group’ spent five days discussing some of the known challenges facing FETPs and crafting recommendations for solving them.

The goals of the meeting were to:

- craft a guiding, long-term vision for the global FETP enterprise,
- develop actionable recommendations that would address a set of long-standing issues and barriers to success, in areas such as quality assurance, communication, graduate career paths, cross-border deployments for outbreak investigations, and incorporation of new analytic techniques and technologies into the FETP training and field experience,
- optimally align the work of the various partners and stakeholders, and
- assure effective in-country organizational integration and sustainable long-term funding for this global capacity-building effort.

The group developed a seven-step framework for action. This framework, presented in full in the Roadmap, includes recommendations that countries develop epidemic intelligence service workforce targets at each program level (Frontline, intermediate and advanced); accelerate the integration of FETPs within their public health institutions; improve program quality and accountability; ensure a cadre of trained field epidemiologists who can contain an outbreak at the source; and respond rapidly to an international public health emergency; and assure sustainable funding.

To capitalize on the momentum generated at the Bellagio meeting, we convened a follow-up workshop in February 2019 at WHO headquarters in Geneva. There, participants took the first steps toward operationalizing the Roadmap by drafting a work plan based on the Bellagio recommendations. This work plan is to be executed under the guidance of a newly formed Strategic Leadership Group (SLG), which is to be co-chaired by senior global health leaders at CDC and WHO. This SLG is very much a work-in-progress, and we will need the full engagement of our partners throughout the global FETP network to develop it further. But we believe this approach will elevate the visibility of FETP worldwide, and better integrate the FETP enterprise into global programs and priorities related to health workforce development and global health security.

In the coming months, look to TEPHINET to provide more information about this draft plan in order to get vital input from FETP directors, FETP alumni, funders, and other stakeholders across the global FETP enterprise.

As a reader of TEPHINET’s annual report, you are likely a member of this wide network of stakeholders. I invite you to read the Global Field Epidemiology Roadmap, available in full at www.tephinet.org/the-global-field-epidemiology-roadmap.

We have much work yet to do to build demonstrably effective applied epidemiology capacity throughout the world, but the goal is now clearly visible, and the path to success lies before us.

Sincerely,

Patrick O’Carroll, MD, MPH
Sector Head, Health Systems Strengthening
The Task Force for Global Health
2018 By the Numbers

letters of intent submitted from 35 countries for the 2018-2019 non-communicable disease field epidemiology projects TEPHINET mini-grant opportunity

2 programs* became TEPHINET members in 2018, bringing our total number of member programs to 71

field epidemiology training programs accredited

accreditation workshops held for FETP leadership

regional scientific meeting co-hosted on melioidosis in the Americas

biosafety and biosecurity workshops supported in Egypt, Morocco and Yemen

217

completed the implementation of frontline-level field epidemiology training programs in 13 countries across Latin America and the Caribbean as a response to the Zika outbreak

3

scientific conferences held*

More than 500 field epidemiologists attended TEPHINET regional scientific conferences

1051 scientific abstracts received

267 oral and poster presentations given

14 pre-conference workshops offered

18 plenary sessions hosted

12 FETP site visits conducted by TEPHINET staff in

Bangladesh
Brazil
Cameroon
Colombia
Dominican Republic
Kenya
Pakistan
Paraguay
Peru
Tanzania
Uganda
Uruguay

50 projects implemented by the TEPHINET Secretariat aimed at detecting, preventing and eliminating specific diseases and strengthening field epidemiology training around the world

4 e-learning modules** launched on:

• Risk communications
• Entomology in public health
• Public health laboratory core competencies
• Cancer prevention and control in low- and middle-income countries

41,000 visitors to tephinet.org

More Than

TEPHIConnect, our global FETP alumni network, grew into a community of more than 1500 members

The TEPHINET Secretariat grew to 20 staff members

Scientific Conferences Held*

• Including our first member FETP-V (field epidemiology training program for veterinarians)

*Including the 2018 FETP International Nights, the 10th TEPHINET Regional Scientific Conference of the Americas, and the 9th Southeast Asia and Western Pacific Bi-regional TEPHINET Scientific Conference

**E-learning modules can be found on tephinet.org

Left: Tawatchai Apidechkul (Thailand FETP)
In Memoriam

An Enduring Legacy: A Tribute to Our Late Director, Dr. Dionisio Herrera

On December 4, 2018, the global field epidemiology community lost a visionary leader, nurturing mentor, fierce champion and generous friend. It is with unspeakable sadness that the TEPHINET Secretariat announces the passing of our director, Dr. Dionisio Jose Herrera Guibert.

Always with a ready smile, and always willing to listen and help, Dr. Herrera—or “Dio,” as he was affectionately known—was, to most of his colleagues, a friend first and a coworker second. His genuine interest in people gave him an almost magical ability to build connections and create opportunities with colleagues in more than a hundred countries regardless of culture or geographic distance. As we in the global health arena know, overcoming precisely these obstacles is one of the biggest challenges to achieving results in our field. The global enterprise of field epidemiology training programs benefited from having a leader in TEPHINET who was able to do this with relative ease. Dr. Herrera helped TEPHINET grow, but he also helped develop and/or expand regional FETP networks in Africa, Latin America, Southeast Asia, and the Eastern Mediterranean. Public health systems around the world are stronger because of his tireless efforts.

When Dr. Herrera took the helm of TEPHINET in March of 2009, our network consisted of 30 field epidemiology training programs working in the same number of countries. Today, our network comprises 71 programs serving more than 100 countries. Upon Dr. Herrera’s arrival, the TEPHINET Secretariat operated with four staff members; today, we have a team of 20. Overseeing all of this growth was a leader unmatched in his patience and compassion for others.

On October 30, 2018, The Task Force for Global Health honored Dr. Herrera with its inaugural Consequential Compassion Award for Extraordinary Achievement in Global Health in a ceremony held at its headquarters in Atlanta, Georgia, USA. In attendance were members of his family, including his wife, children, and parents. Dr. Herrera often remarked that his family motivated his work. It is no wonder, then, that under his leadership, TEPHINET became more than a professional network; it became a family that worked together, and together we will continue his legacy.

- TEPHINET Secretariat

Visit our tribute page at tephinet.org/dionisio
Who We Are

TEPHINET: A Global Network of Field Epidemiology Training Programs

First incorporated in 1997, Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) is a global network of field epidemiology training programs (FETPs), trainees, and graduates. Currently, TEPHINET comprises 71 programs actively training field epidemiologists in more than 100 countries.

TEPHINET member programs include those with laboratory and veterinarian education components. Overall, TEPHINET member programs have graduated more than 12,000 alumni who play a critical role in improving global health security by strengthening country capacity to detect and respond to disease outbreaks and other public health problems.

With a secretariat based in Atlanta, Georgia, USA and an Advisory Board of representatives from all six World Health Organization-defined international regions, TEPHINET is the only global network of FETPs and works closely with regional FETP networks and sub-regional and national programs.

Mission

To empower and mobilize a competent field epidemiology workforce to serve all people through standardized training, experiential learning, training program quality improvement, mentoring, and knowledge exchanges in order to connect epidemiologists better, faster and with quality across the globe.

Vision

All people are protected by a field epidemiology workforce capable of detecting and responding to health threats.

What We Do: Our Key Work Areas

The TEPHINET Secretariat works on building FETP capacity through the following general work areas:

- **FETP quality improvement:** Through TEPHINET’s Accreditation Program, Accreditation, FETPs have the opportunity to align with common standards to support quality training. FETPs can apply for accreditation status to the TEPHINET Global Accrediting Body.
- **Workforce mobilization:** Through TEPHIConnect, the online FETP alumni networking platform, and in collaboration with the regional networks and programs, TEPHINET aims to facilitate the mobilization of experienced and qualified epidemiology staff to support public health emergency response.
- **Continuous learning:** Through its continuous learning program, TEPHINET aims to increase the number of learning opportunities and collaboration opportunities offered within the network.
- **Knowledge exchange:** TEPHINET will facilitate knowledge exchange through meetings and scientific conferences, via our website, social media platforms, publications and through TEPHIConnect.
- **Operational support to FETPs:** TEPHINET’s project management team offers financial, administrative, human resources and logistical support to FETPs to implement workshops and to address disease-specific elimination initiatives. Projects are primarily implemented through sub-contacts and consultants hired by TEPHINET through grant funding from the Centers for Disease Control and Prevention (CDC), the World Health Organization (WHO) and the U.S. Department of State.
Who We Are

The TEPHINET Secretariat

Based in Atlanta, the TEPHINET Secretariat currently functions with 21 staff members grouped into leadership, project management and operations teams. In addition, more than 100 international consultants work closely with TEPHINET Secretariat staff each year to implement public health projects around the world.

The Secretariat supports FETPs and public health initiatives through funded projects. Topical areas include FETP capacity building and quality improvement, polio eradication, non-communicable diseases, maternal and child health, birth defects, influenza, infection prevention and control, antimicrobial resistance, and vector-borne diseases. The Secretariat also provides support to FETPs through networking initiatives including communications and scientific conferences.

The TEPHINET Advisory Board

The Advisory Board of TEPHINET supports and evaluates the duties and functions of the network with the support of the Secretariat. In coordination with the Secretariat, the Advisory Board advises on the technical aspects of the network, is informed of the annual budget, and actively carries out the network’s purposes and objectives. The Advisory Board is composed of at least one person from each region as well as the director of the TEPHINET Secretariat and representative members from the following organizations who serve as liaisons: the World Health Organization (WHO), the Centers for Disease Control and Prevention (CDC), and the European Centre for Disease Prevention and Control (ECDC). A chairperson of the board is elected to his/her post by members of the network and serves a three-year term.

What is a Field Epidemiology Training Program (FETP)?

An FETP is a program that builds capacity in health service agencies by providing training in field epidemiology and other public health competencies in the context of health delivery systems. FETPs are modeled after the CDC’s Epidemic Intelligence Service (EIS), a two-year training program for health professionals interested in applied epidemiology. The success of EIS, which was founded in 1951, led to requests from other countries for similar programs. Today, more than 70 countries have FETPs.

FETPs are designed to strengthen public health systems in four specific ways:

1. To increase the number and quality of field epidemiologists in the public health workforce;
2. To develop worldwide capacity for timely detection, investigation of, and response to public health emergencies;
3. To improve capacity to collect public health data through improved disease surveillance systems and use the data collected effectively;
4. To promote the use of evidence-based recommendations in public health decision-making and policies.

The FETP Training Model

In response to the Ebola and Zika outbreaks of the last few years, TEPHINET has been working with local ministries of health and other partners to implement and evaluate frontline and intermediate field epidemiology training programs to build capacity more quickly to respond to future outbreaks.

On average, 75 percent of FETP training consists of a field training apprenticeship taking place in a host country or region which aims to teach the practical application of epidemiological methods in field-based settings. The remainder of FETP training takes place in the classroom. While precise program models differ by country, most advanced-level programs require two years of mentored, full-time work. Most programs are hosted by local ministries of health, while others are housed within a university or public health agency.

FETP graduates are certified by the institutions in which their programs function and work in areas including outbreak investigations, disease surveillance, public health program development, general public health services, and urgent health needs. In addition, many graduates return to their FETPs to serve as mentors or trainers.
Member Programs

The following programs are official members of TEPHINET (i.e., their membership requests have been approved by the TEPHINET Advisory Board):

**African Region**
- Angola Field Epidemiology and Laboratory Training Program
- Cameroon Field Epidemiology Training Program
- Ethiopia Field Epidemiology and Laboratory Training Program
- Ghana Field Epidemiology and Laboratory Training Program
- Guinea-Bissau Field Epidemiology Training Program
- Indian Ocean Field Epidemiology Training Program
- Kenya Field Epidemiology and Laboratory Training Program
- Mozambique Field Epidemiology and Laboratory Training Program
- Namibia Field Epidemiology Training Program
- Nigeria Field Epidemiology and Laboratory Training Program
- Rwanda Field Epidemiology and Laboratory Training Program
- South Africa Field Epidemiology Training Program
- Tanzania Field Epidemiology and Laboratory Training Program
- Uganda Field Epidemiology Training Program
- West Africa Field Epidemiology and Laboratory Training Program
- Zambia Field Epidemiology Training Program
- Zimbabwe Field Epidemiology Training Program

**European Region**
- Central Asia Regional Field Epidemiology Training Program
- European Programme for Intervention Epidemiology Training (EPINET) and the European Programme for Public Health Microbiology Training (EUPHEM)
- France Field Epidemiology Training Program
- Germany Postgraduate Training for Applied Epidemiology
- South Caucasus Field Epidemiology and Laboratory Training Program
- Spain Field Epidemiology Training Program
- Turkey Field Epidemiology Training Program
- United Kingdom Field Epidemiology Training Program

**Southeast Asian Region**
- India Field Epidemiology Training Program – Chennai
- India Field Epidemiology Training Program – Delhi
- India Epidemic Intelligence Service
- Indonesia Field Epidemiology Training Program
- Thailand Field Epidemiology Training Program
- Regional Field Epidemiology Training Program for Veterinarians

**Americas Region**
- Argentina Field Epidemiology Training Program
- Belize Field Epidemiology Training Program
- Brazil Field Epidemiology Training Program
- Canada Field Epidemiology Program
- Central America Field Epidemiology Training Program
- Colombia Field Epidemiology Training Program
- Costa Rica Field Epidemiology Training Program
- Dominican Republic Field Epidemiology Training Program
- El Salvador Field Epidemiology Training Program
- Guatemala Field Epidemiology Training Program
- Haiti Field Epidemiology Training Program
- Honduras Field Epidemiology Training Program
- Nicaragua Field Epidemiology Training Program
- Mexico Field Epidemiology Training Program
- Panama Field Epidemiology Training Program
- Paraguay Field Epidemiology Training Program
- Peru Field Epidemiology Training Program
- United States Epidemic Intelligence Service

**Eastern Mediterranean Region**
- Afghanistan/Tajikistan Field Epidemiology Training Program
- Egypt Field Epidemiology Training Program
- Iraq Field Epidemiology Training Program
- Jordan Field Epidemiology Training Program
- Morocco Field Epidemiology Training Program
- Pakistan Field Epidemiology and Laboratory Training Program
- Saudi Arabia Field Epidemiology Training Program
- Yemen Field Epidemiology Training Program

**Western Pacific Region**
- Australia Master’s in Applied Epidemiology
- Cambodia Applied Epidemiology Training Program
- China Field Epidemiology Training Program
- Hong Kong Field Epidemiology Training Program
- Japan Field Epidemiology Training Program
- Lao Field Epidemiology Training Program
- Malaysia Epidemic Intelligence Program
- Mongolia Field Epidemiology Training Program
- Papua New Guinea Field Epidemiology Training Program
- Philippines Field Epidemiology Training Program
- Singapore Field Epidemiology Training Program
- South Korea Field Epidemiology Training Program
- Taiwan Field Epidemiology Training Program
- Viet Nam Field Epidemiology Training Program

*A TEPHINET-accredited program. Learn more at tephinet.org/accreditation*
In 2016, Cameroon weathered an avian flu outbreak. That same year, there was a catastrophic railway accident when a crowded passenger train overturned while in transit, killing 70 people and injuring nearly 600. In 2018, cholera re-emerged. Though each of these public health emergencies presented different challenges and required various needs, in each circumstance, graduates and residents of the Cameroon Field Epidemiology Training Program (CAFETP) were on site to provide leadership, support, and most importantly, expertise.

Launched in 2010, CAFETP is a joint effort of the Ministry of Public Health and the Ministry of Higher Education through University of Yaoundé I and Buea University in Cameroon. TEPHINET supports CAFETP by providing technical and programmatic support. CAFETP was established to increase the number of trained field epidemiologists and to strengthen Cameroon’s disease surveillance and emergency response systems.

“CAFETP was developed in Cameroon to strengthen health personnel capacity to respond to public health emergencies, monitor diseases, conduct research activities on priority public health issues, and, finally, to improve communication and networking in the country and throughout the region,” says Dr. Armel Evouna Mbarga, coordinator for the advanced training program of CAFETP.

The program’s main goal is to strengthen the public health workforce. Its strategy for doing so is to continue to provide advanced level training for medical and veterinary doctors as well as frontline training to regional and district level surveillance staff from the Ministry of Public Health, the Ministry of Livestock, Animal and Fisheries Industries, and the Ministry of Justice and Defense.

“CAFETP intends to be a platform for training health personnel to perform prevention, detection, management and response to public health events,” says Dr. Bohimbo M. Rose-Carole, Frontline FETP coordinator for CAFETP. “Through frontline and advanced trainings, we help develop practical skills in field epidemiology.”

Advanced FETP training is designed to give residents practical learning experiences. When residents are not in the classroom, they actively participate in different meetings and in the development of processes and tools to address surveillance or outbreak investigation during their internship in key surveillance departments or programs of the Ministry of Public Health. One of the deliverables of the advanced training is for residents to be actively involved in outbreak investigations. If there is a rise in, or risk of, a disease in the region, and the Emergency Operations Center (EOC) decides to plan for an outbreak investigation, a resident will always be part of the team and sometimes leads the activity. Since 2016 alone, more than 40 outbreak investigations have been conducted covering various kind of diseases including vaccine-preventable diseases, zoonoses, cholera and other water-related diseases.

Once residents finish the two-year advanced program, they are appointed to different positions within the Ministry of Public Health. They might continue the work they were doing as residents or bring their expertise to a new role. CAFETP has alumni occupying not only key surveillance positions in Ministry of Public Health departments and programs, but also alumni who are involved in international deployments. Alumni are supporting the Ebola outbreak response in the Democratic Republic of Congo (DRC), and some have applied to support the response to the cholera outbreak in Mozambique.

As a regional program that accepts residents from Central African Republic (CAR) and Chad as well as Cameroon, CAFETP has a broader reach. These residents graduate from the two-year development of processes and tools to address surveillance or outbreak investigation during their internship in key surveillance departments or programs of the Ministry of Public Health. One of the deliverables of the advanced training is for residents to be actively involved in outbreak investigations. If there is a rise in, or risk of, a disease in the region, and the Emergency Operations Center (EOC) decides to plan for an outbreak investigation, a resident will always be part of the team and sometimes leads the activity. Since 2016 alone, more than 40 outbreak investigations have been conducted covering various kind of diseases including vaccine-preventable diseases, zoonoses, cholera and other water-related diseases.

Once residents finish the two-year advanced program, they are appointed to different positions within the Ministry of Public Health. They might continue the work they were doing as residents or bring their expertise to a new role. CAFETP has alumni occupying not only key surveillance positions in Ministry of Public Health departments and programs, but also alumni who are involved in international deployments. Alumni are supporting the Ebola outbreak response in the Democratic Republic of Congo (DRC), and some have applied to support the response to the cholera outbreak in Mozambique.

As a regional program that accepts residents from Central African Republic (CAR) and Chad as well as Cameroon, CAFETP has a broader reach. These residents graduate from the two-year
advanced training program and take the knowledge they have gained back to their countries, where they address surveillance issues, investigate outbreaks and contribute to their ministries of health.

“We have so many success stories at CAFETP,” says Dr. Evouna. “In 2017, CAFETP received accreditation from TEPHINET, which means that CAFETP aligns with common standards that support quality training and is recognized for its value in supporting country public health priorities. In December 2018, four graduates from CAFETP cohorts two, three and four were assigned to new positions in the Ministry of Health in CAR. One was designated as the general director of epidemiology and disease control. The second one is now the director for family health and population. The third is the director of epidemiological surveillance and emergency management in public health, and the fourth is a department chief within the CAR Ministry of Health. In Chad, one graduate from cohort five moved from district medical officer to deputy director of occupational work, whose main task is to assess professional risk. CAFETP is honored when our graduates are nominated and assigned to higher posts with greater responsibility.”

Currently, CAFETP has graduated five cohorts and currently boasts 79 epidemiologists. Thirty-one residents in Cameroon, Chad and CAR are still in training. Since the implementation of Frontline FETP in 2016, approximately 600 key disease surveillance staff from the regional and district levels from the Ministry of Health and the Ministries of Livestock and Defense, as well as prison and police departments, have been certified in frontline field epidemiology in eight out of 10 regions in Cameroon. Graduates of the advanced program have been instrumental in leading this effort.

CAFETP, its residents and graduates have been recognized numerous times for their active contributions in the incident management system in response to many health events, including an avian flu outbreak in 2016 in three regions, a railway accident in the Center region in 2016, a cholera outbreak in North and Far North regions in 2018, and pediatric eruptive fever in 2017.

“Residents are involved in almost all outbreak investigations, and sometimes, they are the team leaders of the outbreak or public health interventions in the field,” Dr. Evouna says. “They are deeply involved in each incident management system once it’s activated.”

Through their training, CAFETP residents become more effective epidemiologists who have stronger research skills and share scientific information with their peers and professionals in their field. They have been recognized for their contributions to the research and scientific communities. For example, CAFETP residents have received scientific awards during international conferences, including first place in scientific innovation at the 6th AFENET Scientific Conference (2016), the first and second place prizes for best oral presentation at the 7th AFENET Scientific Conference (2018), and third place for best oral presentation at the 9th TEPHINET Global Scientific Conference (2017). A CAFETP graduate co-chaired a session at the American Society for Tropical Medicine and Hygiene conference in Atlanta, Georgia, USA in 2016. Even as the program grows stronger, challenges remain.

“One of our main challenges is continuously researching funding sources to ensure our sustainability,” says Dr. Alain G. Etoundi Mballa, CAFETP program director, who is also director of the Department for the Control of Diseases, Epidemics and Pandemics. “We intend for the program to be a hub in field epidemiology training for activities related to surveillance in the Central Africa region.”

Additionally, gaps persist in surveillance and emergency response systems. Fortunately, CAFETP residents are challenging themselves to develop innovative approaches to address these gaps. “CAFETP is a tool for change,” says Dr. Etoundi.

One of the program’s innovations is an outbreak investigation toolkit, a framework which includes documents and checklists that expedite the approval and funding processes for investigations and the process of assembling investigation teams. Once in place, teams consisting of residents and graduates can proceed to the field more quickly. The goal is to reduce technical and administrative delays and to be ready to intervene within 48 hours of notification to avoid the spread of disease due to late detection.

“To prepare an investigation takes some time,” Dr. Bohimbo explains. “We decided to set up an outbreak investigation toolkit that includes logistics, technical information, schedules, communication tools and necessary forms for different diseases in Cameroon and CAR. These drafted files can be adapted to the disease at hand, facilitating the preparation of all technical and administrative materials in relation to the field investigation. Having all of those things in one place allows us to get to the implementation phase much more quickly.”

As CAFETP residents continue to roll out the outbreak investigation toolkit and other strategic initiatives, it’s clear that there is pride among both residents of CAFETP and its leadership, especially for their persistence in the face of significant obstacles.

“Our residents are multitasking, they are willing to learn, and they accept challenges,” says Dr. Evouna.
Spotlight on the Bangladesh Field Epidemiology Training Program

Established in 2013, the Field Epidemiology Training Program (FETP) of Bangladesh is still in its beginnings as an organization. However, it has been quick to make an impact on public health in the country.

“Although FETP is a young program in Bangladesh, the country is learning the importance of having field epidemiologists very quickly,” says Malick Masum Billah, TEPHINET technical consultant, who was also the program’s first graduate. “Through the work of our graduates, the FETP is becoming well-known. We find that we are creating a demand.”

Started in an effort to strengthen public health through training field epidemiologists in Bangladesh, the FETP is a collaborative initiative between the Institute of Epidemiology, Disease Control and Research (IEDCR) in Dhaka and the US Centers for Disease Control and Prevention (CDC). The program, which spans two years, is supervised by a steering committee headed by the Secretary of Health of the Ministry of Health and Family Welfare.

“In Bangladesh, the public health professional sector is not enriched with field epidemiologists or other support for the prevention and control of diseases,” explains Salim Uzzaman, a public health scientist with IEDCR, coordinator with the Global Health Security Agenda program for Bangladesh and course coordinator for the FETP. “To develop a strong public health sector, we need public health fellows who have graduated from the FETP with leadership and managerial skills. Not only can we use these fellows for outbreak investigation and response and for surveillance activities, but we can also use their learned skills in improving public health system management.”

Uzzaman notes that there is much work to do to address the many public health concerns in Bangladesh. FETP fellows are useful in communicable and non-communicable disease control programs.

“We have achieved a lot in the control of infectious diseases, but in a country like Bangladesh, due to its high density population and incidence of natural calamities, we still have many infectious diseases;” says Uzzaman. “In 2017, around one million people, Forcibly Displaced Myanmar Nationals (FDMNs), were in Cox’s Bazar, Bangladesh, and they brought with them some infectious diseases like diphtheria, cholera and measles because they were not properly vaccinated for immunization. FETP fellows also participate in health risk assessment of the FDMN population. In the non-FDMN population of Bangladesh, we have had a re-emergence of cholera; we are yet to contain Nipah virus infection, and we have also had a re-emergence of measles outbreaks in many pockets of the country. We also have a challenge with safe water supply and preventive health education with different types of populations.”

FETP fellows, who are government physicians and veterinarians, are selected objectively based on their performance. The program provides both basic-level frontline and two-year advanced field epidemiology training to the chosen fellows with the goal of training and sustaining a highly skilled public health workforce in Bangladesh.

With such a large job ahead of them, FETP fellows benefit from the leadership and guidance of advisers provided through TEPHINET. Priyakanta Nayak, a graduate of the CDC’s Epidemic Intelligence Service (EIS), is currently a senior advisor for the FETP through TEPHINET. His role in the FETP is extensive.

“As a senior advisor and acting resident advisor for FETP Bangladesh, I give mentorship to fellows, supporting them through their first and second years as trainees. I also give day-to-day technical support and provide program management to try and run the program in a holistic way.”

The emerging public health workforce, increasingly made up of FETP graduates, is tasked with leading outbreak investigations, strengthening surveillance systems, managing ongoing or new systems, providing evidence to make public health decisions based on solid data, consulting on epidemiologic methods, and training in surveillance and outbreak response for community health workers.

“FETP Bangladesh is the best public health program in country,” says Billah. “It is very different from the existing public health program, and the quality of the training is very high.”

With the understanding that field epidemiology training must be immersive to be truly effective, FETP Bangladesh fellows spend 80 percent of their time in a classroom and 20 percent in field placement. Fellows receive hands-on experience in various types of situations.

“FETP is a complete package of trainings that makes graduates capable of leading outbreak investigations, making rapid and feasible recommendations to control the outbreaks, communicating with different stakeholders, conducting surveillance to detect outbreaks and conducting research to prevent future outbreaks,” says Billah. “FETP trains us to be disease detectives.”

“We find that we are creating a demand.”

Through 2019, ten residents have graduated through the first two cohorts of the program’s advanced level training. One hundred and fifteen doctors and veterinary surgeons have completed its two-month FETP Frontline course, which was implemented in 2016. Following the completion of their training, approximately 80 percent of graduates from cohorts one and two have stayed in Bangladesh to work at the Ministry of Health and Family Welfare and to mentor fellows in cohorts three and four. As of 2018, FETP Bangladesh fellows have conducted 90 to 100 outbreak investigations.

Fellows have participated in various international conferences including TEPHINET global and regional conferences. In 2014, 2015 and 2016, consecutively, three fellows were awarded TEPHINET non-communicable disease mini-grants.

As the public health workforce in Bangladesh grows stronger, the ultimate goal is for Bangladesh’s government to assume control of the FETP.

“FETP Bangladesh is currently in a period of transition,” says Nayak. “Sustainability by the government is the goal, and we are working to ensure that the government is prepared to sustain the program on its own.”

Through 2015 and 2016, consecutively, three fellows were awarded TEPHINET global and regional conferences. In 2014, 2015 and 2016, consecutively, three fellows were awarded TEPHINET non-communicable disease mini-grants.

As the public health workforce in Bangladesh grows stronger, the ultimate goal is for Bangladesh’s government to assume control of the FETP.
Until There Are None: Immunizing All Children is Key to Eradicating Polio

TEPHINET, in close collaboration with CDC, continues to support N-STOP Pakistan to contribute, along with the Polio Eradication Initiative (PEI) partnership team, to achieving polio eradication in Pakistan.

28 days. That is when the cascade of intensive activities associated with Pakistan’s polio eradication campaign and the countdown to the next National Immunization Day (NID) will begin. For the Polio Eradication Initiative (PEI) partnership teams, including National Stop Transmission of Polio (N-STOP) officers, the next four weeks will be intense, with long hours, often in high risk areas with difficult terrain and security challenges.

The N-STOP program came to Pakistan in 2011 when the country declared polio a national emergency. It is one of several partners working on the Polio Eradication Initiative, a global program involving hundreds of thousands of field staff from the Government of Pakistan including provincial and district governments, the Department of Health, and staff from partner organizations including the World Health Organization, UNICEF, Bill and Melinda Gates Foundation, Rotary International, and others.

N-STOP is the result of collaboration among several organizations, including the Federal Ministry of National Health Services, Regulation and Coordination of the Government of Pakistan, the U.S. Centers for Disease Control and Prevention (CDC), the Expanded Program on Immunization (EPI) in Pakistan, provincial health departments in the country, and TEPHINET. Through CDC funding, TEPHINET provides operational support to the N-STOP program.

The Pakistan Field Epidemiology and Laboratory Training Program (FELTP), established in 2006, provides training to the N-STOP officers, who are public health professionals and medical doctors. Currently, 65 percent of the N-STOP workforce consists of FELTP Pakistan graduates; 9 percent consists of currently enrolled FELTP Pakistan fellows, and 26 percent consists of attendees of a four-week FELTP Pakistan basic screening course.

When the N-STOP program began, N-STOP officers were deployed in 16 high risk districts for six months. Now, there are 81 N-STOP officers deployed in all of Pakistan’s provinces and 61 of its high priority districts, including 12 officers at divisional and provincial levels.

28 days. That is when the cascade of intensive activities associated with Pakistan’s polio eradication campaign and the countdown to the next National Immunization Day (NID) will begin. For the Polio Eradication Initiative (PEI) partnership teams, including National Stop Transmission of Polio (N-STOP) officers, the next four weeks will be intense, with long hours, often in high risk areas with difficult terrain and security challenges.

The N-STOP program came to Pakistan in 2011 when the country declared polio a national emergency. It is one of several partners working on the Polio Eradication Initiative, a global program involving hundreds of thousands of field staff from the Government of Pakistan including provincial and district governments, the Department of Health, and staff from partner organizations including the World Health Organization, UNICEF, Bill and Melinda Gates Foundation, Rotary International, and others.

N-STOP is the result of collaboration among several organizations, including the Federal Ministry of National Health Services, Regulation and Coordination of the Government of Pakistan, the U.S. Centers for Disease Control and Prevention (CDC), the Expanded Program on Immunization (EPI) in Pakistan, provincial health departments in the country, and TEPHINET. Through CDC funding, TEPHINET provides operational support to the N-STOP program.

The Pakistan Field Epidemiology and Laboratory Training Program (FELTP), established in 2006, provides training to the N-STOP officers, who are public health professionals and medical doctors. Currently, 65 percent of the N-STOP workforce consists of FELTP Pakistan graduates; 9 percent consists of currently enrolled FELTP Pakistan fellows, and 26 percent consists of attendees of a four-week FELTP Pakistan basic screening course.

When the N-STOP program began, N-STOP officers were deployed in 16 high risk districts for six months. Now, there are 81 N-STOP officers deployed in all of Pakistan’s provinces and 61 of its high priority districts, including 12 officers at divisional and provincial levels.

N-STOP officers in Pakistan are instrumental in District Polio Control Rooms in bridging the gap between health department officials, district administration officials and PEI partnership staff in all phases of an immunization campaign, including planning and preparation, implementation, and post-campaign monitoring and evaluation.

In the planning and preparation phase, they will start their days at 8:30 a.m. at the District Polio Control Rooms/Emergency Operation Centers (EOC) with pre-campaign activities. This is a huge effort which requires teamwork and close coordination to implement activities, review results and assess failures of the last campaign before moving on to preparations of supplementary immunization activity (SIA) plans.

During campaigns, N-STOP officers start their day at 7:30 a.m. with team deployment, field monitoring and supervision of campaign activities. They will continue to work up to 11:30 p.m. after the facilitation and completion of district evening review meetings. In the post-campaign days that follow, they contribute to post-campaign evaluations including LQAS (Lot Quality Assurance), continue to coordinate and make plans for tracking missed children in the campaign, and devise strategies for reaching and vaccinating them.

At an efficient and steady pace, District Polio Control Room officers will move into planning for the next campaign, which includes formulating a timeline and assigning responsibilities. After the team assesses needs for the next campaign, trainings will begin so that staff are adequately prepared for the vaccination campaign. Close collaboration and effective communication are critical.

On day one of the campaign, N-STOP officers will start their day from the District Polio Control Room. Teams coordinate and then go into the communities to support frontline polio teams and supervise and monitor the quality of immunization campaigns—often through challenging terrain and with limited security—to ensure that every child is vaccinated against polio.
"While working in Pakistan, there’s not just one challenge — there are many."

– Dr. Mumtaz Ali Laghari, deputy team lead for N-STOP

Brigadier (R) Dr. Kamal Soomro, National Coordinator of the N-STOP program, supervises polio vaccination teams during house-to-house visits during the September 2018 NID in high-risk Union Council 4 (Gujra), Gadaan town, Karachi, Pakistan. (Photo: TEPHINET)

According to Pakistan’s polio eradication program, there has been a 96 percent reduction in cases of polio in Pakistan since 2014. In that year, Pakistan experienced 306 cases. In 2019—just five years later—there have only been six cases of polio reported in Pakistan.

With success comes continued vigilance in polio eradication. One challenge to meeting that goal is that many children and their families in Pakistan are highly mobile.

“We are reaching the majority of children, but we are not reaching every child each time because of the complicated mix of parental hesitancy to vaccinate and the high mobility of people in Pakistan from place to place,” says Soomro. “We are employing many different strategies to reach persistently missed children.”

One way Pakistan’s polio eradication program is tackling the challenge of mobile populations is by setting up permanent cross-border transit points (on the Pakistan-Afghanistan border), across the country at provincial and district borders, and at other important transit points such as bus stops, railway stations, airports and highways. In January 2019 alone, 15 million children were vaccinated at permanent transit points, and a total of 39.4 million children were vaccinated during the January 2019 National Immunization Days. Yet, if just one child in any country has polio, children in all parts of the country remain at risk.

“We understand the world is looking at us with high concern,” says Laghari. “Pakistan holds the key to eradication. We are ready and committed to finish the job.”

Dr. Sanam (N-STOP Officer for Jamshoro, Sindh) taking cluster from a high-risk mobile population in Union Council Sansawar 1 during NID catch-up in January 2019. (Photo: N-STOP)
2018 TEPHINET Conferences

Facilitating the Exchange of Public Health Knowledge to Develop a Better-prepared Workforce

TEPHINET conferences provide opportunities for trainees and graduates of our member programs to present their work before international audiences of epidemiologists and public health experts. The networking and information-sharing occurring at TEPHINET conferences are invaluable efforts toward building the capacity of public health systems in all countries, particularly low- and middle-income countries.

2018 FETP International Nights at the 67th Annual EIS Conference: Improving Global Health Security through Field Epidemiology Training, Surveillance, and Outbreak Response

April 16-19, 2018 – Atlanta, Georgia, USA

Each year, TEPHINET and CDC co-host the FETP International Nights during the Epidemic Intelligence Service (EIS) Conference. International Nights are an EIS Conference tradition weaving global perspectives into a domestically-focused event. FETP trainees and graduates whose abstracts are selected present the results of their field studies through oral and poster presentations. This event also brings together FETP and EIS trainees to share experiences and expand the global network of disease detectives.

- 364 scientific abstracts submitted
- 21 poster presentations
- 6 oral presentations
- 84 field epidemiology photo contest entries displayed

Award Winners

William H. Foege Award for Best Oral Presentation:
Phoebe Hilda Alitubeera (Uganda): “Food poisoning outbreak caused by poisonous cassava flour: Kasese District, Uganda, September 2017”

Jeff Koplan Award for Best Poster:
Itumeleng Moema (South Africa): “Outbreak of culture-confirmed Candida auris bloodstream infection in the neonatal unit of a public-sector hospital, South Africa, July through September 2017”

Director’s Award for Excellence in Epidemiology and Public Health Response:
Brazil Field Epidemiology Training Program (Programa de Treinamento em Epidemiologia Aplicada aos Serviço do SUS [EpiSUS]) for its work in responding to the Zika virus and yellow fever outbreaks

Field Epidemiology Photo Contest Winners:
- 1st place: Fadhili Ngogo (Tanzania, top photo)
- 2nd place: Maureen Anyanwu (Nigeria, middle left)
- 3rd place: Kebkab Tilahun (Ethiopia, middle right)
- Facebook winner: Mariz Zheila Blanco (Philippines, right)
10th TEPHINET Regional Scientific Conference of the Americas: Health Security in the Americas: The Challenges of an Interdisciplinary Approach

May 15-18, 2018 – Cartagena, Colombia

TEPHINET co-hosted the 10th TEPHINET Regional Scientific Conference of the Americas with the National Institute of Health (Instituto Nacional de Salud) of Colombia, the host organization of the Colombia Field Epidemiology Training Program.

**Pre-conference Workshops**
- Hypothetical Scenarios for Approaches to Arbovirus Outbreaks
- TEPHINET Accreditation for FETPs
- FETP Capacity-building for Cancer Prevention and Control
- Risk Communication
- International Health Regulations (IHR)
- Use of Innovative Tools for the Entomological Surveillance of Aedes aegypti
- Building Capacity for the Study of Associated Neurological Syndromes: The Experience of Zika

**Field Site Visits**
Field site visits offer attendees valuable opportunities to observe unique aspects of local health systems.
- Case Analysis
- Emergency Operations Center
- Field Epidemiology and Community Surveillance in Public Health
- Public Health Surveillance in Colombia
- Port Surveillance and Health

**Sponsors**
- TEPHINET
- Instituto Nacional de Salud
- Centers for Disease Control and Prevention
- Instituto Nacional de Salud
- TEPHINET

**Plenary Sessions**
- Collaboration, health, and security
- The One Health approach as a focus for the treatment of zoonotic and vector-borne diseases
- Innovative strategies for public health surveillance
- Zika response activities across the region
- National security and health emergency response
- Risk management
- Sharing data and samples in accordance with the International Health Regulations (IHR)

**Field Epidemiology Photo Contest Winners:**
- 1st Place: Mario Alberto Chaparro Rodriguez (Colombia, top left photo)
- 2nd Place: Sandra Ocampo (Paraguay, top middle photo)
- 3rd Place: Roshan Seeramsingh (Trinidad and Tobago, top right photo)
- Facebook Winner: Mario Alberto Chaparro Rodriguez (Colombia, left photo)

**Award Winners**
- **Best Applied Public Health Intervention:**
  - Yasuani Cornelio (Dominican Republic): “Desarrollo de herramientas gráficas tecnodidácticas para el apoyo a la detección de enfermedades notificables con potencial epidémico en la República Dominicana, 2017”

- **Best Oral Presentation by a Trainee or Graduate of an Advanced/Intermediate FETP:**
  - Rita de Cássia Ferreira Lins (Brazil): “Evaluación del sistema de vigilancia epidemiológica universal de las meningitis, Paraná, Brasil, 2016”

- **Best Oral Presentation by a Trainee of an Advanced/Intermediate FETP:**
  - Sandoval Ordinola (Peru): “Brecha de control en la localidad La Encantada–Piura, Perú, 2015”

- **Best Poster Presentation by a Trainee or Graduate of an Advanced/Intermediate FETP:**
  - Nathalia Munoz (Colombia): “Variables climáticas y presentación de casos de Dengue–Cal., Valle del Cauca, Colombia, 2016–2017”

- **Best Poster Presentation by a Trainee of an Advanced/Intermediate FETP:**
  - Gustavo Giménez (Paraguay): “Evaluación del sistema de vigilancia epidemiológica universal de las meningitis, Paraná, Brasil, 2016”

- **Best Poster Presentation by a Trainee of an Advanced/Intermediate FETP:**
  - Bruna Dias Tourinho (Brazil): “Investigación de 512 casos de reacciones adversas a medicamentos (ADR) debido a somatropin use, Paraná State, Brazil, 2017”
9th Southeast Asia and Western Pacific Bi-regional TEPHINET Scientific Conference: Investing in Field Epidemiology Training Programs in the Era of the Sustainable Development Goals

November 5-9, 2018 – Vientiane, Laos (Lao People’s Democratic Republic)

TEPHINET co-hosted the 9th TEPHINET Bi-regional Scientific Conference with the South Asia Field Epidemiology and Technology Network (SAFETYNET) and the Lao Ministry of Health and Field Epidemiology Training Program.

Pre-conference Workshops

• Measuring the impact of Sustainable Development Goal 3, Non-communicable Disease Target: Planning a Cardiovascular Health Investigation
• Public Health Problem Analysis and Action Planning
• Scientific Writing
• TEPHIConnect and FETP Alumni Engagement
• Finding Our Way through the Data Forest: How Advances in Data Analytics Can Strengthen Operational Responses and How the FETPs Can Lead in This Joint Effort
• Translating Research Into Policy Recommendations

Field Site Visits

Field site visits offer attendees valuable opportunities to observe unique aspects of local health systems.

• National Center of Laboratory and Epidemiology
• Hadsayfong District Hospital
• COPE Visitor Center

Sponsors

• TEPHINET
• South Asia Field Epidemiology and Technology Network (SAFETYNET)
• Indo-Pacific Centre for Health Security, DFAT, Australia
• U.S. Centers for Disease Control and Prevention
• World Health Organization (WHO) Lao Country Office and Western Pacific Regional Office

Plenary Sessions

• Polio eradication: STOP (Stop Transmission of Polio), the response of the Lao FETP to a vaccine-derived poliovirus outbreak, and the response of the Papua New Guinea FETP to a polio outbreak this year
• One Health collaboration
• A pilot surveillance study on extended spectrum beta lactamase-producng E. coli in the Philippines
• Veterinary epidemiology training (FETP-V)
• The role of supervisors or mentors in field epidemiology training
• Australia’s Health Security Initiative
• The role of epidemiologists during natural disasters and health emergencies
• Joint External Evaluation (JEE) results for countries in the Southeast Asia and Western Pacific regions
• Overview of the Lao Field Epidemiology Training Program
• Capacity strengthening for health security in the Pacific through Strengthening Health Interventions in the Pacific (PHIP)
• Investing in and institutionalizing FETPs

Award Winners

Oral Presentation Winners

1st: Chiaki Kawakami (Japan):
“Enhancing preparedness against imported infectious diseases for the 2020 Tokyo Olympic and Paralympic Games”

2nd: Nichakul Pisitpayat (Thailand):
“A Pertussis Outbreak among Adolescents, Thailand, 2018: From Home to School”

3rd: Kiran Kumar Maramraj (India):
“Outbreak Investigation of Re-Emerging Diphtheria Infection, Telangana state, India, 2017”

Posters Presentation Winners

1st: Denisse Lou Manalili (Philippines):
“Public Health Response to the Avian Influenza Outbreak Among Poultry – Pampanga and Nueva Ecija, Philippines, August – September 2017”

2nd: Suhayza Sulaiman (Malaysia):
“Public Health Response to a Poultry Outbreak of Highly Pathogenic Avian Influenza (H5N1) in Kelantan, 2017”

3rd (tied): Jasper Kent Ola (Philippines):
“A Cohort Study of a Capillariasis Outbreak in a Rural village, Mindanao, Philippines, 2017”

3rd (tied): Ai Chia Ho (Malaysia):
“Acute Gastroenteritis Outbreak in the District of Pusa, Belont, Sarawak, 2017”

Field Epidemiology Photo Contest Winners:

1st place: Meliana Depo (Indonesia, top left photo)
2nd place: Nguyen Thi Bich Hue (Viet Nam, top right photo)
3rd place: Buntha So (Cambodia, bottom left photo)
Facebook winner: Davendra Kumar (India, bottom right photo)

UP NEXT:
The 10th Southeast Asia and Western Pacific Bi-regional TEPHINET Scientific Conference will be hosted by the Taiwan FETP in 2020.
2018 Projects

As an implementing partner to public health organizations, the TEPHINET Secretariat is granted funds to manage projects related to strengthening public health systems worldwide. TEPHINET provides direct support to several field epidemiology training programs through funding it receives for projects conducted in collaboration with these programs. This section lists the projects the TEPHINET Secretariat managed in 2018.

Multiple Regions

Advancing Birth Defect Counts through Mini-grants and Training
Funder: CDC  |  Countries: Afghanistan, Tanzania, Nigeria, Nigeria, Tanzania
To award small grants (mini-grants) on the topic of birth defect surveillance, risk factor identification, or birth defect prevention interventions. Mini-grants were awarded in Tanzania, Nigeria, and Afghanistan focused on surveillance of structural birth defects and birth defect prevention interventions.

Developing an FETP Cancer Curriculum
Funder: CDC  |  Countries: Worldwide
To develop an FETP cancer curriculum, including slide presentations, facilitator guides, case studies, and field exercises for four modules (cancer epidemiology, comprehensive cancer control programs, cancer registries, and cancer screening programs). The project also aims to provide technical assistance to FETP residents conducting non-research cancer projects through the awarding of mini-grants. The curriculum is available on the CDC FETP and TEPHINET websites for countries to increase capacity in cancer prevention, control, and surveillance.

Global Non-communicable Disease Activities
Funder: CDC  |  Countries: Worldwide with a focus on Latin America and the Caribbean
To support the CDC's Global NCD Branch's efforts to improve the prevention and control of NCDs through surveillance, capacity building and evidence generation. This includes working with partners to strengthen the evidence base of cardiovascular disease and its risk factors with a particular focus on hypertension through the Global Hearts Initiative.

Developing National Public Health Institutes
Funder: CDC  |  Countries: Botswana, Democratic Republic of Congo, Liberia, Namibia, Ukraine, Zambia, and other countries to be determined
To support the development of national public health institutes (NPHIs) in up to nine total countries (over the course of the project) as well as the overall operations of the NPHI Program at CDC. By supporting the development of NPHIs, this project will build awareness for the importance of field epidemiology for health security among global and national partners and contribute to public health workforce development.

Developing One Health Classroom and E-learning Case Studies
Funder: CDC  |  Countries: Worldwide
To improve epidemiologic capacity to investigate and control zoonotic outbreaks as well as support continuous learning within the global FETP community through the creation of innovative training by developing and implementing a One Health-focused case study for use in the classroom and as a self-guided e-learning solution.

Developing an FETP Cancer Curriculum
Funder: CDC  |  Countries: Worldwide
To develop an FETP cancer curriculum, including slide presentations, facilitator guides, case studies, and field exercises for four modules (cancer epidemiology, comprehensive cancer control programs, cancer registries, and cancer screening programs). The project also aims to provide technical assistance to FETP residents conducting non-research cancer projects through the awarding of mini-grants. The curriculum is available on the CDC FETP and TEPHINET websites for countries to increase capacity in cancer prevention, control, and surveillance.

Infection Prevention and Control/ Antimicrobial Resistance Regional Meetings
Funder: CDC  |  Countries: Liberia, Nigeria
To support the CDC's International Infection Control Program (ICP) as it strives to reduce the global burden of healthcare-associated infection and antimicrobial resistance associated with healthcare delivery in low- and middle-income countries by serving as a global resource for infection prevention and control. The main project objective is to strengthen and promote national and local infection prevention and control (IPC) and antimicrobial resistance (AMR) practices. TEPHINET provides programmatic and logistic support for the implementation of IPC training and development of IPC/AMR guidelines.

Supporting the National Center for Immunization and Respiratory Diseases (NCIRD)
Funder: CDC  |  Country: Tanzania
To develop capacity at the country level to support disease detection, diagnosis, and surveillance by (1) providing training and technical assistance to detect and monitor public health events of international importance using event-based surveillance (EBS), and (2) conducting program management trainings for Global Health Security Agenda (GHSA) funded ministries of health.

WHO/IDF Cambridge Course on the Epidemiological and Public Health Aspects of Diabetes Mellitus
Funder: CDC  |  Countries: Worldwide
To create a focal point for a network of researchers and professionals involved in the field of diabetes epidemiology and provide one of the preeminent brief training settings for professional workforce for diabetes epidemiology in the world. The Cambridge Diabetes Training Course brings together international experts as resident faculty and less experienced researchers in a learning setting.

Building FETP Capacity in Non-communicable Disease Detection through Mini-Grants
Funder: CDC  |  Countries: Worldwide
To strengthen country surveillance systems for non-communicable diseases (NCDs) by awarding small grants (mini-grants) to individual FETP trainees and/or graduates to complete non-research studies of surveillance systems related to several NCD topical areas. The NCD mini-grant program was launched in 2010.

Accreditation of Field Epidemiology Training Programs
Funder: CDC  |  Countries: Worldwide
Through its accreditation program, TEPHINET ensures the quality of field epidemiology training worldwide by (1) creating minimum quality standards for field epidemiology training programs, (2) providing a process for continuous program improvement, and (3) identifying program needs regarding quality improvement. The accreditation process occurs through annual cycles. To date, TEPHINET has completed three cycles of accreditation (beginning in 2016) and has accredited a total of 13 programs.

Building Global Applied Epidemiology Capacity Through Field Epidemiology Training Programs

Regional Focus:
- Africa

Evaluating and Enhancing Maternal and Perinatal Death Surveillance and Response
Funder: CDC  |  Country: Uganda
To enhance maternal and perinatal death surveillance and response in Uganda through national, regional, and facility-level evaluation through direct study, mentorship of FETP residents, and coordination with numerous stakeholders from the national level and downward through the health system.

Improving Public Health Management for Action (IMPACT) in Kenya
Funder: CDC  |  Country: Kenya
To continue the implementation of the IMPACT Kenya public health management fellowship program, including the
Kenya Advancing Birth Defects Counts
Funder: CDC | Country: Kenya
To assess the burden of three selected defects; namely, neural tube defects, cleft lip, and cleft palate and club foot (tibial equinovarus) in Nairobi County from 2016 to 2018.

Mini-grants: Maternal and Child Health
Funder: CDC | Countries: Ghana, Nigeria, South Africa, Tanzania, Uganda
To award small grants (mini-grants) to FETP trainees to conduct projects focused on maternal and child health surveillance and public health intervention evaluation.

To provide, through an e-learning platform, guidelines in the African region.

and knowledge in the IDSR Technical Guidelines in the African region.

Support to the Cameroon Field Epidemiology Training Program
Funder: CDC | Country: Cameroon
To provide operational support for the implementation of the Frontline and advanced level Cameroon FETP trainings.

TEPHINET provides programmatic support for the implementation of all training activities.

Support to the Kenya Field Epidemiology and Laboratory Training Program
Funder: CDC | Country: Kenya
To increase the self-sufficiency of the national surveillance system to identify and respond to unusual health-related events as part of a more integrated public health system in Kenya by continuing with Frontline and intermediate level field epidemiology training courses.

To develop, through an e-learning course, an online training experience where users can practice using the skills and knowledge in the IDSR Technical Guidelines in the African region.

To provide, through an e-learning platform, guidelines in the African region.

and knowledge in the IDSR Technical Guidelines in the African region.

Integrated Disease Surveillance and Response (IDSR) eLearning Course
Funder: CDC | Country: Ghana
To provide, through an e-learning course, an online training experience where users can practice using the skills and knowledge in the IDSR Technical Guidelines in the African region.

To develop, through an e-learning course, an online training experience where users can practice using the skills and knowledge in the IDSR Technical Guidelines in the African region.

To provide, through an e-learning platform, guidelines in the African region.

and knowledge in the IDSR Technical Guidelines in the African region.

Region: Americas

Capacity Building to Strengthen Evidence-based Vector Control Strategies
Funders: USAID, CDC
Countries: Dominican Republic
To strengthen the Dominican Republic’s surveillance for the Aedes mosquito as well as to build the capacity of the national vector control program using an integrated vector management framework.

Curriculum Development on Zika-related Epidemiological Topics
Funders: USAID, CDC
Countries: Throughout region
To increase FETP residents’ ability to understand the relationship between the epidemiology of Zika and its control measures through short modules that supplement current training and experiences of FETP residents and graduates in Latin America and the Caribbean. Self-guided e-learning modules were developed on Zika and birth defects as well as entomology in public health; these are available on the TEPHINET website.

Enhanced FELTP Vector-borne Disease Detection Capacities in the Dominican Republic
Funder: USAID, CDC
Countries: Dominican Republic
To train laboratory personnel in field epidemiology skills through the development of a Field Epidemiology and Laboratory Training Program (FELTP) in the country in order to improve the capacities to prepare and respond to Zika, dengue, chikungunya and other vector-borne emerging infections.

Establishing FETP Frontline Across Latin America and the Caribbean in Response to Zika
Funders: USAID, CDC
Countries: Brazil, Colombia, Dominican Republic, Ecuador, Grenada, Haiti, Jamaica, Paraguay, Peru, Saint Vincent and the Grenadines, Trinidad and Tobago, Uruguay
To rapidly develop in-country expertise by training a cadre of health workers through the establishment of Frontline FETP in order to improve the capacities to prepare and respond to Zika, dengue, chikungunya and other vector-borne emerging infections.

Evidence-based Vector Control Strategies
Funders: USAID, CDC
Countries: Throughout region
To increase the Dominican Republic’s surveillance for the Aedes mosquito as well as to build the capacity of the national vector control program using an integrated vector management framework.

Curriculum Development on Zika-related Epidemiological Topics
Funders: USAID, CDC
Countries: Throughout region
To increase FETP residents’ ability to understand the relationship between the epidemiology of Zika and its control measures through short modules that supplement current training and experiences of FETP residents and graduates in Latin America and the Caribbean. Self-guided e-learning modules were developed on Zika and birth defects as well as entomology in public health; these are available on the TEPHINET website.

Enhanced FELTP Vector-borne Disease Detection Capacities in the Dominican Republic
Funder: USAID, CDC
Countries: Dominican Republic
To train laboratory personnel in field epidemiology skills through the development of a Field Epidemiology and Laboratory Training Program (FELTP) in the country in order to improve the capacities to prepare and respond to Zika, dengue, chikungunya and other vector-borne emerging infections.

Establishing FETP Frontline Across Latin America and the Caribbean in Response to Zika
Funders: USAID, CDC
Countries: Brazil, Colombia, Dominican Republic, Ecuador, Grenada, Haiti, Jamaica, Paraguay, Peru, Saint Vincent and the Grenadines, Trinidad and Tobago, Uruguay
To rapidly develop in-country expertise by training a cadre of health workers through the establishment of Frontline FETP in order to improve the capacities to prepare and respond to Zika, dengue, chikungunya and other vector-borne emerging infections.

Field Model Risk Communication Training
Funder: USAID, CDC
Countries: Throughout region
To train country representatives to effectively utilize risk communication principles for the Zika response.

TEPHINET helped create instructor-led training modules in the Caribbean and Central and South America) as well as self-guided risk communication e-learning modules in English and Spanish (these are hosted on the TEPHINET website).

Guillain-Barre Syndrome Studies
Funders: USAID, CDC | Country: Peru
To conduct field research on patients with neurological symptoms associated with Zika virus in the northern region of Iquitos, Peru. Through a sub-contract with Cayetano Heredia University, TEPHINET provided logistical and contractual support for recruiting project staff and field researchers (neurologists, physicians) and setting up the field office.

Improving Public Health Emergency Management Capacity and Coordination
Funder: CDC | Country: Colombia
To increase Ministry of Health partner awareness and understanding of public health emergency management concepts.

Knowledge, Attitudes and Practices about Zika in High-risk Areas in Guatemala, El Salvador, and Honduras
Funder: Tulane University
Countries: El Salvador, Guatemala, Honduras
Through breakthrough research, USAID’s flagship program for social and behavioral change research and evaluation, TEPHINET partnered with Tulane University to conduct KAP (Knowledge, Attitudes, and Practices) surveys in El Salvador, Guatemala, and Honduras.
Building Global Applied Epidemiology Capacity Through Field Epidemiology Training Programs 2018 TEPHINET Annual Progress Report
Influenza Surveillance and Training in Central Asia
Funder: CDC
Countries: Kazakhstan, Kyrgyzstan, Turkmenistan

To improve influenza surveillance in the Central Asia region by training staff and supporting an electronic surveillance database for influenza at nine sentinel surveillance sites. With training, staff will be able to identify positive pandemic influenza samples at the sites. This will allow the Ministry of Health to respond rapidly to a pandemic influenza outbreak, reducing its spread through the Central Asia region.

Support to the Central Asia Regional Field Epidemiology and Laboratory Training Program
Funder: CDC
Countries: Kazakhstan, Kyrgyzstan, Turkmenistan

To provide logistical support for the two-year Central Asia Regional Field Epidemiology Training Program so that FELTP residents from these countries are able to complete FELTP core competencies and successfully graduate from the program.

Best Practices for Hepatitis C Virus Elimination
Funder: CDC
Country: Georgia

To develop, implement, and assess interventions and strategies to enhance screening and linkage to care for persons infected with hepatitis C virus (HCV). The interventions and strategies will include, but not be limited to, those that target providers, hospitals, primary care health centers, and other organizations and institutions that care for persons at risk for HCV infection.

Infection Prevention and Control Activities
Funder: CDC
Country: Georgia

To work with the Georgia HCV treatment program, the Georgian government, and stakeholders in primary care delivery to assess and develop resources to improve IPC and AMR through the use of evidence-based guidelines, clinical practice guidelines, and IPC training tools. In addition, technical assistance will be given to facilities needing improvement in treatment delivery.

Developing and Implementing FETP Frontline in Georgia
Funder: CDC
Country: Georgia

To strengthen and build epidemiological capacity in Georgia by developing in-country expertise at the local level so that disease outbreaks can be detected locally and prevented from spreading. The Frontline Field Epidemiology Training Program (FETP Frontline) prepares workers on the ground to help countries build this capacity. The establishment of a three-month FETP Frontline in Georgia will strengthen public health surveillance and promote use of data for decision-making at all levels of the country's surveillance system.

Support for Hepatitis C Elimination in Georgia
Funder: CDC
Country: Georgia

To work with the Georgia hepatitis C (HCV) program to support the improvement of the Georgia HCV elimination program. The project will also establish a baseline prevalence of HCV in Georgia and improve HCV surveillance and data management.

Improving Public Health Management for Action (IMPACT) in Bangladesh
Funder: CDC
Country: Bangladesh

To increase the number of trained managers in the public health workforce of Bangladesh, increase Bangladesh’s capacity to support the development and delivery of all aspects of national public health plans, improve community partnerships and networks, and improve processes related to public health systems and program implementation.

Support to the Bangladesh Field Epidemiology Training Program
Funder: CDC
Country: Bangladesh

To support the continued expansion of the Field Epidemiology Training Program in conjunction with the Institute of Epidemiology Disease Control and Research, Bangladesh.

Support to the Burma Field Epidemiology Training Program
Funder: CDC
Country: Myanmar (Burma)

To provide operational support to the field epidemiology training program in Myanmar (Burma). This program uses the Thailand FETP to train professional epidemiologists from Myanmar. Through this project, TEPHNET will provide funding for two FETP trainees from Myanmar (Burma) to participate in the international FETP in Thailand, focusing on malaria activities including outbreak investigations, program evaluations, and surveillance.

National and Facility Level Infection Prevention and Control Assessment and Point Prevalence Survey of Healthcare Associated Infections
Funder: CDC
Country: Thailand

- Generate the baseline prevalence of HAIs, AMR and AMU in healthcare facilities in Thailand.
- Estimate total national mortalities attributable to HAIs, attributable to AMR and the economic cost of HAIs and AMR as percent of GDP.
- Describe characteristics of HAIs and AMR in patients, invasive procedures, site of infections, pathogens and prescribed antimicrobials.
- Strengthen capacities of all participating hospitals to generate evidence from PPS and data utilization.
- Establish national PPS Working Group for sustaining regular national PPS.
- Assess IPC capacities in the national representative health facilities in Thailand using the WHO standard assessment tool for the healthcare facility level.

Kusnia Wati Rahayu, Indonesia FETP

Anush Tunyan (Armenia, South Caucasus FELTP)
TEPHINET is grateful for the generosity of all our donors and funders, including the Centers for Disease Control and Prevention, which provides more than 90 percent of TEPHINET’s funding. We recognize the following partners for providing support in 2018:

If you are interested in supporting TEPHINET, please contact secretariat@tephinet.org.