

Updates from the Field...

Strengthening Public Health Systems and Workforce Capacity Globally

Fall 2012, Issue 8

Director's Message

Dear Colleagues:

Having worked in and traveled to many parts of the world, I've become aware of the importance of names, particularly ones that are intended to identify and or describe



— Peter B. Bloland

Selecting a name for an organization or program is not easy because a name does more than identify an entity; it tells audiences who you are, what you do, and something about how you do it. An organization's name differentiates it from its partners as well as its competitors, peaks the public's interest, and hopefully, invites further investigation. Often, especially with names for groups, institutions, or projects, a name is the first, and sometimes the only thing that people hear and remember.

The Field Epidemiology Training Program (FETP) is well-recognized and respected by public health institutions and practitioners across the globe. However, I'm of the opinion (and imagine many of my colleagues would agree) that the name "FETP" has perhaps limited people's perception about the full impact that the program has had and how it contributes to CDC's global mission of protecting and improving health through science, policy, partnership, and evidence-based public health action.

As I reflected on this issue, I also thought about CDC and its evolution. Since CDC was created in 1946, its name has changed numerous times to reflect the growing breadth of its prevention and control programs. CDC was first named the Communicable Disease Center, then renamed the Center for Disease Control

in 1970, the Centers for Disease Control in 1981, and finally, the Centers for Disease Control and Prevention in 1992. Throughout its history, CDC has kept its internationally recognized and respected acronym of "CDC". The name is so well-branded that some countries have adopted it and adapted it for their own national public health institutes, including China CDC, and National CDCs in India, Nigeria, Georgia, and elsewhere.

FETP is facing a similar situation. Modeled after CDC's Epidemic Intelligence Service (EIS) program, the first FETP was implemented in Canada in 1975 followed by Thailand in 1980 and has also become an internationally recognized and respected program. With currently over 50 FETPs or FETP-like programs around the world and more beginning every year, the FETP model has proven itself to be both very successful and sustainable and an integral part of health systems strengthening.

FETPs have matured and evolved over time. As the name suggests, FETP has its roots in training field epidemiologists (and laboratorians, in the case of FELTPs) and thereby creates a cadre of public health professionals capable of addressing a country's most pressing public health challenges and emergencies. However, over the past 30 years, FETPs have evolved and increasingly provide critical services to ministries of health. Because FETP residents spend the majority of their time within public health programs conducting the work of the ministry, residents participating in FETPs are well positioned to strengthen the public health systems and institutions within which they work. Through this hands-on approach, FETPs have been able to build or strengthen critical public health systems. Through FETPs, countries have also been able to develop, adapt, and/or implement new surveillance systems, whether

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disease-specific, such as for viral hepatitis in Pakistan, or more comprehensive, such as a developing a Behavioral Risk Factor Surveillance System in Jordan. FETPs have also helped create public health reference laboratory networks, allowing more timely and effective sharing of laboratory-based data. They have also made significant contributions to high priority public health

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Center for Global Health

Division of Public Health Systems and Workforce Development



Updates from the Field..

Highlights of Investigations

Outbreak Investigation of an Illness of Unknown Etiology In Gofl Shamr, Hajja Governorate, Yemen

Submitted by Dr. Aisha Jumaan, Resident Advisor, Yemen and Dr. Mohammed Al Najjar, FETP Resident

In early May 2012, a Hajja Governorate surveillance officer reported to the Ministry of Public Health and Population (MOPHP) cases of illness of unknown etiology among children, 7 of whom died, in Gofl Shamr district. Due to a lack of information regarding the cause of disease, the number of fatalities, and the vulnerability of the affected age group, MOPHP worked with the Yemen FETP to launch an outbreak investigation to confirm the outbreak, identify the cause, and recommend control and preventive measures to local health authorities.

From May 4th to 28th, FETP residents and Hajjah health officers conducted an active house-to-house search for cases and interviewed families or guardians of victims and ill children to collect demographic and clinical information. Blood samples were collected from 46 cases for diagnostic testing.

A total of 60 cases were identified from March to May, 2012, 40% of whom were less than 5 years of age. The most common clinical symptoms were fever, rash, conjunctivitis, cough, headache, muscular pain, joint pain, and mouth ulcers; about 20 % had hemorrhagic manifestations. The case fatality ratio was 12%. The highest number of cases and all of the deaths were from Alholog village, a remote mountain village. Most of those who died (57%), died from respiratory complications and diarrhea.

The first case reported was a 24 year old female who presented to a hospital in Abs district on March 28th, 2012 complaining of sudden onset of high fever, shivering, headache, joint and abdominal pain. Generalized rash developed 3 days after fever onset and was followed by vomiting, watery diarrhea, and multiple mouth ulcers. Hemorrhagic manifestations



Alholog Village where FETP residents conducted a measles outbreak investigation.



Young child in Yemen with suspected measles with mouth ulcers.

appeared later in the form of nosebleeds, blood in the urine, and bloody diarrhea. The woman had no history of contact with sick people or recent travel, however, her husband traveled extensively throughout Yemen.

Clinical symptoms of 41 of the 60 cases matched the team's case definition of suspected measles. Laboratory confirmation of measles was obtained in 19 of the 46 specimens collected. However, the laboratory also identified 2 cases of rubella, 6 cases of dengue, and 6 cases of chikungunya. Results were undetermined for 15 cases. Of the 7 reported deaths, 4 were epidemiologically linked to confirmed measles cases. FETP residents confirmed that measles was the main cause of the outbreak, with other diseases including rubella, dengue, and chikungunya, complicating the picture.

The team postulated that Alholog may have been the most severely affected village because of other underlying diseases, such as malaria or malnutrition; absence of an easily accessible health provider; low measles immunization; a remote location and low socioeconomic status of the population that may have inhibited them from travelling outside the village for medical care; and delays in notification due to weaknesses in the surveillance system.

Prior to the unrest in Yemen in 2011, measles control was at the elimination stage with yearly case counts typically in the hundreds. However, from January 2011 to March 2012, a total of 3,767 measles cases were reported in Yemen. Moreover, 126 deaths were reported in children under 5 years old; 95% of these were reported in the first three months of 2012.

Since the deaths occurred at home before the FETP investigation, residents were not able to collect specimens for laboratory confirmation. There are no health services in Alholog village and no vaccination services were provided in the past five years. Indeed, the investigation found that 67% of all cases identified and all 7 deaths had not been vaccinated for measles in the past. The FETP team recommended extending vaccination outreach activities to the affected health district, strengthening health education messages about vaccination, and addressing concerns that lead to vaccination refusals among this population. FETP residents also recommended that religious and community leaders be utilized as partners for targeting hard to reach areas, and stressed the importance of strengthening surveillance systems for early notification and response.

For further information, please contact Dr. Aisha Jumaan at aoj1@cdc.gov.

Updates from the Field...

Partnership Matters

Improving Equity in Maternal and Child Health Outcomes through Partnership

Submitted by Dr. Benjamin Schwartz and Dr. Helene Gayle, CARE

The 2012 Countdown report toward the 2015 Millennium Development Goals (MDGs) describes substantial progress in saving the lives of women and children (<http://www.countdown2015mnch.org>). Between 1990 and 2010, annual maternal deaths decreased from 543,000 to 287,000 and child deaths from 12 million to 7.6 million. Progress, however, varies substantially within and between countries. For example, data from 54 countries show large disparities between rich and poor in skilled attendance at birth and satisfied need for family planning – both keys to reducing maternal deaths. And while 9 Countdown countries are on track to reach maternal health goals, 25 have made insufficient or no progress.

This is the context in which CARE, a non-governmental development and humanitarian organization, contributes to the global effort toward the MDGs. CARE's focus on reaching the most vulnerable and marginalized people and populations, and empowering women is predicated on the concepts of equity and social justice. While global data document the technical solutions that can effectively prevent maternal and child deaths, the bigger question is how can these interventions be extended so that they reach all women, all families, and all communities? While some organizations see the answer as training more healthcare workers to increase access, CARE believes that the challenge is less about distance to a healthcare facility and more about overcoming the barriers that limit usage. CARE's experience suggests that more rapid and sustainable change requires transforming social norms and increasing gender equality, improving local governance and accountability, motivating healthcare workers to provide quality services, and using data-driven management to improve programs.

By working collaboratively with governments, local partners, and academic institutions, CARE implements and rigorously assesses the contribution of these and other cross-cutting strategies to improve implementation of evidence-based technical solutions, such as skilled birth attendance and emergency obstetric care to improve maternal health outcomes. In Bangladesh, for example, CARE is working with the Japan International Cooperation Agency and the International Center for Diarrheal Disease Research, Bangladesh (ICDDR,B) to document the impact of community empowerment and support groups for pregnant women on maternal and neonatal deaths – an approach that in an earlier evaluation eliminated a more than 2-fold disparity in antenatal care coverage between rich and poor. In Malawi, CARE is working with the Centers for Disease Control and Prevention (CDC) and other partners to test the impact of local governance systems engaging healthcare providers and community representatives to define, assess, and improve the quality and coverage of key maternal health interventions.

CARE's largest ongoing initiative to develop and assess innovative, cross-cutting strategies that improve maternal and child health outcomes is in Bihar, India, as part of a multi-partner program supported by the Bill and Melinda Gates Foundation. This initiative aims to reach over 100 million people in Bihar at the end of five years. Two of the approaches that will be rigorously tested include



A dabi ("pressure") group meeting of dalit women facilitated by a CARE local NGO partner in the western region of Nepal, 2011. These groups empower lower caste women to demand better and more equitable services and overcome cultural barriers to improve their health and survival. (Photo courtesy of Brooke Barnes)



A 26 year old mother of 7 children experienced post-partum hemorrhage after giving birth to her youngest child. Despite living only about 100 meters from a health facility, she didn't seek care until she was at severe risk of dying. Physical access to a health facility is often not the only barrier to seeking healthcare in the western region of Nepal. (Photo courtesy of Benjamin Schwartz)

using incentives to motivate improved performance by healthcare worker teams, done in collaboration with the Georgia Institute of Technology; and using mobile phone applications to improve services and counseling by frontline healthcare workers, in collaboration with several technology partners.

Through partnerships in programs, innovation, and learning, CARE aims to advance global understanding of how to most effectively and equitably reduce maternal and child deaths. Then, through shared learning with governments, international and local NGOs, bilateral and multilateral organizations, and other stakeholders, solutions can be leveraged, scaled-up, and sustained.

For further information, please contact Dr. Benjamin Schwartz at bschwartz@care.org.

Updates from the Field..

Partnership Matters

CDC in Partnership with TEPHINET Provides Web Access to NCD Training Materials: A Key Component of a Larger CDC Strategy

Submitted by: Andrea Bader, Instructional Designer

The Division of Public Health Systems and Workforce Development (DPHSWD) within the Centers for Disease Control and Prevention (CDC) is pleased to announce the availability of noncommunicable disease (NCD) training materials through the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) website (www.TEPHINET.org). NCDs are the world's leading cause of death and place an enormous financial burden on all countries regardless of their level of development. According to Bassam Jarrar, DPHSWD, Deputy Director, "Due to the prevalence of NCDs globally and the increased demand for NCD training materials, in October 2010 we stepped up our efforts and began working strategically to build capacity in low- and middle- resource countries where the need for NCD control and prevention is tremendous. Providing access to NCD training materials through the web is one of many ways that CDC is actively working to expand the Field Epidemiology Training Program (FETP) curriculum. Providing access through the web also leverages resources and expands our reach not only to the FETP community, but also gives other programs and organizations access to NCD training materials. We believe this will help to address this global health challenge, improve health outcomes, and make a greater impact."

During the past 22 months, DPHSWD in collaboration with CDC's National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) has developed over 150 hours of NCD training. NCD competencies were identified by NCD subject matter experts at CDC and instructor-led as well as self-paced training modules were developed to support the competencies. Self-paced materials make the training accessible to a wider audience and allow FETP residents to complete the modules at their own pace with the support

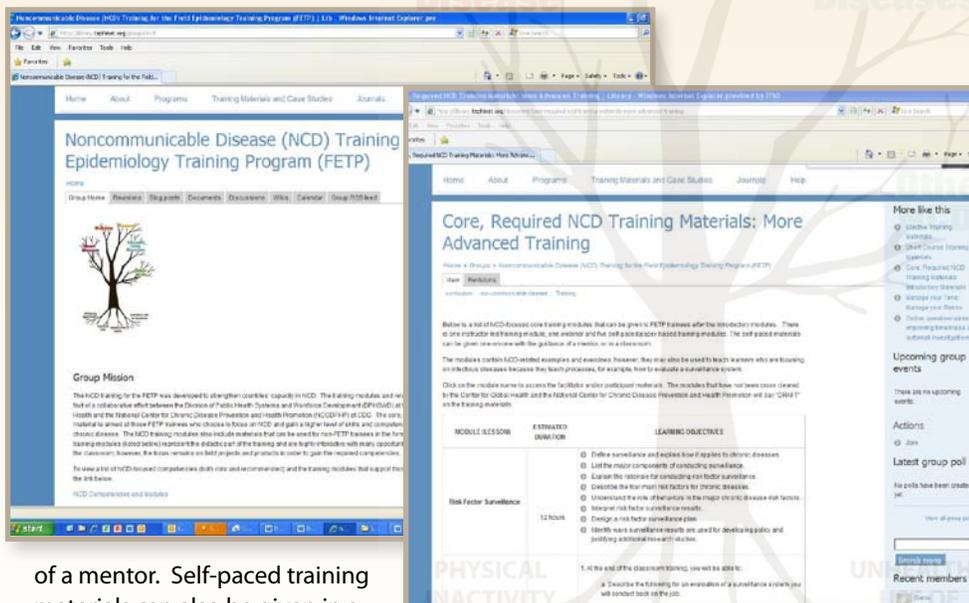
of a mentor. Self-paced training materials can also be given in a classroom setting to meet the specific needs of certain audiences.

NCD modules were piloted at regional TEPHINET conferences and in China, Colombia, Jordan, Tanzania, and Thailand. Training materials that have been finalized can be accessed through TEPHINET's website; as soon as further materials are finalized, they will also be available. According to Mike Engelgau, CDC NCD Resident Senior Advisor in China, "These training materials have brought together the knowledge and experience from a vast bank of seasoned epidemiologists, technical experts, and instructional designers resulting in our ... training courses rising to an extremely high quality level. They have helped move FETP NCD training forward very quickly – which will result in higher level skills among trainees so they meet, and often exceed, those expected from our FETP efforts. Finally, I have found that while these materials are designed with a focus on NCDs, the topics are of high interest to all areas, including trainees in the area of communicable diseases."

To access the NCD materials, first register on the TEPHINET website, then search the

library menu for the "Noncommunicable Disease Training for FETP" group page and join the group. The NCD group page contains links to documents that list the NCD competencies and training modules. The core required NCD training modules include introductory training materials such as *NCD Burden of Disease* as well as more advanced materials such as *Analyzing and Interpreting Large Datasets*, elective training materials such as *Using Science to Inform Policy*, and short course training materials such as *Data Dissemination*. Training modules that have been uploaded to the website are highlighted in blue, with links to the specific document page that provides a brief overview of the module as well as participant and instructor materials. (Note: To access and download instructor training materials, users must request "instructor" status when they join.) For documents that do not have links, please continue to check the website periodically.

For more information, or feedback on how we can improve the training materials, please contact Andrea Bader at vb6@cdc.gov, or Dana Schneider at gw9@cdc.gov.



Updates from the Field..

Profile:

Michele Evering-Watley CDC Instructional Designer and Health Education Specialist

Submitted by Ruth Cooke Gibbs
and Janean Lomax, CDC

Michele Evering-Watley, an Instructional Designer and Health Education Specialist, was motivated to develop a career in public health while in university and learned that her father was HIV positive. She was researching an assignment in the early 80s and was surprised to learn that screening the nation's blood supply for HIV was not routine. As a result, some people were becoming infected with HIV from donated blood.

Unfortunately, Michele's father died a few months before she completed graduate school. Michele returned home to Brooklyn, New York, to find her community the epicenter of the TB and HIV epidemic in the United States.

Although she couldn't do anything to save her father, she decided to try to help others affected by HIV and other health issues, and accepted an opportunity to start the first community-based Directly Observed Therapy (DOT) program to help prevent the spread of TB. According to Michele, "At that time we were seeing high rates of people who were co-infected with TB and HIV. However, many people who were co-infected and taking medication for both did not understand the importance of remaining on TB medication and would often stop taking it due to the side effects from HIV meds (e.g., AZT). As a result, education and DOT were essential for populations at risk for non-compliance with TB medications".

The successful DOT program gained extensive national and international attention. As a result, Michele became a Senior Public Health Advisor for the New York City Department of Health in the Bureau of TB Control. During that time, Dr. Thomas Frieden, CDC's current Director,



Michele Evering-Watley, CDC Instructional Designer and Public Health Advisor with Samuel Ngobua, CDC-Nigeria Training Program Specialist returning from an initial assessment visit to the Northern part of Nigeria (Sokoto) as part of the preparation to implement the health diplomacy training course.

was also working there as an Epidemic Intelligence Service (EIS) officer. Little did she know then, that their paths would cross again later working at CDC.

While in New York, Michele also started the first multi-site DOT program at St. Luke's Roosevelt Hospital Center and was instrumental in designing, implementing, and managing the program for 3 years until she relocated to Atlanta, Georgia, in 1996.

While working as a Health Education Specialist in the Training and Technical Support Branch of CDC's Division of HIV/AIDS Prevention, Michele soon found that Atlanta was just as rewarding as New York. After working for four years domestically, she began to focus globally by working with CDC's Global AIDS Program (GAP). While working in Kenya to pilot Voluntary Counseling and Testing (VCT) materials, she recalls Dr. Kevin De Cock (former CDC Kenya Country Director, now Director of CDC's Center for Global Health) saying that achieving impact in complex global health problems would require great personal commitment. Dr. De Cock's insight plus her own experiences have taught her that ongoing involvement and "multiple visits are usually necessary to develop good relationships and begin the process of collaboratively moving agendas forward



Michele Evering-Watley, CDC Instructional Designer and Public Health Advisor with Ed Maes Director, US CDC Republic of Georgia, and representatives from the University of Cairo and Ministry of Health after meetings to discuss revitalizing the Egyptian FETP in Cairo.

to address the country's public health priorities."

In her current position as an instructional designer within the Division of Public Health Systems and Workforce Development (DPHSWD), Field and Applied Epidemiology Training Branch, Michele's role varies depending on a country's needs. She considers herself a program person, with instructional design being one of her skills. "My role includes working with partner universities and ministries of health to ensure the FETP courses and competencies included in their country's FETP curriculum reflect the country's needs and health priorities. I also use my diplomatic, programmatic, and health education skills to help countries meet their programmatic milestones and troubleshoot and or address challenges."

When asked how her work contributes to DPHSWD's mission, goals and objectives she responded, "Each time we work with partners in-country and complete training on outbreak investigation and response or graduate a cohort of residents from an FETP, we move forward with our goal to improve capacity and strengthen public health systems ultimately improving the lives of others."

For further information, please contact Michele Evering-Watley at mee4@cdc.gov.

Updates from the Field..

Training/Resources

Lao PDR Ministry of Health Develops Innovative Field Epidemiology Training to Manage Emerging Infectious Disease Threats

Submitted by Dr. Andrew Lee Corwin, U.S. CDC Country Director (Influenza Division), Lao PDR, and Dr. Ann Moen, CDC, National Center for Immunization and Respiratory Diseases (Influenza Division)

Against the backdrop of pandemic influenza threats, including highly pathogenic avian influenza, Lao PDR recognized the need to strengthen and decentralize national epidemiological capabilities. This was addressed by establishing an adapted Field Epidemiology Training (FET) with collaborative support from the U.S. CDC (Influenza Division) and World Health Organization (WHO).

With critical human resource pressures, the Lao Ministry of Health (MoH) developed an innovative one-year FET tailored to the Lao context. Eight trainees from national and provincial levels are selected annually from both human (6) and animal (2) health sectors thereby facilitating the “one health” concept. Each of three modules consists of one month practical classroom instruction and three months of applied/field experience. Each FET trainee is assigned an operational research project tailored to meet national public health needs. Applied activities are linked to supporting essential surveillance and response activities at the National Center for Laboratory and Epidemiology (NCLE).

The FET alumni network now boasts 23 graduates who have returned to their workplace after completing the training and cover 16 of 17 Provinces. The FET has proved to be a critical resource in the rapid identification and response to outbreaks and in providing more accurate and timely surveillance data. Furthermore, the network of graduates, armed with new skills, now comprise the core resource for training at the local level.



Monks being interviewed during FET AEFI pandemic influenza assessment in Luang Prabang Province, 2010.



Health education being provided by Mengmoua Mouaxaychou, FET 3 during a rotavirus outbreak in Sekong Province, March 2011.



AEFI influenza vaccine assessment being provided by Anousone Phongmanee, FET 4 in Luang Prabang province, May 2012.

FET has played a major role in developing core surveillance and response capacity in Lao PDR. The applied nature of the training has equipped graduates with the

ability to readily and effectively employ their newly gained knowledge when returning to their respective positions within the Lao Ministries of Health or Agriculture. In addition, the findings and recommendations from trainees' field work have translated into MoH policies for the control of communicable diseases such as starting new vaccine initiatives for rubella and Japanese Encephalitis. The FET is also credited with implementing an adverse events following immunization (AEFI) assessment in conjunction with pandemic influenza vaccine deployment, and improvements and expansion of the influenza surveillance network that contributed to the Lao PDR Government's decision to initiate seasonal influenza vaccinations in April 2012.

In the near future, FET will be strengthened by the development of the alumni network and a focus on training for trainers, supervisors and mentors.

For further information, please contact Dr. Tippavan Nagachinta at txn3@cdc.gov.

Updates from the Field..

Training/Resources

DPHSWD Embraces the One Health Approach through FETP and other Program Activities

Submitted by Michele Evering-Watley
Instructional Designer and Health
Education Specialist, CDC

Approximately 75% of recently emerging infectious diseases affecting humans are diseases from animals. In response, animal health, human health, and environmental health professionals have joined together to embrace the One Health approach. The Centers for Disease Control and Prevention's (CDC) Division of Public Health Systems and Workforce Development (DPHSWD) within the Center for Global Health supports One Health as a strategic approach to increase collaborative efforts across disciplines to better understand and address health issues created by the convergence of human, animal, and environmental domains.

Several Field Epidemiology Training Programs (FETPs), including Thailand, Brazil, Ghana, and Nigeria, have a long history of accepting veterinarians into their programs and graduating veterinarian-epidemiologists. These programs significantly contribute to developing human and animal health systems and building workforce capacity. The examples described below include working with stakeholders in West Africa to address zoonosis, leading to the Accra Declaration; participating in the Emerging Pandemic Threats/One Health Core Competencies Working Group; and helping to create a One Health Fellowship intended to enhance the knowledge and skills of public health and animal health professionals encouraging better cross-disciplinary collaboration.

Accra Declaration

In May 2009, DPHSWD participated in a workshop organized by the African



1st row (L-R) Nigeria-FELTP 1st cohort Residents Dr. Aisha Abubakar, Halimatu Ayanieke, Michele Evering-Watley, Ibrahim Kurmi, Dr. Saheed Gidado, Dr. Lora Davis, Veterinary Resident Advisor; 2nd row (L-R) Dr. Mohammed Adamu Kida, Dr. Olaniran Alabi, Endie Waziri, DVM, Emmanuel Awosanya, Dr. Patrick Nguku, Resident Advisor, Tolough Geoffrey Ingyoroko; 3rd Row (L-R) Sikiru Badaru, Suleiman Haladu, and Dr. Oladayo John Biya.

Field Epidemiology Network (AFENET) to develop a strategic framework to integrate and foster closer partnerships between FETPs and veterinary services. The workshop was attended by 70 participants, including experts from Nigeria, Ghana, Burkina Faso, Mali, and Senegal and representatives from CDC, the U.S. Agency for International Development (USAID), the U.S. Department of Agriculture, the World Health Organization (WHO), and the United Nations Food and Agriculture Organization.

The resulting "Accra Declaration" affirms the ongoing need to improve coordination between the human health and veterinary communities and to establish mechanisms that will allow partners to more easily share information about zoonoses in an effort to combat all infectious diseases in line with the International Health Regulations (IHR, 2005). The Declaration set the stage for defining the competencies needed by practitioners for implementing One Health and the establishment of the One Health fellowship.

RESPOND/EPT One Health Core Competency Workgroup

In March 2011, the RESPOND project of USAID's Emerging Pandemic Threats (EPT) program convened project and partner

representatives to form a One Health Core Competencies (OHCC) Working Group to define the competencies that both human and animal health professionals need to address diseases more effectively and to create a unifying framework for building a competent One Health-oriented workforce. The OHCC Working Group includes human, animal, and environmental health professionals from CDC, USDA's Animal and Plant Health Inspection Service's Veterinary Services, USAID/PREVENT Project, Tufts University, Columbia University, University of Minnesota's School of Public Health, and the Training Resource Group, Inc. (TRG).

The working group has identified seven core competency domains: Planning and Management, Culture and Belief, Values and Ethics, Collaboration and Partnership, Leadership, Communication and Informatics, and Systems Thinking. The resulting framework is intended for use by professionals working on One Health challenges and those who train and supervise that workforce to help improve coordination, communication and effectiveness across disciplines and sectors. Competency in each domain will strengthen teams facing health challenges at the intersection of animal and human health. The OHCC is a living document

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Updates from the Field..

Training/Resources

CDC and MoH in South Sudan Launch First Course on Routine Immunization and Field Epidemiology

Submitted by Dr. James (JR) Ransom, FETP Resident Advisor, South Sudan and Rebecca Hartz, Public Health Advisor, FETP Africa Team

In early 2012, the Ministry of Health (MoH) in South Sudan partnered with the Centers for Disease Control and Prevention (CDC) to launch training courses on Routine Immunization and Field Epidemiology in South Sudan. This initiative was developed to build regional capacity in routine immunization with a focus on three countries -- South Sudan, Uganda, and Ethiopia. Funded by the Bill and Melinda Gates Foundation, the MoH is collaborating with CDC to provide long-term, integrated training to its state-based public health staff.

The project is managed by CDC's Global Immunization Division (GID) in partnership with the Field and Applied Epidemiology Training Program (FAETP) branch in CDC's Division of Public Health Systems and Workforce Development. According to Steven Stewart, Health Education Specialist and Project Lead with CDC's Global Immunization Division, "The Ministries of Health in all three countries have expressed a strong interest in this project. The project design to build the capacity of both immunization and surveillance officers through a series of joint workshops and the completion of job-related field activities which are supported by project mentors -- is a good one. Participants include both regional/state MoH officers as well as district/county-level officers in underperforming focal regions in each country."

The first cohort included Expanded Program on Immunization (EPI) managers and surveillance officers from all 10 states within South Sudan to help provide 1) practice-based instruction on core public health skills and competencies, 2) practical aspects of EPI and Integrated Disease Surveillance and Response (IDSR) program management, and 3) a system of technical assistance and



Participant from the Routine Immunization and Field Epidemiology course developing a list of inputs needed for surveillance, Kajo-Keji, South Sudan, July 2012



Participants from Sudan FETP Cohort 1 discuss field projects during their first training course on Routine Immunization and Field Epidemiology in Kajo-Keji, South Sudan, July 2012



Facilitators from CDC, WHO, MoH, and IMC and FETP residents from Cohort 1 who participated in the Routine Immunization and Field Epidemiology course, Kajo-Keji, South Sudan, July 2012.

mentorship to help improve their day-to-day work as public health practitioners. The course was held at the MoH training facility in Kajo-Keji County from July 16-27, 2012, and included 23 participants from around the country (9 EPI Managers, 9 state Surveillance Officers, 3 Guinea Worm Surveillance Officers, and 2 county EPI/surveillance staff). The South Sudan Resident Advisor, Dr. James Ransom, and project training coordinator, Muki Johnson, coordinated the 12-day training, with facilitators from Juba University, WHO-Geneva, CDC South Sudan, and CDC Atlanta (DPHSWD and GID).

Participant performance throughout the course was tracked through a series of homework assignments, exams, and participation in exercises. At the end of the training all 23 passed their exams and homework assignments. They also completed a pre- and post-test to assess knowledge gained, in addition to completing a course evaluation. Overall, participants highly valued the course and plan to use this knowledge within

their respective states. One participant stated, "I enjoyed the integration of both immunization and surveillance because it helped me better understand both."

The resident advisor and training team will continue to coordinate activities with the MoH (EPI, Epidemic Preparedness and Response, Communicable Diseases, Training and Professional Development), WHO, CDC-Juba, and other partners at the central level, in addition to following-up with Cohort 1 to assure that work plans for field projects are finalized and approved. Dr. Ransom and team will conduct technical assistance visits to participants' states over the next three months, and the second course for Cohort 1 will begin in October where they will present their field projects. Upon successful completion of the courses and field projects, participants will receive a Certificate of Completion. A graduation ceremony for Cohort 1 is proposed for June or July 2013, in Juba.

For further information, please contact Rebecca Hartz at isi6@cdc.gov.

Updates from the Field..

Training/Resources

DPDx: Strengthening Laboratory Capacity for Parasitic Disease Diagnosis

Submitted by Amanda Burke, MPH, CPH, ORISE Fellow, Division of Parasitic Diseases and Malaria, Center for Global Health, CDC

Building public health capacity by strengthening laboratory systems and networks is a part of the Centers for Disease Control and Prevention's (CDC) global health strategy. CDC's Division of Parasitic Diseases and Malaria (DPDM) developed DPDx to improve laboratory identification of parasites of public health importance. DPDx provides Internet based teleradiology, builds laboratory capacity through online tools and training workshops, and develops molecular diagnostics that can be adopted by other laboratories across the globe.

Telediagnosis

DPDx is a teleradiology and education website created by DPDM. Teleradiology is a process of reviewing digital images submitted to CDC through the DPDx website. Expert interpretation of the submitted images is available 24/7 from DPDM staff; often responses are sent within hours after receipt of images. A digital camera connected to a microscope can be used to capture images for teleradiology; a high resolution camera on a smart phone can also be used. Teleradiology is not only more time-efficient, it is also more cost-effective than the more traditional methods of confirmatory diagnosis. For example, a single laboratory result from DPDx teleradiology is approximately 80% less expensive than shipping a specimen in the mail to CDC. Between 2006 and 2011, 59 countries outside of the United States utilized DPDx teleradiologic assistance (See Figure 1, world map). In 2011 alone, DPDx provided teleradiologic assistance to



Henry Bishop (DPDM laboratorian) demonstrating how to prepare blood films for the diagnosis of malaria during Identification of Bloodborne Parasites DPDx workshop in Massachusetts. Participants included techs from the MA public health lab (PHL) as well as other state PHLs and private labs in the region.

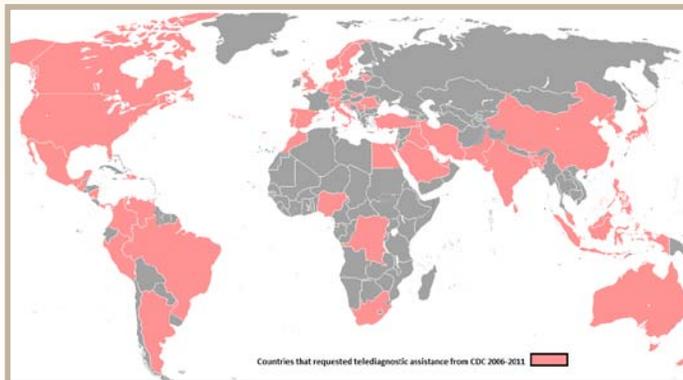


Figure 1. Countries that requested teleradiologic assistance from CDC, 2006-2011

549 inquiries, which included confirmatory diagnosis for approximately 20% of the malaria cases reported in the United States.

Capacity Building

DPDx is dedicated to improving laboratory capacity for parasitic disease diagnosis in the United States and around the world. DPDx is a valuable education resource that contains information about parasites that are of public health importance, including visual depictions of parasite lifecycles, a reference library of images, and a source for diagnostic procedures. The DPDx image library and collection of life cycles are used widely by health professionals and educators.

DPDx also provides training workshops throughout the world to improve local laboratory diagnostic capacity for parasite identification. For example, from 2008 to 2011, DPDx conducted a series of training workshops in Angola and Mozambique on malaria diagnosis to support the

President's Malaria Initiative. DPDx also held hands-on workshops in Rwanda, India, Dominican Republic, Haiti, Mexico and Brazil. As a result, over 200 microbiologists are able to make reliable laboratory diagnoses of malaria and enteric parasitic infections. In addition to the workshops, DPDx also provides training through its online continuing education parasitology courses and through its website's monthly case studies series, reaching over 1,500 email

subscribers worldwide. The online tool is an effective and simple way for individuals to increase their knowledge without being confined to a classroom.

Test Development

DPDx staff also develop and validate molecular diagnostic techniques for use in U.S. Public Health Laboratories (PHLs) and reference laboratories worldwide. CDC has a long history of research to develop improved assays for parasitic disease diagnosis. This research has resulted in the development of many of the gold standard molecular tests that are still in use for several parasitic diseases, including the diagnosis of malaria and other parasitic infections.

To find out more about teleradiology, training and other DPDx services, go to <http://www.dpd.cdc.gov/DPDx> or email Alexandre Dasilva at adasilva@cdc.gov.

Updates from the Field..

Training/Resources

MfPH Program Launched in Lusaka Gets Rave Reviews from MoH Participants

Submitted by Denise Traicoff, Management Training Specialist, CDC

In support of CDC's global health strategy to strengthen public health institutions and build workforce capacity, the Sustainable Management Development Program (SMDP) developed the Management for Improved Public Health (MIPH) program. Since 1992, MIPH has trained 379 fellows from 65 developing countries in public health management competencies. Originally provided as a six week course in Atlanta, MIPH became a regionally-based program in 2010 with the goal of being more accessible to its target audience. During the 2010 course, held in Botswana, participants from Zambia designed and embarked on a project to establish a management development program for Zambia Ministry of Health officials. A 2002 MIPH graduate and SMDP provided technical assistance.

As a result, the University of Zambia School of Medicine (UNZA) launched the new Management for Public Health (MfPH) program in Lusaka in October 2011, creating a third generation of public health professionals strengthening their management effectiveness in order to improve health outcomes. The MfPH program also instills the values of leadership and high ethical principles in all activities of public health practice. MfPH is designed as a six month program, which begins with a two-week course at UNZA, continues at the workplace with a management improvement project and concludes with a one-week program to present project results and complete continuing education.

In 2012, thirty leaders from the Zambia Ministry of Health and Ministry of Defense, as well as a representative from Guinea Bissau, participated in the program. Dr. Nyambe Sinange, District Medical Officer from the Nyimba District Health Office in Lusaka commented on the very practical nature of MfPH and how he was able use



Zambia district medical officers prepare a Gantt chart for their field project as part of the MfPH training at University of Zambia School of Medicine, Lusaka.

what he learned in Process Improvement and Project Management courses to improve the operations of his district. When asked about topics that were of particular interest during the course, Dr. Sinyange responded, "...Team Building helped me understand a lot of different skills in my program officers and therefore enabled me to form effective management teams. The topic on leadership also made me a different leader ... I am now able to give focus to the team on important service delivery issues by setting the right priorities. My communication skills as a leader have also improved."

Performance management is also an essential component of good leadership and included in the MfPH. Responsible for operations of the Nyimba District Health Office, Dr. Sinyange commented on how this aspect of the course helped him improve performance. According to Dr. Sinyange, "One of the areas of poor performance was that the district was unable to conduct operational research, which was a requirement according to the performance assessment standards.... I was able to make a research team which spearheaded all the research at district level. Many research areas were identified

by the district after I oriented them on process improvement."

The design of the course as part-time, in-service, and Zambia-based made it accessible to health professionals who are unable to leave their position for extended periods of time. For many students, this is an added and much appreciated benefit. "Another very important part of the training was that I was able to do the training while being available to work at the station. This is very important as we have a lot of human resource crisis in our facilities."

CDC collaborated with essential partners to bring the vision to reality. Dr. Grace Kehenya, Senior Technical Advisor for Laboratory Services with the non-governmental organization Management Sciences for Health and a 2002 MIPH graduate, provided assistance in the design, development, and implementation of the new program. Dr. Kehenya noted how her own participation in MIPH advanced her career working for Zambia Ministry of Health (ZMOH) as a Director of Public Health Laboratories at the time of her enrollment in MIPH Atlanta—"I benefited from the course by improving my skills in team building, leadership, management, advocacy and negotiation; which assisted me to further my education to obtain a PhD in Public Health in 2009." While still at the ZMOH, Dr. Kahenya was able to develop self-sustaining applied management programs for the health workforce. We congratulate Dr. Kahenya and Dr. Sinyange for their many accomplishments, and extend our best wishes to UNZA for continued success with this innovative program.

For further information, please contact Denise Traicoff at dnt1@cdc.gov.

Updates from the Field..

DPHSWD Embraces the One Health Approach *continued from page 7*

currently being communicated to EPT stakeholders and constituents, and other relevant parties. The OHCC will eventually be placed in a 'tool box' of One Health resources for global partners and serve as a guideline and common unifying framework for synergistic training and communication.

One Health Fellowship

The year-long One Health fellowship strengthens health systems and workforce capacity and orients public health professionals to the One Health approach for better prevention, prediction, rapid detection, control, and response to disease outbreaks in humans, livestock, and wildlife. The first One Health fellows graduated in June 2012, and included four professionals from Makerere University in Uganda (a veterinarian, an MPH-level public health practitioner, a One Health epidemiologist with a bachelor of veterinary medicine and an MPH, and an environmental health scientist) and two graduates from Kenya's FELTP (a medical epidemiologist and the first veterinarian in Kenya to graduate with a Master of Science degree in applied epidemiology).

During their training, the six fellows served as One Health practice ambassadors through their cross-ministry postings and completed projects to strengthen zoonotic surveillance and outbreak response. These projects addressed such topics as designing and implementing mass gathering surveillance to ensure timely detection and response to infectious and non-infectious disease threats; evaluation of surveillance systems for zoonoses at district and provincial levels; investigation of zoonotic disease outbreaks such as anthrax, brucellosis, and Ebola; and evaluation of previous zoonotic disease outbreaks to identify gaps and make recommendations for improving response to public health and veterinary sectors. For each project implemented, the fellows provided feedback to the teams at central,



Front row: The One Health fellows: Dr. Eric Osoro, Ms. Stella Akech, Dr. Kelly Nelima, Dr. Benard Ngago, and Dr. Arthur Bagonza. Back row- Partners and mentors: (L-R): Dr. Chima Ohuabunwo- CDC Atlanta/One Health, Dr. David Mukanga- AFENET, Dr. Wuhib Tadesse- CDC Uganda, Dr. Denis Lwamafa- representing Minister of Health- Uganda, Dr. Thomas Easley- EPT, Dr. Issa Makumbi- Ministry of Health, Dr. Timothy Olubero- Ministry of Public Health and Sanitation- Kenya, Dr. Chris Rutebarika- Ministry of Agriculture, Animal Industry and Fisheries- Uganda, Dr. Murithi Mbabu- Ministry of Livestock Development- Kenya, Dr. Kariuki Njenga- CDC Kenya, Dr. Monica Musenero- USAID Uganda, and Dr. Sheba N. Gitta- AFENET



(L-R): Dr. Monday Busuulwa- One Health Fellowship Coordinator, Dr. Chima Ohuabunwo- One Health Technical Team Leader, Dr. Sheba N. Gitta- AFENET's Deputy Executive Director and Head of Science and Public Affairs, and Ms. Anita Tibasaaga- Editor at the Secretariat compare notes during the graduation.

provincial, and district levels to ensure improvement in service delivery. The fellows have also provided service to ministries of agriculture and health by participating in the management of disease surveillance data, developing technical guidelines for surveillance, and improving epidemic preparedness and response considerations within national Integrated Disease Surveillance and Response guideline adaptation meetings. In addition, fellows have worked with ministry technical teams to evaluate the existing diagnostic capacities for neglected zoonoses which will highlight their public health importance in both animal and human health sectors.



Dr. Ben Nsajju (center) a One Health fellow makes his poster presentation on Surveillance for Mass Gatherings during Martyrs Day celebrations in Uganda, during the graduation ceremony.

The One Health initiative ultimately promotes improved coordination between medical, veterinary, and environmental communities to assist with ensuring effective and rapid sharing of information about zoonosis and other threats to human health in efforts to combat all infectious disease in line with IHR (2005). DPHSWD will continue to support One Health activities by actively working with partners and stakeholders in the spirit of One Health and in line with CDC's global health strategy.

For further information, please contact Michele Evering-Watley at mee4@cdc.gov.

Updates from the Field..

“What’s New?”

Noncommunicable (NCD) training materials are available through TEPHINET’s website

- The NCD Team is pleased to announce the availability of cleared NCD training materials on the TEPHINET website. To access these materials, log onto the TEPHINET website, click on “Library,” then click on “Group” and search for “Noncommunicable Disease Training for FETP”. For quicker access you can join the group (click on the “JOIN” button) and add it to “My Groups.” For additional information about accessing these materials or about accessing pre-cleared drafts of additional NCD material, please contact Andrea Bader, at vbu6@cdc.gov.

Speaking Engagements:

- **Dr. Helen Perry**, Team Lead of the Integrated Disease Surveillance and Response Program (IDSR), was a featured speaker at the Stimson Center Global Health Security Program meeting in Washington, DC in July on the implementation of the revised International Health Regulations (2005) worldwide.

We Welcome:

- **Kenneth Johnson**, Public Health Analyst, will be the Acting Deputy Branch Chief for the Field and Applied Epidemiology Training Program branch. Dan Frank, MPH, is the Acting Branch Chief. The position of the Branch Chief of the FAETP is now closed for review.
- **Kayla Laserson, SD, SM**, currently Director of the KEMRI/CDC Field Research Station in Kisumu, Kenya, has accepted the position of Resident Advisor for the new India EIS Program. Kayla received her doctoral degree from Harvard in 1997 and came to CDC the same year as an EIS Officer in the International TB Branch. She took the KEMRI position in 2005. The India EIS Program is set to enroll its first class of 12 participants in October, and Kayla is scheduled to move to India at the end of the year.
- **Shua Chai, MD, MPH**, will be the Resident Advisor for the new Bangladesh FETP. Shua joined CDC as an

EIS Officer assigned to the Washington, DC Health Department (2006-2008), received his MPH from Hopkins as a CDC Preventive Medicine Resident, completed his PMR assignment at GDD in Beijing, then worked in the Enteric Diseases Epidemiology Branch. He will be based in Atlanta until his transfer to Bangladesh.

- On June 25, 2012, **Dr. Els Mathieu** joined the Field Epidemiology Training Program in Atlanta, GA. She will relocate to Yaounde, Cameroun in the fall of 2012 where she will serve as the Resident Advisor for the Regional FETP, covering Cameroun, Central African Republic, and the Democratic Republic of the Congo.
- **Hee Kyung (“HK”) Chun, DSc**, joined the Division in August as the new Prevention Effectiveness (PE) fellow. Prior to joining DPHSWD, HK served as an Association for Prevention Teaching and Research (APTR-CDC) Fellow at the National Institute for Occupational Safety and Health. She will be performing a comprehensive economic and policy analysis of Field Epidemiology Training Programs.
- We welcome back **Elizabeth (Liz) Kim** as the Program Operations Analyst for the Public Health Systems Strengthening Branch.

We Wish Them Well:

- **Henita Kuntawala, MSPH**, will remain an ASPH/CDC Global Health Fellow and will be moving to the Rwandan CDC office in the fall. She is grateful for having the opportunity to work with FETP this last year and will miss her team.
- **Victoria Fort, MPH**, will be leaving the IDSR team in September to move to California. She has enjoyed working with the DPHSWD team and learning how public health works in the field. She wishes everyone the best.
- **Yesenia (Senia) Wilkins, MPH**, an instructional designer for the FETPs in Central America and Southeast Asia has accepted a permanent position in CDC’s Division of Adolescent and School Health.
- **McKenzie Andre, MD, MPH**, former Medical Epidemiologist with the Haiti,

Morocco, Botswana FETP programs, has accepted a position in CDC’s Global Immunization Division.

New Regional Support Teams, FAETP:

- **John Ngulefac, MBA, MPH** is the Team Lead for the new Francophone Africa Regional Support Team.
- **Augusto Lopez, MD, MPH**, is the new Team Lead for East Africa.

Awards:

- **Matt O’Shea**, Public Health Analyst within the Division’s Global Public Health Informatics Program (GPHIP), was selected as CDC’s Employee of the Month for August. Matt was recognized by CDC’s Director, Dr. Thomas Frieden during the CDC Senior Leadership meeting on September 17, 2012, for demonstrating exceptional performance in completing GPHIP’s contract and budget assignments.

- **Dr. Robert Fontaine** was selected for the 2011 International Frontline Public Health Service Award.

The following DPHSWD employees were recognized at the CGH Awards Ceremony on July 13th, 2012:

- **Daniel Frank**: Excellence in Finance– For excellence in financial services that ensure program accountability and effectiveness.

- **Henry Walke**: CGH Unsung Hero Award – For recognition of those who have demonstrated high ideals, innovation and commitment to their position and work performance, and who have had a significant impact on the ability of others to succeed in their work.

For further information please contact **Monique Tuyisenge-Onyegbula** at von8@cdc.gov

Seeking Submissions...

If you would like your program to be featured in an upcoming issue of Updates from the Field, please send a 300-500 word summary of your program’s activities and photos to Ruth Cooke Gibbs, at icn6@cdc.gov.

Updates from the Field...

Conferences/Events

Upcoming...

- 1st Singapore International Public Health Conference in conjunction with the 7th Singapore Public Health & Occupational Medicine Conference, 1 to 2 October 2012, Singapore, <http://www.phconference.org>
- Prioritizing Health Disparities in Medical Education to Improve Care, 2 October 2012, New York, NY, United States of America, <http://www.nyas.org/disparities>
- 2nd International Public Health Conference & 19th National Public Health Colloquium, 3 to 4 October 2012, Kuala Lumpur, Malaysia, <http://www.pubhealthcollo.org>
- Consumer Genetics Conference, 3 to 5 October 2012, Boston, MA, United States of America, <http://www.consumergeneticsconference.com/>
- 6th National Conference: School and Public Health Nursing, 4 October 2012, Birmingham, West Midlands, United Kingdom, http://www.mahealthcarevents.co.uk/cgi-bin/go.pl/conferences/detail.html?conference_uid=334
- Biodefense-2012, 15 to 17 October 2012, San Francisco, California, United States of America, <http://omiconline.org/biodefense2012/>
- International Society for Environmental Epidemiology East Asia Chapter (ISEE - EAC) 2012 Conference, 15 to 18 October 2012, Kuala Lumpur, Malaysia, <http://iigh.unu.edu/?q=node/178>
- AICR Annual Research Conference 2012 on Food, Nutrition, Physical Activity & Cancer, 1 to 2 November 2012, Washington, D.C., United States of America, <http://www.aicr.org/conference>
- Tackling Smoking in 21st Century Britain, 7 to 9 November 2012, York, Yorkshire, United Kingdom, <http://www.ukctcs.org/ukctcs/index.aspx>
- TEPHINET 7th Global Scientific Conference, 10 to 15 November 2012, Amman, Jordan, <http://www.tephinet.org/conference/tephinet-7th-global-conference>
- Profound Healing - Sustainable Wellbeing Conference 2012 (The Gawler Foundation), 17 to 18 November 2012, Melbourne, Victoria, Australia, <http://www.gawler.org/speakers>



- Public health science: A conference dedicated to new research in public health, 23 November 2012, London, United Kingdom, <http://www.rsm.ac.uk/academ/epd01.php>
- International Conference on Global Public Health 2012, 3 to 4 December 2012, Colombo, Sri Lanka, <http://www.health3000.org>
- The 3rd International Conference, Urban Mobility: Its Impacts on Socio-cultural and Health Issues, 7 to 8 December 2012, Surabaya, East Java, Indonesia, <http://www.fib.unair.ac.id/urbanmobility2012/>
- **For further information, please contact Dacia Davis at ifu5@CDC.gov**

Tell us what you think...

Updates from the Field...

Strengthening Public Health Systems and Workforce Capacity Globally

is a quarterly newsletter produced by CDC's Division of Public Health Systems and Workforce Development. The newsletter aims to inform residents and graduates of Field Epidemiology Training Programs, national and regional partners, and the general public about news, events, training, and resources of interest. We welcome your feedback and would like you to take a few minutes to complete a survey. Please click the link: <http://www.surveymonkey.com/s/GWSB6NB>. Please send any additional comments and or suggestions to Ruth Cooke Gibbs at icn6@cdc.gov.

Director's Message

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programs such as polio eradication as described in the summer issue of DPHSWD's newsletter (<http://www.cdc.gov/globalhealth/dphswd/fieldupdates/pdf/dphswd-field-updates-2012-summer.pdf>) and major international public health initiatives to support malaria, tuberculosis, and HIV/AIDS control and prevention programs. Further, in support of the current revision of the International Health Regulations, FETPs have contributed substantially to governmental responses to outbreaks of infectious diseases and other public health emergencies. For example, in 2011 alone, the 24 CDC-supported FETPs that serve over 40 countries responded to over 300 outbreaks. After completion of the FETP, many graduates have gone on to take leadership positions within ministries of health, allowing them to continue to strengthen the institution as a whole and respond to public health issues more effectively.

Despite FETPs impressive accomplishments in health systems strengthening, many people still think of FETPs as being solely training programs. For those who know about FETPs and what they have contributed to global health, does being called a "training program" imply that FETPs are just training programs and obscure the tremendous contributions FETPs have made towards improving public health around the world? Perhaps the onus is on us and we need to do a better job of letting the public know that FETPs contribute more to public health than training and should be viewed as a platform for health system strengthening. While positioning FETPs as a platform for health system strengthening still doesn't fully describe what FETPs do, it is at least a closer description of the scope of their services and how they function.

— Peter B. Bloland, D.V.M., M.P.V.M.
Director, Division of Public Health Systems and Workforce Development, U.S. Centers for Disease Control and Prevention