

Division of Public Health Systems and Workforce Development

2010 Annual Report Summary



Centers for Disease
Control and Prevention
Center for Global Health

“CDC has re-emphasized the priority it places on responding effectively and efficiently to health threats—domestic or global—and reaffirmed its traditional focus on science and evidence-based public health practice. Key to this has been the strengthening of surveillance and epidemiology—historically among the organization’s greatest assets.”

Thomas R. Frieden, M.D., M.P.H.
Director, CDC, and Administrator, ATSDR

DIRECTOR'S LETTER

It is my pleasure to present the 6th annual report for the Division of Public Health Systems and Workforce Development (DPHSWD) at the Centers for Disease Control and Prevention (CDC). The 2010 Annual Report provides a detailed picture of the division's global health activities and its major accomplishments.

In recent years, CDC has gone through an agency-wide reorganization that led to the restructuring and renaming of our division from the Division of Global Public Health Capacity Development to the Division of Public Health Systems and Workforce Development (DPHSWD). In 2010, the division became a part of the newly established Center for Global Health (CGH). The division also expanded by adding the Global Public Health Informatics Program (GPHIP) and the Integrated Disease Surveillance and Response (IDSR) team. Those two programs complement the previously existing programs: the Field Epidemiology and Laboratory Training Program and Systems Development Branch (Africa), the Field Epidemiology and Laboratory Training Program and Systems Development Branch (Asia and the Americas), and the Sustainable Management Development Program.

The reorganization also brought to CGH the Division of Global Disease Detection & Emergency Response, the Division of Global HIV/AIDS, and the Division of Parasitic Diseases and Malaria. This organizational restructuring reflects CDC's increased emphasis on global public health. Being a part of this new Center presents numerous opportunities to strengthen existing relationships, develop new partnerships, streamline activities, be more innovative, and work with partners more efficiently to build and strengthen public health systems.

During the past year, the work of DPHSWD and its Field Epidemiology Training Programs (FETPs) continued to receive global recognition. Several new FETP programs have been established while others have expanded. We have also broadened the scope of our activities by working on specific tracks for non-communicable diseases, malaria, zoonoses, and immunization. Greater emphasis has also been given to improving the quality of the training and outcomes. We are developing and deploying new tools to help programs assess their quality. We are also partnering with TEPHINET and others to work on accreditation and preparing for a multi-site evaluation of the FETP. We believe that this approach will allow us to expand support for ministries of health and other partners, strengthen and improve critical public health systems, prevent and control infectious and chronic diseases, respond to international disasters, and provide a sustainable approach to building a global public health workforce that includes skilled field epidemiologists, laboratory scientists, and public health managers.

The division's Sustainable Management Development Program (SMDP) continues to focus on building a strong public health system and workforce equipped with competent managers and leaders. SMDP has focused its efforts on a Global Health Leadership Forum that targets public health leaders and an on-site Management for International Public Health course that targets mid-level managers. Both initiatives assist countries in building management and leadership capacity. The addition of the GPHIP and IDSR teams further expands the range of services and technical advice our division can offer partner countries.

DPHSWD is re-examining our strategies, goals, and objectives with the aim of providing a stronger and more strategic approach to building public health systems and workforce capacity through partnerships. We will also focus more on providing better headquarters support to our programs and Resident Advisors in the field through a results-oriented approach.

As we continue to define our goals and objectives and develop a strategic plan to move forward as a division within CGH, we will work closely with our internal and external partners to determine how best to utilize all of CDC's assets to support the needs of the countries we serve. We remain committed to working with our partners to strengthen public health systems and workforce capacity and to protecting and improving the health of the global community. We look forward to keeping you apprised of our progress on this new strategic positioning so that together we can maximize our ability to support country needs. For the latest updates on our activities, please visit our websites at www.cdc.gov/globalhealth/fetp; www.cdc.gov/globalhealth/smdp; www.cdc.gov/idsr; and <http://www.cdc.gov/globalhealth/programs/informatics.htm>.



Bassam Jarrar, MBA, MA
Acting Director
Division of Public Health Systems and Workforce Development
Center for Global Health
Centers for Disease Control and Prevention





DIVISION OVERVIEW

Based in Atlanta, Georgia (U.S.A.), the Division of Public Health Systems and Workforce Development is part of the Center for Global Health at the U.S. Centers for Disease Control and Prevention.

The division's strategy is to work with partners to strengthen the global public health workforce, support public health systems, and achieve program sustainability through key strategies that emphasize applying public health science and practice and demonstrating measurable public health impact. We aim to achieve these goals through:

Vision

Our vision is that countries throughout the world have effective and equitable public health systems to protect communities and enable people to live healthy and productive lives.

Mission

Working with Ministries of Health (MOHs) and public health partners, we are committed to strengthening public health systems and developing the workforce using solid science and innovative programs.

We aim to build sustainable capacity that meets our partners' national priorities. We believe that strong public health systems are needed to improve and protect the public's health and to respond effectively to the ever-changing and increasing global public health challenges. We are committed to effectively collaborate with our public health partners and to respect the diversity of global public health practices, resources, and experiences.

Goals

Using systems development programs such as Field Epidemiology Training Programs (FETP), Field Epidemiology and Laboratory Training Programs (FELTP), Sustainable Management Development Program (SMDP), Global Public Health Informatics Program (GPHIP), Integrated Disease Surveillance and Response (IDSR), and other programs, we help MOHs around the world build strong, effective, sustainable programs and capacity to improve public health systems on a local, regional, and national level.

- **Field Epidemiology.** We work with ministries of health (MOHs) and other ministries and public health institutions to strengthen their epidemiology workforce through the division's flagship residency-based programs in applied epidemiology, the Field Epidemiology Training Programs (FETPs) and the Field Epidemiology and Laboratory Training Programs (FELTPs). A combination of classroom-based instruction and mentored practical work allows residents to receive hands-on multi-disciplinary training in public health surveillance, outbreak investigation, laboratory management, program evaluation, and other aspects of epidemiologic research and methodology. Through the FE(L)TP, short courses, and other programs, we help to train hundreds of public health professional on the principles of epidemiology, surveillance and outbreak response, and public health practice to address specific country needs.
- **Public Health Surveillance and Response Systems.** We work with partner MOHs to strengthen their public health surveillance and response systems for priority disease conditions. FETP and FELTP residents learn about surveillance, disease or outbreak detection, confirmation, reporting, analysis and feedback of disease data, and implementation of effective public health responses in a participatory approach. As graduates, they apply these skills in their work for the MOH to operate and further strengthen the public health surveillance and response systems and to use the information for more effective disease detection, control, and prevention.

- Integrated Disease Surveillance and Response (IDSR).** Instituted in 1998 by the World Health Organization African Regional Office (WHO AFRO) and later identified as a primary strategy for African countries to build the detection and response capabilities required under the International Health Regulations, IDSR aims to improve the availability and use of surveillance and laboratory data for control of priority infectious diseases that are the leading cause of death, disability, and illness in the African region. Through technical assistance and development of guidelines and tools, the CDC's IDSR Team works closely with African ministries of health to implement strategies and activities for improving surveillance and response to priority infectious diseases in Africa. IDSR is the surveillance strategy taught to FETP residents in Africa.
- Public Health Leadership and Management.** Through strategic partnerships with public health training institutions, faculty development in our Management for International Public Health course, and technical program assistance, the Sustainable Management Development Program (SMDP) works with partner countries to develop leadership and management programs for public health professionals. Our approach combines experiential training and supervised applied management improvement projects to help public health professionals acquire the knowledge and skills needed to improve organizational performance, shape the public health agenda, and strengthen public health practice in their countries.
- Public Health Informatics:** The Global Public Health Informatics Program (GPHIP) supports the division's mission to expand opportunities to work with the global health community to standardize, strengthen, integrate, exchange, share, and ensure interoperability of disparate datasets, tools, and services to maximize public health impact. GPHIP's vision is to transform public health practice through informatics. Its mission is to improve health outcomes, quality, and safety through interoperable, integrated, and standardized information systems that are able to capture, track, report, and exchange data and improve decisions.



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- **Public Health Systems Strengthening in Fragile States:** Combining the division's programmatic and technical resources with those of other technical units around CDC, we provide support to many partner governments of countries emerging from war, civil war, natural disasters, and other causes of instability to assist them in building, rebuilding, or strengthening their critical public health systems and workforce. These activities contribute to larger, multilateral reconstruction and stabilization efforts.

Our teams of epidemiologists, public health advisors, management trainers, instructional designers, health educators, health communication specialists, and support staff provide scientific expertise, training consultations, and other programmatic support and advice to help MOHs enhance their health protection and health promotion programs.

Our Resident Advisors are assigned to MOHs and provide direct technical assistance in developing and sustaining the FE(L)TPs, and assist with training, mentoring, and system strengthening. Our team has developed curricula, tools, and training material in all areas of epidemiology, biostatistics, management, and public health communication skills, to mention a few examples. Our Atlanta-based team provides technical assistance and support both from Atlanta and on-site.

Our work is only possible through partnerships. Ministries of health are our main partners in building workforce and systems capacity. Collaboration and partnerships include other CDC units, especially the Global AIDS Program and the Global Disease Detection Program. Externally, we have built strong partnerships with many national and international organizations such as the World Health Organization, the U.S. Agency for International Development, the Department of State, the Department of Defense, the Bill and Melinda Gates Foundation, the Ellison Medical Foundation, the Carter Center, and the World Bank. We also have strong partnerships with the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) and regional FETP networks –the African Field Epidemiology Network (AFENET), the Eastern Mediterranean Public Health Network (EMPHNET), the South Asia Field Epidemiology and Technology Network (SAFETYNET) and REDSUR (the network of FETPs in Latin America).

2010 HIGHLIGHTS

Non-Communicable Disease Track

Non-communicable diseases (NCDs) such as diabetes, heart disease, and stroke, are rapidly becoming a major factor in low- and middle-income countries where, combined with the already heavy burden of infectious diseases, they create a double toll on the health of the population. Many of our partner countries are trying to respond to this threat. DPHSWD is collaborating with CDC's National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) on an initiative to improve surveillance and build epidemiologic capacity for NCDs via FETPs.

Initially, this initiative aims to build workforce capacity and strengthen surveillance systems for NCDs in China, Colombia, Thailand, Jordan, and Tanzania using existing FE(L)TPs as a platform. FE(L)TP trainees who select the NCD track will follow the same core curriculum as trainees in the regular program, but they will also receive specialized training in NCDs. Their field work and program requirements will also have an NCD focus (e.g., surveillance system evaluations, thesis, bulletin reports, manuscripts, outbreak investigations, and data analysis).

The NCD team at the division and NCCDPHP completed assessments in the five countries with agreements on key programmatic areas. Curriculum and training materials are being developed along with a specific implementation plan for early 2011.

Pakistan FELTP Responds to Humanitarian Disaster Created by Massive Flooding in Pakistan

When flood waters rose in Pakistan in late July 2010, one of the first calls for help went to the U.S. Centers for Disease Control and Prevention-supported Pakistan Field Epidemiology and Laboratory Training Program. The magnitude of the devastation brought by the heavy monsoon rains was enormous. One fifth of the country was under water and more than one million homes were destroyed. Approximately 2,000 people died and another 1,500 were injured. Altogether, more than 17 million people were affected by the floods, which—according to UNICEF—is more than the number of people affected by the 2004 Asian tsunami, the 2005 Kashmir earthquake, and the 2010 Haiti earthquake combined.



Dr. Ashgar visits a child who survived the flood waters for 12 hours before being rescued. CDC-trained FELTP fellows are helping the camps monitor for outbreaks of diseases that can spread in crowded settings.



Pakistan FELTP Fellows conducting a survey in Lahore, Pakistan.

The Pakistan Ministry of Health (MOH) created a post-disaster National Infectious Diseases Task Force and contacted the Pakistan FELTP, asking the program to be part of the taskforce. The taskforce drafted an overview of anticipated public health challenges and outlined requisite response measures. Thirty-one FELTP officers were sent into the camps, where they monitored health conditions and disease outbreaks such as cholera which can spread rapidly in crowded and unsanitary conditions.

The FELTP fellows' unconditional commitment to serve in this public health disaster is a direct result of the intensive field-based trainings which are the hallmark of the FELTP tradition.

The Pakistan FELTP is conducting the following activities on an ongoing basis:

- Providing technical assistance to the National Infectious Diseases Task Force in a daily epidemiological review of public health situational analysis and response
- Improving the local public health response by continuously communicating and advising FELTP fellows throughout Pakistan

China FETP Investigates H1N1 Influenza (pH1N1) Infection in Shenyang City

From November 2009 to January 2010, the Chinese Field Epidemiology Training Program (CFETP) conducted an investigation of an outbreak of severe disease and death from H1N1 influenza (pH1N1)

infection in northern China's Shenyang City. The CFETP investigation found that a major risk factor for this outbreak was the use of steroids for treating fever and mild symptoms during the early stage of pH1N1 disease development. Patients who were given early steroid injections were nearly three times as likely to subsequently develop severe disease or die. The practice of using steroids to lower fever and treat mild symptoms of infections is rampant in China, especially among rural practitioners, and is likely to be responsible for tens of thousands of deaths and even more permanent disabilities in China. This study's findings will be published in the journal *Clinical Infectious Disease* later this year. The findings of this study will be used to evaluate national policy on steroid use for treating fever.



Chinese FETP Officers (left to right) Yang Su, Ke Han, Jinhui Zhao, and a nurse from the hospital arrives to begin the investigation.

Nigeria FELTP Graduates its First Cohort of Residents

In December 2010, 13 residents from the Nigeria Field Epidemiology and Laboratory Training Program (6 medical epidemiologists, 4 veterinary epidemiologists, and 3 public health laboratory scientists) completed the 2-year training program. Established in 2008, the program aims to develop capacity in applied epidemiology and laboratory management and provide epidemiological expertise to the Nigerian Federal Ministry of Health, the Federal Ministry of Agriculture and Rural Development, and State Ministries of Health. The Nigeria FELTP was the first African FELTP to incorporate a “One Health” approach integrating collaborations between physicians, laboratory scientists, and veterinarians. Residents in the Nigeria FELTP work toward improving public health systems within Nigeria under a holistic strategy that connects the human-animal-environmental interface with public health practice. Each of the graduates received a Master of Public Health degree in Field Epidemiology, Veterinary Epidemiology, or Laboratory Epidemiology and Management from either Ahmadu Bello University or the University of Ibadan.

A finalization ceremony was held in Abuja for the graduates and involved many of the Nigeria FELTP partners including CDC staff from the Division of Public Health Systems and Workforce Development and the One Health Office of CDC’s National Center for Emerging and Zoonotic Infectious Diseases. The finalization ceremony began with an address by FELTP program director Dr. Henry Akpan followed by a cultural dance performed by the Nembe Dance Troupe from the Nigeria Ministry of Arts and Culture. Goodwill messages were presented by many of the stakeholders and the keynote address on behalf of the Honorable Minister of Health was delivered by Dr. Akpan. Ceremony attendees were also presented with “The Pacesetter”, a yearbook produced by the FELTP residents; it profiles each member of the cohort, provides contact information, and displays well wishes from numerous stakeholders. The graduates have now returned to work in their respective positions within the ministries and have formed an alumni association to allow continued networking and provide ongoing support to future residents of the Nigeria FELTP.



Dr. Patrick Nguku, Nigeria FELTP Resident Advisor, imparts knowledge to residents during a lecture in Abuja, Nigeria.



First Nigeria FELTP Cohort Graduation Ceremony, Abuja, Nigeria, January 27, 2011.

PEPFAR Funds First FELTP Program in a Portuguese Speaking Country

The Mozambique FELTP (M-FELTP), funded by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), is the first program in a Portuguese-speaking African country. Mozambique's inaugural FELTP Cohort was enrolled in August 2010. The current residents, consisting of epidemiologists and laboratorians, are pictured here with Resident Advisor Tim Doyle. M-FELTP graduates will receive a Masters degree in Public Health with a specialization in Field Epidemiology or Public Health Laboratory



Residents of the first cohort for the Mozambique FELTP during the FELTP's introductory course standing with resident advisor Tim Doyle.

Management upon satisfactory completion of the program. Four of the current M-FELTP residents were also earlier participants of an FELTP 2-week Outbreak Investigation Short Course conducted in Mozambique. The program is administered jointly between the Mozambique Ministry of Health and the University Eduardo Mondlane. The M-FELTP residents' investigation of a recent measles outbreak illustrated the value of the program by providing the MOH with additional information on age distribution and risk groups that will better inform planning for upcoming national measles vaccination campaigns. A strong partnership has developed between M-FELTP and the 10-year old Brazilian FETP – the Brazilian program participated in the early country assessment stage of development of the Mozambique FELTP and they continue to share information with the program.

Bill and Melinda Gates Foundation funds their first African FELTP

In 2010, the Bill and Melinda Gates Foundation funded their first African FELTP. The Central Africa FELTP supports residents from the Central African Republic, the Democratic Republic of the Congo, and Cameroon. It is part of the Surveillance in Central Africa (SURVAC) project. The FELTP strengthens essential public health systems in four domains--- improved epidemiologic surveillance; workforce development through long-term and short-term training; laboratory capacity development and establishment of a network of laboratories; and use of new information and communication technologies. Together the program covers a population of nearly 110 million people living in three countries with multiple public health challenges.

2010 marked the 5th Anniversary of CDC's partnership with AFENET

The African Field Epidemiology Network (AFENET) was the first regional network of FETPs. It was started in 2005 with CDC and USAID support and has become a principal implementing partner for FELTP development, support, and networking for FELTP work in Africa. AFENET works with each of the 12 CDC-supported FETPs and FELTPs in Africa and facilitates the management of resources that are used to implement FELTPs. AFENET also provides a platform for a) epidemiologists, laboratorians and other public health professionals to participate in disease outbreak response; b) the design, implementation, and evaluation of surveillance systems for early detection and containment

of outbreaks; c) research; d) monitoring and evaluation of intervention programs; e) capacity building for health systems through training, coaching and mentorship; and f) the direct provision of logistics and supplies. Graduates of FELTPs in Africa contribute in the networking process and have made major contributions to public health within their countries and throughout the region. Many have contributed significantly to the design, implementation, and evaluation of various disease-specific programs including malaria, tuberculosis, and HIV/AIDS. Alumni have taken up leadership positions in the health sector and have collaborated across countries to set up cross-border surveillance systems. CDC has worked closely with AFENET to develop a network of graduates and to help countries develop their own FELTP. An example is Fausta Moshia, a Tanzanian graduate of the Kenya FELTP, who led the development of the laboratory track in the Tanzania FELTP. This success propelled her to a leadership position as the Director of the National Public Health Laboratory in Tanzania. Pictured here, she is assisted by Brazil FETP graduate Daniel Coradi de Freitas, in demonstrating the proper use of personal protection equipment for participants of an Outbreak Investigation course in Mozambique.



During an outbreak investigation short course in Mozambique, funded through PEPFAR and facilitated by AFENET, Fausta Moshia (L) and Daniel Coradi de Freitas demonstrate the proper use of personal protection equipment.

CDC SMDP Launches Global Health Leadership Forum in Atlanta, GA

Recognizing the need and value of effective leadership and management at the highest levels of the health system, SMDP launched the CDC 2010 Global Health Leadership Forum under the theme “*Meeting Health Challenges through Leadership and Collaboration*”. Forty-two senior leaders from 15 countries representing ministries of health, national health programs, and CDC overseas offices convened in Atlanta, Georgia, in November 2010. During the Forum, country representatives formed teams and engaged in leadership-related discussions on systems thinking, collaborative leadership, policy advocacy, and workforce development. Speakers included renowned systems thinker Peter Senge who authored *The Fifth Discipline* and *The Dance of Change*, Jo Ivey Boufford who co-authored *Strong Ministries, Strong Health Systems*, and Bill Eggers, author of *Getting Big Things Done in Government*.



2010 Global Health Leadership Forum participants at CDC Headquarters, Atlanta, GA.



2010 MIPH participants (from Botswana, India, Nigeria, Vietnam, and Zambia) complete a fish-bone diagram as part of a process improvement activity.

CDC SMDP Co-Hosts First Regional MIPH Course in Gaborone

In August 2010, CDC SMDP, in partnership with Botswana SMDP, co-hosted the first regional Management to Improve Public Health (MIPH) course in Gaborone. Thirty-three participants from Botswana, India, Kenya, Malawi, Nigeria, South Africa, Uganda, Vietnam, Zambia, and Zimbabwe completed this course. Course learning objectives addressed building effective teams, training adult learners, making effective presentations, managing projects, coaching and mentoring in the workplace, managing conflict, improving work processes, and leading people and organizations. Following the course, participants implemented management improvement projects using knowledge and skills they developed during the course. CDC SMDP provides ongoing technical assistance and continuing education to help them succeed.

SMDP Process Improvement Tools Enhance Public Health Outcomes in Ethiopia

Projects conducted by public health professionals who participated in the MIPH training often lead to important outcomes. Ethiopian MIPH graduates and other faculty trained Prevention of Mother to Child Transmission (PMTCT) teams from the Oromia Regional Health Bureau on the use of process improvement tools and,



Staff at the Dembre Birhan hospital in Ethiopia where process improvement activities have been successfully implemented.

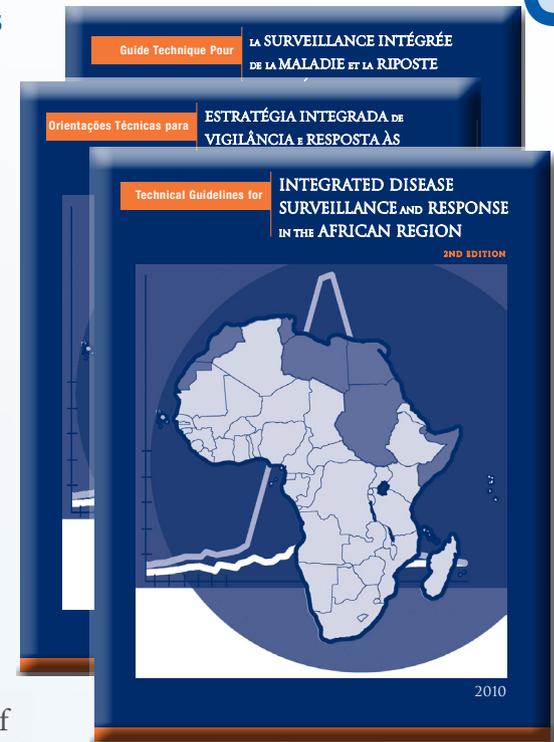
with technical assistance from SMDP staff, mentored them as they conducted management improvement projects. Completed over one year, nearly all hospital and clinic projects have had favorable public health impacts. For example, projects to date have increased the percentage of antenatal care clients delivering in an institutional setting from 23% to 56% (Adama Health Center); HIV testing and counseling of pregnant women's partners from 13% to 51% (Fitche Hospital); HIV+ women receiving antenatal care who had their CD4 (t-cell) counts tested from 42% to 90% (Asella Hospital and Health Center); HIV-exposed infants enrolled in ART from 13% to 98% (Bishoftu Hospital); and HIV+ mothers taking prophylaxis to prevent mother to child transmission from 20% to 82% (Robe Health Center).

IDSR and WHO-AFRO Revise the IDSR Technical Guidelines

In 2010, the Integrated Disease Surveillance and Response (IDSR) unit worked in partnership with WHO-AFRO to complete a revision of IDSR Technical Guidelines. These guidelines incorporate recommendations for achieving the International Health Regulations (IHR 2005) requirements and for addressing surveillance requirements for non-communicable and neglected tropical diseases that have emerged as a global health threat in the last 10 years. The revised IDSR Technical Guidelines are now available in English, French, and Portuguese and are a reference for training, policy development, and monitoring strategies in support of stronger surveillance and response systems. The guidelines are being disseminated to the 46 countries in the Africa region for adaptation and adoption into national public health programs.

IDSR Published a Surveillance Cost-effectiveness Study

Effective surveillance for infectious diseases is an essential component of public health yet very few studies estimate the cost-effectiveness of starting or improving disease surveillance. IDSR conducted a cost-effectiveness analysis using pre- and post- IDSR meningococcal meningitis surveillance data from Burkina Faso (1996–2002 and 2003–2007). IDSR implementation was correlated with a more rapid resolution of outbreaks (a median reduction of 2 weeks in reaching the peak of an outbreak). IDSR was also correlated with a reduction of 43 meningitis cases per 100,000 cases. Assuming the correlations between reductions in time to peak of outbreaks and cases are related, the cost-effectiveness of IDSR was \$23 per case averted, and \$98 per meningitis-related death averted. It is not possible to determine if the measured differences were due solely to IDSR; however, it is reasonable to claim that IDSR can improve the cost-effectiveness of public health surveillance.



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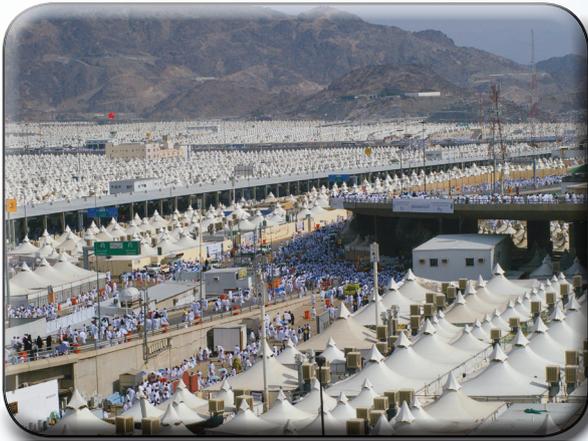
Modeling the Cost-Effectiveness of the Integrated Disease Surveillance and Response (IDSR) System: Meningitis in Burkina Faso

Zana C. Somda¹, Helen N. Perry¹, Nancy R. Messonnier¹, Mamadou H. Djingarey², Salimata Ouedraogo Ki³, Martin I. Meltzer^{1*}

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GPHIP Developed Informatics Modules for Saudi Arabia National Guard

In 2010, the Global Public Health Informatics Program (GPHIP) strengthened its partnership with the Saudi Arabia National Guard to integrate a platform for capturing, analyzing, and reporting health-care associated and notifiable conditions and better ensure interoperability with existing clinical and laboratory systems and the general public health infrastructure. GPHIP developed and deployed components of the Healthcare Safety Network (HSN), Notifiable Disease System (NDS), and an Environmental and Occupational Disorders Registry System (EODRS) module. The system was officially inaugurated in October of 2010.



Thousands gathering in tents for the Hajj in Saudi Arabia.

GPHIP Developed a Mobile-based Surveillance System for the 2010 Hajj Mass Gathering

The annual Hajj, the pilgrimage to Mecca which brings together approximately 3 million Muslim pilgrims from over 140 countries, is a major mass gathering event presenting numerous public health challenges. Effective and timely monitoring of health events and rapid response to outbreaks are critical for ensuring the health and safety of the pilgrims while in Mecca for preventing spread of disease when they return to their native counties. In November 2010 GPHIP continued its partnership with Saudi Arabia Ministry of Health and the Saudi FETP to produce a mobile-based infectious disease surveillance system. This system was used to achieve real-time data reporting and analysis for 2010 Hajj in Saudi Arabia.



First day of Epidemiology Module 6 Veterinary training in Almaty, Kazakhstan.

GPHIP Expanded the Electronic Integrated Disease Surveillance System (EIDSS)

GPHIP continued to expand the Electronic Integrated Disease Surveillance System (EIDSS) in collaboration with the Defense Threat Reduction Agency (DTRA) of the U.S. Department of Defense (DoD) to strengthen dangerous pathogen detection and response networks. EIDSS version 2 was deployed in six countries, including Azerbaijan, Armenia, Georgia, Kazakhstan, Ukraine, and Uzbekistan and five training sessions for the EIDSS Epi Module were provided in Georgia and Kazakhstan. Version 3 is under development and preliminary testing is underway.

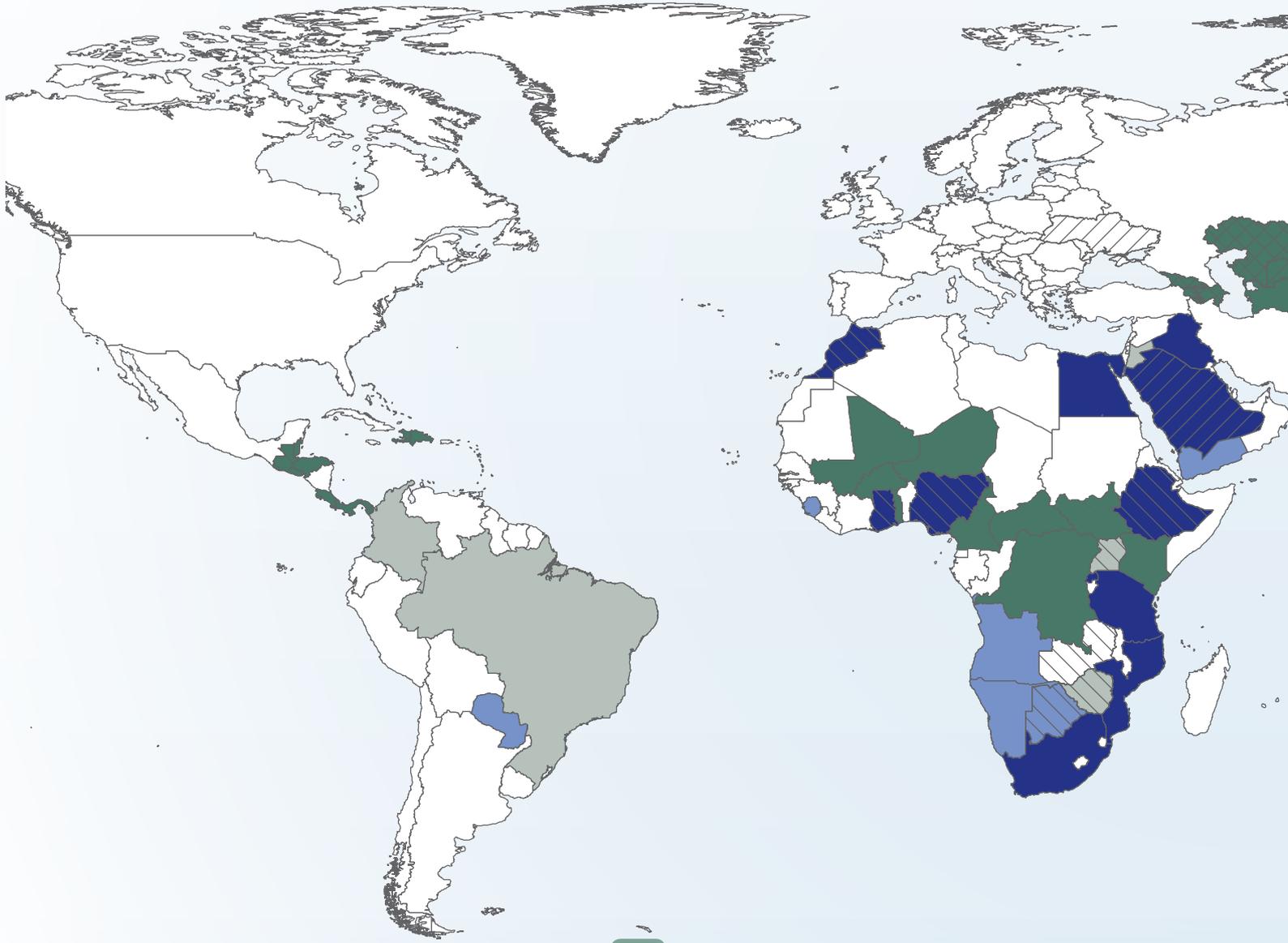
WHO Collaborating Center for Public Health Informatics Initiative

The CDC WHO Collaborating Center for Public Health Informatics (WHO CC) was established and designated by WHO in 2009 to provide opportunities to work with the global public health community to standardize, strengthen, integrate, exchange, and share disparate data, tools, and services. In 2010 the WHO CC, in partnership with WHO Health Metrics Network (HMN), provided support to the implementation of the International Health Regulations (IHR) through development of a suite of epidemiologic tools including an IHR monitoring tool, a public health information toolkit, and a web-based launch pad/portal that integrates software components.

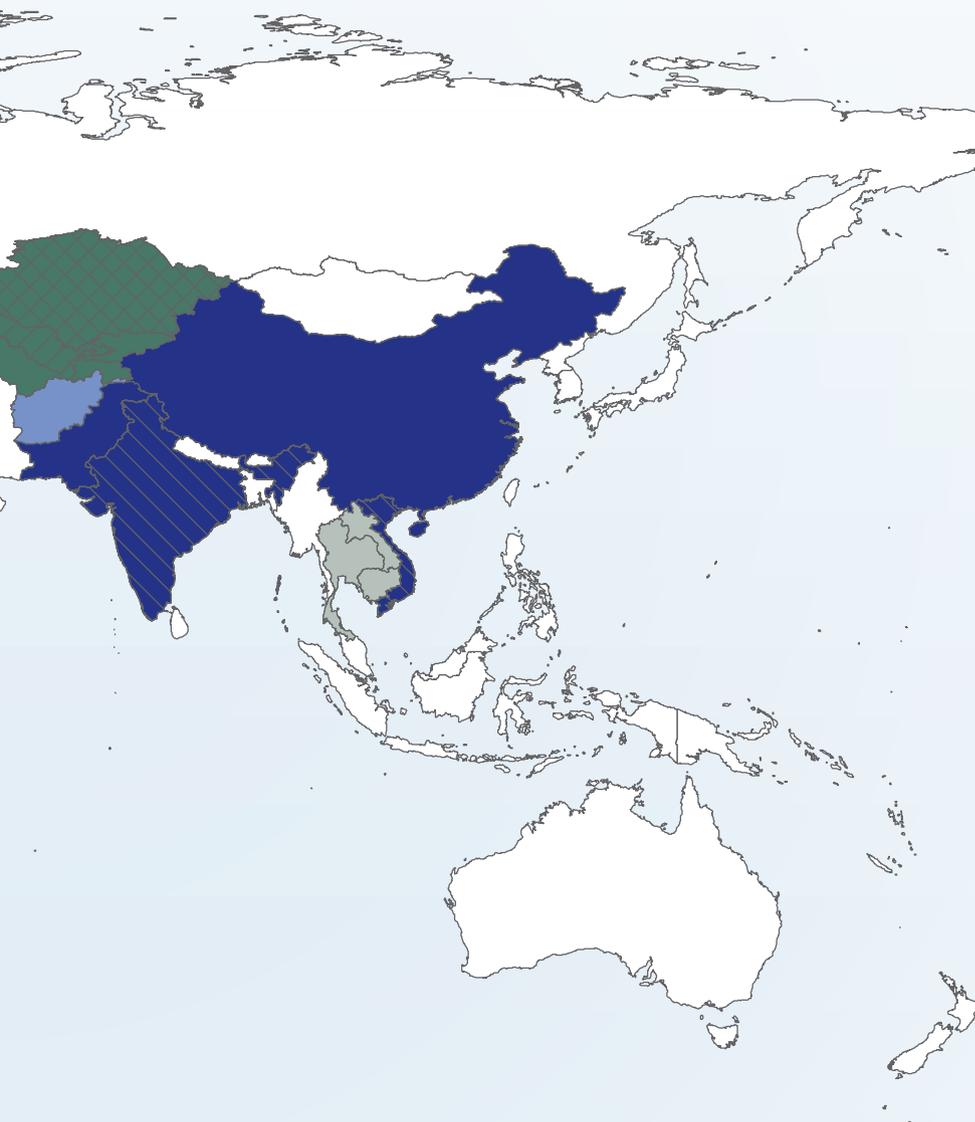




DIVISION OF PUBLIC HEALTH SYSTEMS AND WORKFORCE DEVELOPMENT



SUPPORTED PROJECTS (AS OF JUNE 2011)



Legend

Public Health Systems FE(L)TP

- Country
- Regional
- In Development
- Special Project
- GPHIP
- SMDP
- Both

Integrated Disease Surveillance and Response (IDSR) operates in all countries in WHO/AFRO region.

INTERNATIONAL NIGHT: A HIGHLIGHT OF EIS CONFERENCE WEEK

The 59th Annual Epidemic Intelligence Service (EIS) conference held in Atlanta, Georgia, was a tremendous success, drawing many public health scientists and representatives from Atlanta and around the world.

International Night, a long-standing part of the annual conference, offers residents of Field Epidemiology Training Programs an opportunity to share their work with their US counterparts in the EIS program. The event was co-hosted by the Division of Public Health Systems and Workforce Development, Center for Global Health, CDC, and the Training in Epidemiology and Public Health Interventions Network (TEPHINET).

CDC Director Dr. Thomas Frieden gave introductory remarks. The session was co-chaired by Dr. Patricia Simone, Principal Deputy Director of CDC's Center for Global Health and Dr. Paul Kelly, Director of the Australian Field Epidemiology Training Program & Chairman of the Board of TEPHINET. The evening featured scientific oral and poster presentations from 11 countries.

The 2010 William H. Foege Award for Outstanding Public Health Abstract was presented by Dr. Dionisio Herrera Guibert, Director of TEPHINET. The award was presented to Ke Han, F. He, H.L. Ma, B.P. Zhu, L.J. Zhang, and R.E. Fontaine for their abstract entitled Shigellosis Outbreak in an Elementary School: Sichuan Province, China, June 7-16, 2009.







STRENGTHENING PUBLIC HEALTH SYSTEMS GLOBALLY

FE(L)TP

Since 1980, CDC has helped establish more than 41 FETPs or FELTPs that have produced more than 2300 graduates. As of March 2011, we are supporting 18 FETPs or FELTPs, covering 34 countries, with the help of 20 resident advisors who provide direct program support on the ground. We are also in the process of establishing 8 new programs covering an additional 9 countries.

In 2010, CDC supported 335 trainees in the 18 FE(L)TP programs. These trainees conducted 148 outbreak investigations, 47 planned investigations, and 188 surveillance studies. They presented 79 oral and 99 poster presentations at international conferences and published 29 manuscripts in peer-reviewed journals.

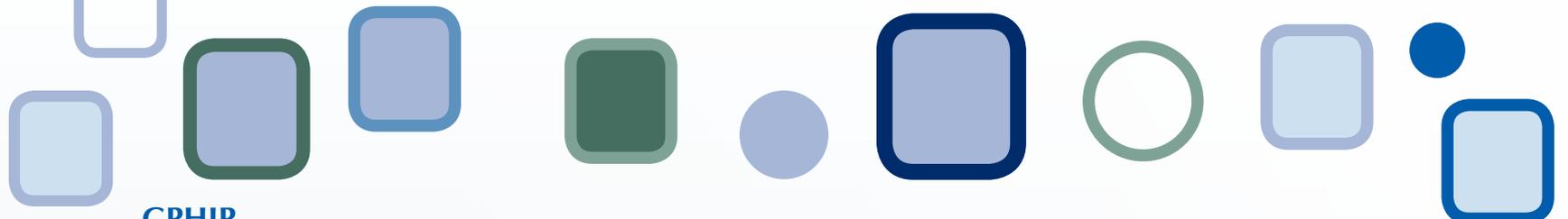
In addition to the standard courses conducted as part of the two-year FE(L)TP curriculum, an additional 24 short courses were provided to the FE(L)TP community that reached 515 participants. Course topics included strengthening laboratory health systems, leadership and management, scientific communications, GIS training, and chronic disease epidemiology.

SMDP

In 2010, SMDP supported 236 MIPH trainees in five countries (Botswana, Ethiopia, Georgia, Ghana, and Vietnam). From 1992-2010, 414 trainees graduated from MIPH programs; 35 graduated in 2010.

Management capacity building programs that MIPH Fellows have engaged in include the following:

- MIPH Fellows in India trained nearly 30 newly placed public health district managers in Andhra Pradesh and 15 FETP scholars in Tamil Nadu in core management competencies;
- With SMDP assistance, MIPH graduates in Uganda facilitated a train-the-trainer workshop for 23 professionals from 11 pre-service training programs, the Ministry of Health, and district health departments in application-oriented management programs they will in turn provide to public health program managers;
- Twenty district health directors from Ghana and Rwanda and CDC locally employed staff from Nigeria participated in a SMDP- and University of Ghana School of Public Health-led management training course and have used the tools to implement management improvements in their work settings; and
- SMDP provided management training to the first class of 14 FELTP fellows in Nigeria and to approximately 75 participants at the 2010 TEPHINET conference in Cape Town, South Africa.



GPHIP

During 2010, GPHIP was involved in several projects including:

- Developing and deploying components of the Healthcare Safety Network (HSN) and Notifiable Disease System (NDS) for Saudi Arabia National Guard;
- Providing informatics support in the Electronic Integrated Disease Surveillance System (EIDSS) version 2 to deploy in Azerbaijan, Armenia, Georgia, Kazakhstan, Ukraine, and Uzbekistan and provided EIDSS Epi module 6 training in Georgia and Kazakhstan;
- Administering the WHO Collaborating Center for Public Health Informatics (WHO-CC), and providing opportunities to work with the global public health community to standardize, strengthen, integrate, exchange, share, and ensure interoperability of disparate datasets, tools, and services to impact public health; and
- Developing and modifying the Mobile-based Surveillance System to provide a real-time surveillance for mass gathering during the 2010 Hajj in the Kingdom of Saudi Arabia.

IDSR

- The Integrated Disease Surveillance and Response (IDSR) team worked in partnership with WHO-AFRO to complete a revision of IDSR Technical Guidelines.
- In 2010, IDSR published a cost-effectiveness study suggesting the cost benefits of a comprehensive, multi-disease surveillance and response system in reducing cases, deaths, and the time-to-peak of an outbreak.



“The scope and intensity of global health challenges demand that CDC work in close partnership with ministries of health and an array of international agencies, institutions and regional networks. We cannot shape the future of global health without a focus on strengthening health systems and building an effective public health workforce.”

Kevin M. De Cock, MD, FRCP
Director, CDC, Center for Global Health

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