

Updates from the Field...

Strengthening Public Health Systems and Workforce Capacity Globally

Fall 2011, Issue 4

Director's Message

Dear Colleagues:

On behalf of the Division of Public Health Systems and Workforce Development, I am pleased to present the 4th edition of the division's quarterly newsletter. We began this effort at the end of last year, with a vision of creating a communication tool that would allow us to 'tell our story' and share some of the incredible work that our staff and partners in Atlanta and around the world are doing to build workforce capacity and strengthen public health systems globally. Since March 2011, over 6,100 people have signed up to receive the newsletter. I want to thank all those who have signed up and are following our work through the newsletter and, as always, we welcome your feedback.

We are continuing our efforts to strengthen the division so that we can serve the needs of our partners and country programs more efficiently. One result of that effort involves staff changes and I am honored to have been chosen to lead the division as its new director. I would like to extend my sincere thanks and appreciation to Bassam Jarrar in whose capable hands the division has been entrusted for the last eleven months as Acting Director. Bassam returns to his position as the Division's Deputy Director. Dr. Henry Walke has been appointed Chief of the new Field and Applied Epidemiology Training Program Branch



— Peter L. Bloland

which now brings all FETPs under a single management structure. Although the division has been restructured and changes in management and leadership have taken place, I would like to emphasize that during this period of transition and realignment, we remain committed to providing our partners with the best support possible. As we define our goals and objectives we will continue to work closely with our internal and external partners and take a more comprehensive and strategic approach to building workforce capacity and strengthening public health systems and institutions.

“We are continuing our efforts to strengthen the division so that we can serve the needs of our partners and country programs more efficiently.”

We are also in the process of assisting in the development of accreditation standards for the Field Epidemiology Training Programs. This initiative is being developed in collaboration with TEPHINET, the World Health Organization, the European CDC, and the programs themselves. We see this effort as an important step toward supporting continuous quality improvement within FETPs and formally acknowledging those programs that commit themselves to meeting or exceeding defined standards of quality. We expect this process will be ready for full implementation by early 2012.

The division's 2010 Annual Report and Summary are now available and can be downloaded using the following URL. www.cdc.gov/globalhealth/dphswd.

Continued on page 11

Inside this issue:

Director's Message..... 1

- Progress on the DPHSWD's realignment, FETP accreditation, and more

Highlights of investigations

- Ministry of Health Evaluates National Policy and Issues Guidelines on Early Use of Steroids Based on China FETP Study2
- Yemen FETP confirms Dengue Outbreak in Al-Mahara Governorate.....3

Partnership Matters

- Strengths of Event-Based Surveillance Systems and the GDDOC4
- CDC/Peace Corps MOU Seeks to Expand Public Health Training Partnership5

Graduate Corner

- US Ambassador Congratulates Graduates from South Caucasus Field Epidemiology and Laboratory Training Program.....6
- Central America FETP Initiates 7th Cohort in Guatemala7

Training/Resources

- SMDP Staff Assist Morocco Ministry of Health Develop Field-based Masters in Health Admin and Public Health8
- Geospatial Mapping Helps Public Health Professionals Make Better Decisions.....9
- CDC's Upcoming Leadership Events Attract Global Leaders and Managers10

New Appointees and Staff Changes.....11

Upcoming Conferences/Events

- Upcoming Conferences/Events..... 12

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..

Highlights of Investigations

Ministry of Health Evaluates National Policy and Issues New Guidelines About Early Use of Steroids Based on China FETP Study

In fall 2009, China was fighting the influenza pandemic sweeping the world. In the largest city in the northeast, Shenyang City, residents were being hospitalized, some of them critically ill. Complications included pneumonia, respiratory failure, acute respiratory distress syndrome, and failure of vital organs. An investigation team comprised of China FETP, Guangdong Center for Disease Control and Prevention (CDC), Shenyang CDC, and China CDC investigated the outbreak to determine possible risk factors for developing critical diseases. The investigators were particularly interested in how steroid use affected the onset of critical diseases among patients with influenza-like illnesses that led to death, respiratory failure, septic shock, failure or insufficiency of two or more non-pulmonary organs, the need for mechanical ventilation, and or admission to an intensive care unit.

Steroid use increases the risk of developing more severe disease from viral infections. However, primary care practitioners in China regularly use steroids to reduce fever or prevent pneumonia, potentially exposing hundreds of millions to this risk. A recent survey showed that approximately 30% of Chinese rural practitioners routinely prescribe the steroid dexamethasone to treat simple fever. The investigation team studied eighty-three patients with confirmed pandemic influenza A (pH1N1) who were hospitalized in Shenyang City from October 20 to November 30, 2009. Medical records review and in-person interviews were conducted for two groups of patients: those that received steroids (i.e., glucocorticoid treatment) within seventy-two hours of becoming ill and those who received late (i.e., after



Chinese FETP Officers (left to right) Yang Su, Ke Han, Jinhui Zhao, and a nurse from one of the four general hospitals in Shenyang Prefecture, Liaoning Province, China arrive to begin the investigation on how steroid use affected the onset of critical diseases among patients with influenza-like illness.

seventy-two hours of becoming ill) or no steroid treatment. The team found that using steroids within three days of the onset of illness tripled the possibility of patients developing critical disease. The findings of the study were published in the August 15, 2011 issue of the journal *Clinical Infectious Diseases*.

Based on these findings, the investigators concluded that early use of steroids for fever reduction and pneumonia prevention increases the risk for critical disease or death from pH1N1 infection. They recommended that guidelines on steroids, specifically glucocorticoid use, be established and enforced. According to FETP resident advisor Robert Fontaine: "The recommendation from this study has the potential to improve patient health all over China. In addition,

the study emphasizes the importance of investigating disease outcomes, especially those associated with pandemic influenza." In response to these study findings and other recent studies conducted by the China FETP, the Ministry of Health convened an expert committee to evaluate the national policy on the use of glucocorticoids. Based on the committee's recommendation, the MoH issued new Guidelines on the Clinical Use of Glucocorticoids, which warned against the abuse of glucocorticoids for fever treatment.

For further information, please contact Genessa Giorgi at vky7@cdc.gov.



Updates from the Field..

Highlights of Investigations

Yemen FETP Confirms Dengue Outbreak in Al-Mahara Governorate

In recent years, dengue has emerged as a public health problem in Yemen causing multiple outbreaks; the first confirmed outbreak was in 2002. In 2010, dengue outbreaks occurred in eight coastal Governorates. In May 2011, a suspected dengue outbreak was reported in Al-Mahara Governorate for the first time and the Yemen Field Epidemiology Training Program (Y-FETP) was asked by the Ministry of Public Health and Population (MOPHP) to conduct an investigation to characterize the outbreak and confirm its cause.

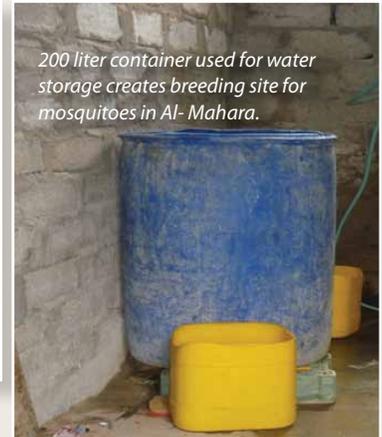
A surveillance team comprised of staff from the MOPHP, the Surveillance and Disease Control Directorate, the National Malaria Control Program, the Governorate Health office, and FETP used WHO case investigation forms to collect data on suspected dengue cases, defined as having fever 2-7 days with two or more of the following symptoms: headache, joint pain, muscle pain, retro-orbital pain, rash, and/or hemorrhagic manifestations. Blood specimens were tested for confirmation of symptoms using Immunoglobulin M (IgM) ELISA, and resulting data were analyzed by the team.

From May 21st – mid July 2011, 221 suspected cases were reported; 169 (76%) were 15-45 years of age, 171 (77%) were males, and 209 (95%) were from Al Ghyadah district, the capital of Al-Mahara Governorate. Of the 197 tested specimens, 101 (51%) were IgM positive indicating a recent infection. Among IgM positive patients, most frequently reported symptoms were fever (100%), myalgia (95%) joint pain (94%), and headache (89%). Of 11 patients who had at least one hemorrhagic manifestation, six were IgM positive. Twenty three cases were hospitalized, and 13 (57%) were IgM positive. Immunoglobulin G (IgG) were detected in 39 patients.

The mosquito populations responsible for dengue transmission (*Aedes aegypti*) were



Open water storage containers in Al-Mahara create breeding sites for mosquitoes.



200 liter container used for water storage creates breeding site for mosquitoes in Al-Mahara.



Construction workers in Al-Mahara with dengue fever.



Indoor fogging in Al-Mahara.

very dense in the 54 homes surveyed and water containers used by the households to store water allowed continuous breeding of mosquitoes and transmission of the dengue virus. Outdoor spraying and indoor fogging were carried out in affected areas.

The investigation confirmed a dengue outbreak in Al-Mahara Governorate for the first time. Cases were mild to moderate, and there was a suggestion of previous infections. The high burden of disease among males and adults suggests exposure to the mosquitoes outside the homes. The surveillance team recommended that efforts to contain dengue and prevent its spread to other Governorates in the country need to be strengthened including controlling areas where mosquitoes like to breed and by engaging the community and through early detection and response.

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

Updates from the Field..

Partnership Matters

The Global Disease Detection Operations Center (GDDOC) “Complementary Surveillance: Strengths of Event-Based Surveillance Systems and the GDDOC”

The Global Disease Detection Operations Center (GDDOC) was established in 2006 as a critical part of the United States Government (USG) and CDC’s global biosurveillance efforts. The first of its kind at CDC, and one of only a few similar centers globally, the GDDOC provides vital epidemic intelligence and response operations for early warning about international disease threats. Located within the Center for Global Health’s Division of Global Disease Detection and Emergency Response (GDDER), the GDDOC is modeled after the World Health Organization’s (WHO) Alert and Response Operations and is comprised of a multi-disciplinary team of experts in infectious diseases, veterinary medicine, medical microbiology, epidemiology, information technology, and emergency deployment.

The GDDOC primarily uses event-based surveillance to capture information about outbreaks around the world that are a potential risk for public health. In contrast to case-based surveillance, event-based surveillance is particularly useful for surveillance in countries with limited public health infrastructure, inadequate diagnostic lab capacity, and weak reporting mechanisms, or in countries that are attempting to withhold information. Using innovative Internet-based text mining systems to detect events, the information received is rapidly assessed by leveraging CDC program expertise and formal and informal networks, including those of other CDC partners. This provides CDC staff with a



The Global Disease Detection (GDD) Operations Center is located in the CDC EOC. Dr. Ray Arthur, Director (center), is shown (L to R) with Analysts Drs. Myron Schultz, Kira Christian, Rohit Chitale and Catherine Chow. Derek Hardy (not shown) is the Emergency Coordinator.

single-source of reliable, comprehensive, and high quality information on international disease outbreaks.

Since its inception, the GDDOC has reported over 600 events with over 2000 updates to CDC leadership and staff by way of the GDD Operations Center Daily Report. Public health events are categorized as follows:

- Of International Importance: event must meet a set of criteria that are based on the revised International Health Regulations (2005): the event is one of four specific diseases (SARS, smallpox, polio caused by wild-type virus, and influenza attributable to a new virus strain); or the event has serious public health implications, is unusual or unexpected; or the event has the potential to spread internationally or affect trade or travel;
- Under Investigation: events are credible reports of disease outbreaks or other health threats that potentially meet one of the criteria listed above but have not yet been verified and;
- For Information: a verified health event that does not meet one of the above

criteria, but potentially poses a threat to human health or is of general interest.

Event detection is validated through CDC’s experts in the U.S. and its extensive global presence (CDC maintains staff in ≥ 55 countries), multilateral organizations including the WHO and the European Center for Disease Prevention and Control, other US governmental agencies, and Ministries of Health.

The GDDOC also has an outbreak response contingency fund to ensure that CDC’s response to international requests for assistance is not limited or delayed. The GDDOC works with pro-

grams across the agency and the CDC Emergency Operations Center to facilitate and coordinate international outbreak response activities. The delivery of these services by the GDDOC has led to significant contributions that protect global public health. Since 2006, the GDDOC has supported 50 outbreak responses in 28 countries including:

- Cholera in Haiti, Dominican Republic, and 4 other countries
- International response to the 2009 H1N1 influenza outbreak
- Poliomyelitis in the Republic of Congo
- Typhoid fever in Malawi
- Meningococcal meningitis in Ghana
- Ebola, Marburg, and yellow fever in Uganda
- Ebola in the Democratic Republic of Congo
- Aflatoxicosis in Kenya
- Acute lead poisoning in Nigeria
- Nodding syndrome in South Sudan and Uganda
- Unknown liver disease in Ethiopia

For additional information, please email the GDDOC mailbox at gdd-outbreak@cdc.gov.

Updates from the Field..

Partnership Matters

New CDC/Peace Corps MOU Seeks to Expand Partnership in Public Health Training

The Corps was the “genesis” of many CDCers public health careers

CDC and the Peace Corps signed a Memorandum of Understanding (MOU) in July to expand collaboration between the two agencies with an emphasis on helping countries meet their needs for public health training and education. CDC Director Thomas R. Frieden, M.D., M.P.H. joined Peace Corps Director Aaron S. Williams at Peace Corps Headquarters in Washington, D.C., for the signing. The latest MOU continues work the two US agencies agreed to in MOUs in 2003 and 2006.

“CDC staff and Peace Corps volunteers share a singular dedication to helping people around the world live healthier, longer, more productive lives. We have a long-standing partnership with hundreds of returned Peace Corps volunteers at CDC and we look forward to further strengthening this partnership,” said Dr. Frieden. Williams added, “By leveraging the CDC’s expertise, Peace Corps volunteers will have more resources to promote public health programs in their communities.”

Under the expanded MOU, CDC and the Peace Corps will work together on a “whole-of-government” approach to strengthen health systems. CDC will provide support to the Peace Corps in selecting health volunteers’ worksites to help ensure that volunteers serve in areas with the greatest public health needs. The MOU also calls for a mentorship program that matches CDC field staff with a Peace Corps volunteer to expand Peace Corps volunteers’ technical experience. To help the Peace Corps strengthen their health projects, CDC will provide training and scientific, evidence-based guidance.



Peace Corps Director Aaron S. Williams (left) and CDC Director Thomas R. Frieden, M.D., M.P.H. (right) signing MOU at Peace Corps Headquarters in Washington, D.C. (Photo courtesy of Peace Corps)



Dr. Helen Perry, CDC Integrated Disease Surveillance and Response Team Lead meeting with village health workers and the district Community Administration Officer to talk about community surveillance in Kyenjojo District, Uganda

Dr. Helen Perry is one of hundreds of CDCers who trace their public health roots to the Peace Corps –some even refer to having the “peace corps gene”. Today Dr. Perry is a training specialist and team leader for CDC’s Integrated Disease Surveillance and Response (IDSR) within the Division of Public Health Systems and Workforce Development. Instituted in 1998 by the World Health Organization African Regional Office (WHO AFRO), IDSR was later identified as a primary strategy for African countries to build the detection and response capabilities required under the International Health Regulations. Through this initiative, Dr. Perry works in collaboration with WHO AFRO and Ministries of Health 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 Africa region. Through technical assistance and development of guidelines and tools, Dr. Perry and the IDSR Team work closely with African ministries of health to implement strategies and activities for improving surveillance and response to priority infectious diseases in Africa. IDSR is also the surveillance strategy taught to FETP residents in Africa. Dr. Perry has been with CDC’s IDSR collaboration since 1999, and has been with CDC for nearly 14 years. During her Peace Corps service, Dr. Perry worked in a provincial hospital laboratory in Meknes, Morocco, and a TB hospital in Rabat, Morocco. Perry says she recognizes many Peace Corps experiences as relevant to her job today, including the need to use what you have at hand to get the job done. “I think my grassroots experience of working in local laboratories and health centers helps me to keep in mind the

strengths and limitations experienced by our colleagues at all levels in our partner countries in Africa and Asia.”

CDC is a key partner for Peace Corps in implementing the President’s Malaria Initiative (PMI) and the President’s Emergency Plan for AIDS Relief (PEPFAR). The Peace Corps and CDC have a long history of collaboration and have worked together in more than 20 countries around the world, including programs for HIV/AIDS education, malaria prevention, potable water and sanitation, hygiene practices, nutrition, and disease awareness and prevention.

For further information on IDSR, please contact Dr. Helen Perry at hap5@cdc.gov.

Updates from the Field..

Graduate Corner

US Ambassador Congratulates First Graduates from the South Caucasus Field Epidemiology and Laboratory Training Program



Graduation Ceremony of the 1st Cohort of South Caucasus Field Epidemiology and Laboratory Training Program, US CDC Georgia Country Office. US Ambassador John Bass is in the center. Directly behind him is the Georgian Minister of Labor, Health, and Social Affairs, Andria Urushadze; on his right is Dr. Ed Maes, Director, CDC Georgia Country Office

On June 03, 2011, the South Caucasus Field Epidemiology and Laboratory Training Program (SC/FELTP) graduated its first class in Tbilisi, Georgia. Eleven epidemiologists and laboratory managers from the Ministry of Agriculture and the Ministry of Health of both Azerbaijan (4) and Georgia (7) received diplomas in applied epidemiology and laboratory management. Also present were John Bass, US ambassador to Georgia; Andria Urushadze, MD, Georgia Minister of Labour, Health, and Social Affairs (MOLHSA); Siala Rustamova, DVM, head of the State Veterinary Service of the Republic of Azerbaijan; Nata Avaliani, MD, director of the Georgia National Center for Disease Control (NCDC); Edmond Maes, PhD, director of the CDC Georgia Country Office; and Thomas Rush, PhD, laboratory resident advisor for the SC/FELTP.

According to Ambassador Bass, "It's important this program covers the Caucasus Region. Georgia, Armenia, and Azerbaijan are facing similar challenges in health and we know diseases do

not respect borders. With this project, the US government helps countries to protect themselves from the spread of dangerous diseases."

In his opening remarks, Maes emphasized particular features of the SC/FELTP: "The program here in Georgia differs from many others around the world in at least three respects: It is cross-country, combining three countries in the South Caucasus, three countries with many common characteristics and endemic disease risks; it is cross-specialty, training both epidemiologists and laboratory managers; it works cross-species, addressing disease threats in both the human and the animal health sectors. Effective disease control requires effective communication and collaborations across all these divisions, and the SC/FELTP is bridging these three divisions."

After the certificates were distributed, the graduates presented results of their surveillance evaluations and outbreak investigations. One presentation covered an investigation of Hemolytic Uremic

Syndrome (HUS) in Georgia in 2009, which shares some features with the HUS outbreak in Germany. Laboratory tests revealed similar species of bacteria in both outbreaks; specialists from Germany are currently consulting with the Georgia NCDC and CDC Atlanta to learn from the experience.

The SC/FELTP is a collaboration among CDC, the Georgia MOLHSA, the Georgia NCDC, the Georgia Ministry of Agriculture, and the Ministries of Health and of Agriculture of Azerbaijan and of Armenia. The SC/FELTP receives financial support from the US Department of State, Department of Health and Human Services, and the Defense Threat Reduction Agency of the Department of Defense.

The goal of the SC/FELTP is to strengthen epidemiology and laboratory capacity to detect, control, and prevent diseases affecting humans and animals. The two-year program combines classroom training and mentored practical work in disease surveillance, outbreak investigation, prevention and control. Two US CDC specialists, an epidemiologist and a laboratory scientist, are assigned as resident advisors to lead the program in collaboration with host country counterparts. In addition, the program has a staff of four Georgians for technical and logistic support.

Currently, two additional cohorts are enrolled in the SC/FELTP, totaling 34 specialists from the human and animal health sectors of Georgia, Armenia and Azerbaijan. The next graduation is scheduled for June 2012.

For further information, please contact Dr. Ed Maes at efm1@cdc.gov

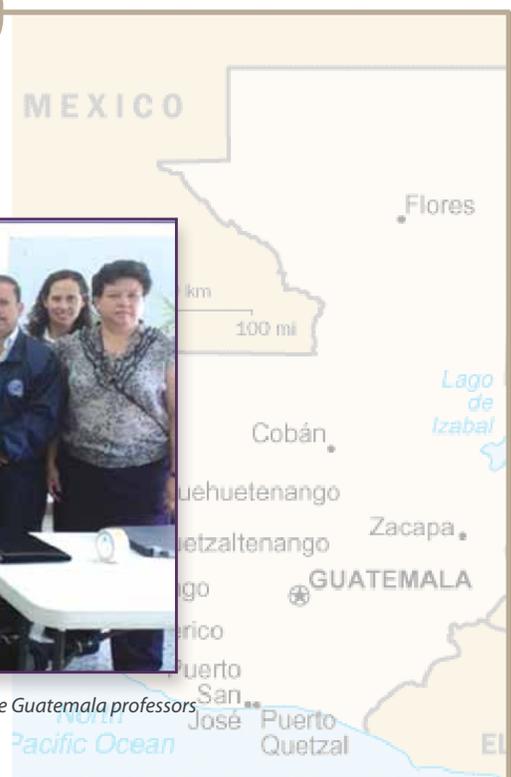
Updates from the Field..

Graduate Corner

Central America FETP Initiates 7th Cohort in Guatemala



Participants of the 7th cohort with CDC Central America and Panama authorities, and University of Valle de Guatemala professors



On May 9, 2011, the Central America Regional Field Epidemiology Training Program (CA-FETP) initiated its 7th cohort at the Universidad del Valle de Guatemala (UVG), in Guatemala City. This cohort also marks the addition of three new countries to the CA-FETP: Panama, Belize and Haiti. The CA-FETP, administered through UVG, is a 2-year accredited masters degree program in field epidemiology. The program begins with a 2-week introductory course followed by 6 courses on Public Health Surveillance.

The majority of the 7th cohort have completed training at the Basic and Intermediate Levels using the new approach which emphasizes cumulative, competency-based, mentored training at Basic (5-month duration) and Intermediate (9-month duration) Levels. This pyramid model provides a strong foundation for more complex skills and competencies acquired during the two year Advanced Level FETP.

The 7th Cohort of the Advanced Level FETP has twenty residents from 8 countries (Dominican Republic-3, El Salvador-4, Guatemala-5, Honduras-2, Costa Rica-2, Belize-1, Panama-1, and Haiti-2). Of the twenty residents, there

are seventeen physicians, 2 nurses, and 1 microbiologist. All residents have mentors who are either FETP graduates or experienced epidemiologists that will provide guidance and support throughout the residents' two year training. To be accepted into the program, mentors are required to successfully complete a 40-hour face-to-face introductory course on tutoring, and a distance-based Tutors Curriculum focused on evaluating resident products. Mentorship for residents enrolled in the Basic and or Intermediate Level courses is also reinforced by having higher tier-residents/graduates provide mentorship.

The CA-FETP uses the Sakai learning management system which is an internet-based system that hosts curriculum materials, facilitates communication among residents, and allows for easy monitoring of grades and completed tasks. According to Victor Caceres, Medical Epidemiologist, and CA-FETP Team Lead: "The materials used for the CA-FETP are regularly reviewed by subject matter experts and piloted in various countries to ensure that we are providing a comprehensive curriculum and meeting regional needs."

For further information, please contact Victor Caceres at vac5@cdc.gov



Participants of the 7th cohort discussing a field exercise during workshop in Guatemala

"The materials used for the CA-FETP are regularly reviewed by subject matter experts and piloted in various countries to ensure that we are providing a comprehensive curriculum and meeting regional needs."

— Victor Caceres, Medical Epidemiologist, and CA-FETP Team Lead

Updates from the Field..

Training/Resources

SMDP Staff Assist Morocco Ministry of Health Develop Field-based Masters in Health Administration and Public Health Program



District health officers prioritize the tasks and required competencies for successful public health managers during a January 2011 needs assessment workshop, to inform the improvement of public health management development programs in Morocco.

According to Dr. Maaroufi, “the ministry expects INAS to develop the future leaders of Morocco’s health system. This new approach will develop hospital administrators and program directors who are ready to assume their responsibilities and advance health in Morocco.”

During their participation in the CDC 2010 Global Health Leadership Forum, Dr. Abderrahmane Maaroufi, director of the National Institute of Health Administration (INAS), Morocco Ministry of Health (MMOH) and Dr. Abdelkrim Meziane Belefkih, Director, Tetouan Region, MMOH proposed a reformation of the current INAS masters programs in Management of Health Programs and Management of Health Organizations to better prepare the future leaders of Morocco’s Ministry of Health (MMOH). Inspired by the Field Epidemiology Training Program (FETP) model of ‘training through service,’ the Masters in Health Administration and Public Health (known as the Field Management Training Program), is thought to be the first of its kind in the world: a competency –based masters degree program in public health management, where participants provide needed services to the ministry of health while attaining their degree.

CDC’s Division of Public Health Systems and Workforce Development, Sustainable Management Development Program (SMDP) assisted in designing and conducting a comprehensive needs assessment and subsequently worked

with the team in Morocco to develop a detailed list of competencies and field activities. According to Denise Traicoff, SMDP’s Instructional Designer, “the reformed program is streamlined, offering a single public health management masters degree, with concentrations in hospital administration or health program management.”

Public health management competencies have been articulated in areas such as analysis, planning, leadership, human resources, advocacy and communication, with field deliverables such as developing a staffing plan or developing an institutional communication plan. Representatives from multiple levels of MMOH have been actively engaged in the analysis and design and will play a crucial role in implementation.

Work is underway to revise class materials to support the field activities, and to identify field placement sites and mentors. Of the 86 finalists, 30 participants have been selected from throughout Morocco, 15 in each specialty, with the cohort scheduled to begin in October 2011. The revisions to the program have received enthusiastic support from the Morocco

Ministry of Health. According to Dr. Maaroufi, “the ministry expects INAS to develop the future leaders of Morocco’s health system. This new approach will develop hospital administrators and program directors who are ready to assume their responsibilities and advance health in Morocco.”

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



Dr. Abderrahmane Maaroufi, director Morocco National Institute of Health Administration, explains the process for determining required competencies to participants of the management training needs assessment workshop.

Updates from the Field..

Training/Resources

Geospatial Mapping Helps Public Health Professionals Make Better Decisions

Outside the King Abdul Aziz Hospital in the city of Riyadh, in the Kingdom of Saudi Arabia (KSA), there is controlled chaos, as millions of visitors make their way to the city of Mecca during the annual Hajj, the religious pilgrimage by Muslims. Inside the hospital, the scene is peaceful. A healthcare worker pauses beside his patients, asks them questions, then pulls out his mobile phone and types. With the push of a button, the patients' medical information is available throughout the country's healthcare system, including the country's Emergency Operations Center, which identifies and responds to suspected outbreaks and public health events of international importance.

This technology, which uses mobile-based real time surveillance and geospatial mapping (a data system which combines location and survey information together for visualization and analysis), allowed the KSA MoH to monitor nine serious health conditions in 2009, when H1N1 influenza A was circulating globally. Identifying the occurrence and distribution of infectious diseases and other health threats is critical during mass gatherings such as the Hajj, which yearly draws millions of visitors from 160 countries. To support widespread and effective disease surveillance, KSA MoH turned to experts in CDC's Global Public Health Informatics Program (GPHIP) for consultation and guidance on geographic information systems (GIS) and geospatial mapping for mass gatherings. With the support of KSA Field Epidemiology Training Program (FETP) residents, CDC staff trained 250 healthcare workers to record patients' health information on mobile phones in less than two months. In a recent discussion between Dr. Osama Ibrahim, CDC Country Representative and Dr. Mohamed Al-Mazroa, KSA MoH FETP Co-coordinator, Dr. Al-Mazroa said... "the last two years' collaboration with the CDC have fulfilled KSAs purpose of transferring experience and building local capacities among the KSA MoH staff in areas of mobile surveillance, field applications of public health informatics, and in managing and mastering the deployment



Saudi Arabia FETP staff and health workers enter data into Smartphone during a hands-on training session.

and field implementation of the CDC/MoH mobile surveillance system."

In 2010, GPHIP once again provided technical assistance to enable automatic data capture for its GIS mapping during the Hajj. According to Carl Kinkade who conducted the training in Saudi Arabia and is the GIS Coordinator at CDC, "Using GPS and GIS mapping technology makes it a lot easier to record information, and there are fewer errors." Global Positioning System (GPS) allows the interviewers to collect the coordinates where the survey was conducted and GIS allows the information to be mapped and analyzed.

CDC first used this technology to train the China Ministry of Health for public health assessments in response to the Sichuan earthquake in 2008. It was also used in the aftermath of the 2010 earthquake in Haiti, and it is being used to set up a real time sentential surveillance system for influenza

in Kenya. GIS has also been used by FETP residents in the Thailand and Philippine MoHs. According to Dr. Henry Walke, CDC Field and Applied Epidemiology Training Program Branch Chief, "GIS training and its application in public health surveillance and response systems have become important components of capacity-building in several FETPs throughout the world. This technology has been used to identify and respond to disease outbreaks in some of the most remote parts of the world with limited resources as well as in more developed countries with large dense populations. Including GIS training as part of the FETP curriculum is one more way that we are working with ministries of health to build capacity and strengthen the efficiency of public health systems globally."

For more information about the Hajj project, please contact Wei Li (GPHIP) at for5@cdc.gov. For more information about GIS, please contact Carl Kinkade at mke5@cdc.gov.

Updates from the Field..

Training/Resources

CDC's Upcoming Leadership Events Attract Senior Leaders and Managers from Around the World

In the fall of 2011, the Sustainable Management Development Program (SMDP) will host two of its flagship activities, the Global Health Leadership Forum (Forum) and the Management for Improved Public Health (MIPH) program. Noted for its integrated approach to improve the performance of health systems in low and middle income countries, SMDP's systems approach is designed to strengthen collaborations between senior-level leaders and managers as they work towards achieving national and global health objectives. Teams of senior leaders from low and middle income countries will attend the Forum (November 7-11, 2011) in Atlanta, Georgia, with an additional session in Washington, D.C. (November 14-15, 2011). During these sessions, they will explore tested leadership approaches, share experiences and success stories with their peers and network with CDC leaders and other partners. As an action item, each country team will assess its country's needs and propose a priority health systems strengthening project that it will address over the ensuing 9-12 months.

Following the Forum, separate teams of senior managers will attend a regional MIPH program in Vietnam (November 28 - December 9, 2011) to develop their management skills and design an implementation plan for the health systems strengthening project selected by their leadership during the Forum. Immediately after the MIPH program, SMDP will offer a two-day Training of Trainers (TOT) session (December 12-13, 2011) for managers whose selected systems strengthening



Participants from Zambia, Vietnam, India and Botswana work together on a process improvement activity as part of the 2010 Management for Improved Public Health (MIPH) course.

projects involve training. Upon return to their countries, managers will work with senior leaders who attended the Forum to implement the projects over the next 9-12 months with support from CDC.

Applications for both events were submitted in July and August and are currently being reviewed.

If you would like to participate in future events and be notified when materials are available, please contact SMDP.

For information or questions about the Forum, please contact Dennis Jarvis at DJarvis@cdc.gov or at 404-639-3191.

For information or questions about the MIPH program, please contact Sara Clements at SClements@cdc.gov or at 404-639-7745.



CDC Nigeria Director, Dr. Okey Nwanyanwu (right) and CDC Atlanta, Medical Director, Dr. Stefan Wiktor (left) confer at the 2010 Global Health Leadership Forum in Atlanta, Georgia.

Updates from the Field..

New Appointees and Staff Changes

- John Ngulefac has recently joined the Field and Applied Epidemiology Training Program (FAETP) branch as a Public Health Advisor. He is coming to the Branch after spending nearly three years as a contracted Health Scientist working in Africa. John will support the South/Central/West Africa regional team, focusing his efforts in support of the SURVAC project (Epidemiologic Surveillance in Central Africa). John is fluent in French. POC: Henry Walke hfw3@cdc.gov
- Megan Gregor has joined the FAETP Branch as a Public Health Advisor. Megan is coming to the Branch from the Policy Office of the CGH Office of the Director where she worked since 2006. She will support the Central Asia regional team and focus her activities on Kazakhstan and the Caucasus. Megan speaks Russian. POC: Henry Walke hfw3@cdc.gov
- Dr. Seymour Williams has joined the Field and Applied Epidemiology Training Program Branch as the Field Epidemiology and Laboratory Training Program Resident Advisor in South Africa. He has come to the Branch after working for two years as the associate director for care and treatment with the Global AIDS Program in CDC-Ethiopia. He is posted in South Africa and is working in close collaboration and support from the Global Disease and Detection Regional team also posted in South Africa. POC: Henry Walke hfw3@cdc.gov
- Dr. Richard Dicker has recently joined the FAETP Branch as a Medical Officer. He has come to the Branch after working with the Global AIDS Program for two years and with the Epidemic Intelligence Service (EIS) program for



many years. He will serve as the Team Lead for the Curriculum Development Unit, which supports all of the regional teams in addressing FETP/FELTP curriculum and training needs. POC: Henry Walke hfw3@cdc.gov

- Donna Jones, MD, MPH has been appointed Branch Chief (Acting), of DPHSWD's Public Health Systems Strengthening (PHSS) Branch. The PHSS Branch includes the Sustainable Management Development Program (SMDP), the Monitoring and Evaluation Team, the Global Public Health Informatics Program (GPHIP), and the Integrated Disease Surveillance and Response (IDSR) Team. For further information, please contact Donna Jones at doj3@cdc.gov or Peter Bloland at pbb1@cdc.gov.
- Dr. Pascale Krumm has accepted a position as Health Communication Specialist in CDC's Office of the Director; Office of Chief Operating Officer. We wish Pascale continued success in her new capacity and thank her for her many contributions to the Division of Public Health Systems and Workforce Development's communication initiatives. For further information, please contact Pascale Krumm at phk4@cdc.gov.

Director's Message

continued from page 1

The Summary is an executive overview of program highlights from the past year, and the Report provides detailed information about the division's programs and country initiatives.

I would like to draw particular attention to one article; a report from the China FETP on the prevalent use of glucocorticoids (steroids) for the routine treatment of fever. Besides highlighting a potentially dangerous practice, this article illustrates how evidence collected by FETPs can influence health care policy and practice and improve patient care and outcomes.

I look forward to working with all of our partners around the world in my new role, and sharing other exciting changes and initiatives that are taking form.

Best regards,

— Peter L. Bloland, D.V.M., M.P.V.M.
Director, Division of Public Health
Systems and Workforce Development
CDC, Center for Global Health

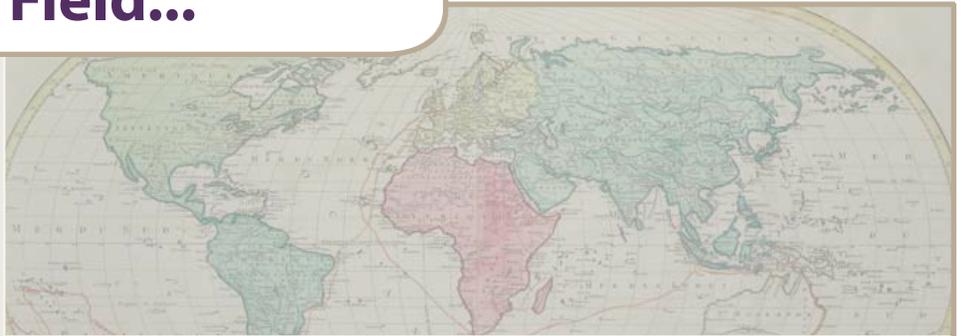
Tell us what you think...

This electronic quarterly newsletter is produced by CDC's Division of Public Health Systems and Workforce Development. It aims to inform residents and graduates of the Field Epidemiology Training Programs, the MIPH community, and national and regional partners about news, events, training, and resources of interest. We welcome your feedback about the Updates from the Field 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.

Updates from the Field..

Conferences/Events

Upcoming...



- 6th International Scientific Conference on Bioaerosols, Fungi, Bacteria, Mycotoxins in Indoor and Outdoor Environments and Human Health, September 6-9, 2011, Saratoga Springs, New York, United States. <http://www.bioaerosol.org/>
- Public Health International Conference 2011, September 7-9, 2011, London, United Kingdom. <http://www.rsph.org.uk/en/courses-conferences-and-events/public-health-international-conference/index.cfm>
- Contributions to global health research, capacity building and governance, September 12-13, 2011, Oslo, Norway. <http://www.legeforeningen.no/id/167967.0>
- 23rd Conference of the International Society for Environmental Epidemiology, September 13-16, 2011, Barcelona, Spain. <http://www.iseepi.org/conferences/future.html>
- World Drug Safety Congress Europe 2011, September 13-16, 2011, London, United Kingdom. <http://www.healthnetworkcommunications.com/2011/world-drug-safety-congress-europe/index.stm>
- 27th International Papillomavirus Conference and Clinical Workshop, September 16-23, 2011, Berlin, Germany. <http://www.hpv2011.org>
- Promoting Healthy Communities: Developing and Exploring Linkages Between Public Health Indicators, Exposure and Hazard Data, September 26-27, 2011, Washington, DC. <http://www.scgcorp.com/PubHealthInd2011/index.asp>
- National Health Colloquium and 1st International Public Health Conference, September 27-28, 2011, Kuala Lumpur, Malaysia. <http://www.pubhealthcollo.org/>
- PHAA 41st Annual Conference: Sustainable Population Health, September 26-28, 2011. Brisbane, QLD, Australia. <http://www.phaa.net.au/41stPHAAAnnualConference.php>
- 2011 Water and Health Conference: Where Science Meets Policy, October 3-7, 2011, Chapel Hill, NC, United States. <http://whconference.unc.edu>
- Second International Symposium on Breast Cancer Prevention: Epigenome, Nutrition, Public Policy, October 9-11, 2011, Rennes, France. <http://purdue.edu/breastcancer>
- American Board for Certification in Homeland Security - 2011 Executive Summit, October 12-14, 2011, Branson, Missouri. <http://www.abchs.com>
- 7th World Alliance for Risk Factor Surveillance (WARFS) Global Conference, October 16-19, 2011, Toronto, Ontario, Canada. <http://www.iuhpe.org/index.html?page=497&lang=en>
- New TB vaccines for the future, October 17-18, 2011, Madrid, Spain. <http://www.tbvi.eu/news-agenda/events/event/symposium-new-tb-vaccines-for-the-future-17-18-october-madrid.html>
- 10th International Conference on Urban Health, November 1-5, 2011, Belo Horizonte, Minas Gerais, Brazil. <http://www.icuh2011.com/>
- 2011 European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE), November 6-8, 2011, Stockholm, Sweden. http://www.ecdc.europa.eu/en/ESCAIDE/Pages/ESCAIDE2011_Home.aspx
- NCRI Cancer Conference, November 6-9, 2011, Liverpool, United Kingdom. <http://www.ncri.org.uk/ncriconference/>
- 6th TEPHINET Southeast Asia and Western Pacific Bi-regional Scientific Conference, November 8-11, 2011, Bali, Indonesia. <http://tephinet.fetpindonesia.org/>
- 2011 United States Conference on AIDS, November 10-13, 2011. Chicago, Illinois. <http://www.nmac.org/index/2011-usca>
- VIII Congresso Brasileiro de Epidemiologia, November 12-16, 2011, São Paulo, São Paulo, Brazil. <http://www.epi2011.com.br/>
- TEPHINET Seventh Americas Scientific Conference, November 14-18, 2011, San Pedro Sula, Honduras. <http://www.tephinet.org/conferences>
- 2011 United States Conference on AIDS, November 10-13, 2011. Chicago, Illinois. <http://www.nmac.org/index/2011-usca>
- The 1st International Symposium on Health Research & Development and The 3rd West Pacific Regional Conference on Public Health 2011, November 11-16, 2011, Bali, Indonesia. <http://www.nihrd.or.id>
- 60th Annual American Society of Tropical Medicine and Hygiene Meeting, December 4-8, 2011. Philadelphia, Pennsylvania. <http://www.astmh.org//AM/Template.cfm?Section=Home1&WebsiteKey=452e1eb1-b2d5-48a7-857a-c789a07c27d1>
- 2nd EMPHNET Regional Conference, December 6-9, 2011, Sharm El-Sheikh, Egypt. <http://conferences.tephinet.org/emphnet-2011>
- International Health Conference IIUM 2011: An Applicability of Modern Scientific Technologies towards Health Researches, December 7-8, 2011, Kuantan, Pahang, Malaysia. <http://www.iium.edu.my/ihs2011>
- Global Health & Innovation Conference, April 10-23, 2012. New Haven, Connecticut. <http://www.uniteforsight.org/conference/>
- 2012 ISHEID: International Symposium on HIV & Emerging Infectious Diseases, May 23-25, 2012, Marseille, France. <http://www.isheid.com>