

**TUESDAY, May 25**

**Scientist Category Day Agenda**

*Room: TBA*

7:45 am - 8:00 am

**Welcome and Introductory Remarks**

LCDR Tegan Boehmer, PhD, MPH, USPHS

LCDR Matthew Murphy, PhD, MS, USPHS

CDR Diana Bensyl, PhD, MA, USPHS

**SESSION I**

Moderator: CDR Diana Bensyl, PhD, MA, USPHS

8:00 am - 9:00 am

**Banning butts: The environmental case**

RADM Thomas Novotny, MD, MPH, USPHS (Ret)

This session will discuss the Cigarette Butt Pollution Project, which has analyzed the toxicity of cigarette butt waste to marine life, the options to control it, and the need for further research on the costs, environmental impacts, and policy implications of more stringent environmental regulations against such waste. Cigarette butts are the most common form of litter in the world, as approximately 5.6 trillion cigarettes are smoked every year worldwide. Cigarette litter constitutes an estimated 30% of the total litter in U.S. shorelines, waterways, and on land. In fact, cigarette butts are the most common debris item collected along waterways during International Coastal Cleanups, organized by the Center for Marine Conservation.

The approaches outlined for addressing this problem will have affects on cigarette consumption and thus on the health consequences of smoking because re-framing cigarette butts as toxic hazardous waste will likely change the way smokers, non-smokers, and communities behave. From increased prices due to litter fees, to increased enforcement of littering violations, to public information campaigns, to changes in the cigarette product, many new opportunities to reduce tobacco consumption comprise this environmental approach to cigarette smoking. The science base for the environmental case against cigarette butt waste will be described in this presentation, with an emphasis on the research agenda, policy activism, and reduction in tobacco use through this innovative approach to tobacco control.

At the end of the session, participants will be able to:

1. Describe the current environmental impact of cigarette butt waste in the environment.

2. Identify the rationale for re-labeling cigarette butts as toxic hazardous waste.
3. List the policy options available to reduce cigarette butt waste in the environment.

9:00 am - 9:30 am

**Creation and production of the Afghan Public Health Broadcast Project**

CAPT Armen Thoumaian, PhD, LCSW, USPHS

This presentation will describe the Afghan Public Health Broadcast Project, which was created in 2008 to address the needs of the Afghan people for basic information about disease and disease prevention. The rate of infant and child mortality in Afghanistan is among the highest in the world and the average life expectancy is ranked among the lowest. Ironically, most of the disease and illness in Afghanistan is preventable through basic sanitary and public health practices, early diagnosis and vaccination. However, due to the remote mountainous location of many communities and a very high illiteracy rate, health and public health information rarely reaches those who need it most. In addition, the information from Coalition Forces and non-government organizations is sometimes held suspect or ignored as Afghans best respond to information that is attuned to their tribal culture and in keeping with the teachings of Islam. A project was initiated to develop culturally sensitive public health messages in the Dari and Pashto languages to which were added supportive Arabic passages from the Holy Qur'an. These messages were scripted and professionally recorded for public broadcast. This year-long effort produced 17 half-hour episodes comprising the PBS style radio program entitled, "Health and Islam." This radio program is now being broadcast nationwide in Afghanistan and was also published in book form for presentation to village leaders and mullahs. The accomplishment of this project in Afghanistan required solutions to unusual problems and overcoming barriers unique to a war zone.

At the end of the session, participants will be able to:

1. Describe the historical and cultural antecedents leading to the creation of this public health initiative.
2. List the health and public health needs addressed by the public health messages.
3. Identify the cultural, political, policy challenges and safety issues which needed to be addressed in developing this program in Afghanistan.

9:30 am - 10:00 am **Investigation of household drinking water sources and contaminant exposures in the Navajo Nation**  
LCDR Matthew Murphy, PhD, MS, USPHS

This session will examine a study aimed at identifying whether Navajo households haul drinking water from contaminated water sources, examine contaminant levels in humans, and define community health risks. Approximately 30% of households on Navajo Nation are not connected to a public water system. These households must haul drinking water from outside water sources that are often unregulated and may contain dangerous chemical or bacterial contaminants.

At the end of the session, participants will be able to:

1. Describe the lack of access to safe drinking water in the Navajo Nation.
2. Describe Navajo Nation water hauling activities and behaviors and associated public health risks.
3. Summarize specific drinking water contaminants identified in Navajo Nation household drinking water.

10:00 am - 10:15 am **BREAK**

**SESSION II** Moderator: LT Jennifer Adjemian, PhD, USPHS

10:15 am - 11:45 am **Career development and leadership panel**  
Panelists: CDR Diana M Bensyl, PhD, MA, USPHS; CAPT William Burkhardt III, PhD, USPHS; RADM Helena Mishoe, PhD, MPH, USPHS; CDR Sara Newman, DrPH, MCP, USPHS

This career development and leadership panel will include presentations by several senior-level Scientist Category officers who will discuss their career path and experiences in the Commissioned Corps. This will be followed by a question/answer session led by panel members in order to facilitate an open discussion about career growth, expectations, and leadership opportunities as scientists within the Corps.

At the end of the session, participants will be able to:

1. Describe the diverse opportunities, leadership roles, and career paths available to Scientist Category officers in the Commissioned Corps.
2. Identify which federal agencies or organizations are eligible for the employment of Corps officers, including those which may currently have little or no Commissioned Corps representation,

and understand how to create new Corps positions within an existing or new federal agency or organization.

3. Describe the key ingredients for successful career progression within the Commissioned Corps, including steps junior officers can take to obtain increasing levels of responsibility and leadership experience.

11:45 am - 12:30 pm **BREAK**

12:30 pm - 1:45 pm **LUNCHEON and Awards Ceremony**

**SESSION III**

Moderator: LCDR Mark Clayton, PhD, USPHS

1:45 pm - 2:30 pm

**Indoor radon: The invisible lung cancer risk in your home**  
CAPT Susan Conrath, PhD, MPH, USPHS

The presentation will explain the health risks of indoor radon, what the Environmental Protection Agency (EPA) radon action level is, what it is based on, and the average risks at the action level. The speaker will review the findings from the National Academy of Science BEIR VI Report and the latest EPA risk assessment. The strengths of the radon risk assessment will be delineated. The results of the European and North American residential radon pooling studies will be reviewed, and the World Health Organization's International Radon Project and the latest Health Physics Society's position paper will be described.

At the end of the session, participants will be able to:

1. Identify the USEPA radon action level.
2. Describe different types of epidemiological studies and how the miner cohort studies and the residential pooling studies reinforce each other.
3. Summarize the international view of the risk from radon.

2:30 pm - 3:00 pm

**Public health response to the Haiti earthquake: PHS Scientist Officers make a difference**  
CDR Daphne Moffett, PhD, USPHS

This session will provide a firsthand account of the public health response to the Haiti earthquake. On January 12, 2010, a 7.0 earthquake struck Haiti with its epicenter near the town of Leogane, approximately 25 km west of Port-au-Prince. According to the United Nations Environment Program (UNEP) approximately 40-50% of the buildings fell in Port-au-Prince and nearby towns and nearly 300,000 people died. This led to the creation of hundreds of internally displaced persons (IDP) camps

with significant water, sanitation, and hygiene needs. Additionally, hospitals sustained severe damage and medical staff were personally impacted; thus, the deployment of the incident response coordination teams (IRCT) and disaster medical assistance teams (DMAT) from the US were critical to addressing the acute health needs of Haitians as well as longer term public health needs. Within 6 days of the earthquake, USPHS scientist officers were on the ground in Port-au-Prince ready to respond. The public health branch of the IRCT consisted of 6 PHS officers, 3 of whom are scientist officers. Missions included developing surveillance and reporting systems for the DMATs, supporting the CDC Haiti office by contributing to the development of a surveillance instrument currently utilized at over 50 National Sentinel Sites, conducting environmental public health assessments at the field clinics, delivering vector control guidance and working with the Navy to implement vector control to the clinics, and investigating potential rash outbreaks and food-borne illness outbreaks. Scientist officers played a critical role in protecting the health of the DMATs and the 26,000+ patients DHHS has treated.

At the end of the session, participants will be able to:

1. Describe the current state of public health services in Haiti
2. Identify at least two necessary competencies for international deployments
3. List at least three contributions Scientist Officers have made thus far during the response to the 2010 Haiti earthquake

3:00 pm - 3:15 pm **BREAK**

#### **SESSION IV**

Moderator: CDR Rachel Avchen, PhD, MS, USPHS

3:15 pm - 3:45 pm **Food and nutrition activities in the President's Emergency Plan for AIDS Relief (PEPFAR)**

CAPT Pamela Ching, RD/LD, MS, SD, USPHS

This session will provide an overview of the President's Emergency Plan for AIDS Relief (PEPFAR), a major component of the Global Health Initiative, which is a six-year, \$63 billion commitment by the United States government to assist developing countries in reducing morbidity and mortality from HIV/AIDS, tuberculosis, malaria, and neglected tropical diseases through improved health care delivery. Considered a crucial component of the United States' foreign policy, the goal of PEPFAR is to provide prevention, care, and treatment programs in developing countries with the greatest number of HIV/AIDS patients, with a particular focus placed on service provision to infants, children, and pregnant

and lactating women. The presentation will examine efforts to improve: 1) assessments of food insecurity and malnutrition; 2) provision of therapeutic and disease prevention interventions which eliminate macro- and micro-nutrient deficiencies; and 3) training programs which increase the number of qualified clinical and community-based personnel able to provide these services to populations receiving assistance through PEPFAR.

At the end of the session, participants will be able to:

1. List at least one indicator used to assess food insecurity and malnutrition.
2. Identify at least one method used to eliminate macro- and micro-nutrient deficiencies.
3. Describe at least one type of training program to improve nutrition assessment skills among clinical healthcare workers and/or community-based peer educators.

3:45 pm - 4:15 pm

**FDA's role in assuring seasonal influenza and H1N1 vaccine quality release**

LCDR James Kenney, DSc, USPHS

This session will examine the Food and Drug Administration's (FDA) role in the testing of vaccine samples submitted in support of licensing actions and their release to market; as well as the review of manufacturer lot release test results. The session also will look at the FDA's role in the review of analytical test methods in vaccine license applications and supplements. The FDA's Center for Biological Evaluation and Research (CBER) Standards and Reagents Section is responsible for the production/procurement, calibration, management and distribution, of CBER Standards and Reagents as required for potency testing during manufacturing and release testing in accordance with the product's license agreement under the Public Health Service Act.

At the end of the session, participants will be able to:

1. Describe the FDA's role in producing CBER Reference Antigens and Antibodies for vaccine production and their distribution to US licensed vaccine manufacturers for vaccine potency testing.
2. Describe the FDA's role in vaccine release testing for safety and potency.
3. Summarize the FDA's role in the review of the manufacturer's vaccine test results in support of lot release to market.

4:15 pm - 4:45 pm

**Trends in workforce availability during emergency response at CDC**

CDR Ross Spears, PhD, USPHS

This presentation will look at the Center for Disease Control and Prevention's (CDC) first-ever study on both historical trends in absenteeism as well as absenteeism during the H1N1 response in 2009. The demands on CDC workforce were tremendous during the H1N1 outbreak given the extent of the global response. Strains on the workforce resulted in concerns about absenteeism for several reasons. A high absentee rate might indicate the presence of H1N1 among CDC staff. High absentee rates might indicate that the stressors of the response itself have impacted the health of the workforce. Finally, a high absentee rate, particular among certain sectors of the Agency, could impair the ability of the agency to respond further. This study was based on data captured from the CDC Time and Attendance system (TASNet) for the civil servant population as representative of the agency workforce as a whole.

At the end of the session, participants will be able to:

1. Describe the importance of and challenges related to tracking workforce availability.
2. Summarize a new method for predicting an agency's ability to respond to an emergency.
3. Describe trends in workforce availability at CDC between 2002 and 2009.

4:45 pm - 5:15 pm

**Closing Remarks**

CAPT Sharon Williams-Fleetwood, PhD, USPHS

LCDR Matthew Newland, PhD, USPHS