

2022 USPHS Scientific and Training Symposium

Category Day

Wednesday, May 25, 2022

Environmental Health Agenda

8:00 AM - **Welcome, Explanation of CE, Intro of CPO and PAC Chair Symposium Day**
8:30 AM **Planners**

8:30 AM - **CPO Update**
9:00 AM *CAPT Timothy Jiggins*

The goal of this session is to provide an update on the Environmental Health Officer Professional Advisory Committee (EHOPAC). Participants will have a better understanding of the purpose of the EHOPAC and the current framework in which the EHOPAC operates.

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

1. Identify the purpose and framework of the EHOPAC.
2. Describe how Environmental Health Officers can serve on the EHOPAC as a voting or a non-voting member.
3. Explain the benefits of serving on the EHOPAC.

9:00 AM - **EHOPAC Chair update**
9:30 AM *CAPT Jessica Havranek*

The goal of this session is to provide an update on the Environmental Health Officer Professional Advisory Committee (EHOPAC). Participants will have a better understanding of the purpose of the EHOPAC and the current framework in which the EHOPAC operates.

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

1. Identify the purpose and framework of the EHOPAC.
2. Describe how Environmental Health Officers can serve on the EHOPAC as a voting or a non-voting member.
3. Explain the benefits of serving on the EHOPAC.

9:30 AM - **Break**
10:00 AM

10:00 AM - **Health and social services emergency response and recovery on a small-island state with a Hispanic/Latino underserved population**
10:30 AM *LCDR Sandra Carpio*

This session will provide attendees with an introduction to specific augmented risks and vulnerabilities to climate change for small-island-territories in the context of emergency response and recovery. According to the United Nation's Intergovernmental Panel on Climate Change it is known that greenhouse gas emissions from small islands are negligible in relation

2022 USPHS Scientific and Training Symposium

Category Day

Wednesday, May 25, 2022

to global emissions, but nonetheless, the price these islands are paying as result of the threats of climate change and sea level rise to small islands is unequivocal. The vastly Hispanic/Latino community in the U.S. Territory of Puerto Rico confront yearly augmented threats during the months of June to the end of September as hurricane seasons become deadlier and response and recovery efforts need to have a holistic and all-hazards approach. The session will provide a summary of the work of an EHO on leading health and social services emergency response and recovery work and the journey towards a more equitable and resilient small-island-state health.

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

1. Describe environmental justice in the context of climate change impacts and augmented vulnerabilities in small-island-states
2. Identify health and social services strategies to advocate for equitable emergency response and recovery activities in small-island-states.
3. Mention 2 examples of how climate change affects the social and environmental determinants of health, including clean air, safe drinking water and secure shelter in the small island territories.

10:30 AM - **SESSION CANCELLED**

11:00 AM **Fighting COVID-19 Infection in Congregate Correctional Setting with Environmental Health**

CDR Danielle Shirk Mills

Correctional sections are challenging environments in themselves, let alone the highly political and litigious circumstances that accompany them. At the beginning of the pandemic, the Berks facility was not allowing visitors in the facility and was taking no new residents. With a captive population, we knew that if there was an introduction of COVID-19 it would have to had come from a staff member (medical or custodial) bringing it into the facility. It was crucial to communicate the best infection prevention practices to all staff members. The facility implemented administrative screening measures to reduce the risk of staff members bringing in COVID-19. These were body temperature measurements and symptom screening questions upon entering the facility each workday. Also implemented were various activities designed to mitigate risk and allow our mission of providing care to continue. These mitigation strategies included more frequent disinfection of frequently touched surfaces such as shared equipment and door handles, increased social distancing during meetings and shift reports, and stratifying schedules to allow for better social distancing. The process and experience of implementing these strategies and guidance will be discussed.

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

1. Describe when PPE should be used, and name one limitation of PPE.
2. Identify a benefit of following public health guidance in the workplace.
3. List one way to ease staff anxiety when health and safety guidance is evolving.

2022 USPHS Scientific and Training Symposium
Category Day
Wednesday, May 25, 2022

11:00 AM - **Networking/Engagement Activity/Break in Exhibit Hall**
1:00 PM

1:00 PM - **Environmental Health Officer Category Luncheon with Awards**
2:30 PM

2:30 PM - **Running the River Without Getting the Runs – Public Health Assessments in the
National Park Service Backcountry**
3:00 PM
LCDR Ronan King

This session will provide attendees with an overview of the National Park Service Backcountry Operations guidance and the measures taken to reduce the spread of vectorborne and zoonotic disease in the backcountry. Due to the nature of backcountry operations, conventional measures to prevent the spread of disease through refrigeration and plumbed water and wastewater services are not possible. To compensate for the remote environment, the National Park Service Office of Public Health has developed guidance to promote food safety, potable drinking water standards, and human waste management during backcountry operations. Additionally, identification and isolation of sick individuals is key to prevent the further spread of disease in remote environments.

Food safety, handwashing, and appropriate human waste disposal are paramount to ensuring a healthy backcountry trip. Space and cooling media are particular concerns during these trips. Food items must be stored in a manner so they do not contaminate one another. Additionally, time/temperature control for safety (TCS) food items should be maintained with internal temperatures below 45°F. This becomes a bit more difficult considering most trips are not able to replenish ice during the trip. Careful consideration must be taken into menu planning and reducing the frequency of opening coolers. Handwashing is another critical element to mitigate the spread of disease during backcountry operations. If water other than hauled potable water is used, appropriate treatment techniques are necessary to ensure hands do not become contaminated. Additionally, hand washing stations must be located near the food area and toilet setup. To protect the delicate environment in the backcountry, all human waste must be disposed of in appropriate manner. Allowable methods depend on the NPS park and may differ depending on the location of travel. Methods of handling human feces in the backcountry can be divided into two categories: collection/removal and on-site treatment/disposal.

Backcountry visitors are at risk for vectorborne and zoonotic disease exposure. These exposures are compounded by the lack of physical facilities and medical treatment options available in the backcountry. Onset of illness shall be quickly identified and communicated using a satellite phone. Those individuals who are ill shall try to exclude themselves as much as possible.

The session will conclude with an interactive activity identifying a typical cooler setup on a river

2022 USPHS Scientific and Training Symposium

Category Day

Wednesday, May 25, 2022

trip and analyzing this setup for strengths and weakness. Participants will analyze the storage of TCS food items and the temperatures of items inside the cooler. Additionally, participants will understand the time constraints when assessing a cooler during backcountry operations and identify ways to enhance the food safety inside.

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

1. Identify the role Public Health Service Officers assigned to the National Park Service play in reducing the risk of disease transmission to Park visitors and employees while conducting backcountry operations.
2. List the food safety measures, potable drinking water standards, human waste management, and vectorborne/zoonotic disease prevention operations necessary to mitigate the spread of disease while conducting backcountry operations.
3. Demonstrate proper food safety skills in the backcountry through analyzing the setup of a cooler onboard a river rafting and triaging food items that do not meet compliance with the National Park Service backcountry regulations.

3:00 PM - **Environmental Health of Emergency Shelters**

4:00 PM *LCDR James Gooch*

This session will provide attendees with an operational understanding on how to conduct environmental assessments of emergency shelters. Presenters will provide an overview on the types, policies, and operational planning of shelters. This will be followed with a breakdown of core environmental health concepts and considerations that are pertinent to shelters. Key design elements and best practices will be highlighted in this section with emphasis on the use of CDC's disaster shelter assessment form. Lastly, the session will be completed with a 20-minute interactive shelter assessment group exercise (or discussion for virtual format). Using real world shelter photos as prompt, attendees will be asked to identify the concern and how they would address/handle the situation. Handouts will also be provided to attendees with related resources and further training opportunities.

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

1. List the different types of emergency shelters
2. Identify four key elements of a shelter assessment
3. Identify two ways shelter operations have adapted during the COVID-10 pandemic

4:00 PM - **Break**

4:15 PM

4:15 PM - **The wildland firefighter exposure and health effects (WFFEHE) study:**

4:45 PM **Collaboration across Categories and Agencies to carry out a prospective cohort study among emergency responders**

LCDR Corey Butler

2022 USPHS Scientific and Training Symposium
Category Day
Wednesday, May 25, 2022

The wildland firefighter exposure and health effects study (WFFEHE) was a collaborative research project between the Centers for Disease Control and Prevention National Institute for Occupational Safety and Health, the USDA Forest Service, and the US Department of the Interior. The purpose of this presentation is to: (1) describe the study purpose, design, and challenges associated with conducting repeat exposure monitoring and health effects research with wildland firefighters (WFFs); (2) provide a summary of the study achievements, including an overview of the study population and the more than 30,000 clinical, research, and exposure monitoring measurements collected; (3) and outline next steps, anticipated analysis, and expected outcomes from this study (4) describe how 13 US Public Health Service Officers from five categories and 55 civilians collaborated to complete this study.

This study examined a comprehensive set of occupational exposure variables and biometrics collected from six federal wildland firefighting crews stationed in Colorado and Idaho during the 2018 and 2019 fire seasons. We assessed acute, subacute, and chronic health changes to WFFs including cardiovascular, pulmonary, renal, and hearing function. To our knowledge, this is the first time a cohort of WFFs was extensively monitored for longer than one fire season. Over the course of the two-year study period, 154 WFFs volunteered to participate in at least one of four separate pre-season or post-season testing events in 2018 and 2019. Participants could elect to participate in a series of questionnaires designed to better understand risk factors, underlying medical conditions, occupational and non-occupational exposures, and health outcomes before, during, and between fire-seasons; biomonitoring, physiologic, pulmonary function, and audiometric testing designed to assess changes based on validated clinical and research measurements. In addition, researchers carried out a mid-season exposure (industrial hygiene) and health monitoring component at a wildfire incident for three days.

Results from the WFFEHE study will contribute to scientific evidence regarding how occupational risk factors and exposures to physical and environmental factors effect WFFs' health over and across wildland fire seasons. This research is anticipated to lead to the development of preventive measures and policies aimed at reducing exposures to harmful components of the wildland fire environment, which should reduce adverse health effects for the wildland fire community, an important emergency response workforce. This project will also identify future research needs both in health and environmental monitoring among this workforce, but other outdoors workers in similar exposure settings.

While Environmental Health Officers served as the project officers for this study, participation and subject matter expertise was required from Health Service, Medical, Veterinarians, and Scientists along with 55 civilians. The presenters will engage with the audience to discuss how to collaborate across categories to carry out complex research.

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

1. Describe two current protective strategies during wildland fire.

2022 USPHS Scientific and Training Symposium

Category Day

Wednesday, May 25, 2022

2. Describe one unique challenge to conducting scientific research on the association between repeated exposure monitoring and health effects on wildland firefighters.
3. Describe how 13 US Public Health Service Officers collaborated to perform this multidisciplinary research

4:45 PM - **Professional Development Updates for Environmental Health Officers**

5:15 PM *CAPT Michael Quinn LT Braden Hickey*

This session will cover pertinent Professional Development updates for Environmental Health Officers. Members of the Professional Development Committee will provide updates on PHS benchmarks, the promotion process, the 2021/22 CV format for all officers, and other topics relevant to EHOs.

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

1. List one new update regarding the next promotion cycle
2. Describe one new change for EHOs using the new universal CV format
3. List one thing that changed in the 2021/22 benchmarks that impacts EHOs

5:15 PM - **Environmental Health Officer Category Closeout**

5:30 PM