USPHS Deployment Safety Academy for Field Experiences (D-SAFE)

ANNUAL REPORT

2022-2023

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"As America's Health Responders, Public Health Service officers are the first in line to defend our nation's public health against threats large and small. Trainings, such as the D-SAFE course, are critical components of the preparation needed to help Public Health Service officers protect, promote, and advance the health and safety of the nation."

RDML Richard P. Schobitz, PhD ABPP, Director of Commissioned Corps Headquarters (CCHQ)

BY THE NUMBERS

99% of participants reported instructors were responsive to their learning needs and questions

46 specialties represented in attendance at synchronous trainings

874 CME credits awarded to onsite learners

100% of participants reported confidence in their ability to identify appropriate personal protective equipment post training

9 onsite training courses held

44% of the onsite D-SAFE course is spent conducting hands-on training

ENROLLMENT NUMBERS

Asynchronous
300+

Synchronous (Live Webinars)
1,090

Onsite
171

In April 2022, the **Global Center for Health Security (GCHS)** launched the development of the **United States Public Health Service (USPHS) Deployment Safety Academy for Field Experiences (D-SAFE)** course. This training program, focused on the management of high-consequence infectious diseases, is supported by the University of Nebraska Medical Center/ Nebraska Medicine, Texas A&M University, and the University of Texas Health Science Center at Houston. We train Public Health Service officers through three modalities: asynchronously through an online platform that allows for self-paced training on key infection prevention and control principles; onsite training that enables learners to practice key safety considerations through simulations tailored to a deployed environment; and synchronously through monthly webinars developed in response to the needs shared by Public Health Service officers. Across modalities, Public Health Service officers learn from public health and infectious disease experts with extensive experience in the development of standard operating procedures for managing and responding to infectious disease outbreaks both domestically and abroad.

UNMC Nebraska Medicine

TEXAS A&M UNIVERSITY

UTHealth The University of Texas Health Science Center at Houston School of Public Health

22 subject matter experts from a consortium of 3 academic institutions consulted during initial curriculum development.

2022

JUNE 20
Asynchronous pilot course launched

AUG 9 – 11
1st onsite pilot training

AUG 30 – SEPT 1
2nd onsite pilot training

OCT 15
Enduring asynchronous training course launched

NOV 15 – 16
3rd onsite pilot training

DEC 6 – 7
Enduring onsite training course launched

DEVELOPING THE CURRICULUM

The D-SAFE program trains Public Health Service officers on personal safety and security when deployed to environments with potential for COVID-19 or high-consequence infectious disease exposure.

To ensure applicability and relevance of all training materials, asynchronous, and onsite content were piloted with a diverse group of Public Health Service officers in the summer of 2022.

In June 2022, the asynchronous pilot course was launched, serving as a prerequisite to the onsite pilot courses. The virtual course consisted of interactive modules, narrated presentations, educational infographics, and surveys. In total, 41 Public Health Service officers completed the course.

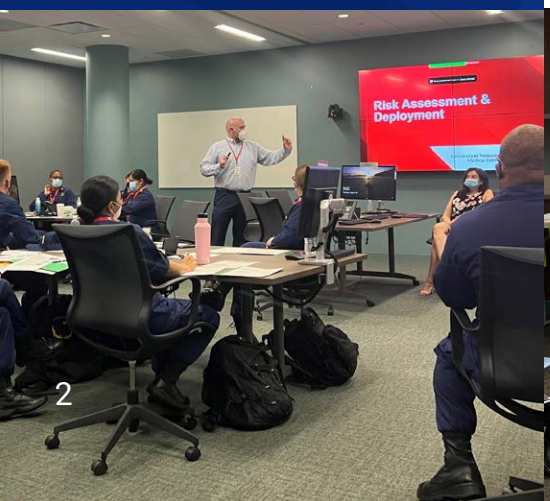
93%
of asynchronous pilot learners agreed or strongly agreed that they would use the concepts learned from the training

98%
of learners reported the asynchronous pilot content was of an appropriate level

83%
of learners agreed or strongly agreed that the asynchronous pilot course provided them with new information

In August and September 2022, UNMC GCHS:

- Hosted Public Health Service officers and leadership in three-day pilot trainings for two distinct cohorts of participants.
- Provided a series of structured workshops for Public Health Service officers to define the training contexts and prioritize the training needs for the enduring curriculum.
- Performed evaluation activities including surveys, focus groups, and information gathering forms to assess the content.



96% approval rating or higher was obtained for all onsite pilot sessions

The D-SAFE onsite pilot training courses offered the opportunity to evaluate both asynchronous and onsite training content and better understand USPHS deployments and environments; in turn, findings from the pilots informed more applicable and relevant training for D-SAFE participants. The multi-pronged evaluation identified broad themes for which to adapt, refine, and develop content, while also eliciting session-specific feedback that informed the delivery and content of individual modules both within and outside of the overarching themes.

Recommendations from pilot evaluation feedback centered on the following themes, that informed modifications and revisions to the overall course as well as individual modules:

- Revise the training to better fit the experiences and deployment settings of Public Health Service officers.
- Tailor the training to better fit the preferred learning styles of the Public Health Service officers.

38 Participants

from **14** diverse USPHS specialty categories were represented and contributed to the pilot training program assessment.

"The course provided good foundation for dealing with public health emergencies."

Pilot Learner

"I thought that course topics were great, appropriate amount of knowledge that can be utilized out in the field/job."

Pilot Learner

9

DISTINCT ORGANIZATIONS REPRESENTED

- Centers for Disease Control and Prevention
- National Institute for Occupational Safety and Health
- Office of Surgeon General
- U.S. Food and Drug Administration
- Centers for Medicare & Medicaid Services
- Administration for Children and Families
- Federal Bureau of Prisons
- Immigration Health Services Core
- Nebraska Department of Health and Human Services

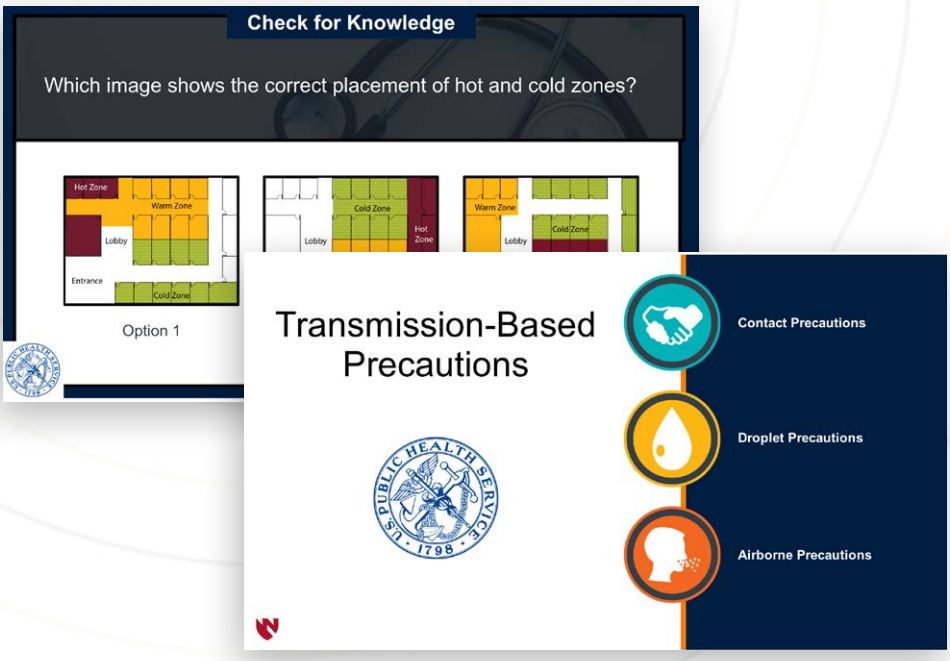
ASYNCHRONOUS TRAINING

The D-SAFE asynchronous course was piloted in the summer of 2022, with the enduring course published on October 15, 2022.

The course includes interactive e-learning modules and narrated presentations on a variety of subjects relevant to a high-consequence infectious disease deployment, including education on conducting a risk assessment, applying administrative and engineering controls, and utilizing communication strategies to create a safe work environment.

Educational content was developed and reviewed by a diverse group of professionals, including physicians, academicians, scientists, and industrial hygienists, with extensive experience training governmental and non-governmental agencies to safely respond to infectious disease outbreaks both domestically and abroad.

The asynchronous training modality promotes flexibility, allowing learners to access course content at the times most convenient for them. Further, content is accessible with mouse-free and closed captioning features included to provide all Public Health Service officers equal opportunities to learn. The asynchronous course is a stand-alone educational opportunity, in addition to being used as a pre-requisite for the two-day onsite D-SAFE course.



"I will use these infection prevention practices on a daily basis in my current job and also in future deployments when I have the opportunity to deploy for PHS."

Asynchronous Learner

97%
of learners reported the content was valuable to their work/ job, role/profession

84%
of learners were satisfied with the asynchrnous USPHS D-SAFE training course

91%
of learners would recommend the Asynchronous USPHS D-SAFE Training Course to their co-workers

ASYNCHRONOUS COURSE MODULES

1. **Transmission-Based Precautions:** Learners identify and differentiate between the three modes of transmission of communicable disease and determine the best way to protect healthcare workers and the healthcare workers' environment according to the route of transmission.
2. **Risk Assessment and Deployment:** Following education on risk assessment and the risk management cycle as they relate to infection prevention and control, Public Health Service officers identify deployment activities to inform safe and effective practices.
3. **Administrative and Engineering Controls:** Learners identify and differentiate between engineering controls and administrative controls and then utilize both to identify safe solutions to a series of problems.
4. **Ethical Concerns and Zones of Contamination:** Learners identify and differentiate between engineering controls and administrative controls and recieve education on how to navigate risk when competing interests are present.
5. **Team Dynamics and Creating a Safe Work Environment:** Learners receive education on team-based challenges, stressors, and risk points, with additional information provided on the importance of situation monitoring, communication, psychological safety, and conflict management.
6. **Limitations of Personal Protective Equipment (PPE):** An overview on the appropriate selection of PPE is provided, and subsequently, the importance, limitations, and common failure points of PPE are described.
7. **Cleaning and Disinfection:** Public Health Service officers identify the appropriate PPE and processes associated with cleaning and disinfection when working with highly infectious diseases.

"Appreciate the timely and useful information given current disease outbreaks."

Asynchronous Learner

"I feel these trainings are a great resource one can use to have an immediate positive effect on deployment and an Officer can review/refer back to the information provided."

Asynchronous Learner

"This provided a valuable opportunity to learn deployment skills, practice those skills, and walk away feeling more comfortable going into a field deployment."

Onsite Learner

"All of the information presented in this training is relevant not only to deployments but with my everyday job."

Onsite Learner

ONSITE TRAINING

Participant Feedback on Training Content and Relevance

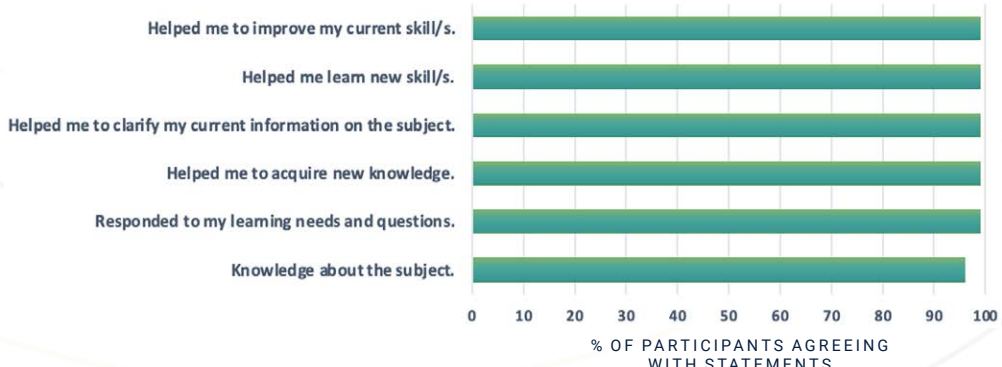
75 repondents

Informed by feedback received during the two pilot trainings held in the summer of 2022, revisions to the course curriculum were made. A third pilot training with repeat learners from the first two pilots, and two new learners, was held in November 2022 to confirm the appropriateness of the revised curriculum. Following the November training, the two-day enduring onsite training course was launched on December 6, 2022, and as of March 29, 2023, nine cohorts of participants have been trained.

The onsite training modality builds upon the asynchronous training, combining didactic learning with interactive, hands-on activities and culminating with a simulated exercise. The onsite curriculum addresses tools for risk assessment, rationale for PPE selection, team dynamics, and other important factors for deploying to infectious disease events. Notably, the simulation exercise allows Public Health Service officers to work in interprofessional teams to assess and safely manage risk in a risk-free training environment.

As with the asynchronous course, content for the two-day onsite course was developed and reviewed by a diverse group of professionals with extensive experience educating and training entities on how to safely respond to infectious disease outbreaks.

Participant Feedback on Evaluation of Instructors



75 repondents

96%

of participants "agreed" or "strongly agreed" that the training content is valuable to their work/job/profession

97%

of participants "agreed" or "strongly agreed" to the statement "I will use the concepts that I learned from this training"

99%

of participants reported that instructors were responsive to their learning needs and questions

Participant Feedback on the Learning Enviornment

75 repondents

"This is great training for future deployments. I feel much better prepared than I did on my first COVID deployment in May 2020!"

Onsite Learner

"Very knowledgeable [instructors] with real-world experience; very considerate in anticipating the student skill levels and needs."

Onsite Learner

"Top notch staff, facilities, and training simulations."

Onsite Learner

The D-SAFE onsite course offers

13.25

hours

of continuing education credit

Credit has been awarded to

66

individuals

in 13 different categories as of Feb. 8, 2023

In total,

874

hours

of continuing education credit have been awarded since the December 2022 course launch

ONSITE COURSE AGENDA

DAY 1

- **Risk Assessment and Deployment:** Public Health Service officers identify risks related to the three modes of disease transmission and practice using tools to assess and manage risk in a deployed environment.
- **Engineering/Administrative Controls — iWall:** Using an interactive piece of technology, learners apply administrative and engineering controls in high- and low-resource settings.
- **Engineering/Administrative Controls in the National Quarantine Unit:** Public Health Service officers visit the National Quarantine Unit with focus on site safety considerations, including the application of administrative and engineering controls.
- **Transmission-Based Precautions — Respiratory Selection and Limitations of PPE and PAPR Familiarization:** Following education on the appropriate selection, limitations, and failure points of PPE, learners engage in a hands-on activity to explore communication limitations while in PPE.

DAY 2

- **Deployment Prep Station 1 — Team Dynamics and Creating a Safe Work Environment:** Learners apply team dynamics concepts to establish a safe working environment with emphasis on the implications of different communication strategies and techniques.
- **Deployment Prep Station 2 — Space:** Public Health Service officers work in teams to apply zoning concepts based on the resources, staff, and space available.
- **Deployment Prep Station 3 — Supplies:** Following education on key principles when donning and doffing PPE, Public Health Service officers return to the iWall to practice donning PPE.
- **Simulation Activity:** Given a deployment scenario, Public Health Service officers practice conducting a risk assessment, donning/doffing PPE and overcoming challenges to ensure good communication and infection prevention and control practice.

Percent Change in Confidence and Familiarity of Learning Objectives from Pre- to Post-training

90% change in percent of participants reporting confidence in assessing risk after receiving training

60% change in percent of participants reporting familiarity with developing/ implementing administrative controls after receiving training

52% change in percent of participants reporting familiarity with the three modes of transmission of communicable diseases

51% change in percent of participants reporting confidence in their ability to conduct a risk assessment

42% change in percent of participants reporting confidence in their ability to identify appropriate PPE

"All activities felt appropriate for the audience and engaging."

Onsite Learner

"All instructors were knowledgeable, supportive, and shared their knowledge and expertise wholeheartedly."

Onsite Learner

"The course design, delivery, and the facility is amazing."

Onsite Learner

Learners from 44 states attended the Infectious Disease webinar series

856 HOURS

continuing education credits awarded to webinar attendees

94%

of participants would recommend webinars to colleagues or friends

95

different organizations/ agencies had representatives attend the Infectious Disease webinar series

SYNCHRONOUS TRAINING: INFECTIOUS DISEASE SERIES

In recognition of the USPHS Commissioned Corps' unique role in research, healthcare delivery, regulatory affairs, and public health response, a webinar series on infectious diseases was initiated to educate and prepare Public Health Service officers as they deploy to support outbreaks.

The synchronous training modality was launched on October 13, 2022, and webinars have occurred monthly since.

Two speakers are identified for each webinar, a Public Health Service officer and a subject matter expert, with speakers representing diverse backgrounds, including infectious disease medicine, microbiology, infectious disease epidemiology, and emergency preparedness and response. To date, webinars have covered mpox, Ebola virus disease, measles, respiratory syncytial virus, influenza, and Lassa fever, with information provided on key features of each disease, including routes of transmission, signs and symptoms, and site safety considerations.

Live webinars are accessible to all members of the USPHS Commissioned Corps, with no prerequisites required to attend. Additionally, webinar recordings are made available to Public Health Service officers via the Commissioned Corps Learning Management System.

"I truly appreciated the virtual webinar series; it was relevant and taught by very knowledgeable sources."

Synchronous Learner

USPHS Webinars to Date

- Mpox
- Ebola
- Measles
- RSV
- Influenza
- Lassa

November 15 – 16 cohort

As we reflect on the first year of the USPHS D-SAFE training program, we wish to recognize the dedicated contributions of individuals across the consortium. We are deeply grateful for their commitment to excellence and dedication to safety.

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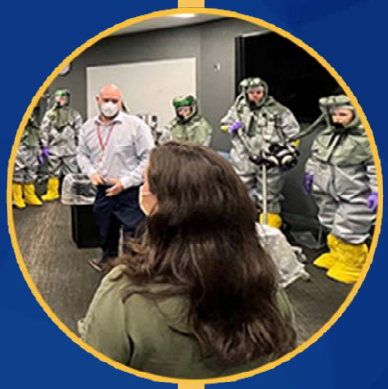


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