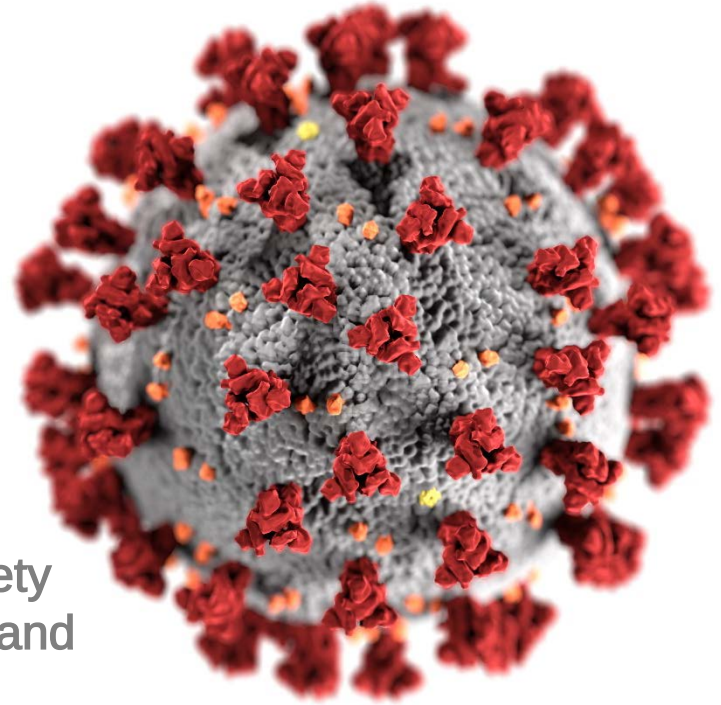


Overview of Emergency Responder Health Monitoring and Surveillance™ Framework & NIOSH Response to Coronavirus Disease 2019

National Institute for Occupational Safety
and Health Emergency Preparedness and
Response Office



cdc.gov/coronavirus

Emergency Responder Health Monitoring and Surveillance™ (ERHMS™)

- Ensure only qualified, trained, and properly equipped personnel (employees, contractors, and volunteers) are selected for deployment.
- Ensure all receive sufficient health and exposure monitoring and surveillance.
- Determine whether long-term monitoring or surveillance is needed.



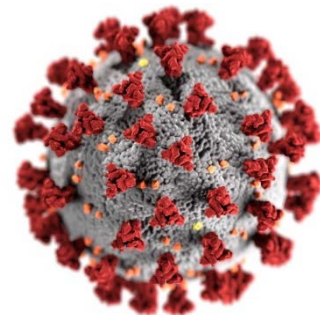
ERHMS™ Goal

- Develop a health monitoring and surveillance framework for the prevention of illness and injury to emergency responders to addresses all phases of a response, including pre-deployment, deployment, and post-deployment phases.

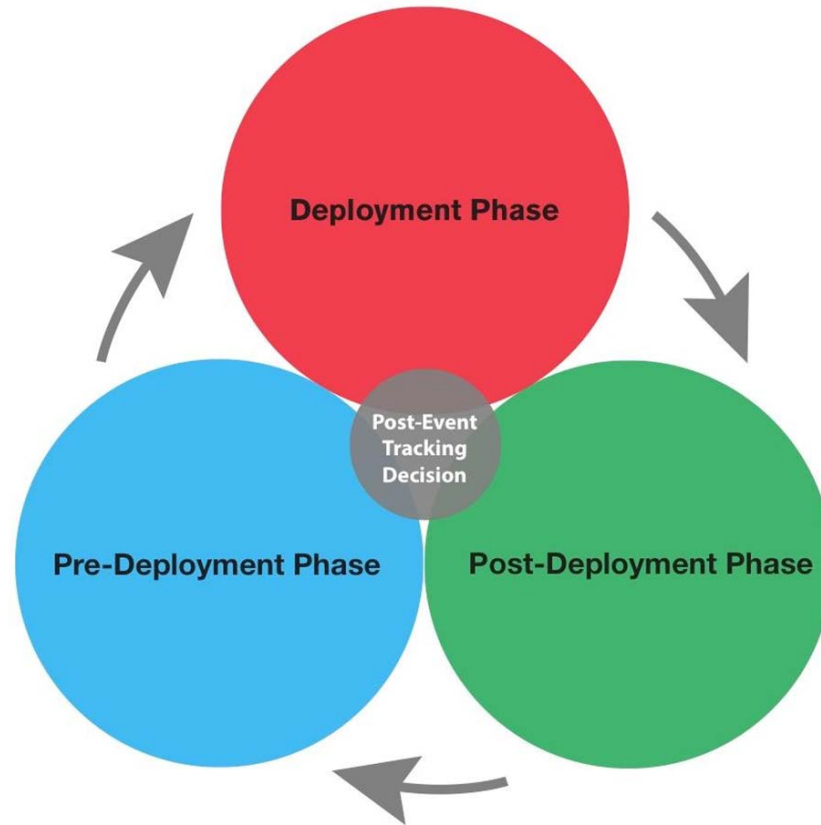


Coronavirus Disease 2019 (COVID-19) NIOSH Response

- Early January 2020
 - CDC had been monitoring reports of pneumonia in China.
 - NIOSH Emergency Preparedness and Response Office (EPRO) assigned personnel to initial center-level CDC activities.
- January 21, 2020
 - CDC initiated agency-wide response and activated emergency operations center.
 - NIOSH/EPRO stood up Worker Safety and Health (WSH) Team and began creating guidance and information products and providing technical assistance.
- February 2020–present
 - Worker Safety and Health Team expanded into several units incorporating multiple SMEs from across NIOSH.
 - Continues to create and disseminate guidance and provide technical assistance.



ERHMS™ Three-Phase System



Pre-Deployment Phase



Pre-Deployment Considerations

- Are responders ready to deploy — physically and mentally fit?
- Are responders qualified with the right training and licenses?
- Do responders have all the correct personal protective equipment, gear, immunizations?



ERHMS™ Pre-Deployment Overview

- The pre-deployment phase emphasizes preparedness for response. During this phase, the foundation is established for monitoring and surveillance during and after a response.



**Rostering and
Credentialing**



**Health Screening
/ Immunizations**



**Health and Safety
Training**



**Data Management /
Information
Security**

Pre-Deployment COVID-19 WSH Team Response Activities

- Provided consultation to CDC's internal health and safety program to safely deploy CDC staff.
- Reviewed and provided content for pre-deployment presentation providing information on equipment, safety/security, and monitoring for CDC employees.
- NIOSH staff served in CDC Occupational Health Clinic.
- Stood up WSH Team NIOSH Personnel Deployment Unit ensuring NIOSH staff met deployment medical clearance requirements.



Deployment Phase



Deployment Considerations

- Which responders deployed and how are we keeping track of them?
- How are we monitoring their exposures, and how are we protecting them on-site if there are newly found exposures?
- How are we tracking their activities and their health and safety during the response?



ERHMS™ Deployment Overview

- The deployment phase emphasizes tracking responders once on-site. Activities include monitoring and assessing health hazards during response work and then controlling hazards when identified.



**On-site Responder
In-processing**



**Health Monitoring
and
Surveillance**



**Exposure
Assessment,
Activities, and
Controls**



**Communication of
Exposure and
Health Data**

Deployment COVID-19 WSH Team Response Activities

- Provided safety officers to quarantine stations and repatriation sites.
- Tracked NIOSH personnel while on deployment using Deployment Unit to conduct field check-ins.
- Stood up Worker Safety Health (WSH) Team and expanded into units
 - Created and disseminated guidance documents, information products, and toolkits.
 - Provided virtual and onsite technical assistance.
 - Advocated for and reported on industry and occupation in surveillance data.
 - Conducted and supported other response activities in collection, analysis, and reporting of industry and occupation data.
 - Supported broad agency announcements to solicit and fund response and research activities.



Deployment COVID-19 WSH Team Response Activities Cont.

- Addressed personal protective equipment (PPE)
 - Created *Strategies to Optimize the Supply of PPE and Equipment* in collaboration with Infection Prevention and Control Team.
 - Provided technical assistance regarding use, reuse, and disinfection of PPE.
 - Coordinated with FDA on Emergency Use Authorization and stood up process to assess newly manufactured or imported respirators.



SENIOR LEADERS

Worker Safety and Health /NIOSH

ASSOCIATE DIRECTORS FOR SCIENCE

OPERATIONS
Lead and WSH Box Team

Lead Deputy

Lead ADS
Chief Medical Officer
Clearance coordinator
Deputy
Policy
Mailbox Team

V-EOC COORDINATION
Lead, Deputy
V-EOC/NARIS Senior Advisor
Communications Team
VEOC Box Team

LIAISONS

ALL OTHER INDUSTRIES
Lead
Deputy
IH Team
IH Lead
Field Team

REOPENING TECHNICAL ASSISTANCE
Lead
Deputy
SME Team
Speakers Bureau/ Webinars Team
Factsheet Team

VIRTUAL/ FIELD TECHNICAL ASSISTANCE
Lead
Deputy
IH Team
IH Lead
Epi Team
Epi Lead
Field Team

PUBLIC INQUIRIES
Lead
NIOSH CDC Info Response Team
WSH Questions Box and Triage Team

PERSONAL PROTECTIVE EQUIPMENT (NPPTL)
Lead
Deputy
Respirator Approval Program
PPE Concerns Box Team

OCCUPATIONAL EPIDEMIOLOGY
Lead
Deputy

NIOSH DEPLOYMENTS
Lead
Deputy
Deployment Team
Deployment AAR Team
EXTRAMURAL IPA
Lead

COMMUNICATIONS
Lead
Deputy

SCIENCE AND RESEARCH
Leads

BUDGET

INSTITUTE SUBJECT MATTER EXPERT SUPPORT AS NEEDED COORDINATED WITH V-EOC COORDINATION, OPERATIONS, AND DEPLOYMENT

Resuming Business TOOLKIT

Coronavirus Disease 2019 (COVID-19)



Morbidity and Mortality Weekly Report

Characteristics of Health Care Personnel with COVID-19 — United States, February 12–April 9, 2020

CDC COVID-19 Response Team



Interim Guidance for Businesses and Employers Responding to Coronavirus Disease 2019 (COVID-19), May 2020

Plan, Prepare and Respond to Coronavirus Disease 2019

General Business Frequently Asked Questions

Investigating and responding to COVID-19 cases in non-healthcare work settings

Considerations for state and local health departments

Meat and Poultry Processing Workers and Employers

Interim Guidance from CDC and the Occupational Safety and Health Administration (OSHA)

What Airline Workers Need to Know about COVID-19

AIRPORT BAGGAGE AND CARGO HANDLERS

Accessible version: <https://www.cdc.gov/coronavirus/2019-nCoV/airports.html>



Coronavirus disease 2019 (COVID-19) is a respiratory illness caused by a virus called SARS-CoV-2. Symptoms often include a fever, cough, or shortness of breath. Our understanding of how the virus spreads is evolving as we learn more about it, so check the [CDC website \(https://www.cdc.gov/coronavirus/2019-nCoV/airports.html\)](https://www.cdc.gov/coronavirus/2019-nCoV/airports.html).

As an airport baggage handler, you can help protect yourself and others by following these steps:

For baggage or cargo that may be at risk, remain low, include surfaces COVID-19 or by 1

Collection and Submission of Postmortem Specimens from Deceased Persons with Known or Suspected COVID-19

Collecting Occupation and Industry Data in Public Health Surveillance Systems for COVID-19

Personal Protective Equipment (PPE) Burn Rate Calculator

Use this Excel spreadsheet to calculate your PPE burn rate

Strategies to Optimize the Supply of PPE and Equipment



Correct*



Incorrect

Three Key Factors Required for a Respirator to be Effective

Manufacturing Facilities:

Key Strategies to Prevent COVID-19 Infection among

Accessible version: <https://www.cdc.gov/coronavirus/2019-nCoV/airports.html>

Employers should assess their workplace for factors that might increase the risk of spread. Use a safety plan using a combination of the following prevention recommendations. Reach out to health officials and occupational safety and health professionals to get relevant and up-to-date information.

- **Keep employees at least 6 feet away** from each other. This includes when talking, coughing, sneezing, or touching surfaces. Avoid handshakes, hugs, or other close contact. Breaks should be taken to allow for social distancing.



- **Increase frequency of cleaning and disinfection in shared spaces.** Clean and disinfect tools or other equipment at least as often as employees change workstations. Disinfect frequently.



- **Encourage sick employees to stay home (including employees who are positive but do not have symptoms).** Develop policies that encourage sick employees to stay at home without fear of punishment or loss of incentives, and make sure employees are aware of these policies. Work with occupational medicine professionals to develop policies for workers who may be at [increased risk](#) related to COVID-19.



- **Encourage employees to practice social distancing.**

Post-Deployment Phase



Post-Deployment Considerations

- How do we make decisions about tracking responder health?
- When is tracking necessary?
- What can we learn from this response to make future improvements?



ERHMS™ Post-Deployment Overview

- The post-deployment phase emphasizes recovery from response and establishes the process for ongoing long-term monitoring and surveillance of responders' health.



**Out-Processing
Assessment**



**Determination of
Need for Long-Term
Monitoring**



**After-Action
Reporting**

Post-Deployment COVID-19 WSH Team Response Activities

- Developed policy regarding NIOSH personnel and post-deployment quarantine and isolation.
- Created and administered out-processing assessment to NIOSH personnel returning from deployments.
- Participated in interim after-action assessments of team and task force response activities.

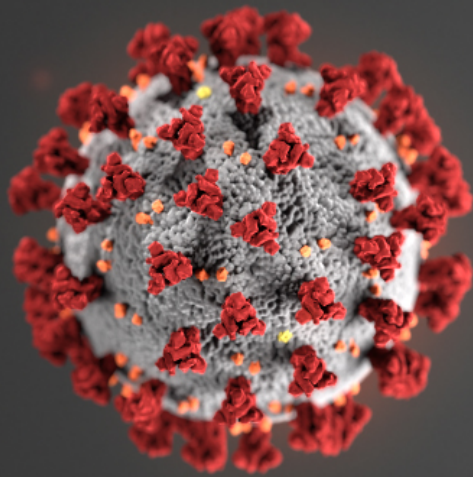


CDC Resources



Where to get more information:

- [CDC Emergency Responder Health Monitoring And Surveillance \(ERHMS\)™](#)
- Questions: erhmsonline@cdc.gov



For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.