



The responder safety and health capability describes the ability to protect public health agency staff responding to an incident³¹⁷ and the ability to support the health and safety needs of hospital and medical facility personnel, if requested.

This capability consists of the ability to perform the following functions:

- Function 1:** Identify responder safety and health risks
- Function 2:** Identify safety and personal protective needs
- Function 3:** Coordinate with partners to facilitate risk-specific safety and health training
- Function 4:** Monitor responder safety and health actions

Function 1: Identify responder safety and health risks

Assist in the identification of the medical and mental/behavioral health³¹⁸ risks (routine and incident-specific) to responders and communicate this information prior to, during, and after an incident.

Tasks

This function consists of the ability to perform the following tasks:

- Task 1:** Prior to an incident, identify the medical, environmental exposure, and mental/behavioral health risks that may be faced by staff responding to the public health incident in conjunction with partner agencies and based on jurisdictional risk assessment. *(For additional or supporting detail, see Capability 1: Community Preparedness)*
- Task 2:** Prior to an incident, identify subject matter experts and other informational resources that can be used by public health staff to make health and safety recommendations to the Incident Safety Officers or lead agency.
- Task 3:** Prior to an incident, and as applicable during an incident, work with subject matter experts to develop information on potential acute and chronic health conditions that may develop/occur during and after an exposure.
- Task 4:** In consultation with the Incident Safety Officer and subject matter experts, participate in the formulation of recommendations to the Incident Commander regarding responder-specific risks to be addressed in incident action plans.
- Task 5:** Distribute safety materials to public health responders through daily briefings at the onset of, and throughout an incident, in consultation with the Incident Safety Officer and jurisdictional subject matter experts. *(For additional or supporting detail, see Capability 4: Emergency Public Information and Warning)*

Performance Measure(s)

At present there are no CDC-defined performance measures for this function.

Resource Elements

*Note: Jurisdictions must have or have access to the resource elements designated as **Priority**.*

P1: (Priority) Written plans should include documentation of the safety and health risk scenarios likely to be faced by public health responders, based on pre-identified jurisdictional incident risks, which are developed in consultation with partner agencies (e.g., environmental health, occupational health and safety, jurisdictional Local Emergency Planning Committee, risk-specific subject matter experts).³¹⁹ This documentation should include the following elements:

- Limits of exposure or injury necessitating response
- Job-specific worker safety guides³²⁰ (e.g., radiation, heat, fire, and infrastructure damage resulting in other chemical release)
- Potential for post-event medical and mental/behavioral health follow-up assessments³²¹

Suggested resources

- State Occupational Safety and Health Plans: <http://www.osha.gov/dcsp/osp/index.html>
- Environmental Protection Agency guidelines: <http://www.epa.gov/radiation/rert/pags.html>
- Jurisdictional National Weather Service Office: <http://www.weather.gov/stormready/contact.htm>

PLANNING (P)

Function 1: Identify responder safety and health risks
Resource Elements (continued)

- Hybrid Single Particle Lagrangian Integrated Trajectory Model:
http://www.arl.noaa.gov/HYSPLIT_info.php
- Area Locations of Hazardous Atmospheres Predictive Model for Chemical Emergencies:
[http://response.restoration.noaa.gov/topic_subtopic_entry.php?RECORD_KEY\(entry_subtopic_topic\)=entry_id,subtopic_id,topic_id&entry_id\(entry_subtopic_topic\)=518&subtopic_id\(entry_subtopic_topic\)=24&topic_id\(entry_subtopic_topic\)=1](http://response.restoration.noaa.gov/topic_subtopic_entry.php?RECORD_KEY(entry_subtopic_topic)=entry_id,subtopic_id,topic_id&entry_id(entry_subtopic_topic)=518&subtopic_id(entry_subtopic_topic)=24&topic_id(entry_subtopic_topic)=1)
- U.S. Department of Transportation, Emergency Response Guidebook (ERG2008):
<http://www.tc.gc.ca/media/documents/canutec-eng/erg2008eng.pdf>
- World Health Organization, Manual for the Public Health Management of Chemical Incidents:
http://www.who.int/environmental_health_emergencies/publications/FINAL-PHM-Chemical-Incidents_web.pdf
- Jurisdictional Association for Professionals in Infection Control and Epidemiology:
<http://www.apic.org/scriptcontent/custom/members/chapters/chaptermap.cfm?section=chapters>

P2: (Priority) Written plans should include documentation that identifies public health roles and responsibilities related to the jurisdiction's identified risks, that was developed in conjunction with partner agencies (e.g., state environmental health, state occupational health and safety, and hazard-specific subject matter experts) and emergency managers. This documentation should identify the protective equipment, protective actions, or other mechanisms that public health responders will need to have to execute potential roles. Roles for consideration may include the following elements:

- Conducting environmental health assessments
- Potable water inspections
- Field surveillance interviews

Recommend inclusion of the following groups, at a minimum:

- State versions of Environmental Protection Agency
- State Radiation Control Programs: <http://www.crcpd.org/Map/RCPmap.htm>
- State Occupational Safety and Health Agency

Suggested resources

- Federal Emergency Management Agency, Center for Domestic Preparedness Responder Handbook:
http://cdp.dhs.gov/pdfs/responder_handbook.pdf
- Department of Homeland Security, Planning Guidance for Protection and Recovery Following RDD and IND Incidents: <http://ogcms.energy.gov/73fr45029.pdf>
- CDC National Institute for Occupational Safety and Health, Pocket Guide to Chemical Hazards:
<http://www.cdc.gov/niosh/npg/npgsyn-c.html>
- Jane's Chem-Bio Handbook
- American Conference of Governmental Industrial Hygienists Threshold Limit Values and Biological Exposure Indices Guide
- CDC, Population Monitoring in Radiation Emergencies: A Guide for State and Local Public Health Planners:
<http://emergency.cdc.gov/radiation/pdf/population-monitoring-guide.pdf>
- CDC Radiological Terrorism: Just in Time Training for Hospital Clinicians:
<http://emergency.cdc.gov/radiation/justintime.asp>
- CDC Radiological Terrorism: Tool Kit for Public Health Officials:
<http://emergency.cdc.gov/radiation/publichealthtoolkit.asp>
- Federal Emergency Management Agency, Environmental Health Training in Emergency Response:
<https://cdp.dhs.gov/resident/ehter.html>
- Occupational Safety and Health Administration, Keeping Workers Safe During Clean Up and Recovery Operations Following Hurricanes, 2005: www.osha.gov/OshDoc/hurricaneRecovery.html
- American Public Health Association (APHA) Policy Statement 20027: Protecting the Health and Safety of Workers Who Respond to Disasters. APHA Policy Statements, 1948 - present, cumulative:
http://www.apha.org/legislative/policy/policysearch/index.cfm?fuseaction=search_results&YearofPolicy=2002
- American Public Health Association Policy Statement 20069: Response to Disasters: Protection of Rescue and Recovery Workers, Volunteers, and Residents Responding to Disasters:
<http://www.apha.org/advocacy/policy/policysearch/default.htm?id=1333>

Function 1: Identify responder safety and health risks

Resource Elements *(continued)*

SKILLS AND TRAINING (S)

- S1:** Public health staff who will participate in planning for responder risks (e.g. planners, environmental health staff, preparedness staff, and epidemiologists) should have awareness-level training on population monitoring to identify risks and recommendations for personal protective equipment.
- S2:** Public health staff participating in the role of Incident Safety Officer should take the National Incident Management System ICS-300 course.
- S3:** Public health staff participating in responses where Level A equipment is to be used should have Level A awareness and technical response training.

EQUIPMENT AND TECHNOLOGY (E)

E1: Have or have access to Level D basic safety equipment, such as the following:

- Coveralls
- Gloves
- Boots/shoes, chemical-resistant steel toe and shank
- Boots, outer, chemical-resistant (disposable)
- Safety glasses or chemical splash goggles
- Hard hat
- Escape mask
- Face shield
- N95 or dust masks (surgical masks)

If participating in a clinical scenario, public health staff should have or have access to standard precautions, including gloves, gowns, and masks and goggles or face shields.

Suggested resources

- Occupational Safety and Health Administration, general description and discussion of the levels of protection and protective gear:
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9767
- CDC Guidance for the Selection and Use of Personal Protective Equipment in Healthcare Settings:
www.cdc.gov/ncidod/dhqp/pdf/ppe/PPEslides6-29-04.ppt

Function 2: Identify safety and personal protective needs

Coordinate with occupational health and safety and other subject matter experts, based on incident-specific conditions, to determine the necessary personal protective equipment, medical countermeasures, mental/behavioral health support services and other items and services, and distribute these, as applicable, to protect the health of public health responders.

Tasks

This function consists of the ability to perform the following tasks:

- Task 1:** Prior to an incident, and as applicable during an incident, work with subject matter experts (e.g., state environmental health, state occupational health and safety, hazard-specific subject matter experts, and emergency managers) to identify responder safety and health resource requirements (e.g., equipment needs).
- Task 2:** Prior to an incident, and as applicable during an incident, and in conjunction with subject matter experts, formulate recommendations to public health responders regarding personal protective equipment that are consistent with local jurisdictional requirements.
- Task 3:** Coordinate with partner agencies to provide medical countermeasures and/or personal protective equipment to public health responders, if indicated by the incident. *(For additional or supporting detail, see Capability 8: Medical Countermeasure Dispensing)*

Function 2: Identify safety and personal protective needs

Performance measure(s)

At present there are no CDC-defined performance measures for this function.

Resource Elements

Note: Jurisdictions must have or have access to the resource elements designated as **Priority**.

PLANNING (P)

P1: (Priority) Written plans should include recommendations for risk-related personal protective equipment for public health responders that have been developed in conjunction with partner agencies (e.g., state environmental health, state occupational health and safety, and risk-specific subject matter experts).

Suggested resources

- CDC’s National Institute for Occupational Safety and Health, Pocket Guide to Chemical Hazards: <http://www.cdc.gov/niosh/npg/npgsyn-c.html>
- U.S. Health and Human Services, Radiation Emergency Medical Management Guide PPE Guidance: <http://www.remm.nlm.gov/onsite.htm>
- Occupational Safety and Health Administration, general description and discussion of the levels of protection and protective gear: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9767

P2: Written plans should include processes (either led by public health agency or delivered via partnerships with the appropriate lead agency, i.e., state/local occupational safety and health lead) that assure that public health responders are fit-tested and medically cleared to use personal protective equipment indicated for their particular response role, both prior to and at the time of the incident.

P3: Written plans should include protocols and processes to access (e.g., through mutual aid agreements or other mechanism) backup/cache equipment for incident response, including identifying sources of additional equipment and expertise both within and outside of the jurisdiction. These protocols and processes should follow emergency management request procedures. *(For additional or supporting detail, see Capability 9: Medical Materiel Management and Distribution)*

EQUIPMENT AND TECHNOLOGY (E)

E1: (Priority) Have or have access to personal protective equipment that is consistent with the identified risks in the jurisdiction and associated job functions of public health response personnel. This equipment should meet nationally recognized standards as defined by the InterAgency Board for Equipment Standardization and Interoperability (<https://iab.gov>).

Note: If public health departments elect to purchase personal protective equipment for their responders, they must follow state, Occupational Safety and Health Administration, CDC’s National Institute for Occupational Safety and Health, and other applicable regulations regarding the storage, dissemination, fit testing, and maintenance of such personal protective equipment.

Suggested resource

- General description and discussion of the levels of protection and protective gear, OSHA: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9767

Function 3: Coordinate with partners to facilitate risk-specific safety and health training

In conjunction with partner agencies, facilitate the inclusion of risk-specific physical safety, mental/behavioral health, and personal protective equipment topics (based on jurisdictional risk assessment) into public health responder training to prepare responders for the incident.

Function 3: Coordinate with partners to facilitate risk-specific safety and health training

Tasks

This function consists of the ability to perform the following task:

Task 1: Prior to an incident, and as applicable during an incident, work with subject matter experts to determine/recommend risk-specific training (both training for protective actions as well as training for response to exposure or injury).

Performance Measure(s)

At present there are no CDC-defined performance measures for this function.

Resource elements

*Note: Jurisdictions must have or have access to the resource elements designated as **Priority**.*

- S1: (Priority)** Public health staff required to use N-95 or other respirators as part of their response role should undergo respiratory function testing.
- Suggested resources
- Professional Training and Certification in Spirometry Testing and Respiratory Health Surveillance, a National Institute for Occupational Safety and Health-approved Program for Health Professionals
 - National Institute for Occupational Safety and Health Spirometry Initial Training and National Institute for Occupational Safety and Health Spirometry Refresher Course
 - American National Standards Institute/American Industrial Hygiene Association Z88 Accredited Standards Committee, Respiratory Protection: <http://www.aiha.org/insideaiha/standards/Pages/Z88.aspx>
- S2: (Priority)** Public health staff that perform responder functions, as well as staff identified as surge-capacity personnel, should have documentation of training, with documentation updated a minimum of once per year. Documentation should include training date and manner of delivery (e.g., formal training or “train the trainer”). Formal training examples include CDC courses and CD or DVD-based courses, with completion verified by a formal demonstration.
- S3:** Awareness and technician refresher courses depending upon responder role. [Public health staff participating in HAZWOPER incidents should have Occupational Safety and Health Administration HAZWOPER initial 40 hour and annual 8 hour refresher training (OSHA 29CFR 1910.120).]

SKILLS AND TRAINING (S)

Function 4: Monitor responder safety and health actions

Conduct or participate in monitoring and surveillance activities to identify any potential adverse health effects of public health responders.

Tasks

This function consists of the ability to perform the following tasks:

- Task 1:** Conduct or participate in exposure, mental/behavioral health, and medical surveillance of public health incident responders before, during, and after an incident. *(For additional or supporting detail, see Capability 13: Public Health Surveillance and Epidemiological Investigation)*
- Task 2:** Coordinate with healthcare partners to facilitate access to and promote the availability of medical and mental/behavioral health services for responders, either on-site or off-site as applicable to the incident.
- Task 3:** Provide guidance to partner organizations to help conduct monitoring of any responder staff for medical/mental/behavioral incident-related health outcomes.
- Task 4:** Utilize surveillance data and other applicable inputs from partner agencies to provide recommendations or considerations for any changes related to the use of personal protective equipment (e.g., to alter, suspend, or terminate any activity or personal protective equipment usage judged to improve the outcome or be an imminent danger or immediately dangerous to life and health). *(For additional or supporting detail, see Capability 6: Information Sharing)*

Function 4: Monitor responder safety and health actions

Tasks *(continued)*

Task 5: Support the Public Information Officer and partner agencies to implement risk-communication strategies that communicate risks to responders after the completion of the acute phase of an incident. Include risks known pre-incident and those discovered during and after the acute phase. *(For additional or supporting detail, see Capability 3: Emergency Operations Coordination and Capability 4: Emergency Public Information and Warning)*

Performance Measure(s)

At present there are no CDC-defined performance measures for this function.

Resource Elements

*Note: Jurisdictions must have or have access to the resource elements designated as **Priority**.*

PLANNING (P)

P1: (Priority) Written plans should include process and protocols for how the public health agency, in conjunction with lead partners (e.g., occupational health and safety) will participate in surveillance activities to monitor levels of environmental exposure, environmental effects on the responders, and/or incident-related injuries. *(For additional or supporting detail, see Capability 13: Public Health Surveillance and Epidemiological Investigation)*

Suggested resources

- Physical Health Status of World Trade Center Rescue and Recovery Workers and Volunteers -New York City, July 2002 - August 2004. *Morbidity and Mortality Weekly Report* , 53(35): 807-812. September 10, 2005: www.cdc.gov/mmwr/preview/mmwrhtml/mm5335a1.htm
- CDC, Chemical Exposure Assessment Considerations for Use in Evaluating Deepwater Horizon Response Workers and Volunteers: <http://www.cdc.gov/niosh/topics/oilspillresponse/assessment.html>
- National Institute for Occupational Safety and Health (NIOSH) Deepwater Horizon Data Use and Disclosure: <http://www.cdc.gov/niosh/topics/oilspillresponse/pdfs/NIOSH-Disclosure-English-051110.pdf>
- NIOSH Deepwater Horizon Initial Roster Form: <http://www.cdc.gov/niosh/topics/oilspillresponse/pdfs/NIOSH-Roster-Form-English-051210.pdf>
- Procedures for Recruiting Volunteers for Investigative Studies from the NIOSH Deepwater Horizon Response: <http://www.cdc.gov/niosh/topics/oilspillresponse/recruiting.html>

P2: Written plans should include a process or protocol to coordinate with partner agencies for medical-readiness screening of potential public health responders at the time of an incident to detect symptoms that may affect medical readiness (e.g., cough, cold, heat stress, and emotional stress).

Suggested resources

- Medical Pre-Placement Evaluation for Workers Engaged in the Deepwater Horizon Response: <http://www.cdc.gov/niosh/topics/oilspillresponse/preplacement.html>
- Medical Pre-Placement Evaluation Indicators for Health Professionals: <http://www.cdc.gov/niosh/topics/oilspillresponse/indicators.html>

P3: Written plans should include a process and protocols for how the public health agency (in conjunction with lead healthcare and mental/behavioral health partners) can promote the availability of medical and mental/behavioral health services.

EQUIPMENT AND TECHNOLOGY (E)

E1: (Priority) Have or have access to a registry database of responders who were exposed and/or injured during an incident. This database should be updated at a frequency appropriate to the incident.